

VERNOLA RANCH SPECIFIC PLAN

TRAFFIC STUDY MARCH 2023

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March 16, 2023

Rick Bondar
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PO Box 217
Upland, CA 91785

RE: Traffic study for proposed Vernola Ranch Specific Plan along Pats Ranch Road south of Bellegrave Avenue in the City of Jurupa Valley

Dear Rick,

We are pleased to submit our traffic study for the proposed project, which we have prepared at your request.

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

Sincerely,

ALBERT A. WEBB ASSOCIATES



Dilesh Sheth, PE, TE
Senior Vice President

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Project Engineer

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I. EXECUTIVE SUMMARY

Study Objectives

This study evaluates the potential effects on traffic operation from the proposed Vernola Ranch Planned Residential Community development east of the I-15 freeway between Bellegrave Avenue and Limonite Avenue, along Pats Ranch Road in the City of Jurupa Valley, California. The study objectives include:

- Document existing traffic conditions (2022) in the vicinity of the proposed project;
- Determine the expected project traffic;
- Evaluate opening-day traffic scenarios, including project phasing and cumulative projects;
- Evaluate horizon year traffic scenarios;
- Determine if the LOS required by the City of Jurupa Valley and California Department of Transportation (Caltrans) will be maintained within the study area,
    - if not, determine the mitigation measures needed to maintain the required LOS; and
- Evaluate traffic signal warrants for unsignalized study intersections.

Prior to preparing this study, the City of Jurupa Valley approved the study scope (**Appendix A**).

Project Description

The project includes 1,576 single and multifamily homes, recreation areas, internal street network, open space, landscaping, and street improvements in a vacant parcel east of I-15 freeway between Limonite Avenue and Bellegrave Avenue, west of Pats Ranch Road. The proposed project site is currently zoned as One Family Dwelling and Industrial Park with Specific Plan overlay. The proposed project land uses will be based on the Vernola Ranch Specific Plan. Project access is proposed via four main access points along Pats Ranch Road at Shearwater Drive, Park Center Drive, and Boca Place as well as one driveway south of Boca Place. The first three driveways provide access to the single family units and the southern driveway will serve the apartments portion of the development.

Project Trip Generation

Based on the proposed site plan and trip generation rates from the *Institute of Transportation Engineers (ITE) Trip Generation Manual 11th Edition*, the project is expected to generate a total of 13,334 daily vehicle trips, with 1,202 AM peak hour trips and 1,086 PM peak hour trips.

Proposed Project Phasing

This study analyzes the project construction in three proposed phases. Phase 1 (2027) consists of 604 apartments as well as 583 single-family homes, Phase 2 (2029) consists of 389 single-family homes, and Phase 3 (2031) consists of the elementary school with a capacity for 700 students.

Analysis and Findings

Acceptable Level of Service Standards

Per the City of Jurupa Valley Traffic Impact Analysis Preparation Guidelines (2020) and the Caltrans District 8 Office of Intergovernmental Review, the minimum acceptable LOS in the study area is **LOS D**.

Intersection Level of Service

All study intersections are expected to operate at acceptable LOS in all study scenarios, including the addition of cumulative project traffic and the proposed project except for the following intersections (**Table 1**):

- #2 Bellegrave Avenue @ Pats Ranch Road – Buildout Year without Project (PM peak hour only)
- #11 Limonite Avenue @ Hamner Avenue – Phase 1+2+3 Opening Day with Project plus Other Cumulative Projects, Buildout Year
- #12 Limonite Avenue @ Eastvale Gateway – Buildout Year (PM peak hour only)

Table 1: Intersection LOS Analysis Summary

	Intersection[1]	Traffic Control[2]		Peak Hour	Exist-ing[3]	Phase 1[3,4]			Phase 2[3,4]			Phase 3[3,4]			Buildout[3,4]	
		Existing	Proposed			NP	WP	OCP	NP	WP	OCP	NP	WP	OCP	NP	WP
1	Bellegrave Ave @ Hamner Ave	Signal	Signal	AM	B	B	**B**	B	B	**B**	B	B	**B**	B	B	**B**
				PM	*B*	*B*	***B***	*C*	*B*	***B***	*C*	*B*	***B***	*C*	*B*	***C***
2	Bellegrave Ave @ Pats Ranch Rd	OWSC	Signal	AM	B	B	**B**	B	B	**B**	B	B	**B**	C	B	**B**
				PM	*C*	*C*	***D***	*D*	*C*	***C***	*C*	*D*	***B***	*B*	*E*	***B***
3	Bellegrave Ave @ Wineville Ave	Signal	Signal	AM	B	B	**B**	B	B	**B**	B	B	**B**	B	B	**B**
				PM	*B*	*B*	***B***	*B*	*B*	***B***	*B*	*B*	***B***	*B*	*C*	***C***
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	Signal	AM	C	C	**C**	C	C	**C**	C	C	**C**	C	C	**C**
				PM	*B*	*B*	***B***	*B*	*B*	***B***	*B*	*B*	***B***	*B*	*B*	***B***
5	Bellegrave Ave @ Etiwanda Ave	Signal	Signal	AM	D	D	**D**	D	D	**D**	D	D	**D**	D	D	**D**
				PM	*D*	*D*	***D***	*D*	*D*	***D***	*D*	*D*	***D***	*D*	*D*	***D***
6	Shearwater Dr @ Pats Ranch Rd	N/A	Round-about	AM	*N/A*	*N/A*			*N/A*	**A**	A	*N/A*	**A**	A	*N/A*	**A**
				PM						***A***	*A*		***A***	*A*		***A***
7	Shearwater Dr @ Wineville Ave	OWSC	OWSC	AM	B	B	**B**	B	B	**B**	B	B	**B**	B	B	**B**
				PM	*C*	*C*	***C***	*C*	*C*	***C***	*C*	*C*	***C***	*C*	*C*	***C***
8	Park Center Dr @ Pats Ranch Rd	OWSC	Round-about	AM	A	A	**A**	A	A	**A**	A	A	**A**	A	A	**A**
				PM	*A*	*A*	***A***	*A*	*A*	***A***	*A*	*A*	***A***	*A*	*B*	***A***
9	Park Center Dr @ Wineville Ave	Signal	Signal	AM	B	B	**C**	C	B	**C**	C	B	**B**	B	B	**B**
				PM	*B*	*B*	***B***	*B*	*B*	***B***	*B*	*B*	***B***	*B*	*B*	***B***
10	Boca Pl @ Pats Ranch Rd	OWSC	Round-about	AM	A	A	**A**	A	A	**A**	A	A	**A**	A	A	**A**
				PM	*A*	*A*	***A***	*A*	*A*	***A***	*A*	*A*	***A***	*A*	*B*	***A***
11	Limonite Ave @ Hamner Ave	Signal	Signal	AM	C	C	**C**	C	C	**C**	C	C	**C**	C	D	**E**
				PM	*C*	*D*	***D***	*D*	*D*	***D***	*D*	*D*	***D***	*E*	*E*	***E***
12	Limonite Ave @ Eastvale Gateway	Signal	Signal	AM	C	C	**C**	C	C	**C**	C	C	**C**	C	C	**C**
				PM	*D*	*D*	***D***	*D*	*D*	***D***	*D*	*D*	***D***	*D*	*E*	***E***
13	Limonite Ave @ I-15 SB	Signal	Signal	AM	A	A	**A**	B	A	**A**	B	A	**A**	B	B	**B**
				PM	*B*	*B*	***B***	*C*	*B*	***B***	*C*	*B*	***B***	*C*	*C*	***C***
14	Limonite Ave @ I-15 NB	Signal	Signal	AM	A	A	**A**	B	A	**B**	B	A	**B**	B	B	**B**
				PM	*B*	*B*	***B***	*B*	*B*	***B***	*B*	*B*	***B***	*B*	*B*	***C***
15	Limonite Ave @ Pats Ranch Rd	Signal	Signal	AM	C	C	**C**	C	C	**C**	C	C	**C**	C	C	**D**
				PM	*C*	*C*	***C***	*C*	*C*	***C***	*D*	*C*	***D***	*D*	*D*	***D***
16	Pats Ranch Rd @ Apartments Dwy	Does Not Exist	OWSC	AM	*N/A*	*N/A*	**B**	B	*N/A*	**C**	C	*N/A*	**C**	C	*N/A*	**C**
				PM			***C***	*C*		***C***	*C*		***C***	*C*		***D***

[1] Intersection #6 (Shearwater Dr @ Pats Ranch Rd) has no vehicle right-of-way conflicts or traffic control in the existing condition.

[2] OWSC = one-way stop control

3 Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

[4] NP = no project, WP = with project, OCP = plus other cumulative projects

X = LOS falls below minimum

Roadway Segment Level of Service

All study roadway segments are expected to operate at or above the minimum acceptable LOS standard in all study scenarios, including the addition of cumulative project traffic and the proposed project, as well as in the future buildout year.

Traffic Signal Warrants

The California Manual on Uniform Traffic Control Devices (CA MUTCD) defines warrant guidelines for the installation of new traffic signals. In this study, no unsignalized intersection meets the traffic signal warrant guideline for peak-hour traffic in any study scenario.

Proposed Improvements

Project Features

Project access is proposed via four driveways along Pats Ranch Road: one each at Shearwater Drive, Park Center Drive, and Boca Place as well as one driveway south of Boca Place exclusively for the proposed apartment complex. The project proposes to construct roundabouts at the existing intersections of Pats Ranch Road at Shearwater Drive, Park Center Drive, and Boca Place. The apartments driveway is proposed to be controlled by one-way stop. The project is also proposing to complete the Pats Ranch Road connection between Bellegrave Avenue and Shearwater Drive and construct a new traffic signal at the intersection of Bellegrave Avenue at Pats Ranch Road. In addition, the project proposes to improve the southbound approach of Pats Ranch Road at Limonite Avenue to provide one exclusive left-turn lane, one shared through/right lane, and one exclusive right-turn lane. The roadway improvements along Pats Ranch Road are to include roadside features such as curbs, gutters, sidewalks, and landscaped parkways.

Only the proposed roundabouts on Pats Ranch Road at Park Center Drive and Boca Place are proposed to be constructed with Phase 1, with associated roadway improvements between the two intersections and south to Limonite Avenue. The proposed roundabout for Pats Ranch Road at Shearwater Drive and the Pats Ranch Road connection between Bellegrave Avenue and Shearwater Drive are proposed to be constructed with Phase 2, while the proposed traffic signal for the intersection of Bellegrave Avenue and Pats Ranch Road is proposed to be constructed with Phase 3.

Intersection Improvements

The intersection of Limonite Avenue and Hamner Avenue is expected to operate below the minimum acceptable LOS in the Project Phase 3 Opening Day plus Other Cumulative Projects as well as in the General Plan buildout year, with and without the project. It is recommended that the traffic signal timing be revised to include a right-turn overlap phase for the northbound right turn.

Roadway Improvements

As detailed above, all study roadway segments are expected to operate at or above the minimum acceptable LOS standard in all study scenarios. Therefore, no roadway improvements are recommended for traffic operational purposes.

II. INTRODUCTION

Study Objectives

This study evaluates the potential effects on traffic operation from the proposed Vernola Ranch Specific Plan east of the Interstate 15 (I-15) freeway between Bellegrave Avenue and Limonite Avenue, along the west side of Pats Ranch Road in the City of Jurupa Valley, California. The study objectives include:

- Document existing traffic conditions (2022) in the vicinity of the proposed project;
- Determine the expected project traffic;
- Evaluate opening-day traffic scenarios, including project phasing and cumulative projects;
- Evaluate horizon year traffic scenarios;
- Determine if the LOS required by the City of Jurupa Valley and California Department of Transportation (Caltrans) will be maintained within the study area,
    - if not, determine the mitigation measures needed to maintain the required LOS; and
- Evaluate traffic signal warrants for unsignalized study intersections.

Prior to preparing this study, the City of Jurupa Valley approved the study scope (**Appendix A**).

Study Area

The study area (**Figure 1**) is comprised of intersections (**Table 2**) and roadway segments (**Table 3**) that may be affected by project traffic, per the project scoping agreement.

Table 2: Study Intersections

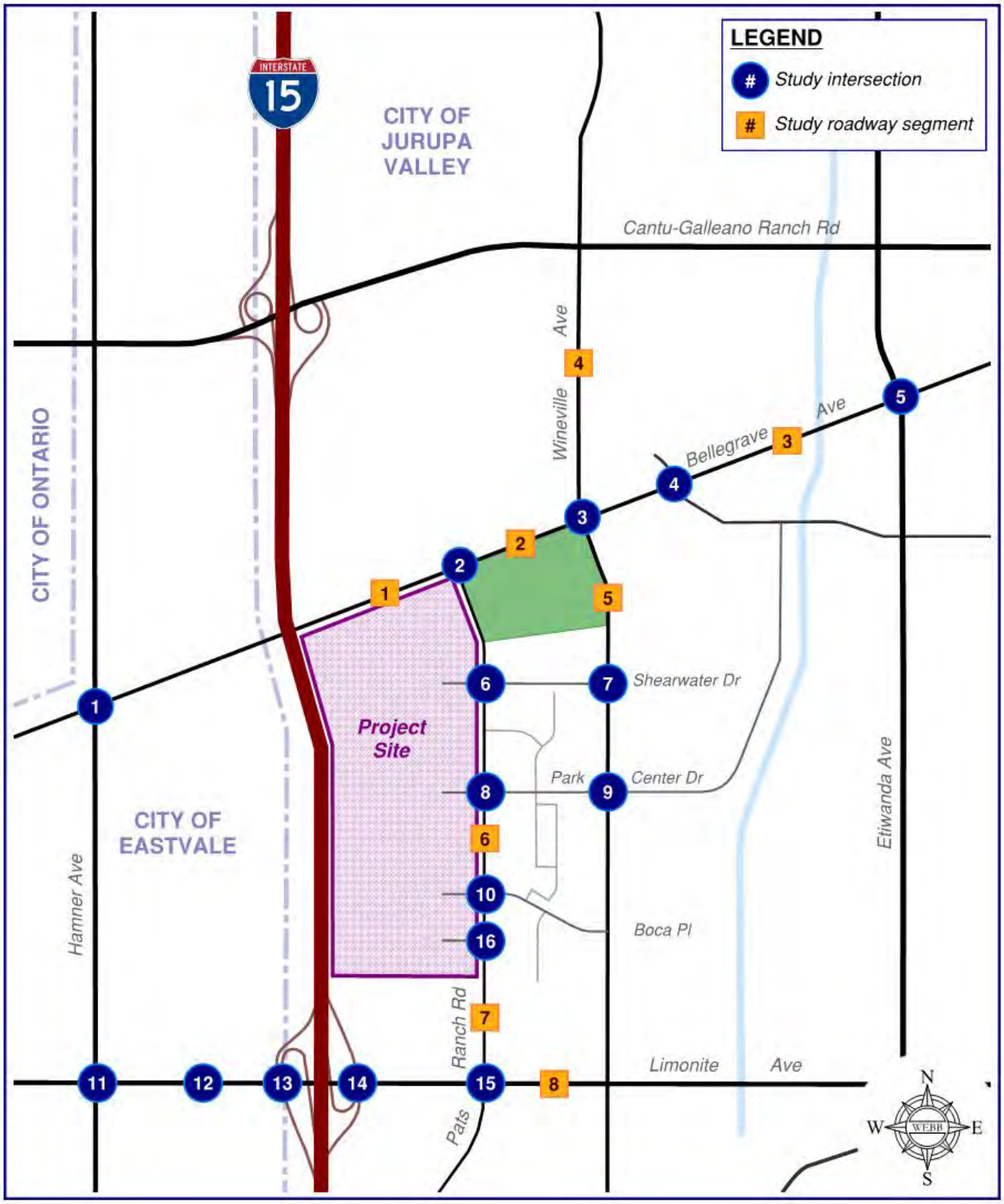
	Intersection	Agency	Traffic Control[1]	
			Existing	Proposed
1	Bellegrave Ave @ Hamner Ave	Eastvale	Signal	Signal
2	Bellegrave Ave @ Pats Ranch Rd	Jurupa Valley	OWSC	Signal
3	Bellegrave Ave @ Wineville Ave	Jurupa Valley	Signal	Signal
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Jurupa Valley	Signal	Signal
5	Bellegrave Ave @ Etiwanda Ave	Jurupa Valley	Signal	Signal
6	Shearwater Dr @ Pats Ranch Rd	Jurupa Valley	N/A	Roundabout
7	Shearwater Dr @ Wineville Ave	Jurupa Valley	OWSC	OWSC
8	Park Center Dr @ Pats Ranch Rd	Jurupa Valley	OWSC	Roundabout
9	Park Center Dr @ Wineville Ave	Jurupa Valley	Signal	Signal
10	Boca Pl @ Pats Ranch Rd	Jurupa Valley	OWSC	Roundabout
11	Limonite Ave @ Hamner Ave	Eastvale	Signal	Signal
12	Limonite Ave @ Eastvale Gateway	Eastvale	Signal	Signal
13	Limonite Ave @ I-15 SB	Caltrans	Signal	Signal
14	Limonite Ave @ I-15 NB	Caltrans	Signal	Signal
15	Limonite Ave @ Pats Ranch Rd	Jurupa Valley	Signal	Signal
16	Pats Ranch Rd @ Apartments Dwy[2]	Jurupa Valley	Does Not Exist	OWSC

[1] Intersection traffic control measure. OWSC = one-way stop control
[2] Future proposed intersection

Table 3: Study Roadway Segments

#	Roadway	Limits	Roadway Classification	Existing # Lanes	Capacity
1	**Bellegrave Ave**	w/o Pats Ranch Rd	Arterial	2	18,000
2		Pats Ranch Rd - Wineville Ave	Major	4	34,100
3		e/o Wineville Ave	Major	4	34,100
4	**Wineville Ave**	n/o Bellegrave Ave	Major	4	34,100
5		s/o Bellegrave Ave	Major	4	34,100
6	**Pats Ranch Rd**	Bellegrave Ave - Boca Pl	Collector	2	12,500
7		Boca Pl - Limonite Ave	Collector	2	12,500
8	**Limonite Ave**	Pats Ranch Rd - Wineville Ave	Urban Arterial	6	56,300

Figure 1: Study Area



Project Location and Description

The proposed project site is located south of Bellegrave Avenue, between the I-15 freeway and Pats Ranch Road in the City of Jurupa Valley along its border with the City of Eastvale in the County of Riverside. The site is currently vacant and zoned as One Family Dwelling and Industrial Park with Specific Plan overlay, which the project is proposing to change to the Vernola Ranch Specific Plan.

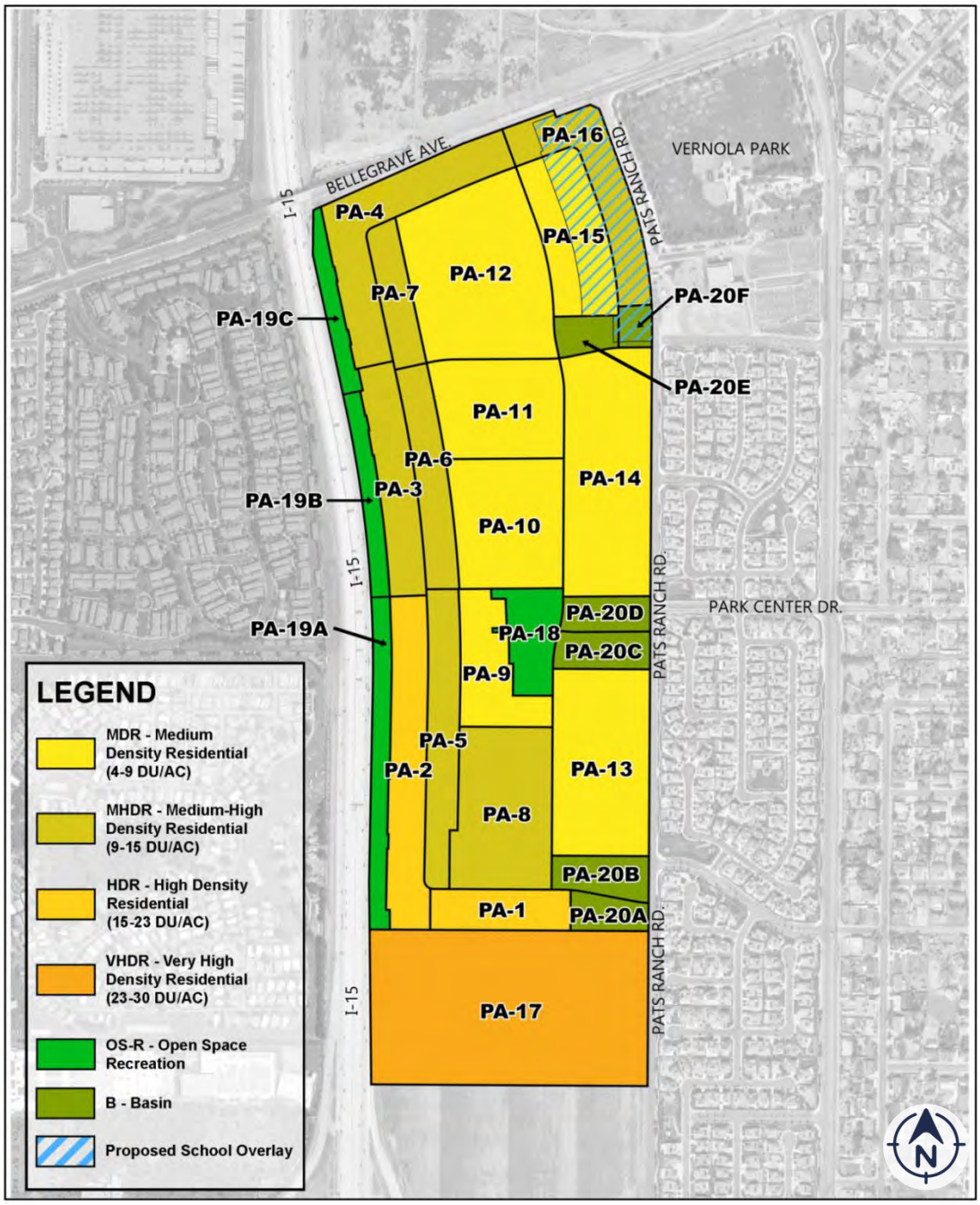
The project proposes to construct 1,576 homes (604 apartments and 972 single-family homes) and an elementary school, along with recreation and open space areas, an internal street network, and street improvements along Pats Ranch Road (**Figure 2**, also **Appendix B**). The project is divided into 20 Planning Areas by land use, to be built in three phases (**Table 4**).

Table 4: Proposed Project Planning Areas

PA[1]	Phase	Designated Land Use	ITE Land Use[2]		Size[3]
1	1	HDR	***215***	*Single-Family Attached Housing*	52 DU
2	1	MHDR	***215***	*Single-Family Attached Housing*	128 DU
3	1	MHDR	***215***	*Single-Family Attached Housing*	73 DU
4	2	MHDR	***215***	*Single-Family Attached Housing*	109 DU
5	1	MHDR	***215***	*Single-Family Attached Housing*	47 DU
6	2	MHDR	***215***	*Single-Family Attached Housing*	48 DU
7	2	MHDR	***215***	*Single-Family Attached Housing*	34 DU
8	1	MHDR	***215***	*Single-Family Attached Housing*	98 DU
9	1	MDR	***210***	*Single-Family Detached Housing*	26 DU
10	2	MDR	***210***	*Single-Family Detached Housing*	42 DU
11	2	MDR	***210***	*Single-Family Detached Housing*	55 DU
12	2	MDR	***210***	*Single-Family Detached Housing*	77 DU
13	1	MDR	***210***	*Single-Family Detached Housing*	63 DU
14	1	MDR	***210***	*Single-Family Detached Housing*	96 DU
15	2	MDR[4]	***215***	*Single-Family Attached Housing*	24 DU
16	3	School	***520***	*Elementary School*	700 STU
17	1	VHDR	***220***	*Multifamily Housing (Low-Rise)*	604 DU
18	*N/A*	OS-R	*N/A*		
19	*N/A*	OS-R	*N/A*		
20	*N/A*	Basin	*N/A*		
Project Total					**1,576 DU**

[1] PA = Planning Area
[2] Land use codes per ITE Trip Generation Manual, 11th Ed (2021)
[3] DU = dwelling unit, STU = student
[4] School overlay zone includes portions of Planning Areas 15 and 16.

Figure 2: Proposed Project Land Use Plan



School Overlay Zone

An elementary school overlay zone is proposed within most of Planning Areas 15 and 16 (see Figure 2). The school is proposed to be built for a capacity of 700 students and would be a part of the Jurupa Unified School District (JUSD). Should JUSD choose to construct the elementary school, no planned residential units would be removed from the project; rather, all homes are to be built before the school, in Phase 2, leaving Phase 3 construction to be the school only. Therefore, this study includes one proposed project plan which includes the school, as it would be the highest project traffic volumes.

Project Access and Circulation

Figure 3 shows the proposed project circulation network, with access proposed via four driveways along Pats Ranch Road: one each at Shearwater Drive, Park Center Drive, and Boca Place as well as one driveway south of Boca Place exclusively for the proposed apartments. The project proposes to construct roundabouts at the existing intersections of Pats Ranch Road at Shearwater Drive, Park Center Drive, and Boca Place, while the apartments driveway is to be controlled by one-way stop. The project is also proposing to complete the Pats Ranch Road connection between Bellegrave Avenue and Shearwater Drive and construct a new traffic signal at the intersection of Bellegrave Avenue and Pats Ranch Road. The proposed intersection geometrics at the study intersections along Pats Ranch Road are shown in **Figure 4**.

Figure 3: Project Traffic Circulation

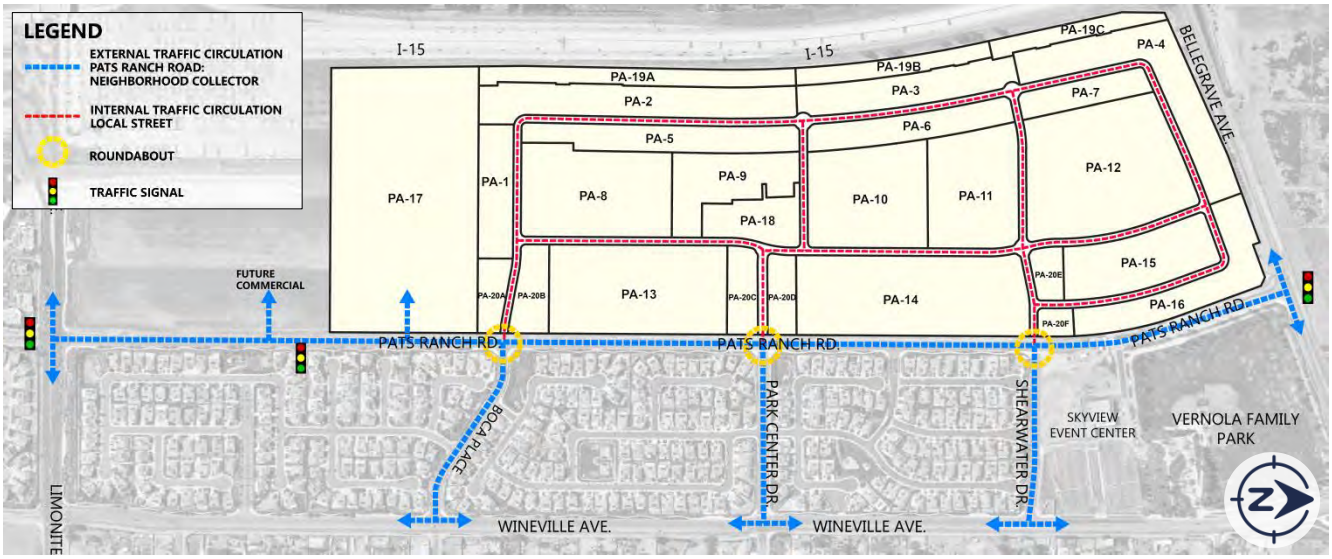
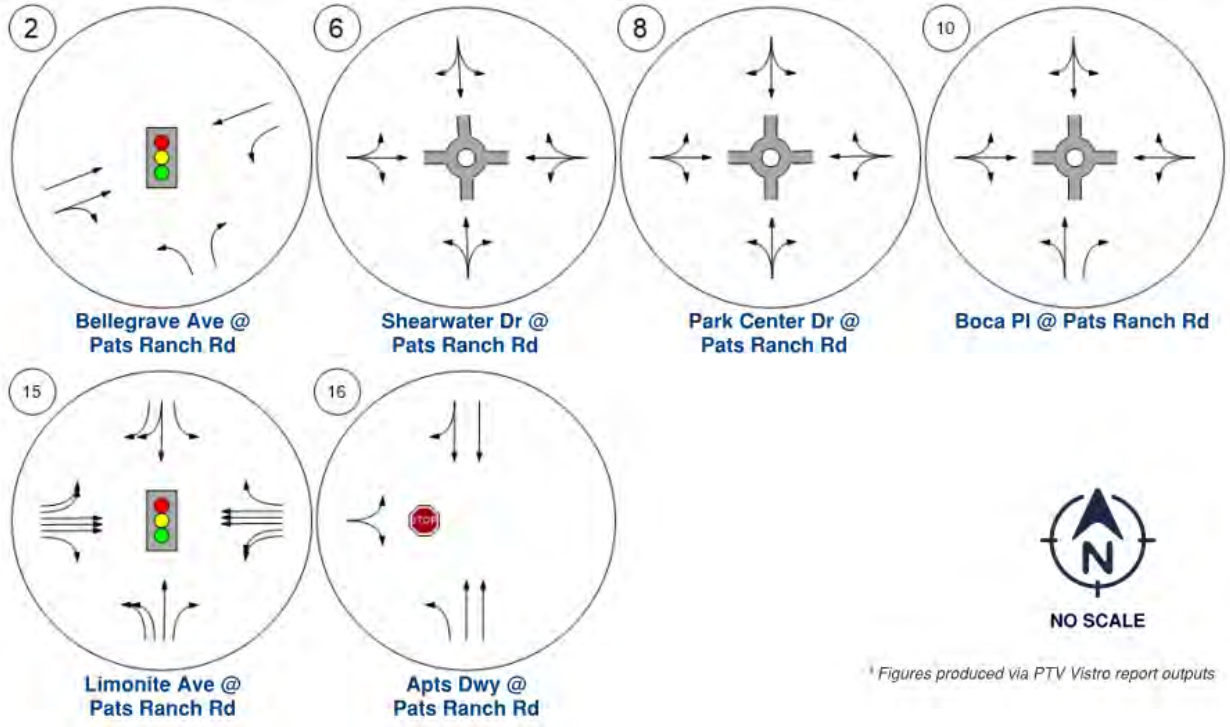


Figure 4: Proposed Intersection Geometrics – Pats Ranch Road



[1] *Figures produced via PTV Vistro report outputs*

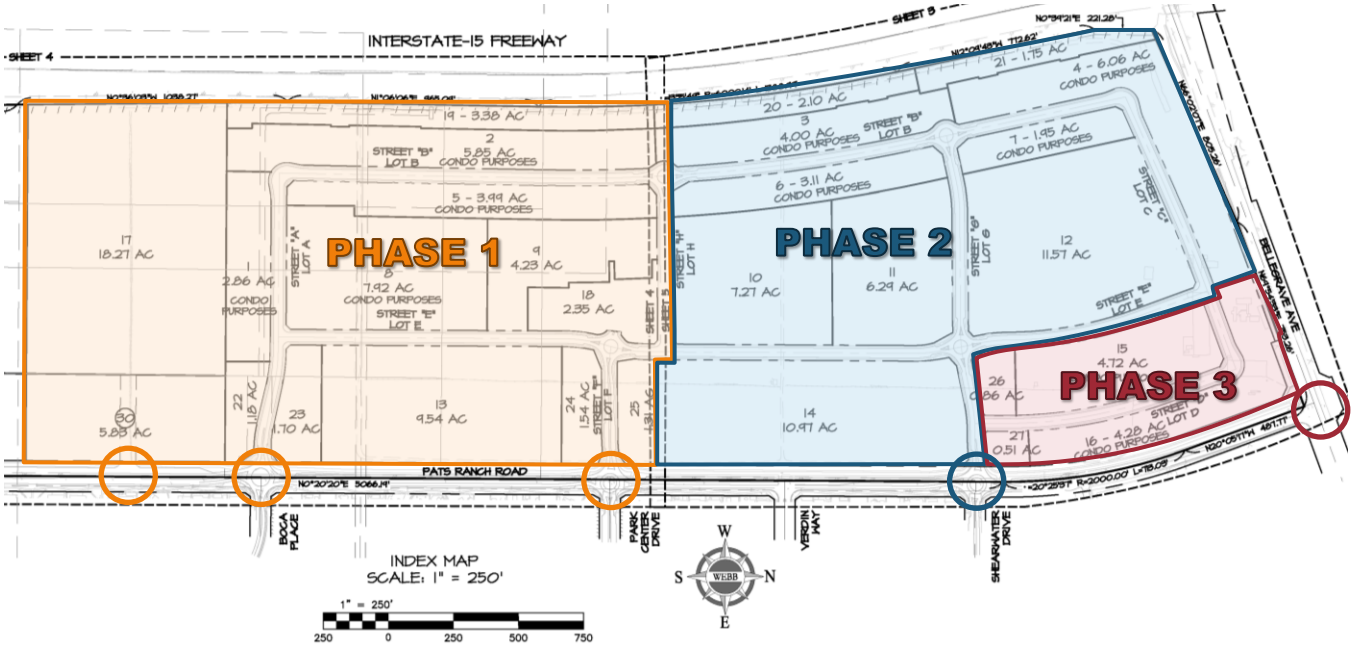
As described in the Vernola Ranch Specific Plan (VRSP), the local street network will provide access from Pats Ranch Road to each planning area and the individual lots therein. The primary local roadway is a neighborhood collector street that loops around the entire project. The standard interior roadway right-of-way is 60 feet with two 18-foot travel lanes, 5-foot sidewalks, and 5-foot parkways.

The VRSP also identifies traffic calming features which may be incorporated throughout the project to slow vehicular traffic and support pedestrian-friendly neighborhoods, including medians, bulb-outs, and enhanced crosswalks. As discussed, the project would construct three roundabouts along Pats Ranch Road at the project access points to slow down vehicles, which will improve pedestrian and bicyclist safety.

Proposed Project Phasing

This study analyzes the project construction in three proposed phases (**Figure 5**).

Figure 5: Proposed Project Phasing



Phase 1 is expected to be completed by 2027 and consists of the apartments in Planning Area 17 as well as 583 single-family homes, Along Pats Ranch Road, Phase 1 would construct frontage improvements south of Boca Place and the new project driveway for Planning Area 17, as well as the proposed roundabouts at Park Center Drive and Boca Place. Within the project site, Phase 1 would construct Street A, connecting to Boca Place; Street F, connecting to Park Center Drive; Street H; and Streets B and E between Street A and Street H.

Phase 2 is expected to be completed by 2029 and consists of 389 single-family homes. Along Pats Ranch Road, Phase 2 would construct frontage improvements between Park Center Drive and Shearwater Drive as well as the proposed roundabout at Shearwater Drive. Within the project site, Phase 2 would construct Street G, connecting to Shearwater Drive; the remainder of Streets B and E; and Street C between Street B and Street E.

Phase 3 is expected to be completed by 2031 and would construct an elementary school with a capacity for 700 students. Along Pats Ranch Road, Phase 3 would construct the roadway connection between Bellegrave Avenue and Shearwater Drive as well as the proposed traffic signal and intersection improvements at the

intersection with Bellegrave Avenue. Within the project site, Phase 3 would construct Street D and the remainder of Street C. All proposed project features, including active transportation improvements, are expected to be completed with the project Phase 3.

Active Transportation

As described in the VRSP, the proposed project pedestrian network includes both a local pedestrian trail along Pats Ranch Road and a community trail**.** The local trail is planned along the west side of Pats Ranch Road, consisting of a wide parkway area with a 6-foot meandering sidewalk, while the community trail would run through the Vernola Ranch Paseo along the western boundary of the project. A two-way Class I bike path will be provided along the west side of Pats Ranch Road for the exclusive use of bicycles, physically separated from motor traffic. The pedestrian trail, community trail, and bike path are proposed to be completed in sections with the corresponding on-site roadway construction, Planning Area development, and Pats Ranch Road frontage improvements per project phase. All active transportation trails and paths are expected to be fully completed with the project Phase 3 construction.

Public Transit

Existing Riverside Transit Agency (RTA) services along Limonite Avenue and Pats Ranch Road are accessible via the pedestrian and bicycle trail system**.** The closest bus stop is located at the intersection of Limonite Avenue and Pats Ranch Road.

Analysis Methodology

Per the City of Jurupa Valley Traffic Impact Analysis Guidelines (2020), this study uses methodology from the most recent Transportation Research Board *Highway Capacity Manual* (HCM, 6th edition, 2016) to analyze traffic operations via Level of Service (LOS) rankings for the following scenarios:

- Existing conditions (2022)
- Project Phase 1 (2027)
    - Opening Year Conditions without Project
    - Opening Year Conditions with Project
    - Opening Year Conditions with Project plus Other Cumulative Projects
- Project Phase 1+2 (2029)
    - Opening Year Conditions without Project
    - Opening Year Conditions with Project
    - Opening Year Conditions with Project plus Other Cumulative Projects
- Project Phase 1+2+3 (2031)
    - Opening Year Conditions without Project
    - Opening Year Conditions with Project
    - Opening Year Conditions with Project plus Other Cumulative Projects
- General Plan Buildout (2040)
    - Future Buildout without Project
    - Future Buildout with Project

Per the HCM, LOS rankings at intersections use a scale ranging from LOS A to LOS F based on average control delay in seconds per vehicle, or how long a vehicle typically waits before proceeding through the

intersection. This delay is compared with free-flow conditions, and includes slowing, queuing, and stopping at the intersection. This study uses Vistro traffic modeling software to evaluate intersection LOS.

For signalized and all-way stop-controlled intersections, LOS rankings are based on the average control delay of all vehicles in the intersection. For two-way or side-street stop-controlled intersections, LOS rankings are based on the highest average control delay of all controlled movements. **Tables 5 and 6** show the LOS delay thresholds for signalized and unsignalized intersections, respectively.

Table 5: Level of Service at Signalized Intersections

Control Delay (sec/vehicle)	Level of Service	Description
0 - 10	A	Minimal delay and primarily free-flow operation. Most vehicles do not stop or only stop for a brief amount of time.
10 - 20	B	Short delay and reasonably unimpeded operation. Many vehicles do not stop or only stop for a short time. More vehicles stop than with LOS A.
20 - 35	C	Moderate delay and stable operation. Individual cycle failures may begin to appear. The number of vehicles stopping is significant.
35 - 55	D	Less stable operation; small increases in vehicles may cause substantial increases in delay. Many vehicles stop, individual cycle failures noticeable.
55 - 80	E	Significant delay and unstable operation. Most vehicles stop and individual cycle failures are frequent.
80 +	F	Considerable delay and extensive queuing. Almost all vehicles stop and most cycles fail to clear the queue.

Source: Transportation Research Board, Highway Capacity Manual 6 (2016)

Table 6: Level of Service at Unsignalized Intersections

Control Delay (sec/vehicle)	Level of Service	Description
0 - 10	A	Minimal delay. Usually no conflicting traffic.
10 - 15	B	Short delay. Occasionally some conflicting traffic.
15 - 25	C	Noticeable delay, but not inconveniencing. Usually some conflicting traffic.
25 - 35	D	Noticeable delay and irritating. A significant amount of conflicting traffic. Increased likelihood of risk taking.
35 - 50	E	Significant delay approaching tolerance level. Lots of conflicting traffic, with some gaps of suitable size. Risk taking behavior likely.
50 +	F	Considerable delay exceeding tolerance level. Lots of conflicting traffic, with not enough gaps of suitable size. High likelihood of risk taking.

Source: Transportation Research Board, Highway Capacity Manual 6 (2016)

Level of Service Standards

Per the City of Jurupa Valley Traffic Impact Analysis Guidelines (2020), the minimum acceptable LOS on roadways and at intersections is **LOS D**. Per Caltrans District 8 Office of Intergovernmental Review, Community and Regional Planning, the minimum acceptable LOS at freeway ramps is **LOS D**.

Significant Impact and Mitigation Criteria

Per the City of Jurupa Valley Traffic Impact Analysis Guidelines (2020), the expected project traffic impacts at signalized intersections are considered significant and would require mitigation as follows:

a) The City's General Plan defines the minimum acceptable intersection LOS as LOS D. Any signalized study intersection operating at an acceptable LOS without project traffic in which the addition of project traffic causes the intersection to degrade to a LOS E or F shall identify improvements to improve operations to LOS D or better. Any signalized study intersection that is operating at LOS E or F without project traffic where the project increases delay by 3.0 or more seconds shall identify improvements to offset the increase in delay.

Consistent with the acceptable LOS for the Jurupa Valley General Plan, the City considers the following criteria at unsignalized intersections:

An operational improvement would be required if the study determines that either section a) or both sections b) and c) occur:

a) The addition of project related traffic causes the intersection to degrade from an acceptable LOS D or better to LOS E or F, OR
b) The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at LOS E or F, AND
c) The intersection meets the peak hour traffic signal warrant after the addition of project traffic.

If the conditions above are satisfied, improvements should be identified that achieve LOS D or better for case a) above or to pre-project LOS and delay for case b) above.

III. FUTURE PROJECTS TRAFFIC

To estimate project traffic volumes, project trip generation first estimates the total project traffic during a typical weekday and its peak hours. Then, trip distribution identifies their origins and destinations in typical travel patterns, while traffic assignment allocates the project traffic to specific roadways and intersections.

Project Trip Generation

Trip Generation Rates

Trip generation represents the amount of traffic accessing a site, both inbound and outbound vehicle trips. Based on nationwide study data, the Institute of Transportation Engineers (ITE) *Trip Generation Manual* 11th Edition (2021) provides common trip generation characteristics by land use. Per the *Manual*, the expected project trip generation uses rates given by ITE Land Use Codes 210: Single-Family Detached Housing, 215: Single-Family Attached Housing, 220: Multifamily Housing (Low-Rise), and 520: Elementary School (**Table 7**).

Table 7: Trip Generation Rates

ITE Land Use Code[1]		Units[2]	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
220	Multifamily Housing (Low-Rise)	DU	**6.74**	0.096	0.304	**0.4**	0.321	0.189	**0.51**
215	Single-Family Attached Housing	DU	**7.2**	0.149	0.331	**0.48**	0.325	0.245	**0.57**
210	Single-Family Detached Housing	DU	**9.43**	0.182	0.518	**0.7**	0.592	0.348	**0.94**
520	Elementary School	STU	**2.27**	0.40	0.34	**0.74**	0.07	0.09	**0.16**

[1] ITE Trip Generation Manual 11th Ed, 2021
[2] DU = dwelling unit, STU = student

Trip Credits and Modal Split

Based on the project land uses, no pass-by trips are considered for this study. Based on the project distance from existing public transit stops, no project traffic reductions from transit use are considered in this study. This study also uses no project traffic reductions from active transportation modes such as bicycling and walking, as the trip generation rates used are calculated for vehicles only, per the ITE *Manual*. Furthermore, the project site is currently vacant, so no existing trip credits were deducted in this study.

It is assumed that the proposed elementary school would serve the surrounding neighborhoods, including those within the project. According to US Census Bureau data, on average there are 40.8 school-age children (6-17) in every 100 single-family owner households (**Table 8**). For the proposed 972 single-family homes in the project, it is expected that the majority would be occupied by the homeowner; therefore, nearly 400 school-age children are expected to live within the project single-family units, of which it is expected that approximately half may be of elementary school age. Therefore, a 20% internal capture trip credit is applied

to the school traffic volumes, or a conservative assumption that at least 140 students would live within the single-family portion of the project and use the internal roadway network to access the school site. The internal capture credit does not include the apartment portion of the project, as it is not connected to the internal roadway network and takes exclusive access from a separate driveway.

Table 8: School-Age Children

School-Age Children per 100 Households				
All Households	Single-Family Housing		Multi-Family Housing	
	Renters	*Owners*	*Renters*	*Owners*
39.0	60.7	40.8	22.6	10.8

Source: US Census Bureau 2019 American Community Survey microdata, tabulated by the National Multifamily Housing Council (NMHC). Updated 11/2020.
Note: School-age children are household members between the ages of 6-17.

Trip Generation

Project traffic volumes are developed by multiplying the trip generation rates by the project size and applying the appropriate trip credits. It is expected that the proposed project would generate 13,334 daily vehicle trips, with 1,202 trips in the AM peak hour and 1,086 trips in the PM peak hour (**Table 9**).

Table 9: Project Trip Generation

Project Portion	Land Use[1]	Size[2]	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Phase 1 (2026)									
Apartments	220	604 DU	4,071	58	184	**242**	194	114	**308**
Single-Family Attached Homes	215	398 DU	2,866	59	132	**191**	129	98	**227**
Single-Family Detached Homes	210	185 DU	1,745	34	96	**130**	110	64	**174**
Phase 1 Subtotal		***1,187 DU***	***8,682***	***151***	***412***	***563***	***433***	***276***	***709***
Phase 2 (2027)									
Single-Family Attached Homes	215	215 DU	1,548	32	71	**103**	70	53	**123**
Single-Family Detached Homes	210	174 DU	1,641	32	90	**122**	103	61	**164**
Phase 2 Subtotal		***389 DU***	***3,189***	***64***	***161***	***225***	***173***	***114***	***287***
Phase 3 (2028)[3]									
Elementary School	520	700 STU	1,589	280	238	**518**	52	60	**112**
Internal Trip Credit[3,4]	20%		-126	-56	-48	**-104**	-10	-12	**-22**
Phase 3 Subtotal			***1,463***	***224***	***190***	***414***	***42***	***48***	***90***
Project Total		**1,576 DU**	**13,334**	**439**	**763**	**1,202**	**648**	**438**	**1,086**

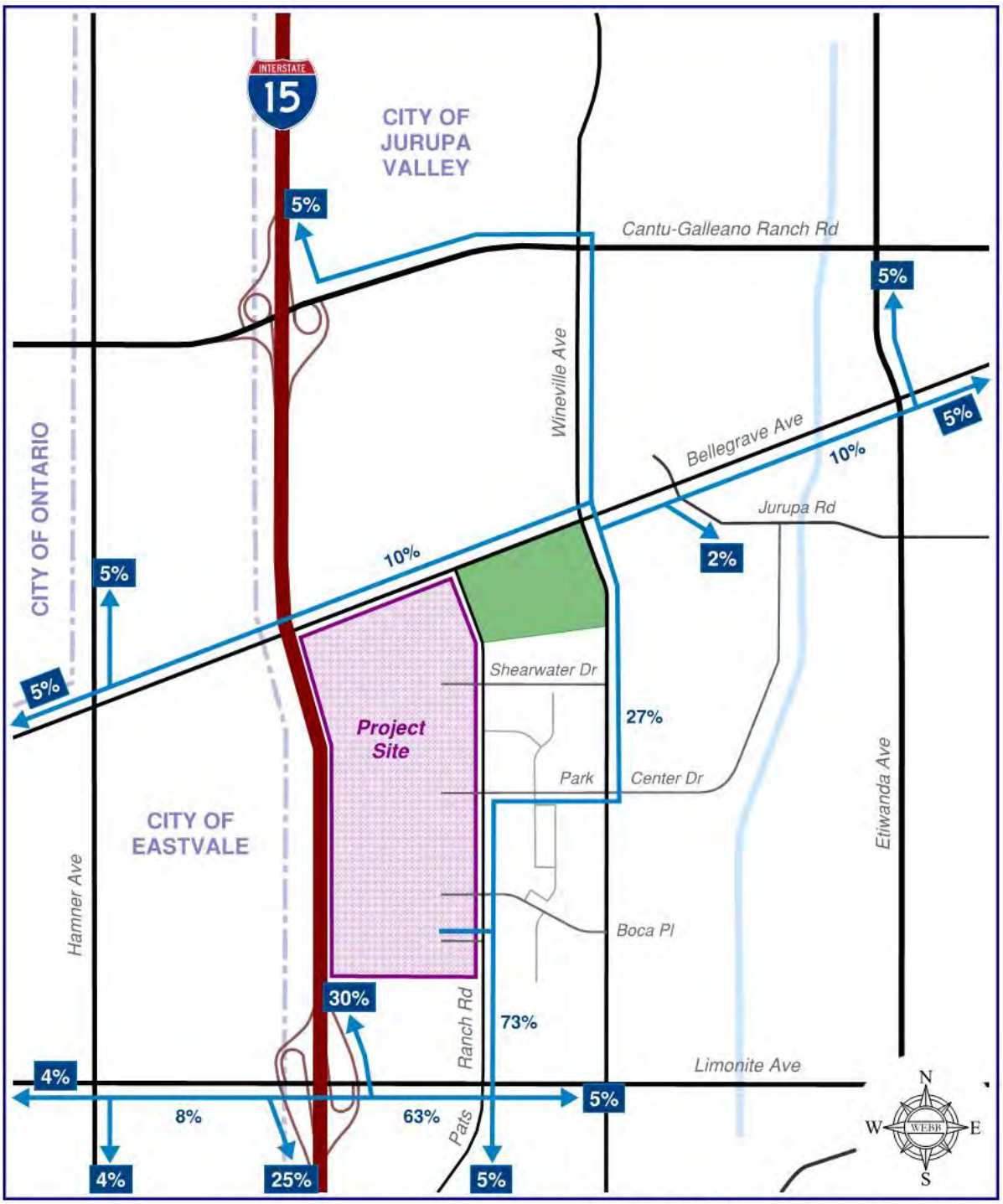
[1] Land use codes per ITE Trip Generation Manual, 11th Ed (2021)
[2] DU = dwelling unit, STU = student
[3] Elementary school internal capture rate based on 140 students living within Vernola Ranch SP single-family homes (PAs 1-15).
[4] Daily trip credit given by the total AM and PM peak-hour trip credits only.

Project Trip Distribution and Assignment

Trip Distribution

Trip distribution is based on the project's location, nearby land uses, and proximity to regional roadways and freeways. The proposed project trip distribution for the apartments, single-family homes, and elementary school are shown in **Figures 6-11** for each project phase.

Figure 6: Proposed Project Traffic Distribution – Apartments (Phase 1, 2)



Note: Pats Ranch Rd connection between Bellegrave Ave and Shearwater Dr is planned to be built in Phase 3 of the Project.

Figure 7: Proposed Project Traffic Distribution – Apartments (Phase 3)

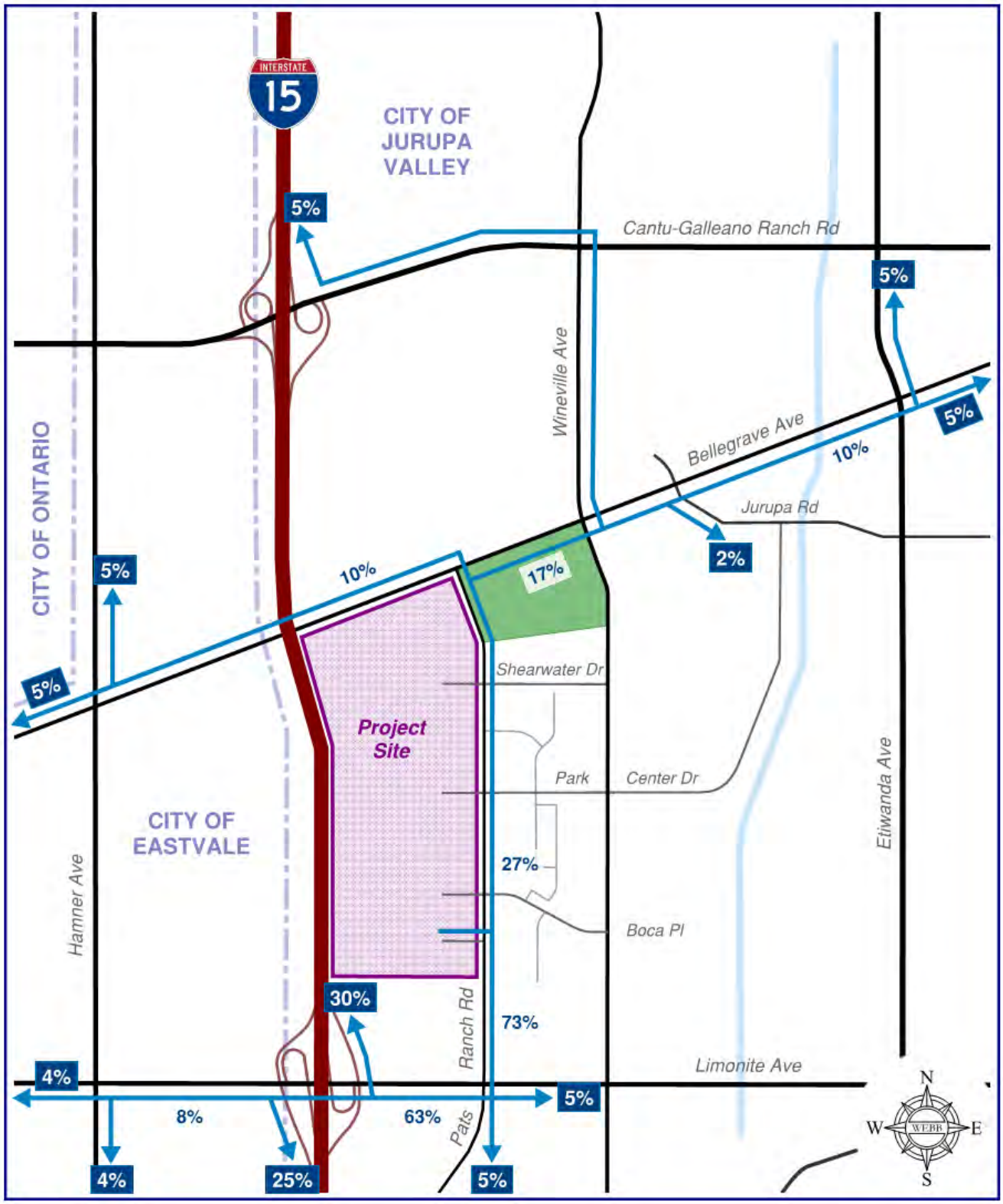
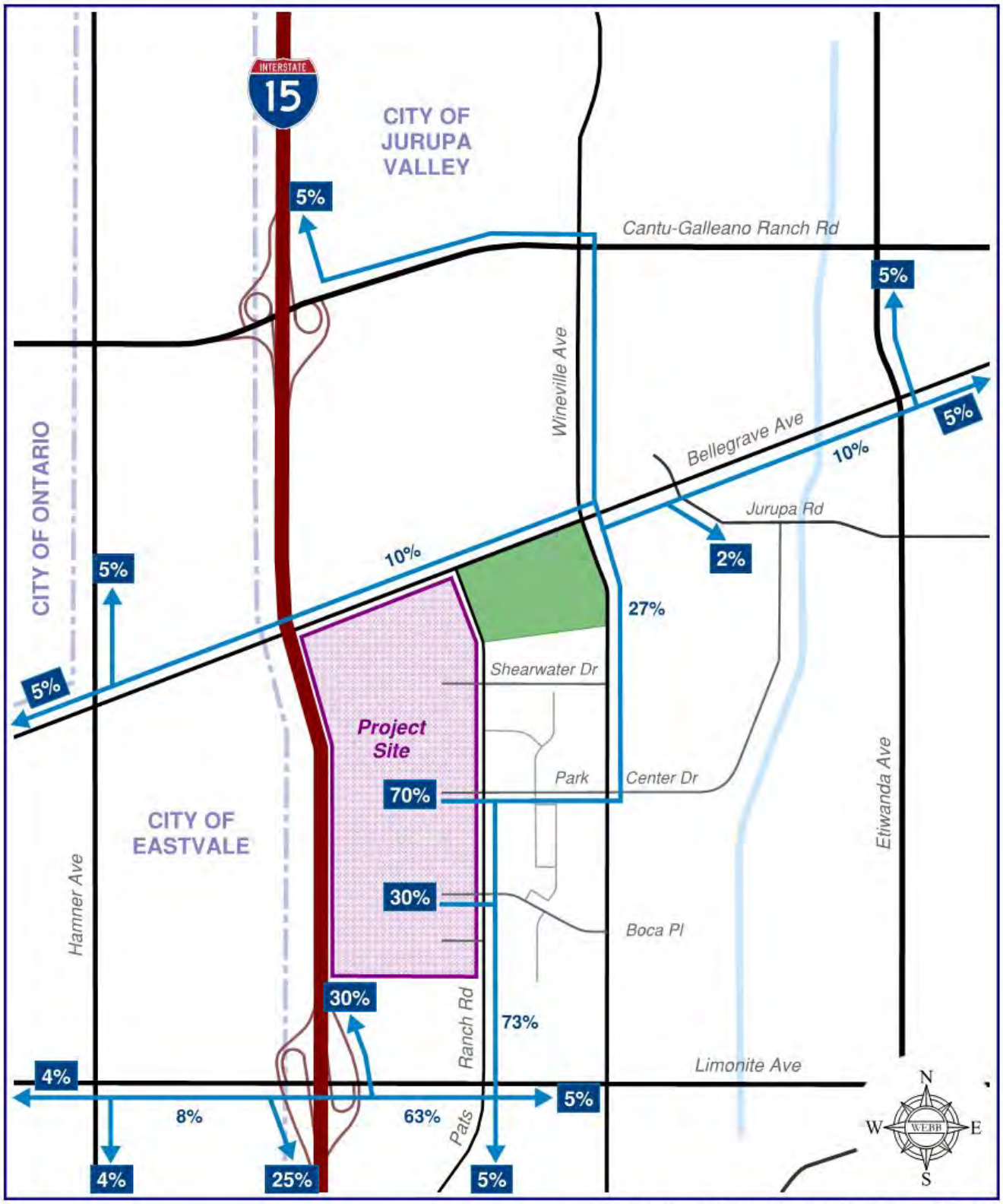
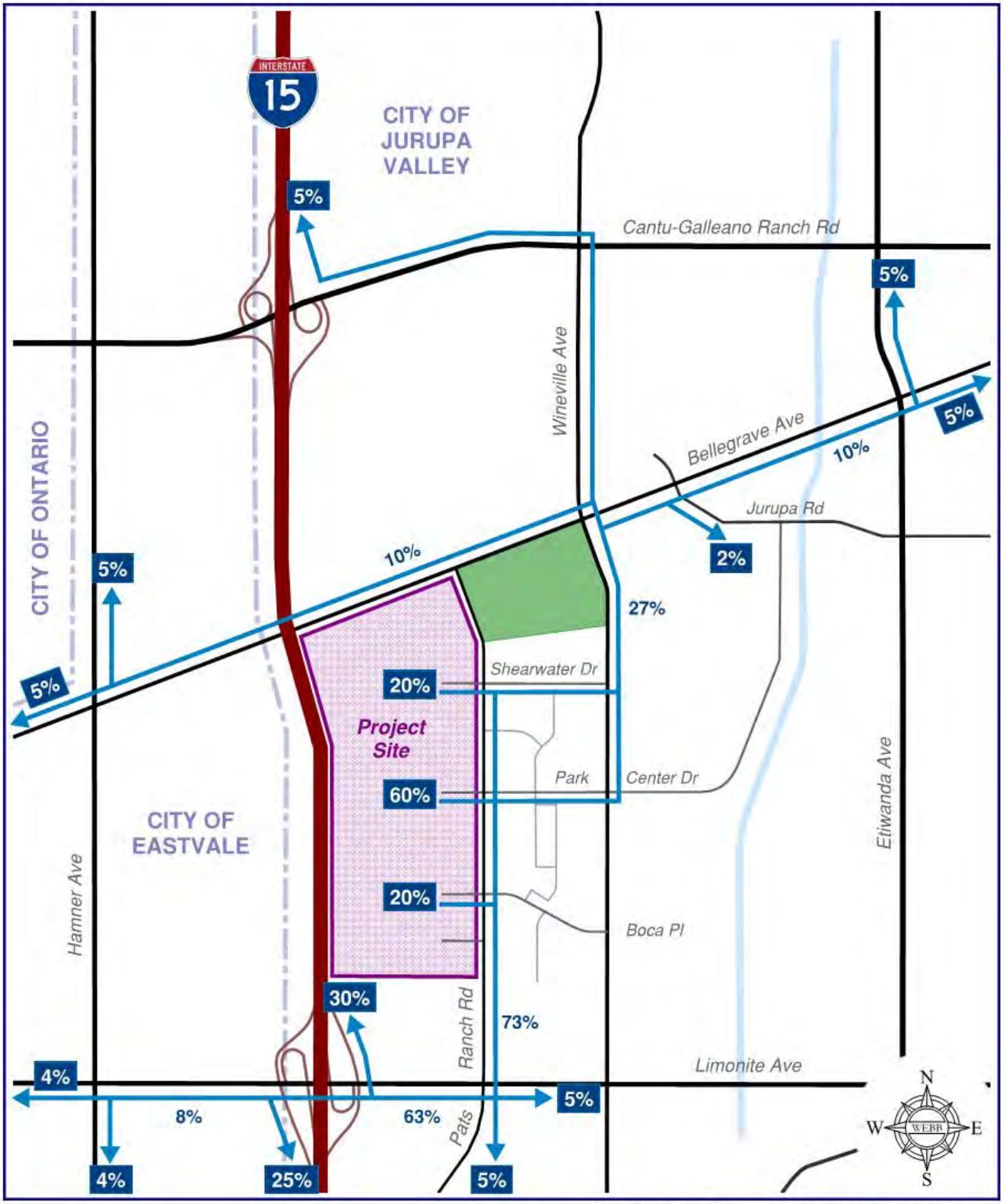


Figure 8: Proposed Project Traffic Distribution – Single-Family Homes (Phase 1)



Note: Pats Ranch Rd connection between Bellegrave Ave and Shearwater Dr is planned to be built in Phase 3 of the Project.

Figure 9: Proposed Project Traffic Distribution – Single-Family Homes (Phase 2)



Note: Pats Ranch Rd connection between Bellegrave Ave and Shearwater Dr is planned to be built in Phase 3 of the Project.

Figure 10: Proposed Project Traffic Distribution – Single-Family Homes (Phase 3)

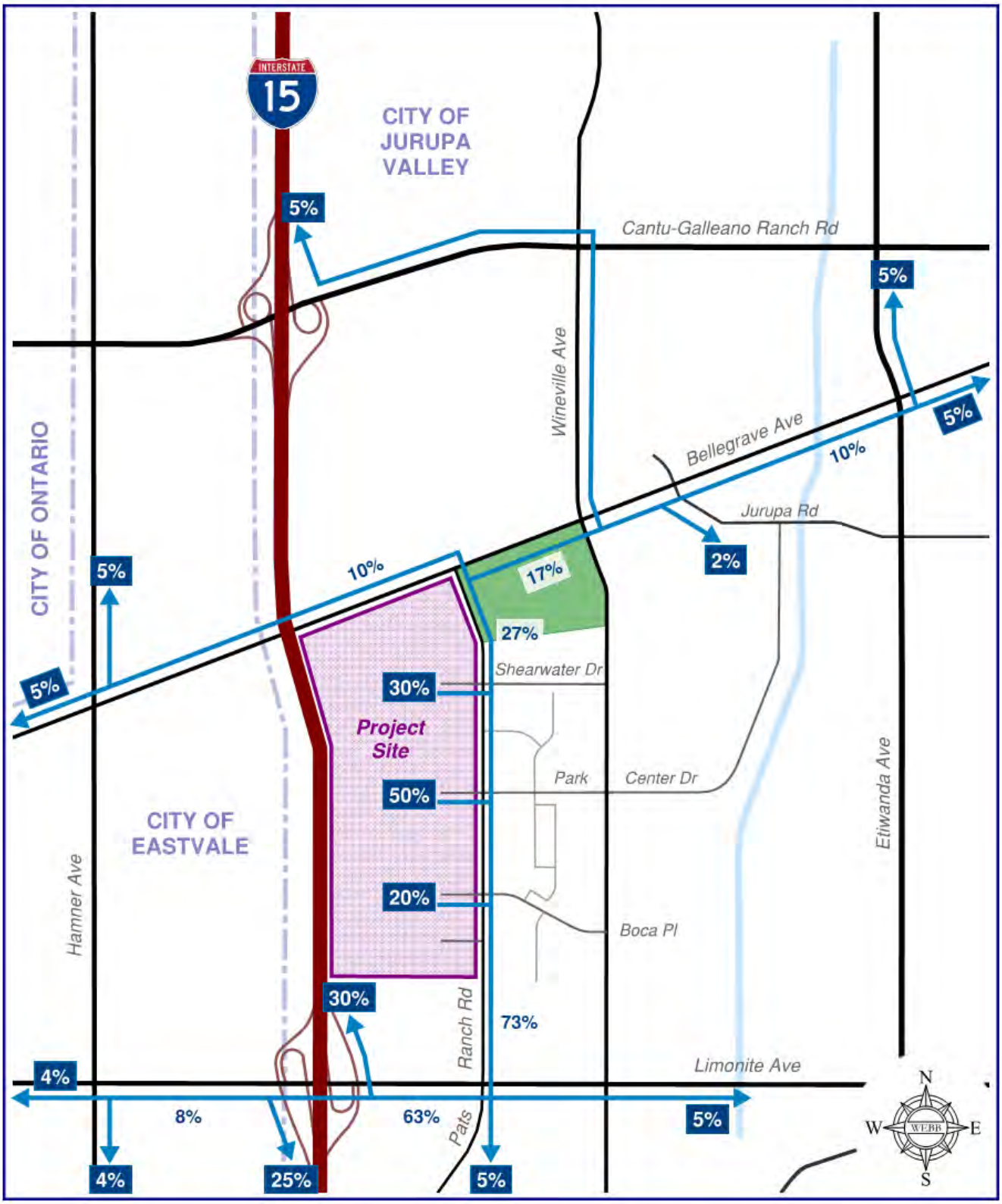
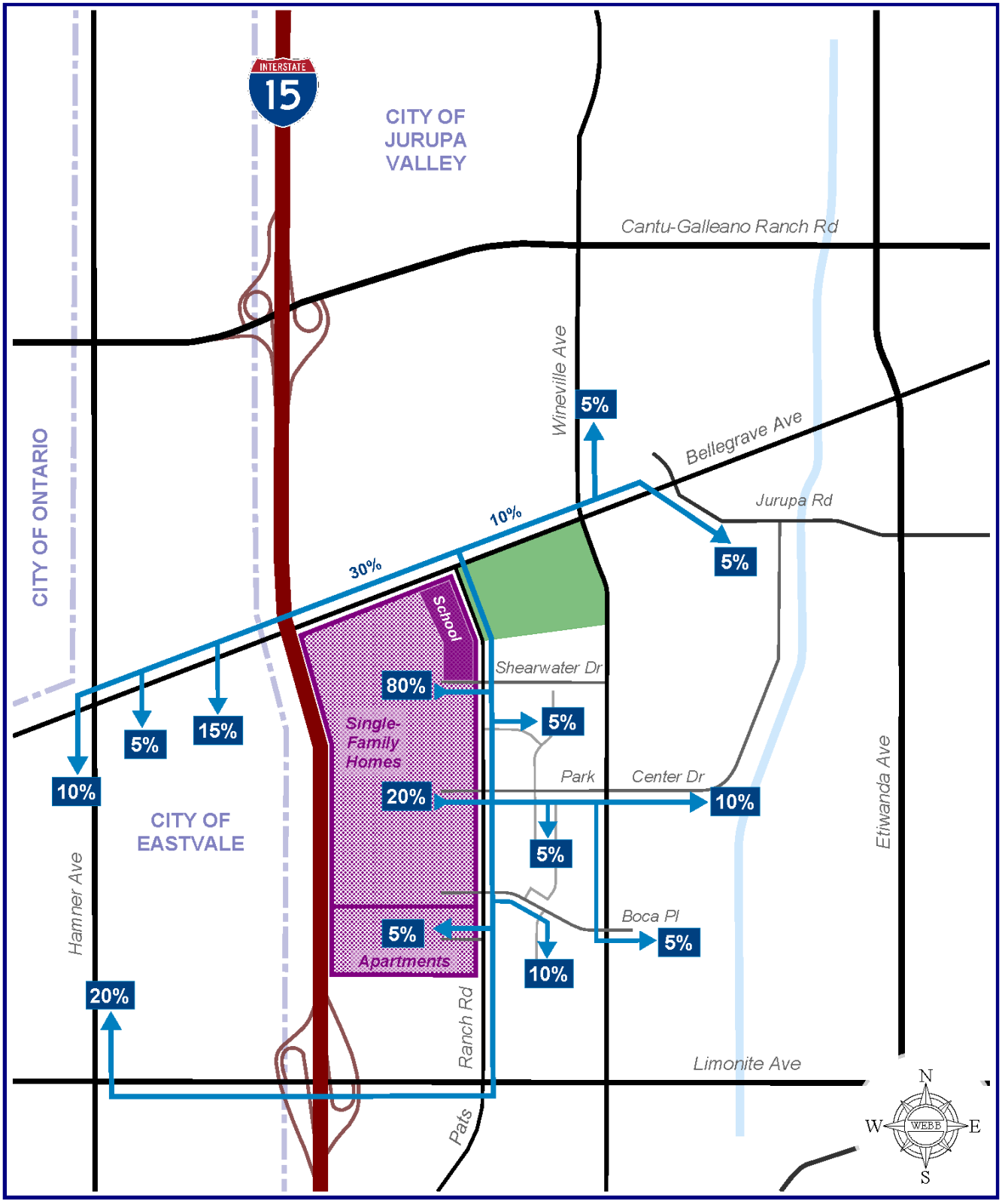


Figure 11: Proposed Project Traffic Distribution – Elementary School (Phase 3 Only)



Trip Assignment

Once the anticipated project trip generation is calculated, the trips are specifically assigned to roadways and intersections on the existing roadway network according to the trip distribution model. **Figures 12-14** show the project traffic volumes at each study intersection for each project phase.

Reference Map: Study Area

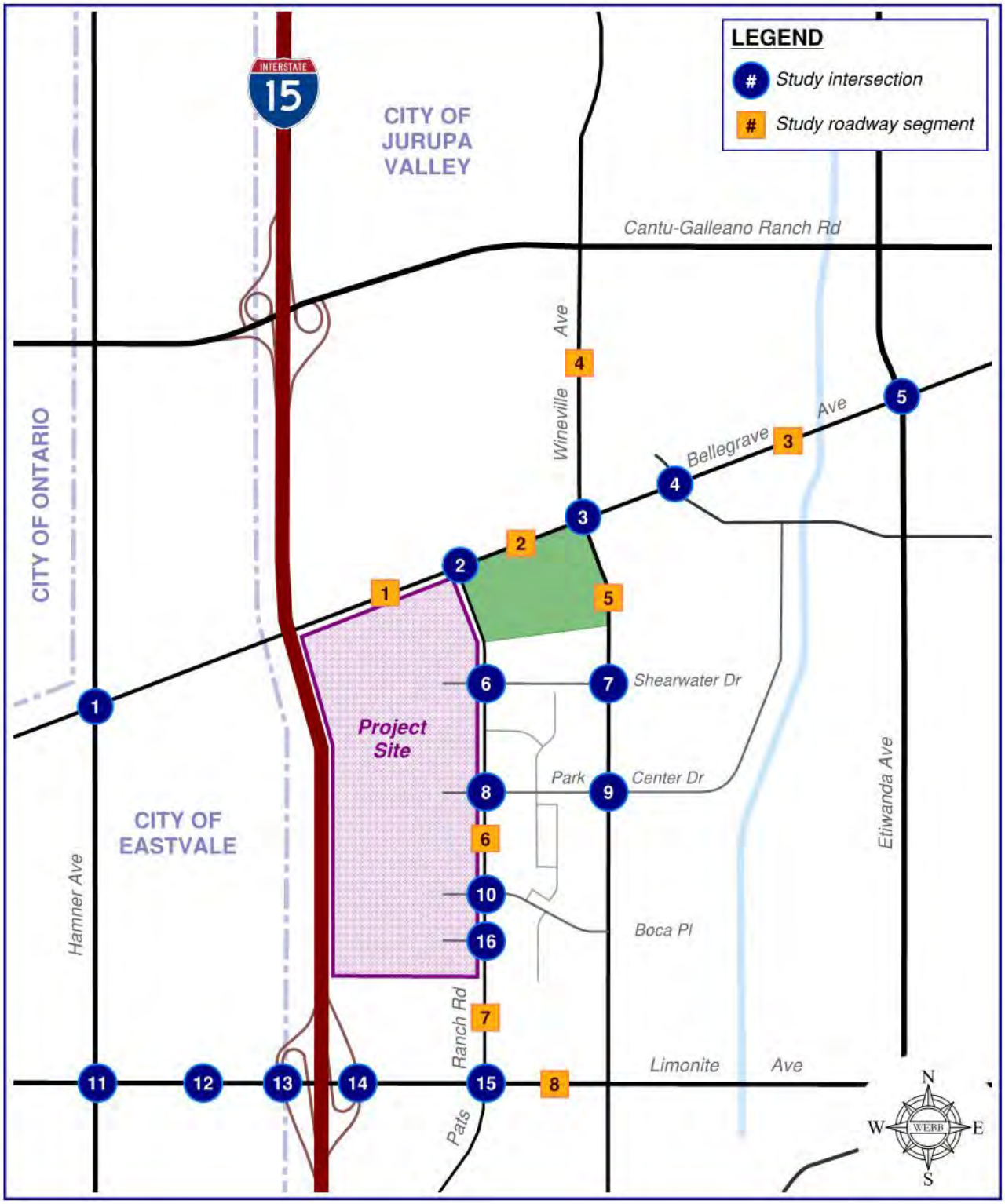


Figure 12: Expected Project Traffic Volumes – Phase 1 (2027)

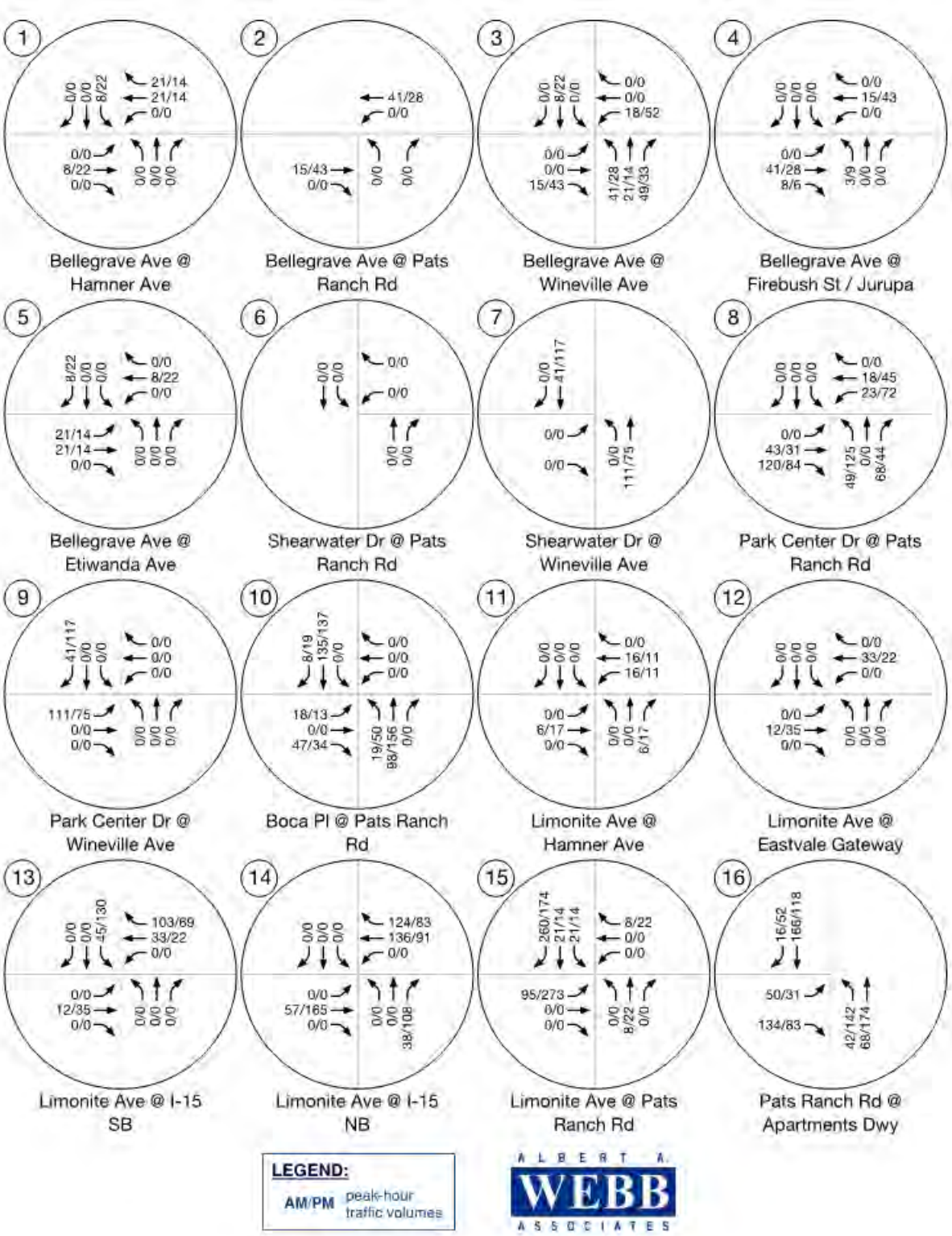


Figure 13: Expected Project Traffic Volumes – Phase 1+2 (2029)

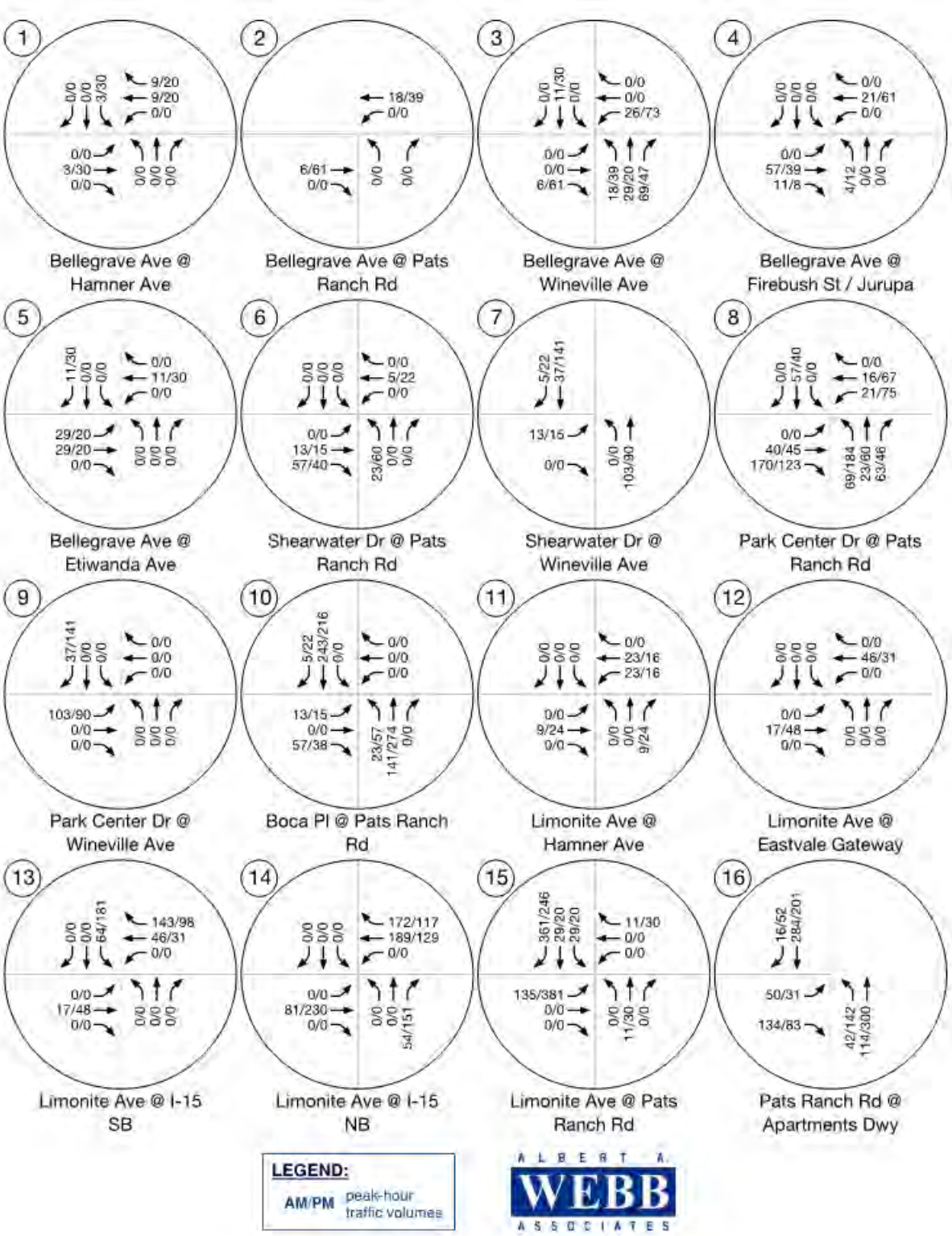
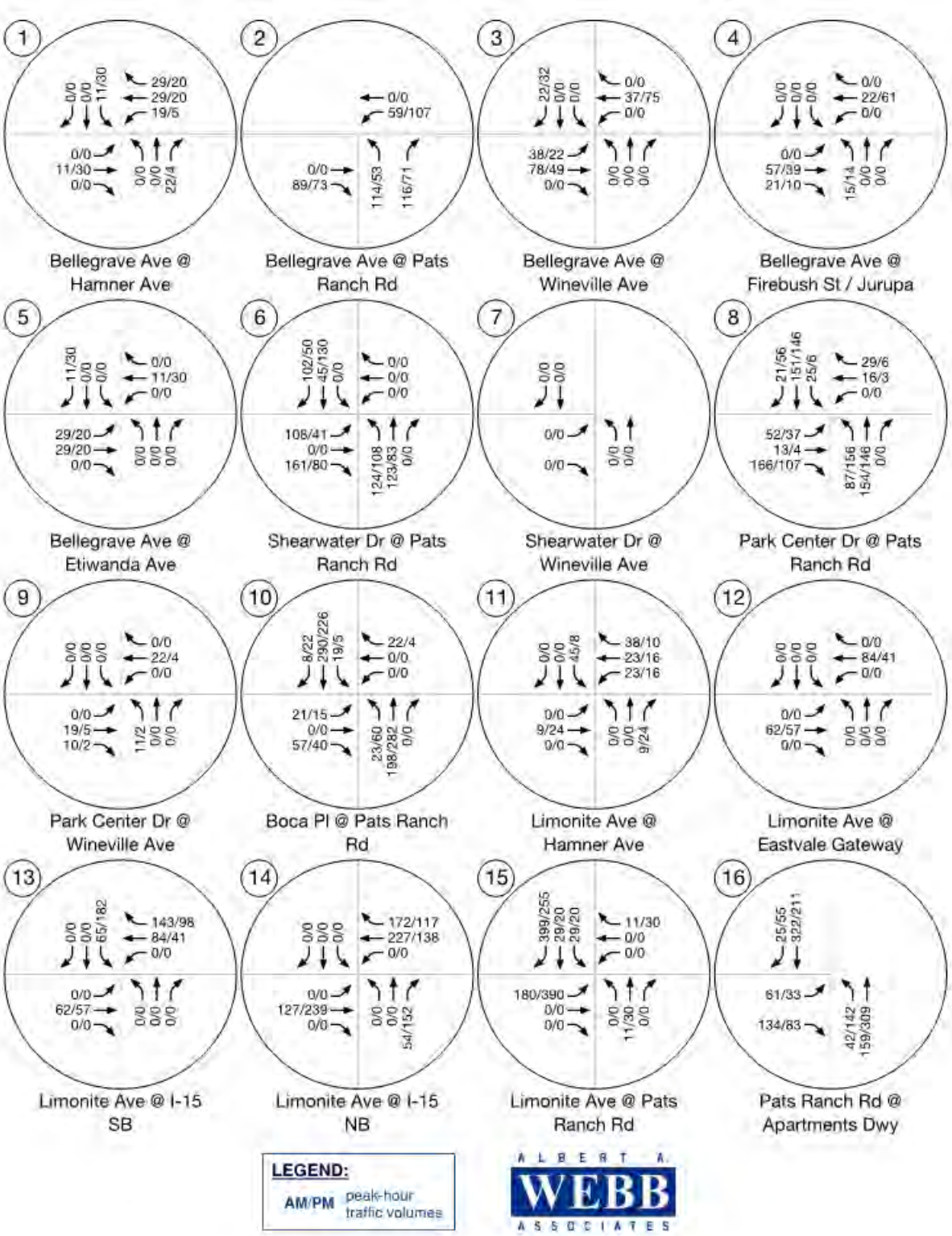


Figure 14: Expected Project Traffic Volumes – Phase 1+2+3 (2031)



Cumulative Projects

Cumulative projects are developments within the area surrounding the proposed project that are anticipated to be completed and contribute vehicle trips to the roadway network by the project's opening year. Compiled from lists provided by the Cities of Jurupa Valley, Ontario, and Eastvale, the cumulative projects used in this study are shown in **Figure 15** and **Table 10** with details in **Appendix E**.

Figure 15: Cumulative Projects

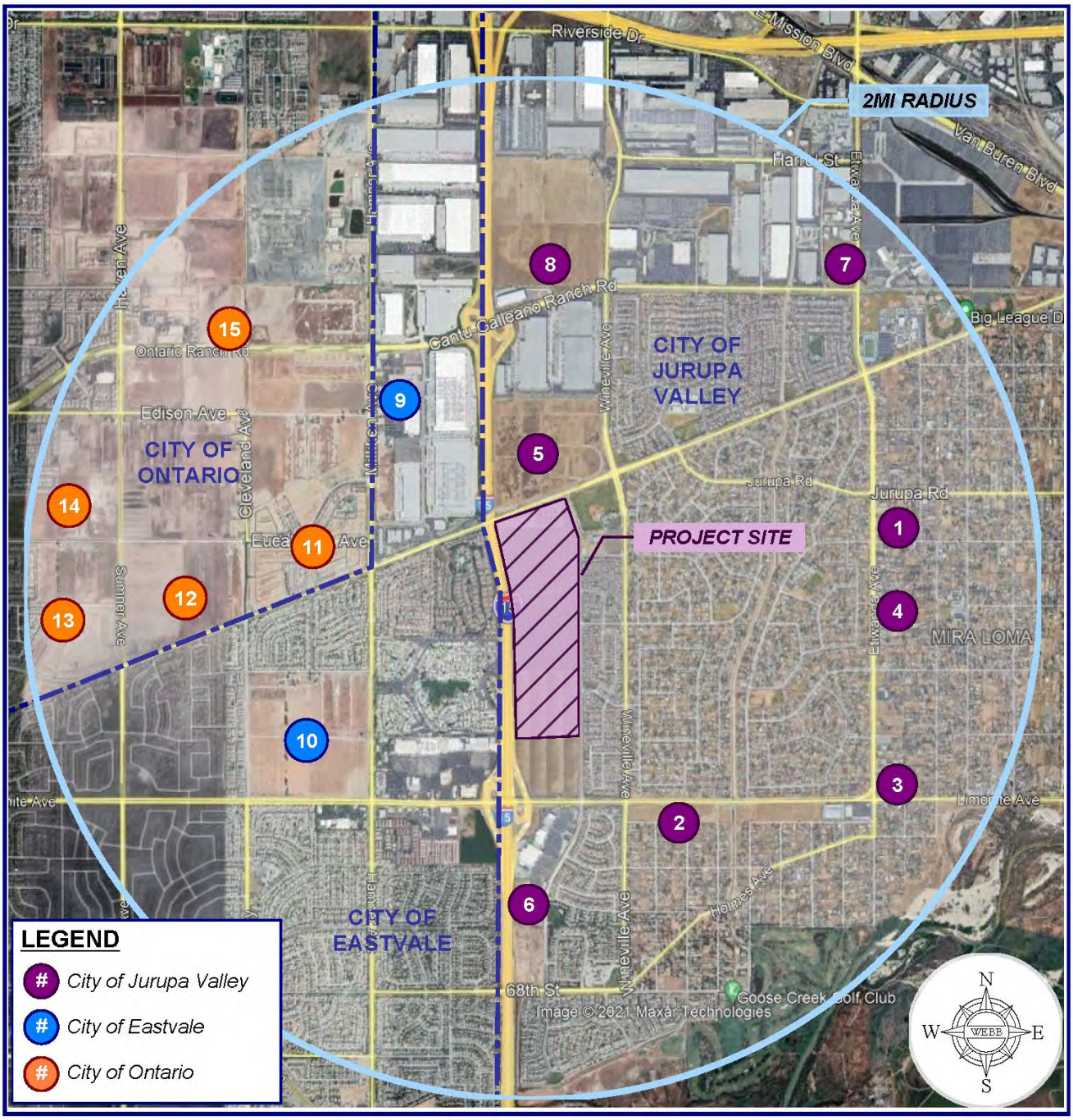


Table 10: Cumulative Projects

Agency		Project	Location	Phase Complete[1]	Land Use		Trip Generation[2] AM	PM	Daily
City of Jurupa Valley	1	**Tacos More Restaurant** (4,500 sf restaurant & sports bar)	5322 Etiwanda	Phase 1	***932***	*High-Turnover (Sit-Down) Restaurant*	43	41	482
	2	**Wineville Marketplace** – Single-Family Homes (130 DU)	SEC Limonite Ave & Wineville Ave	Phase 2	***210***	*Single-Family Detached Housing*	91	122	1,226
		Wineville Marketplace – Retail (37,600 sf)			***820***	*Shopping Center*	32	128	1,392
	3	**Express Car Wash** (1 tunnel)	6168 Etiwanda Ave	Phase 1	***948***	*Automated Car Wash*	0	78	620
	4	**Mixed Use Develop-ment** – Retail (9,500 sf)	5560 Etiwanda Ave	Phase 1	***820***	*Shopping Center*	8	32	352
		Mixed Use Develop-ment – Apartments (45 DU)			***220***	*Multifamily Housing (Low-Rise)*	18	23	303
	5	**Light Industrial Business Park** (10,000 sf)	NWC Bellegrave Ave @ Wineville Ave	Phase 2	***770***	*Business Park*	14	12	124
	6	**Vernola Market Place Apartments** (220 DU)	Pats Ranch Rd s/o Limonite Ave	Phase 1	***220***	*Multifamily Housing (Low-Rise)*	88	112	1,483
	7	**Warehouse Distribution Bldg** (310,760 sf)	NWC Etiwanda & Cantu-Galleano Ranch	Phase 3	***150***	*Warehousing*	53	56	531
	8	**76 Gas Station** – Gas Station w Convenience Store & Car Wash	4585 Pier Enterprise Wy	Phase 1	***945***	*Gasoline/Service Stn w Convenience Mart*	128	147	2,121
		76 Gas Station – Fast-Food Restaurant (4,000 sf)		Phase 1	***933***	*Fast-Food Restaurant w/o Drive-Through*	173	133	1,802
City of Eastvale	9	**Goodman Commerce Center** (addl 96,845 sf planned commercial)	SEC Hamner Ave @ Cantu Galleano Ranch	Phase 1	***820***	*Shopping Center*	81	329	3,584
	10	**Leal Master Plan** – Lifestyle Center	NWC Hamner Ave @ Limonite Ave	Future Buildout	***820***	*Shopping Center*	273	1,105	12,028
		Leal Master Plan – General Commercial			***110***	*General Light Industrial*	167	146	1,096
		Leal Master Plan – Hotel			***310***	*Hotel*	207	266	3,596
		Leal Master Plan – Housing			***220***	*Multifamily Housing (Low-Rise)*	264	337	4,448
City of Ontario	11	**Esperanza** – Single-Family Homes (914 DU)	NWC Hamner Ave @ Bellegrave Ave	Future Buildout	***210***	*Single-Family Detached Housing*	640	859	8,619
		Esperanza – Multi-Family Homes (496 DU)			***220***	*Multifamily Housing (Low-Rise)*	198	253	3,343
	12	**Subarea 29 Addendum** – Single-Family Homes (574 DU)	n/o Bellegrave Ave b/t Scholar Wy & Sumner Ave	Future Buildout	***210***	*Single-Family Detached Housing*	402	540	5,413
	13	**Subarea 29** – Single-Family Homes (2,293 DU)	NWC Bellegrave Ave @ Sumner Ave	Future Buildout	***210***	*Single-Family Detached Housing*	1,605	2,155	21,623
		Subarea 29 – Retail (87,000 sf)			***820***	*Shopping Center*	73	296	3,220
	14	**Grand Park** – Single-Family Homes (740 DU)	NWC Eucalyptus Ave @ Sumner Ave	Future Buildout	***210***	*Single-Family Detached Housing*	518	696	6,978
		Grand Park – Multi-Family Homes (587 DU)			***220***	*Multifamily Housing (Low-Rise)*	235	299	3,956
	15	**Rich Haven** – Single-Family Homes (1,833 DU)	NWC Haven Ave @ Edison Ave	Future Buildout	***210***	*Single-Family Detached Housing*	1,283	1,723	17,285
		Rich Haven – Multi-Family Homes (3,033 DU)			***220***	*Multifamily Housing (Low-Rise)*	1,213	1,547	20,442
Total Cumulative Projects Traffic Volumes							**7,807**	**11,435**	**126,067**

[1] Leal Master Plan and the Ontario Plan are expected to be partially operational at the project opening day.

[2] Trip generation calculations per ITE Trip Generation Manual (11e, 2021)

Trip generation assumptions for the cumulative projects were gathered from available project data, including planning documents and approved traffic studies. Based on existing field conditions, the Leal Master Plan is assumed to be partially completed with each project phase: 20% completing with Phase 1, 30% completion with Phase 2, and 40% completion with Phase 3, with full completion by the future buildout year.

Since the proposed project will be constructed in phases, cumulative project traffic is analyzed per phase. **Figures 16-18** show the cumulative project traffic for each project phase.

Figure 16: Cumulative Projects Traffic Volumes – Phase 1 (2027)

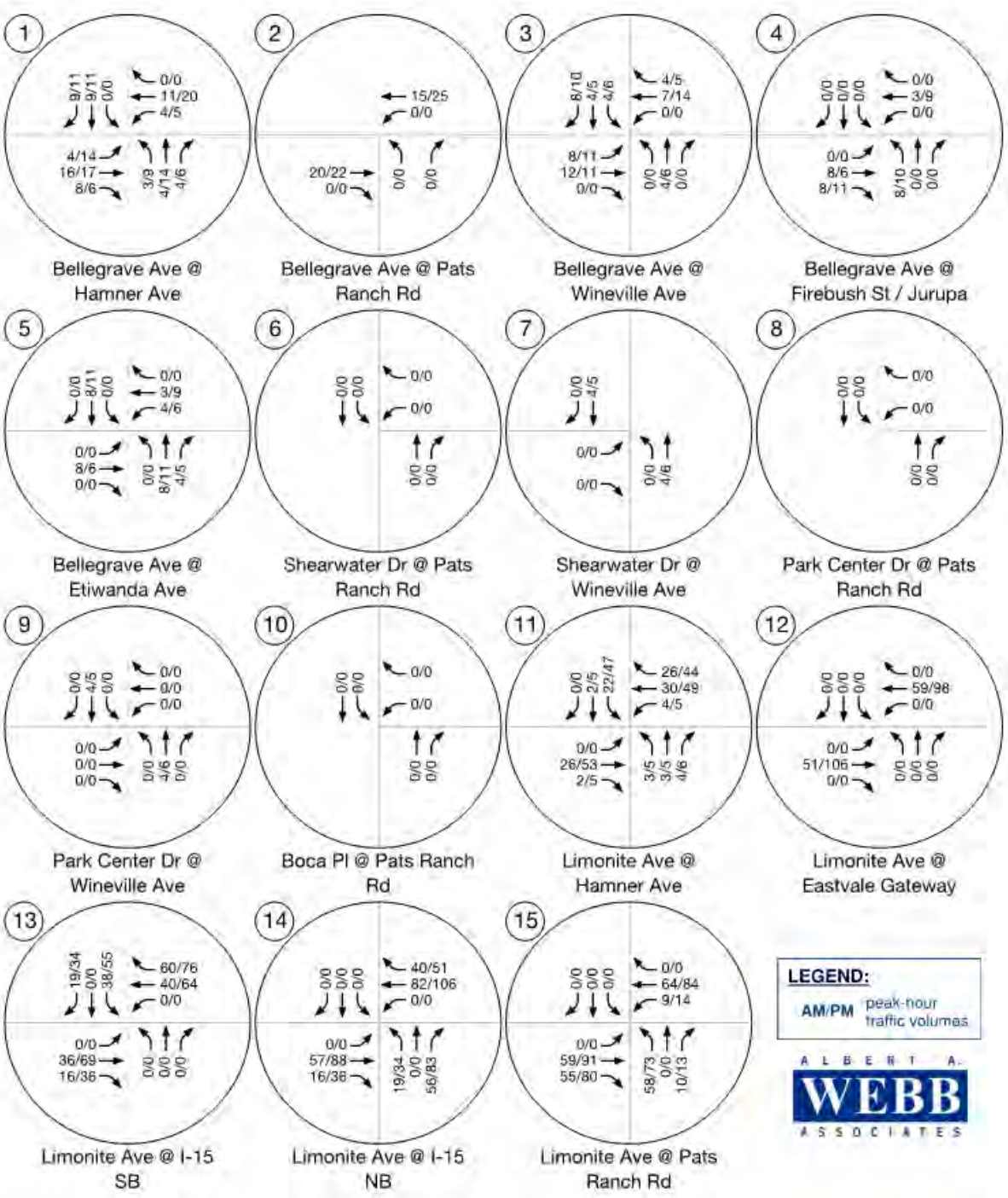


Figure 17: Cumulative Projects Traffic Volumes – Phase 1+2 (2029)

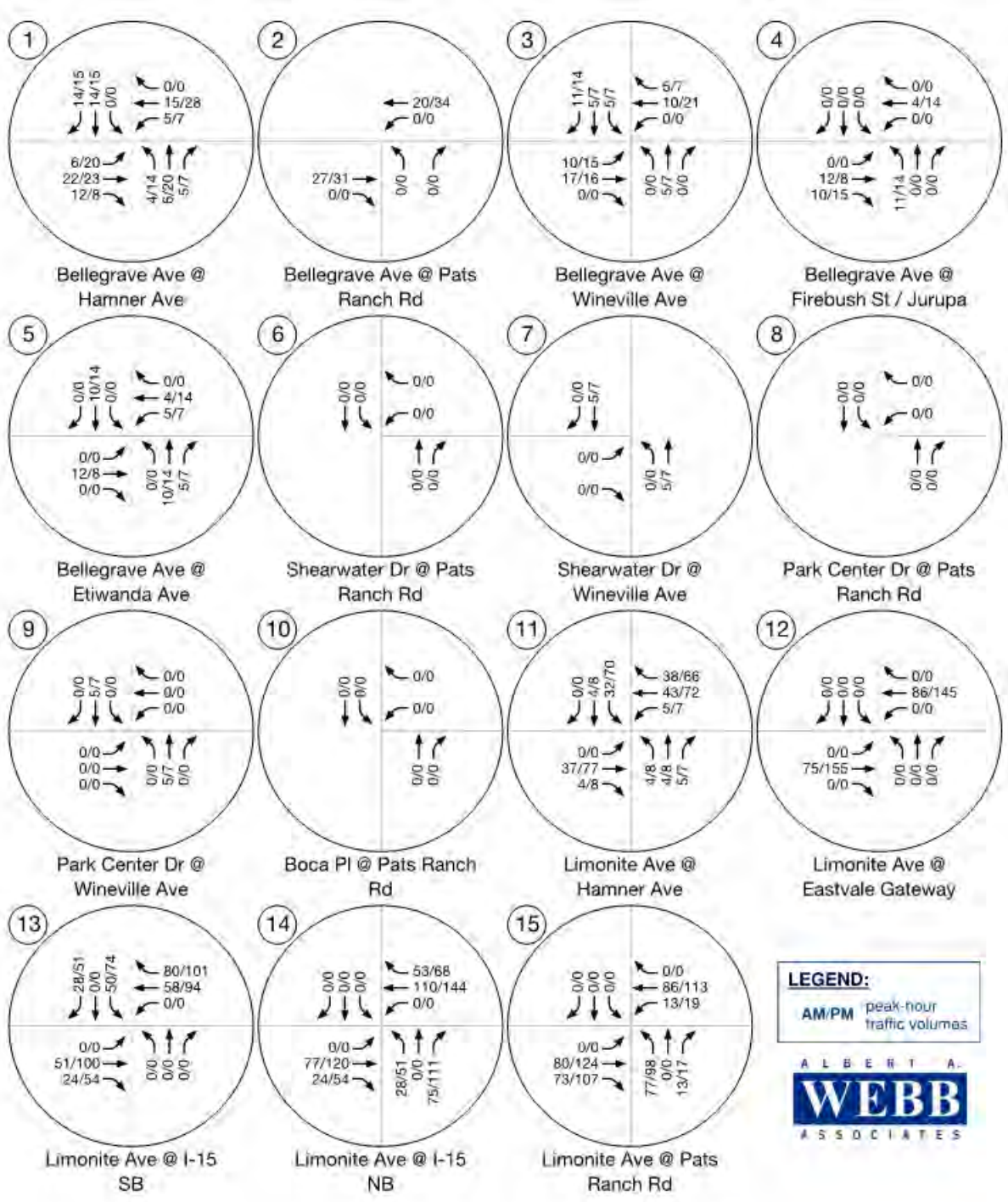
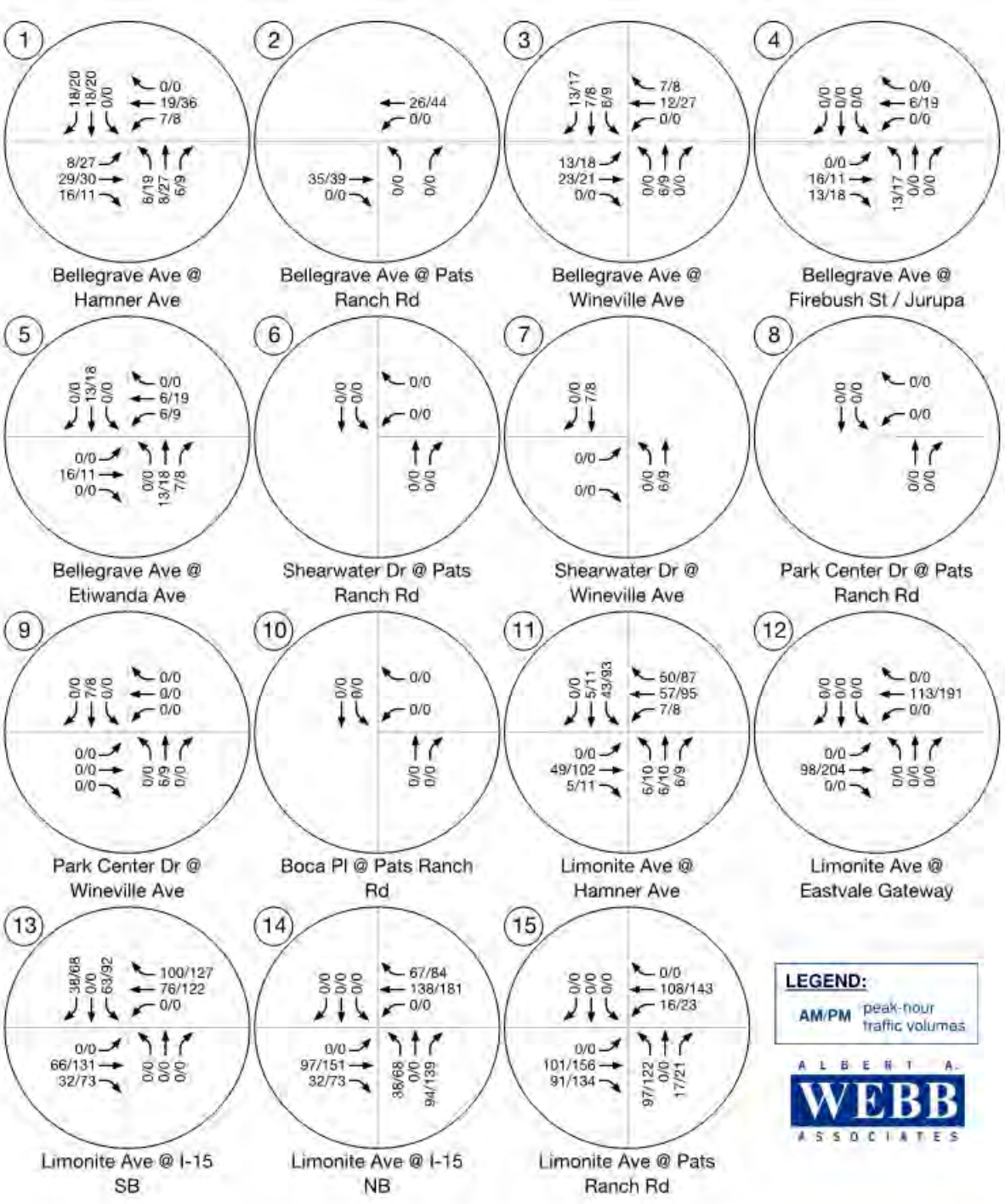
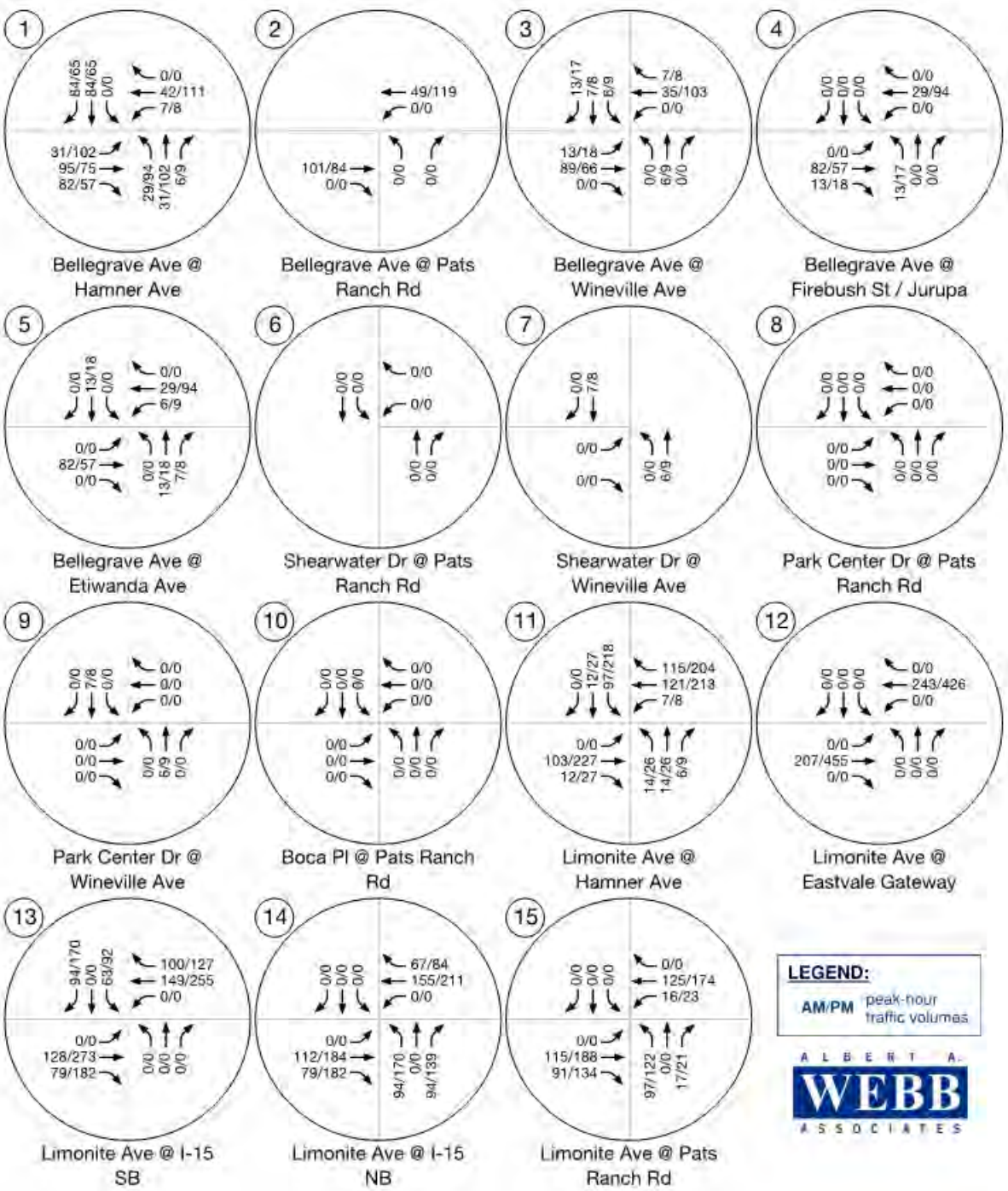


Figure 18: Cumulative Projects Traffic Volumes – Phase 1+2+3 (2031)



This traffic study also includes worst-case analysis scenarios that assume all cumulative projects are fully constructed and operational at the time of the project opening, regardless of expected completion year. **Figure 19** shows the expected traffic volumes with all cumulative projects.

Figure 19: Cumulative Projects Traffic Volumes – All Other Cumulative Projects



IV. EXISTING CONDITIONS (2022)

The proposed project site is located south of Bellegrave Avenue, between the Interstate 15 (I-15) freeway and Pats Ranch Road in the City of Jurupa Valley along its border with the City of Eastvale.

Existing Roadway Network

Within the study area, **Bellegrave Avenue** is an east-west roadway classified as a Major in both the City of Jurupa Valley General Plan and the City of Eastvale General Plan. It varies from four lanes at Hamner Avenue and east of Wineville Avenue to two lanes from the I-15 overcrossing to Wineville Avenue. It provides connections to the Cities of Eastvale and Ontario to the west.

Limonite Avenue is an east-west roadway classified as an Urban Arterial in the City of Eastvale General Plan and as an Arterial between I-15 and Wineville Avenue in the City of Jurupa Valley General Plan. It has six through lanes and a raised median within the study area, providing access to the I-15 freeway as well as the Cities of Eastvale, Ontario, and Chino to the west.

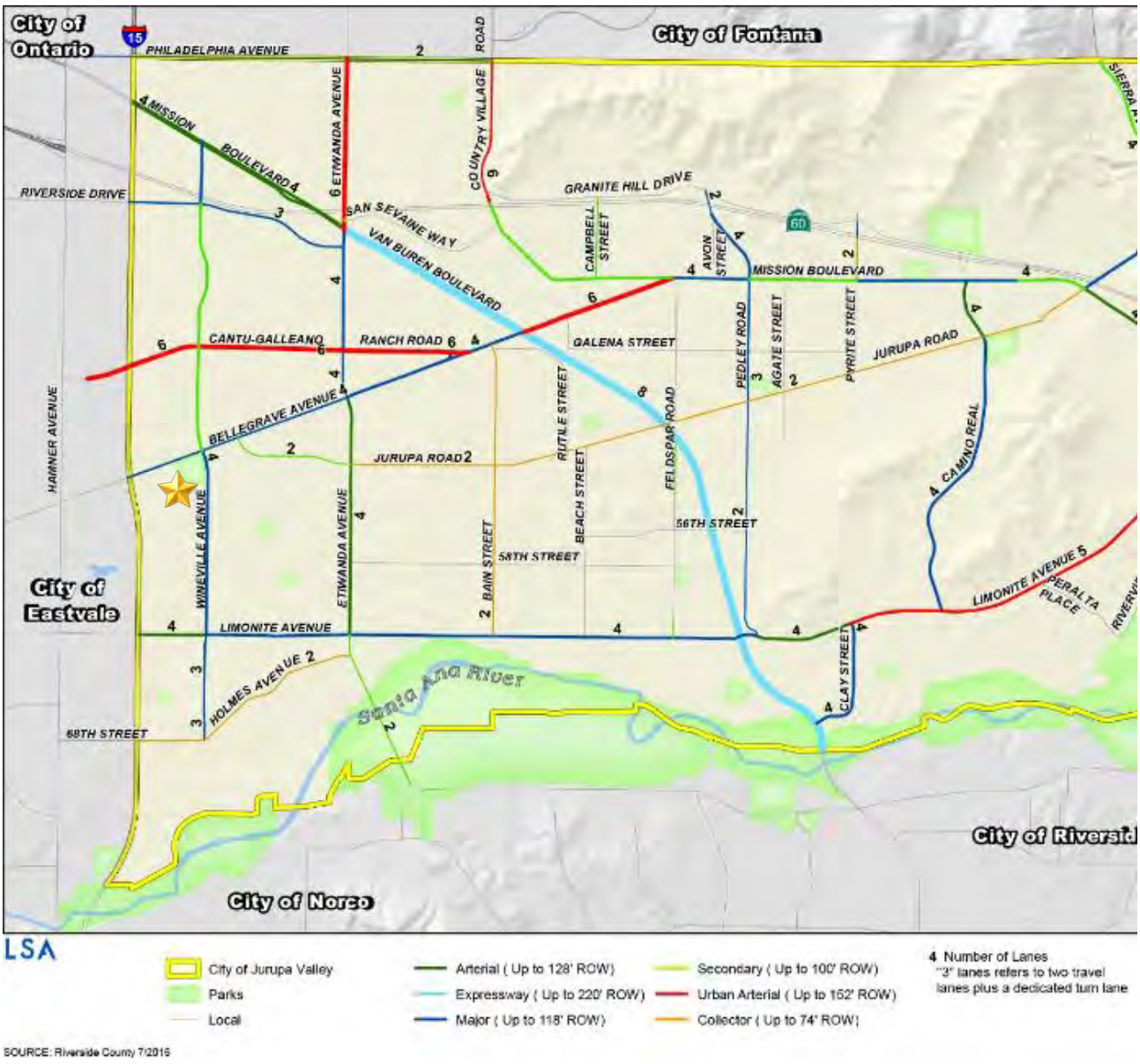
Hamner Avenue is a north-south roadway classified as an Urban Arterial in the City of Eastvale General Plan. Within the study area, it has portions of raised median and varies from six lanes at Bellegrave Avenue to four lanes between Bellegrave Avenue and Limonite Avenue, providing connections to the City of Ontario and the State Route 60 (SR-60) freeway to the north as well as the Cities of Norco and Corona to the south.

Pats Ranch Road is a two-lane north-south roadway classified as a local road in the City of Jurupa Valley General Plan. It terminates at Bellegrave Avenue to the north and within a residential neighborhood at Tributary Way, south of 68th Street.

Wineville Avenue is a four-lane north-south roadway classified as a Major in the City of Jurupa Valley General Plan. It terminates at Mission Boulevard to the north and at 68th Street to the south.

Figure 20 shows the City of Jurupa Valley General Plan roadway network.

Figure 20: City of Jurupa Valley Street Classification



Existing Intersection Geometrics and Traffic Control

Figure 21 identifies the existing intersection traffic controls, intersection geometrics, and the number of vehicle lanes for each study intersection.

Reference Map: Study Area

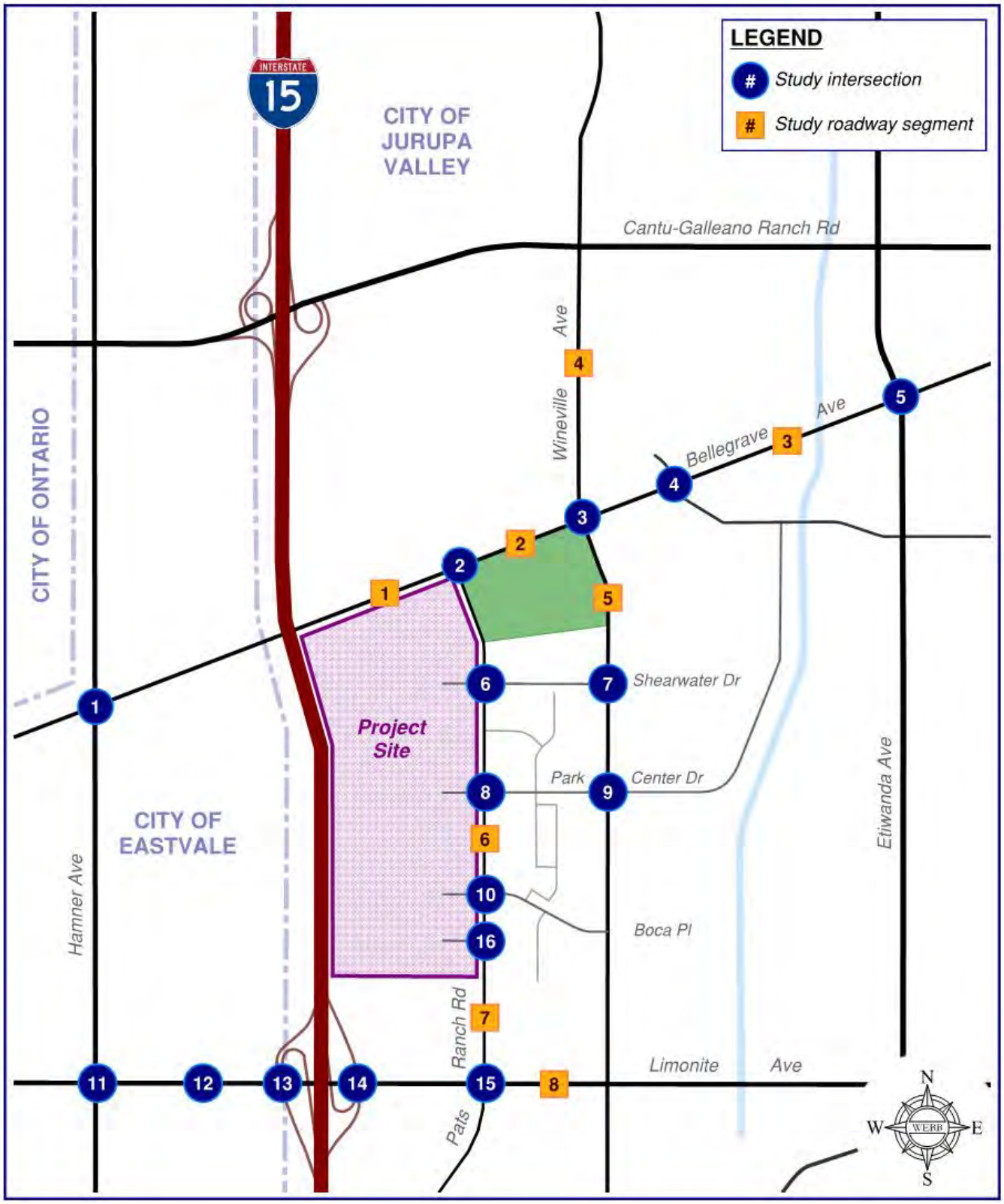
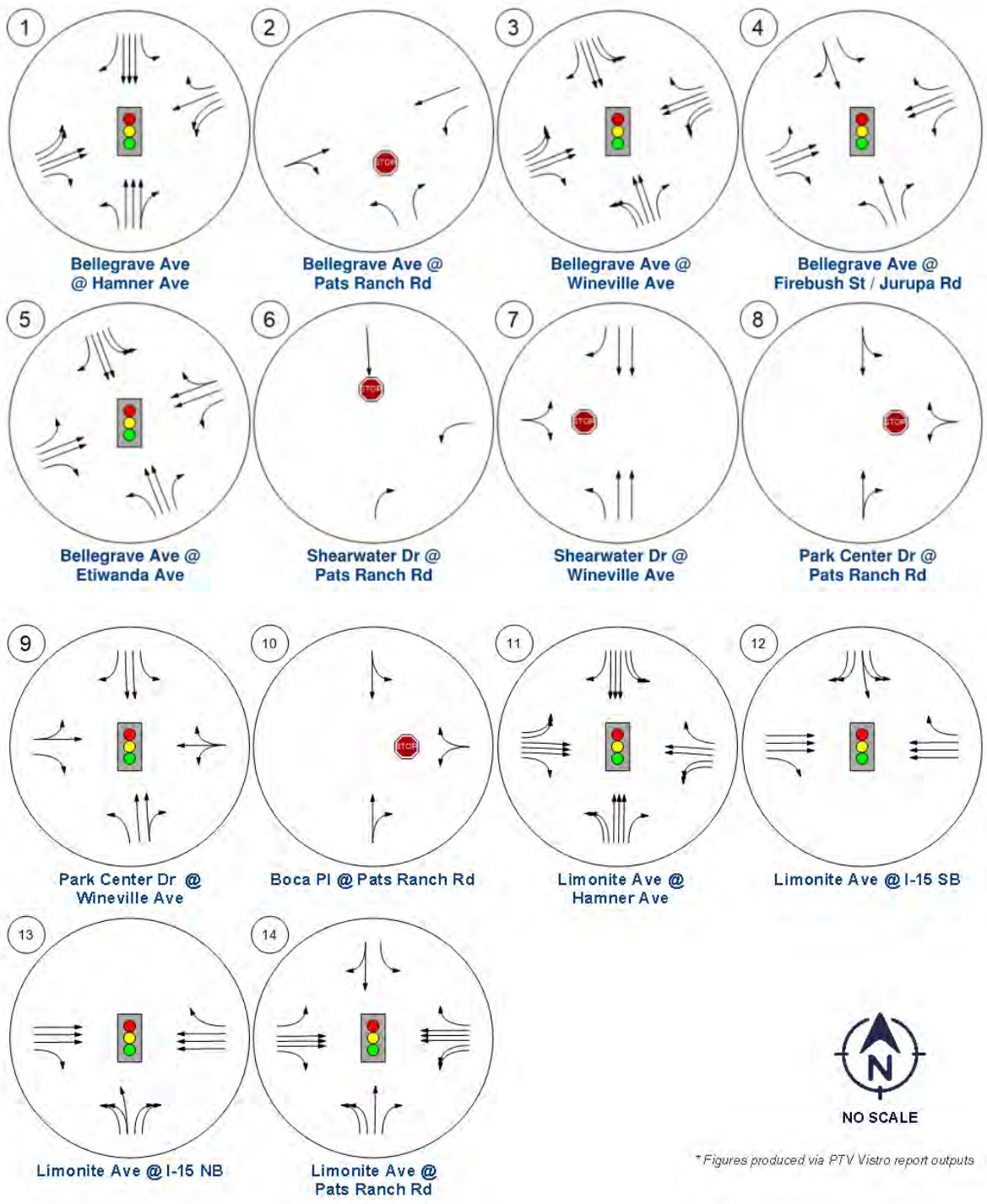


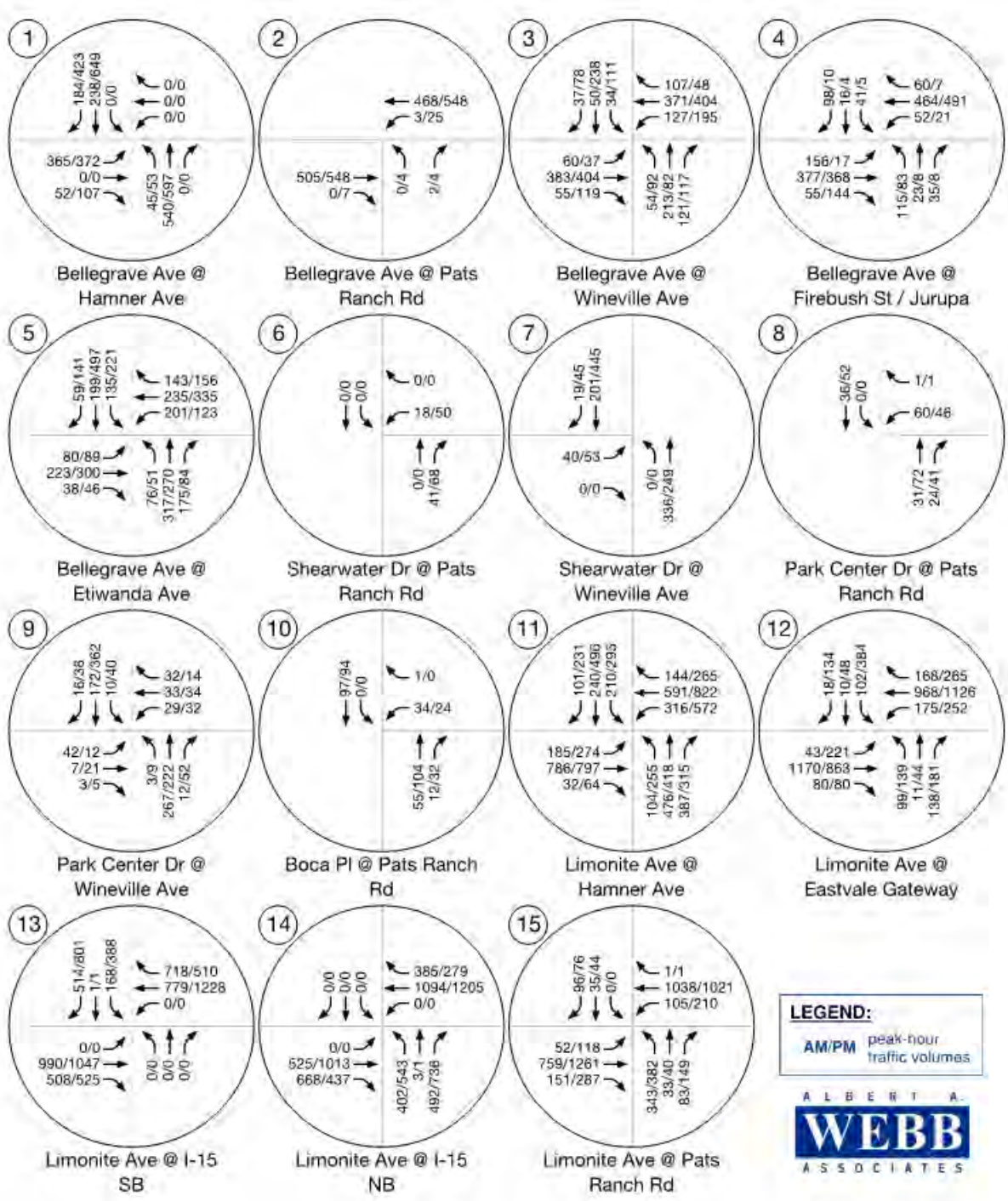
Figure 21: Existing Intersection Geometrics and Traffic Control



Existing Traffic Volumes

To establish a baseline analysis for existing conditions, intersection turning movement counts were conducted at the study intersections in on Thursday, March 3, and Wednesday, August 17, 2022, for the AM and PM peak periods (**Figure 22**, details in **Appendix C**).

Figure 22: Traffic Volumes – Existing Conditions (2022)



Levels of Service – Existing Conditions (2022)

Based on the existing intersection geometrics and peak-hour traffic volumes, intersection LOS was analyzed for the AM and PM peak hours (**Table 11**, see **Appendix D** for details). Under existing conditions, all study intersections currently operate above the minimum acceptable LOS standard (D).

Table 11: Intersection LOS – Existing Conditions (2022)

	Intersection[1]	Traffic Control[2]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[3]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	13	**B**	13.8	**B**
2	Bellegrave Ave @ Pats Ranch Rd	OWSC	12.2	**B**	23.3	**C**
3	Bellegrave Ave @ Wineville Ave	Signal	16.8	**B**	18	**B**
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	22.2	**C**	11.9	**B**
5	Bellegrave Ave @ Etiwanda Ave	Signal	43.9	**D**	38.1	**D**
6	Shearwater Dr @ Pats Ranch Rd	*N/A*				
7	Shearwater Dr @ Wineville Ave	OWSC	12	**B**	15.1	**C**
8	Park Center Dr @ Pats Ranch Rd	OWSC	9.3	**A**	9.7	**A**
9	Park Center Dr @ Wineville Ave	Signal	15.8	**B**	10.8	**B**
10	Boca Pl @ Pats Ranch Rd	OWSC	9.6	**A**	9.7	**A**
11	Limonite Ave @ Hamner Ave	Signal	27.2	**C**	34.9	**C**
12	Limonite Ave @ Eastvale Gateway	Signal	22	**C**	38.9	**D**
13	Limonite Ave @ I-15 SB	Signal	7.9	**A**	11.8	**B**
14	Limonite Ave @ I-15 NB	Signal	7.8	**A**	10.3	**B**
15	Limonite Ave @ Pats Ranch Rd	Signal	20.1	**C**	23.7	**C**
16	Pats Ranch Rd @ Apartments Dwy	*Does Not Exist*				

[1] Intersection #6 has no vehicle right-of-way conflicts or traffic control in the existing condition.

[2] Intersection traffic control measure as analyzed. OWSC = one-way stop control

[3] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

V. PROJECT PHASE 1 (2027)

Phase 1 Opening Day without Project (2027)

To analyze the study intersections LOS under the project phase 1 scenarios, first the trips from the cumulative projects are added to the existing peak-hour traffic volumes (**Figure 23**).

Reference Map: Study Area

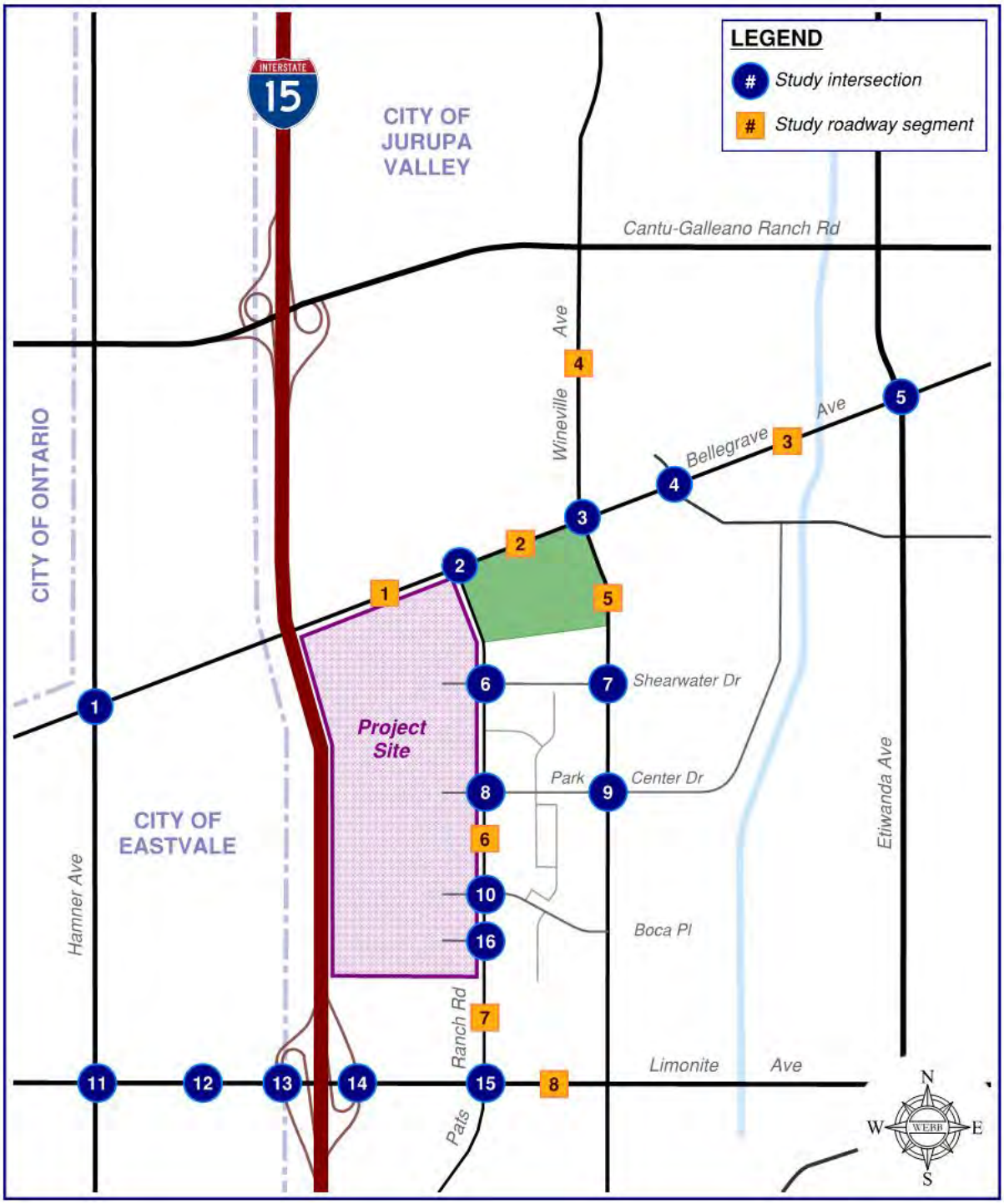


Figure 23: Traffic Volumes – Phase 1 Opening Day without Project (2027)

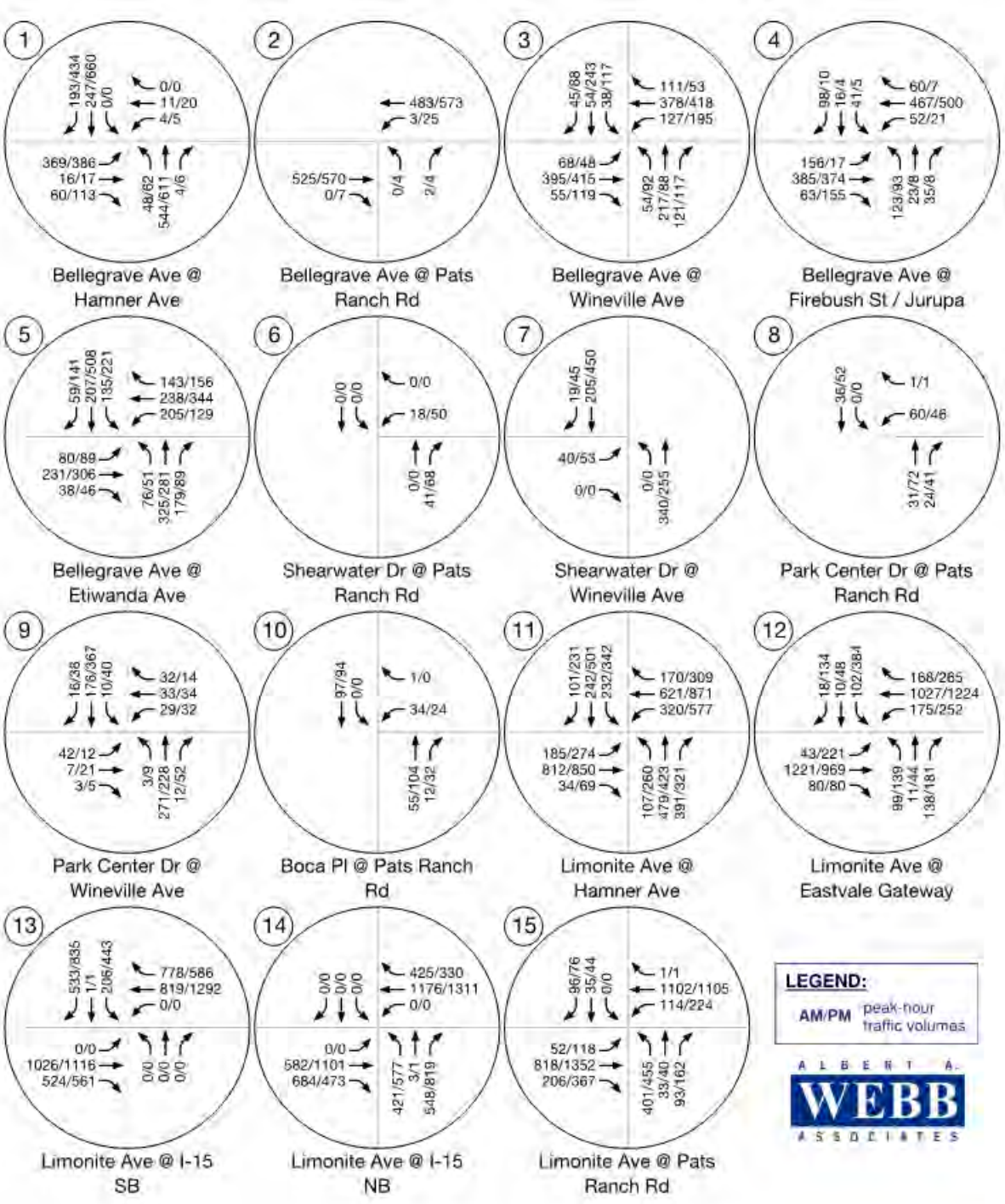


Table 12 gives the LOS analysis for the "Phase 1 opening day without project" scenario, with detailed worksheets in **Appendix D**. With the addition of traffic from nearby cumulative projects, all study intersections are expected to continue operating at or above the minimum acceptable LOS.

Table 12: Intersection LOS – Phase 1 Opening Day without Project (2027)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	13.8	**B**	15.9	**B**
2	Bellegrave Ave @ Pats Ranch Rd	OWSC	12.4	**B**	24.6	**C**
3	Bellegrave Ave @ Wineville Ave	Signal	16.9	**B**	18.2	**B**
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	22.5	**C**	12.4	**B**
5	Bellegrave Ave @ Etiwanda Ave	Signal	43.7	**D**	38.2	**D**
6	Shearwater Dr @ Pats Ranch Rd	*N/A*				
7	Shearwater Dr @ Wineville Ave	OWSC	12.0	**B**	15.2	**C**
8	Park Center Dr @ Pats Ranch Rd	OWSC	9.3	**A**	9.7	**A**
9	Park Center Dr @ Wineville Ave	Signal	15.6	**B**	10.7	**B**
10	Boca Pl @ Pats Ranch Rd	OWSC	9.4	**A**	9.7	**A**
11	Limonite Ave @ Hamner Ave	Signal	28.4	**C**	38.5	**D**
12	Limonite Ave @ Eastvale Gateway	Signal	21.8	**C**	39	**D**
13	Limonite Ave @ I-15 SB	Signal	8.3	**A**	12.8	**B**
14	Limonite Ave @ I-15 NB	Signal	8.5	**A**	11.6	**B**
15	Limonite Ave @ Pats Ranch Rd	Signal	20.9	**C**	25.2	**C**
16	Pats Ranch Rd @ Apartments Dwy	*Does Not Exist*				

[1] Intersection #6 has no vehicle right-of-way conflicts or traffic control in this scenario.

[2] Intersection traffic control measure as analyzed. OWSC = one-way stop control

[3] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

Phase 1 Opening Day with Project (2027)

Then, the expected project traffic is added to the opening day peak-hour traffic volumes (**Figure 24**).

Figure 24: Traffic Volumes – Phase 1 Opening Day with Project (2027)

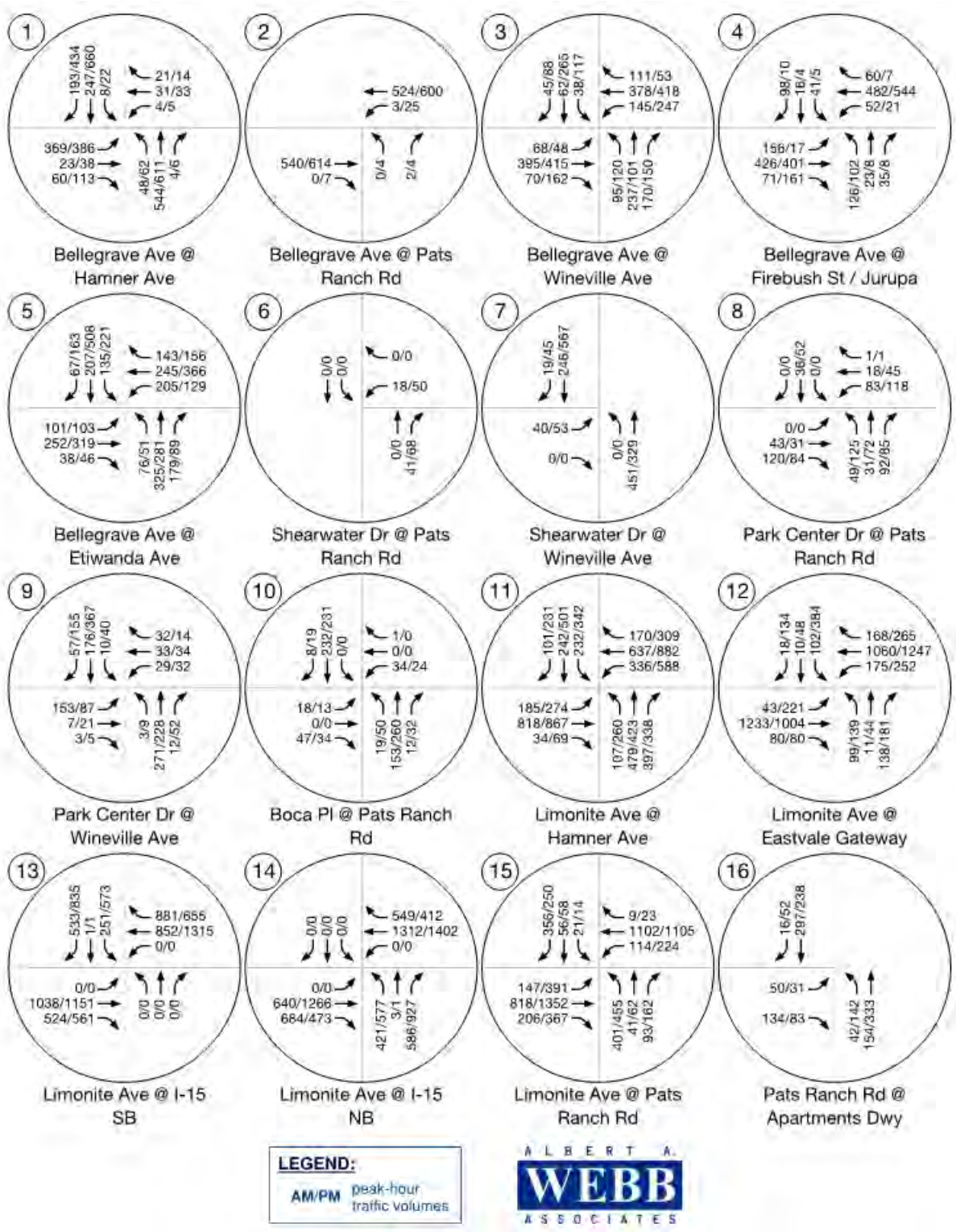


Table 13 summarizes the "Phase 1 opening day with project" LOS analysis, with detailed worksheets in **Appendix D**. With the addition of traffic from nearby cumulative projects and Phase 1 of the proposed project, all study intersections are expected to continue operating at or above the minimum acceptable LOS.

Table 13: Intersection LOS – Phase 1 Opening Day with Project (2027)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	16.2	**B**	18.1	**B**
2	Bellegrave Ave @ Pats Ranch Rd	OWSC	12.6	**B**	26.8	**D**
3	Bellegrave Ave @ Wineville Ave	Signal	17.3	**B**	19.0	**B**
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	22.4	**C**	12.8	**B**
5	Bellegrave Ave @ Etiwanda Ave	Signal	44.5	**D**	38.4	**D**
6	Shearwater Dr @ Pats Ranch Rd	*N/A*				
7	Shearwater Dr @ Wineville Ave	OWSC	13.4	**B**	18.7	**C**
8	Park Center Dr @ Pats Ranch Rd	Roundabout	4.1	**A**	4.9	**A**
9	Park Center Dr @ Wineville Ave	Signal	22.5	**C**	14.9	**B**
10	Boca Pl @ Pats Ranch Rd	Roundabout	4.2	**A**	4.6	**A**
11	Limonite Ave @ Hamner Ave	Signal	29.1	**C**	40.4	**D**
12	Limonite Ave @ Eastvale Gateway	Signal	21.7	**C**	38.9	**D**
13	Limonite Ave @ I-15 SB	Signal	8.6	**A**	13.0	**B**
14	Limonite Ave @ I-15 NB	Signal	9.7	**A**	13.4	**B**
15	Limonite Ave @ Pats Ranch Rd	Signal	24.5	**C**	29.1	**C**
16	Pats Ranch Rd @ Apartments Dwy	OWSC	14.3	**B**	18.5	**C**

[1] Intersection #6 has no vehicle right-of-way conflicts or traffic control in this scenario.

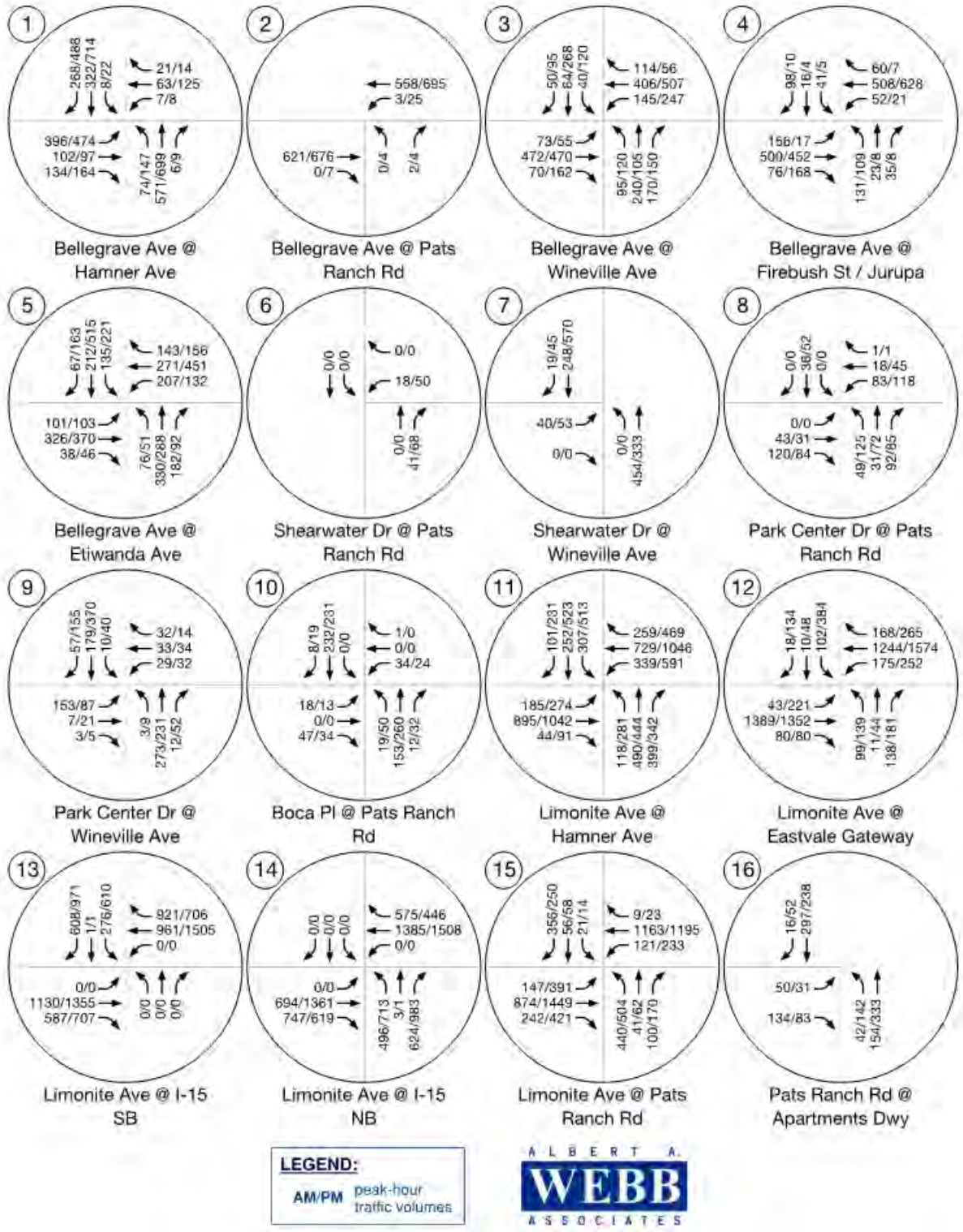
[2] Intersection traffic control measure as analyzed. OWSC = one-way stop control

[3] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

Phase 1 with Project plus Other Cumulative Projects (2027)

This scenario considers all cumulative projects within the study area regardless of their expected opening day. The expected traffic from cumulative projects that are not expected to be completed by the project's opening are also included in the peak-hour traffic volumes for this scenario (**Figure 25**).

Figure 25: Traffic Volumes – Phase 1 with Project plus Other Cumulative Projects (2027)



Per the City's guidelines, this scenario also assumes that intersection and roadway improvements needed for the cumulative projects are constructed. Based on the City of Eastvale General Plan and expected future developments such as the Ontario Plan and Leal Master Plan, this study assumes the following improvements for this scenario:

- **#1 Bellegrave Avenue @ Hamner Avenue:** second westbound through lane is completed.
- **#11 Limonite Avenue @ Hamner Avenue:** third westbound through lane is completed.

Table 14 summarizes the "Phase 1 opening day plus other cumulative projects" LOS analysis, with detailed worksheets in **Appendix D**. With the addition of traffic from Phase 1 of the proposed project and all cumulative projects regardless of their expected completion status, all study intersections are expected to continue operating at or above the minimum acceptable LOS.

Table 14: Intersection LOS – Phase 1 with Project plus Other Cumulative Projects (2027)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	17.5	**B**	26.4	**C**
2	Bellegrave Ave @ Pats Ranch Rd	OWSC	13.6	**B**	32.7	**D**
3	Bellegrave Ave @ Wineville Ave	Signal	17.6	**B**	19.2	**B**
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	22.6	**C**	12.8	**B**
5	Bellegrave Ave @ Etiwanda Ave	Signal	44.7	**D**	38.7	**D**
6	Shearwater Dr @ Pats Ranch Rd	*N/A*				
7	Shearwater Dr @ Wineville Ave	OWSC	13.4	**B**	18.8	**C**
8	Park Center Dr @ Pats Ranch Rd	Roundabout	4.1	**A**	4.9	**A**
9	Park Center Dr @ Wineville Ave	Signal	22.5	**C**	14.8	**B**
10	Boca Pl @ Pats Ranch Rd	Roundabout	4.2	**A**	4.6	**A**
11	Limonite Ave @ Hamner Ave	Signal	32.6	**C**	54.4	**D**
12	Limonite Ave @ Eastvale Gateway	Signal	21	**C**	38.2	**D**
13	Limonite Ave @ I-15 SB	Signal	10.2	**B**	20.1	**C**
14	Limonite Ave @ I-15 NB	Signal	10.7	**B**	14.5	**B**
15	Limonite Ave @ Pats Ranch Rd	Signal	25.7	**C**	31.9	**C**
16	Pats Ranch Rd @ Apartments Dwy	OWSC	14.3	**B**	18.5	**C**

[1] Intersection #6 has no vehicle right-of-way conflicts or traffic control in this scenario.

[2] Intersection traffic control measure as analyzed. OWSC = one-way stop control

[3] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

VI. PROJECT PHASE 1+2 (2029)

Phase 1+2 Opening Day without Project (2029)

To analyze the study intersections LOS under the project phase 2 scenarios, first the trips from the cumulative projects are added to the existing traffic volumes (**Figure 26**).

Reference Map: Study Area

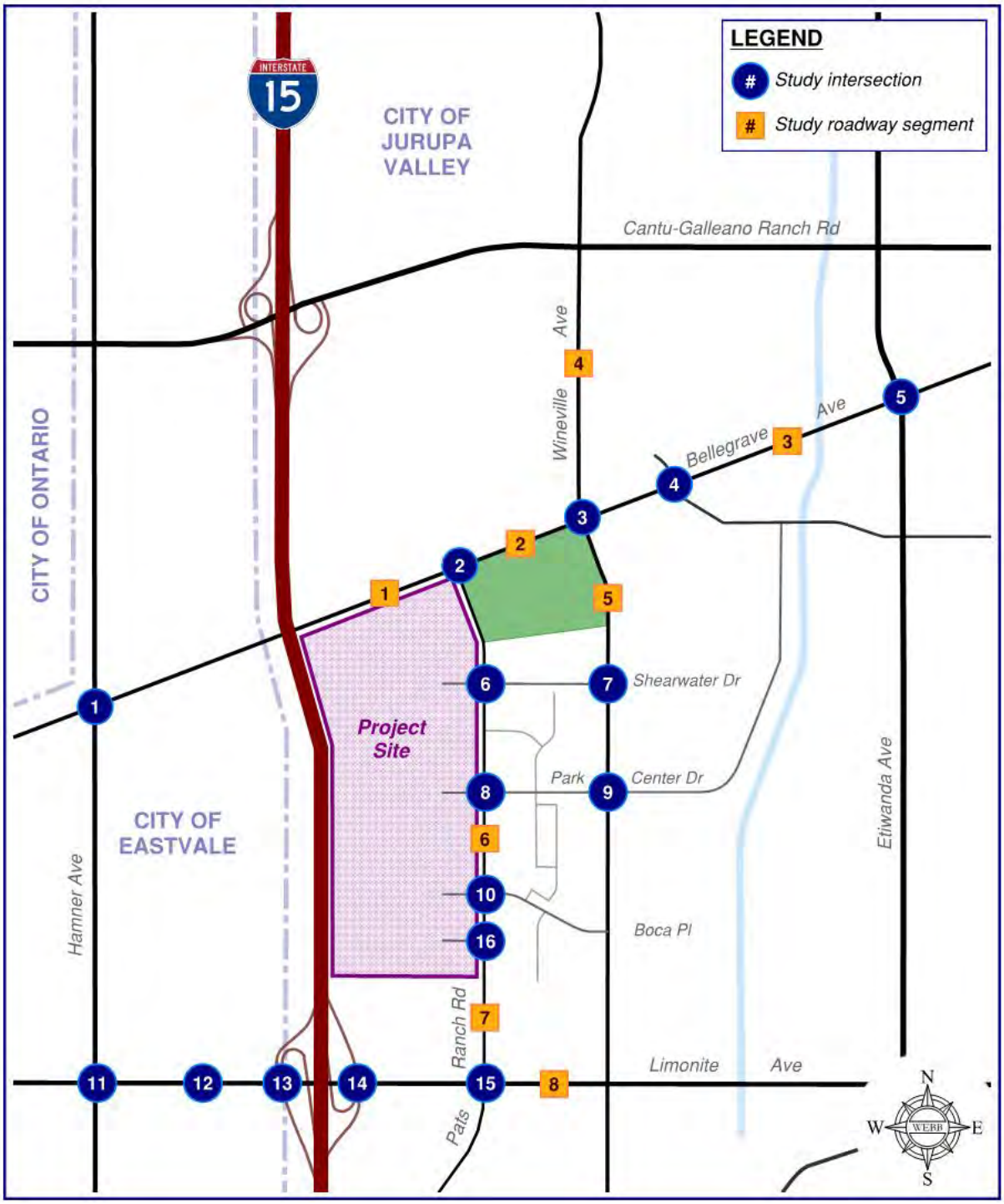


Figure 26: Traffic Volumes – Phase 1+2 without Project (2029)

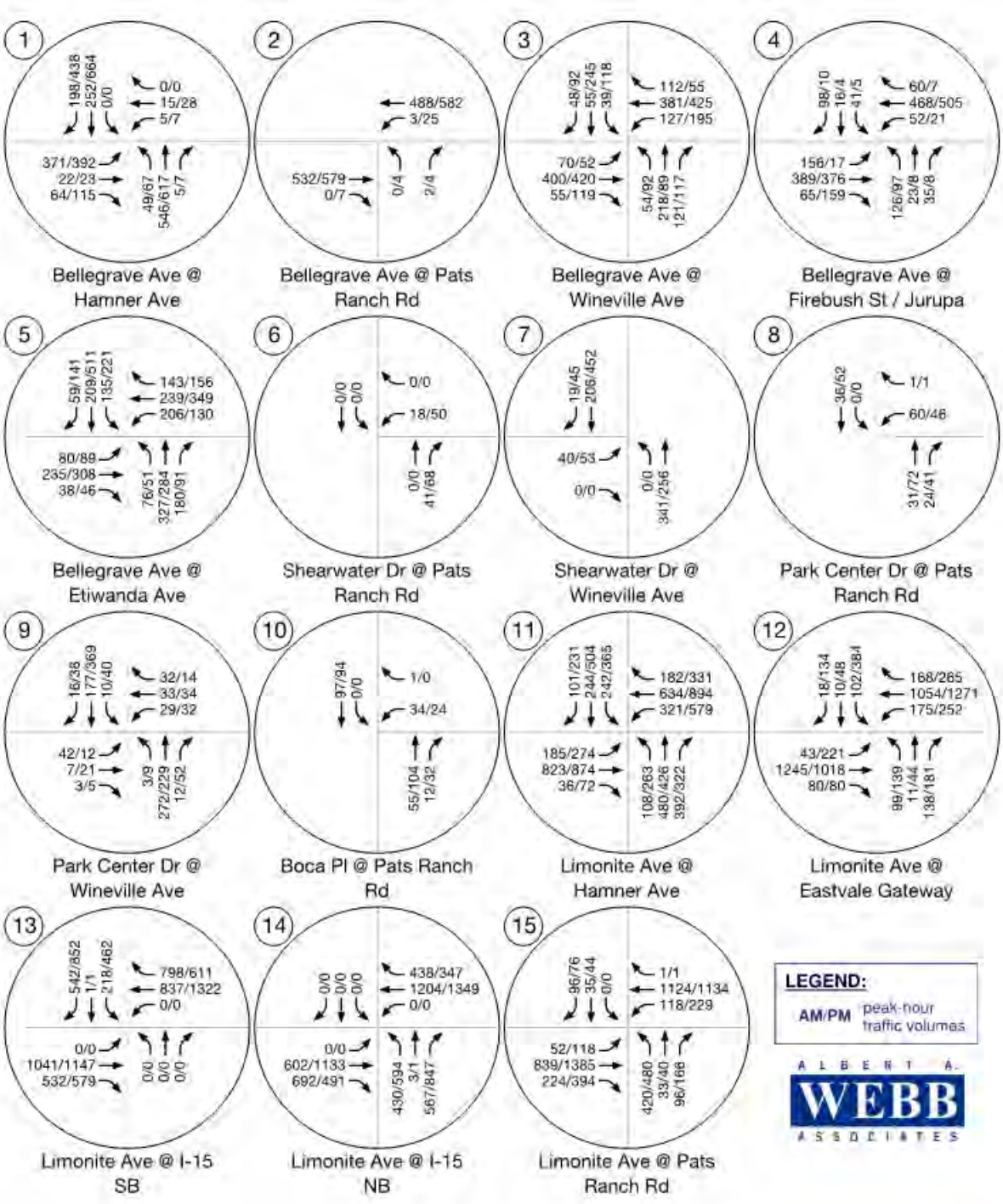


Table 15 gives the LOS analysis for the "Phase 2 opening day without project" scenario, with detailed worksheets in **Appendix D**. With the addition of traffic from nearby cumulative projects, all study intersections are expected to continue operating at or above the minimum acceptable LOS.

Table 15: Intersection LOS – Phase 1+2 Opening Day without Project (2029)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	14.1	**B**	16.6	**B**
2	Bellegrave Ave @ Pats Ranch Rd	OWSC	12.5	**B**	25.1	**C**
3	Bellegrave Ave @ Wineville Ave	Signal	17.0	**B**	18.2	**B**
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	22.6	**C**	12.7	**B**
5	Bellegrave Ave @ Etiwanda Ave	Signal	43.7	**D**	38.3	**D**
6	Shearwater Dr @ Pats Ranch Rd	*N/A*				
7	Shearwater Dr @ Wineville Ave	OWSC	12.1	**B**	15.2	**C**
8	Park Center Dr @ Pats Ranch Rd	OWSC	9.3	**A**	9.7	**A**
9	Park Center Dr @ Wineville Ave	Signal	15.6	**B**	10.7	**B**
10	Boca Pl @ Pats Ranch Rd	OWSC	9.4	**A**	9.7	**A**
11	Limonite Ave @ Hamner Ave	Signal	28.8	**C**	40.2	**D**
12	Limonite Ave @ Eastvale Gateway	Signal	21.7	**C**	38.8	**D**
13	Limonite Ave @ I-15 SB	Signal	8.5	**A**	13.4	**B**
14	Limonite Ave @ I-15 NB	Signal	8.8	**A**	12	**B**
15	Limonite Ave @ Pats Ranch Rd	Signal	21.3	**C**	26.2	**C**
16	Pats Ranch Rd @ Apartments Dwy	*Does Not Exist*				

[1] Intersection #6 has no vehicle right-of-way conflicts or traffic control in this scenario.

[2] Intersection traffic control measure as analyzed. OWSC = one-way stop control

[3] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

Phase 1+2 Opening Day with Project (2029)

Then, the expected project traffic is added to the opening day peak-hour traffic volumes (**Figure 27**).

Figure 27: Traffic Volumes – Phase 1+2 Opening Day with Project (2029)

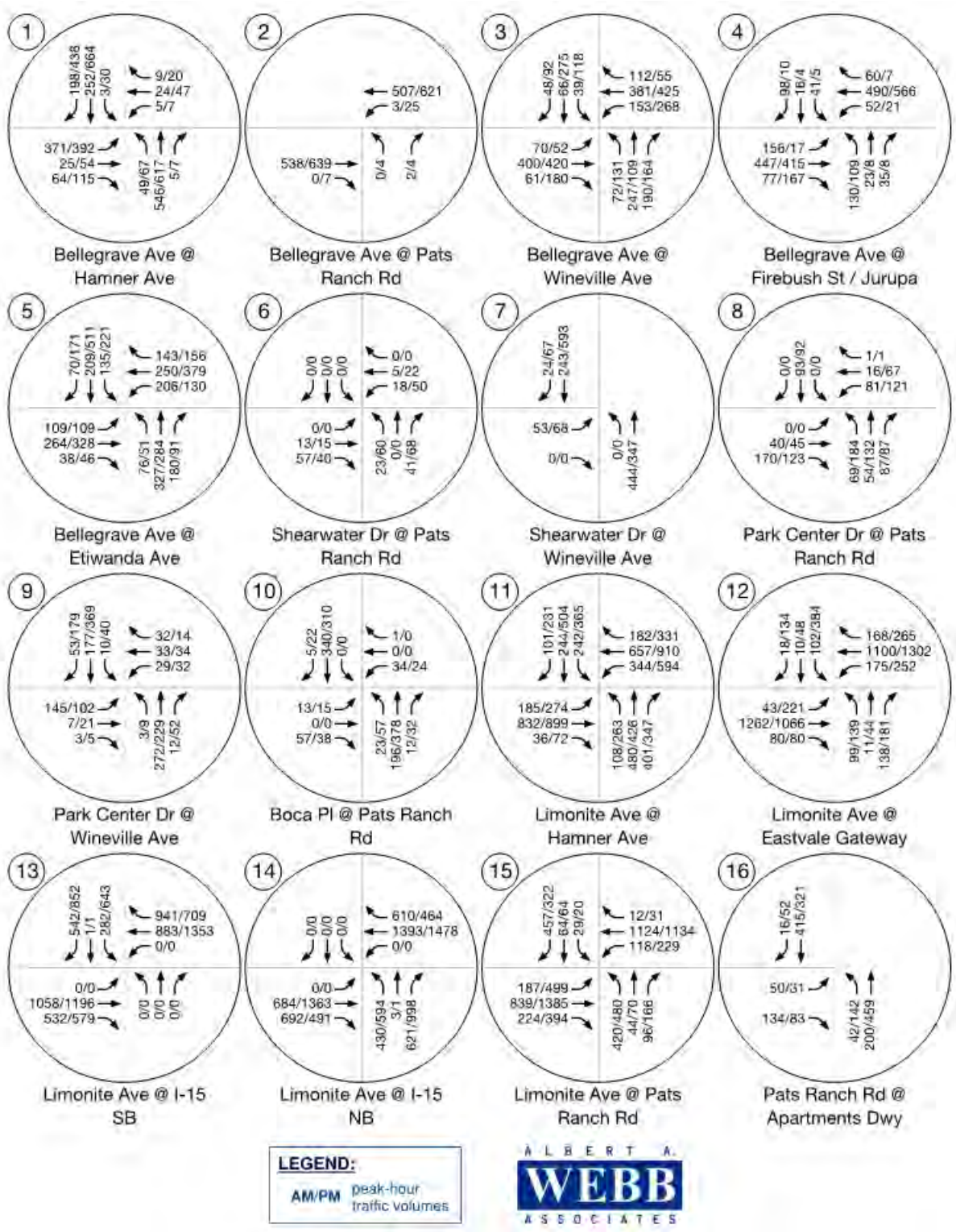


Table 16 summarizes the "Phase 2 opening day with project" LOS analysis, with detailed worksheets in **Appendix D**. With the addition of traffic from nearby cumulative projects and Phase 2 of the proposed project, all study intersections are expected to continue operating at or above the minimum acceptable LOS.

Table 16: Intersection LOS – Phase 1+2 Opening Day with Project (2029)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	15.2	B	19.4	B
2	Bellegrave Ave @ Pats Ranch Rd	Signal	10.3	B	21.8	C
3	Bellegrave Ave @ Wineville Ave	Signal	17.4	B	19.3	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	22.4	C	13.1	B
5	Bellegrave Ave @ Etiwanda Ave	Signal	44.8	D	38.5	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	3.1	A	3.4	A
7	Shearwater Dr @ Wineville Ave	OWSC	13.6	B	20.8	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	4.5	A	6.1	A
9	Park Center Dr @ Wineville Ave	Signal	22	C	15.7	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	4.9	A	5.5	A
11	Limonite Ave @ Hamner Ave	Signal	29.9	C	43.1	D
12	Limonite Ave @ Eastvale Gateway	Signal	21.5	C	38.7	D
13	Limonite Ave @ I-15 SB	Signal	9	A	13.7	B
14	Limonite Ave @ I-15 NB	Signal	10.9	B	14.9	B
15	Limonite Ave @ Pats Ranch Rd	Signal	28.3	C	34.8	C
16	Pats Ranch Rd @ Apartments Dwy	OWSC	16.9	C	22.3	C

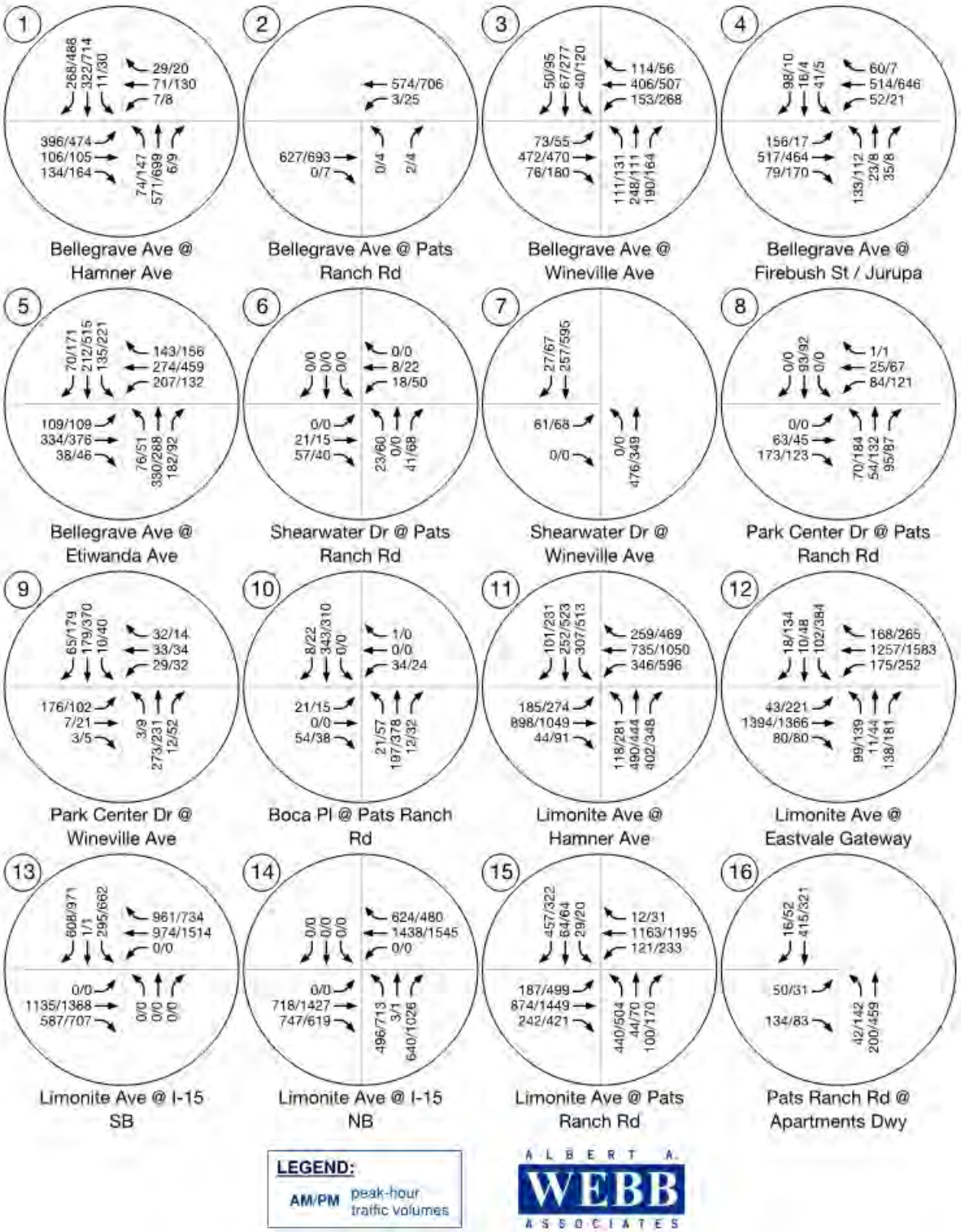
[1] Intersection traffic control as analyzed. OWSC = one-way stop control

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

Phase 1+2 with Project plus Other Cumulative Projects (2029)

This scenario considers all cumulative projects within the study area regardless of their expected opening day. The expected traffic from cumulative projects that are not expected to be completed by the project's opening are also included in the peak-hour traffic volumes for this scenario (**Figure 28**).

Figure 28: Traffic Volumes – Phase 1+2 with Project plus Other Cumulative Projects (2029)



Per the City's guidelines, this scenario also assumes that intersection and roadway improvements needed for the cumulative projects are constructed. Based on the City of Eastvale General Plan and expected future developments such as the Ontario Plan and Leal Master Plan, this study assumes the following improvements for this scenario:

- **#1 Bellegrave Avenue @ Hamner Avenue:** second westbound through lane is completed.
- **#11 Limonite Avenue @ Hamner Avenue:** third westbound through lane is completed.

Table 17 summarizes the "Phase 2 opening day plus other cumulative projects" LOS analysis, with detailed worksheets in **Appendix D**. With the addition of traffic from Phase 2 of the proposed project and all cumulative projects regardless of their expected completion status, all study intersections are expected to continue operating at or above the minimum acceptable LOS.

Table 17: Intersection LOS – Phase 1+2 with Project plus Other Cumulative Projects (2029)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	17.9	B	26.6	C
2	Bellegrave Ave @ Pats Ranch Rd	Signal	10.7	B	24.6	C
3	Bellegrave Ave @ Wineville Ave	Signal	17.8	B	19.5	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	22.6	C	12.9	B
5	Bellegrave Ave @ Etiwanda Ave	Signal	45	D	38.9	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	3.1	A	3.4	A
7	Shearwater Dr @ Wineville Ave	OWSC	14.3	B	20.9	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	4.8	A	6.1	A
9	Park Center Dr @ Wineville Ave	Signal	24	C	15.7	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	4.9	A	5.5	A
11	Limonite Ave @ Hamner Ave	Signal	33	C	55	D
12	Limonite Ave @ Eastvale Gateway	Signal	21	C	38.2	D
13	Limonite Ave @ I-15 SB	Signal	10.4	B	20.1	C
14	Limonite Ave @ I-15 NB	Signal	11.6	B	15.4	B
15	Limonite Ave @ Pats Ranch Rd	Signal	29.2	C	36.7	D
15	Limonite Ave @ Pats Ranch Rd	Signal	29.2	C	36.7	D

[1] Intersection traffic control as analyzed. OWSC = one-way stop control

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

VII. PROJECT PHASE 1+2+3 (2031)

Phase 1+2+3 Opening Day without Project (2031)

To analyze the study intersections LOS under the project phase 3 scenarios, first the trips from the cumulative projects are added to the existing traffic volumes (**Figure 29**).

Reference Map: Study Area

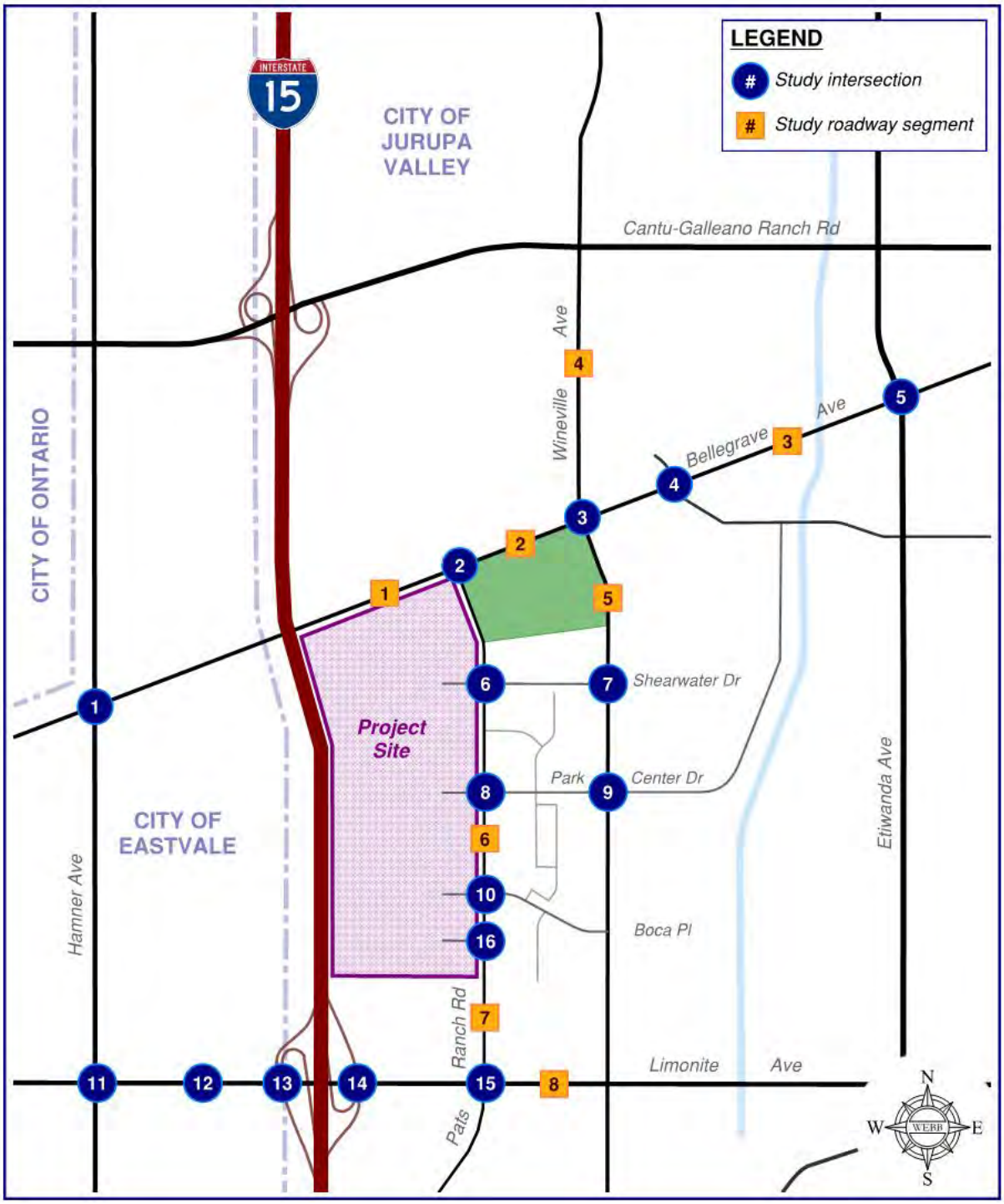


Figure 29: Traffic Volumes – Phase 1+2+3 Opening Day without Project (2031)

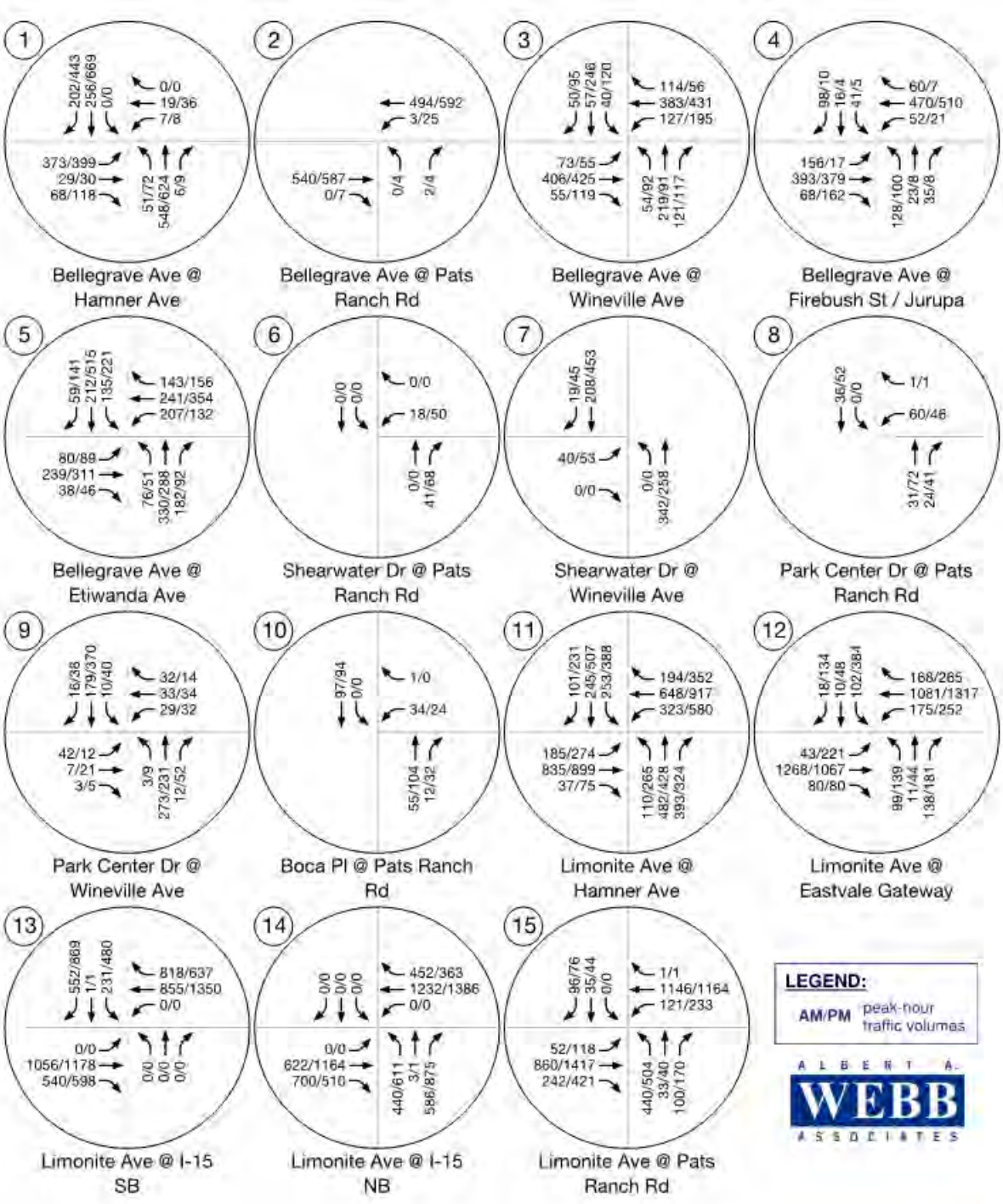


Table 18 gives the LOS analysis for the "Phase 3 opening day without project" scenario, with detailed worksheets in **Appendix D**. With the addition of traffic from nearby cumulative projects, all study intersections are expected to continue operating at or above the minimum acceptable LOS.

Table 18: Intersection LOS – Phase 1+2+3 Opening Day without Project (2031)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	14.4	**B**	17.4	**B**
2	Bellegrave Ave @ Pats Ranch Rd	OWSC	12.6	**B**	25.7	**D**
3	Bellegrave Ave @ Wineville Ave	Signal	17.1	**B**	18.3	**B**
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	22.7	**C**	12.8	**B**
5	Bellegrave Ave @ Etiwanda Ave	Signal	43.7	**D**	38	**D**
6	Shearwater Dr @ Pats Ranch Rd	*N/A*				
7	Shearwater Dr @ Wineville Ave	OWSC	12.1	**B**	15.3	**C**
8	Park Center Dr @ Pats Ranch Rd	OWSC	9.3	**A**	9.7	**A**
9	Park Center Dr @ Wineville Ave	Signal	15.5	**B**	10.7	**B**
10	Boca Pl @ Pats Ranch Rd	OWSC	9.4	**A**	9.7	**A**
11	Limonite Ave @ Hamner Ave	Signal	29.4	**C**	42	**D**
12	Limonite Ave @ Eastvale Gateway	Signal	21.6	**C**	38.7	**D**
13	Limonite Ave @ I-15 SB	Signal	8.7	**A**	14.1	**B**
14	Limonite Ave @ I-15 NB	Signal	9.0	**A**	12.6	**B**
15	Limonite Ave @ Pats Ranch Rd	Signal	21.6	**C**	27.2	**C**
16	Pats Ranch Rd @ Apartments Dwy	*Does Not Exist*				

[1] Intersection #6 has no vehicle right-of-way conflicts or traffic control in this scenario.

[2] Intersection traffic control measure as analyzed. OWSC = one-way stop control

[3] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

Phase 1+2+3 Opening Day Conditions (2031)

Then, the expected project traffic is added to the opening day peak-hour traffic volumes (**Figure 30**).

Figure 30: Traffic Volumes – Phase 1+2+3 Opening Day with Project (2031)

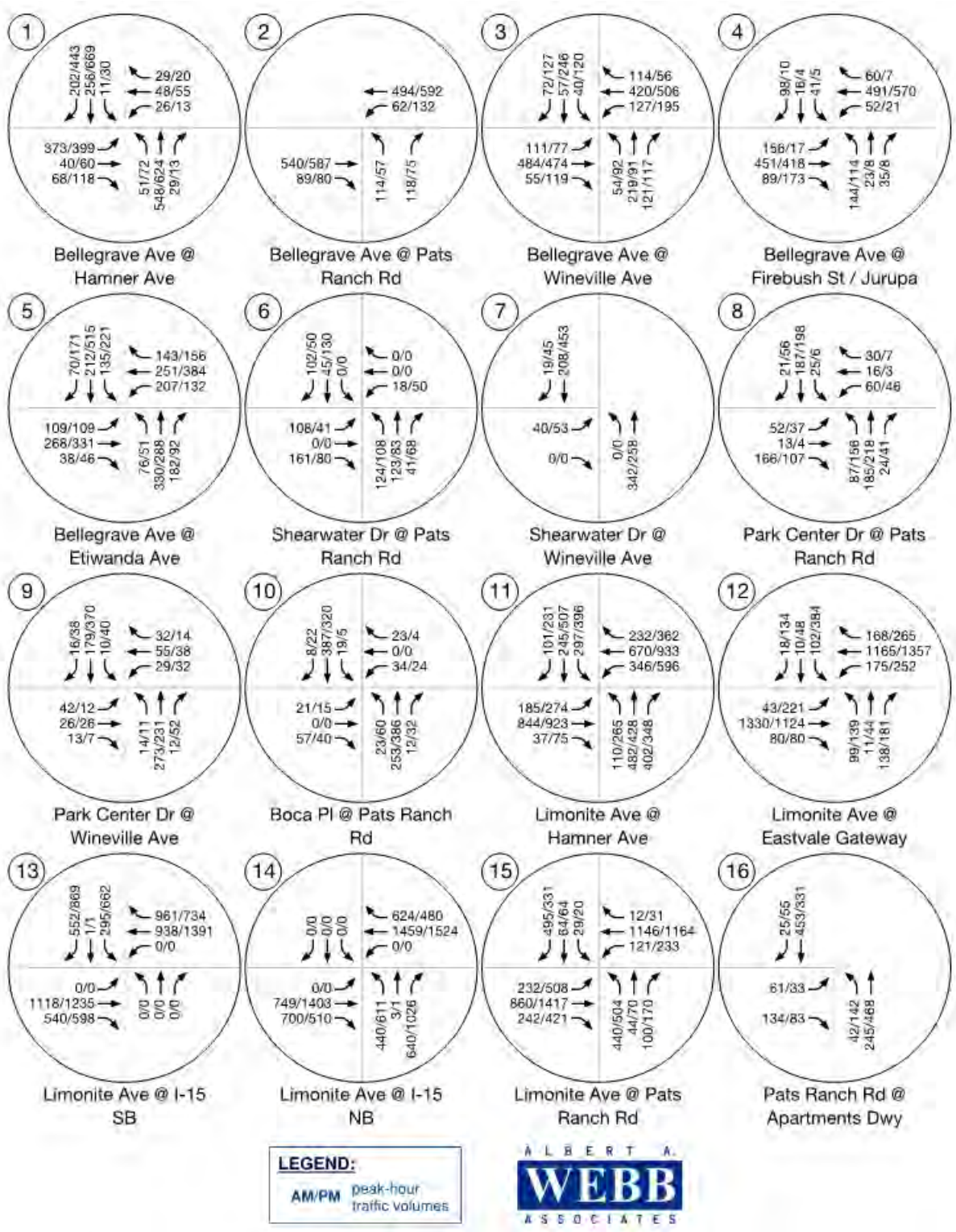


Table 19 summarizes the "Phase 3 opening day with project" LOS analysis, with detailed worksheets in **Appendix D**. With the addition of traffic from nearby cumulative projects and the proposed project, all study intersections are expected to continue operating at or above the minimum acceptable LOS.

Table 19: Intersection LOS – Phase 1+2+3 Opening Day with Project (2031)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	17.4	B	20.0	B
2	Bellegrave Ave @ Pats Ranch Rd	Signal	17.4	B	14.8	B
3	Bellegrave Ave @ Wineville Ave	Signal	17.6	B	18.6	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	23	C	13.3	B
5	Bellegrave Ave @ Etiwanda Ave	Signal	44.7	D	38.2	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	5.2	A	4.7	A
7	Shearwater Dr @ Wineville Ave	OWSC	12.1	B	15.3	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	5.6	A	6.2	A
9	Park Center Dr @ Wineville Ave	Signal	18.2	B	11.4	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	5.5	A	5.7	A
11	Limonite Ave @ Hamner Ave	Signal	31.8	C	45.4	D
12	Limonite Ave @ Eastvale Gateway	Signal	21.3	C	38.5	D
13	Limonite Ave @ I-15 SB	Signal	9.4	A	14.3	B
14	Limonite Ave @ I-15 NB	Signal	11.4	B	15.3	B
15	Limonite Ave @ Pats Ranch Rd	Signal	31	C	36.8	D
16	Pats Ranch Rd @ Apartments Dwy	OWSC	18.9	C	23.0	C

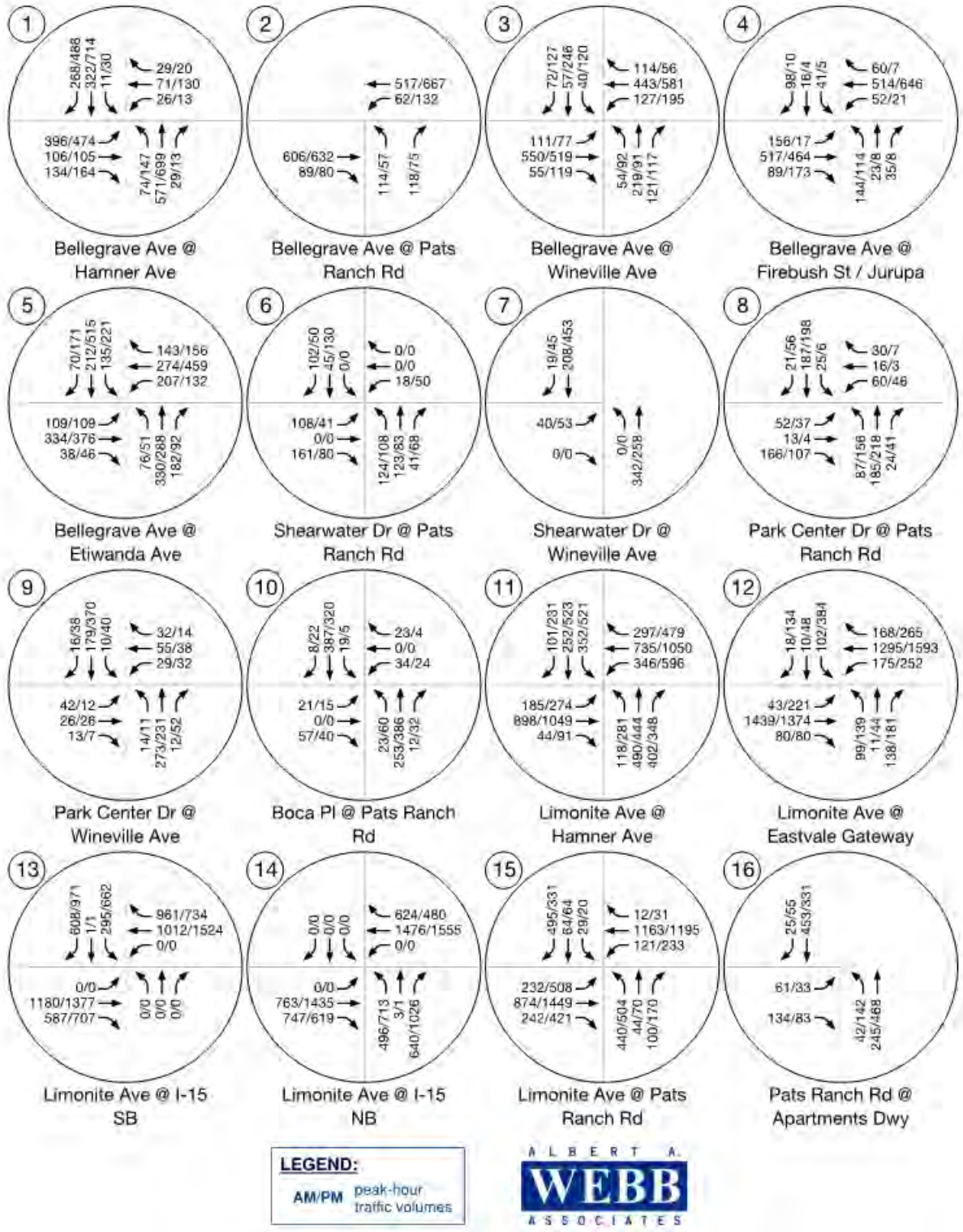
[1] Intersection traffic control as analyzed. OWSC = one-way stop control

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

Phase 1+2+3 with Project plus Other Cumulative Projects (2031)

This scenario considers all cumulative projects within the study area regardless of their expected opening day. The expected traffic from cumulative projects that are not expected to be completed by the project's opening are also included in the peak-hour traffic volumes for this scenario (**Figure 31**).

Figure 31: Traffic Volumes – Phase 1+2+3 with Project plus Other Cumulative Projects (2031)



Per the City's guidelines, this scenario also assumes that intersection and roadway improvements needed for the cumulative projects are constructed. Based on the City of Eastvale General Plan and expected future developments such as the Ontario Plan and Leal Master Plan, this study assumes the following improvements for this scenario:

- **#1 Bellegrave Avenue @ Hamner Avenue:** second westbound through lane is completed.
- **#11 Limonite Avenue @ Hamner Avenue:** third westbound through lane is completed.

Table 20 summarizes the "Phase 3 opening day plus other cumulative projects" analysis, with details in **Appendix D**. With the addition of the proposed project and all cumulative projects regardless of their expected completion date, the following study intersection is expected to operate below the minimum acceptable LOS:

- #11 Limonite Avenue @ Hamner Avenue (PM peak hour only)

Table 20: Intersection LOS – Phase 1+2+3 with Project plus Other Cumulative Projects (2031)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	18.1	B	26.6	C
2	Bellegrave Ave @ Pats Ranch Rd	Signal	16.8	C	14.1	B
3	Bellegrave Ave @ Wineville Ave	Signal	17.8	B	18.9	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	22.8	C	13	B
5	Bellegrave Ave @ Etiwanda Ave	Signal	45	D	38.9	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	5.2	A	4.7	A
7	Shearwater Dr @ Wineville Ave	OWSC	12.1	B	15.3	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	5.6	A	6.2	A
9	Park Center Dr @ Wineville Ave	Signal	18.2	B	11.4	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	5.5	A	5.7	A
11	Limonite Ave @ Hamner Ave	Signal	34.5	C	55.7	E
12	Limonite Ave @ Eastvale Gateway	Signal	20.9	C	38.2	D
13	Limonite Ave @ I-15 SB	Signal	10.5	B	20.1	C
14	Limonite Ave @ I-15 NB	Signal	11.6	B	15.5	B
15	Limonite Ave @ Pats Ranch Rd	Signal	31.2	C	37.2	D
16	Pats Ranch Rd @ Apartments Dwy	OWSC	18.9	C	23.0	C

[1] Intersection traffic control as analyzed. OWSC = one-way stop control

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

X = LOS falls below minimum threshold

Intersection Improvements

The intersection of Limonite Avenue and Hamner Avenue is expected to operate below the minimum acceptable LOS in the PM peak hour with the construction of the full project as well as all cumulative projects regardless of their expected completion date. For this scenario, it is recommended to revise the traffic signal timing to include a right-turn overlap phase for the northbound right turn. With this improvement, the intersection is expected to operate above the minimum acceptable LOS (**Table 21**).

Table 21: Intersection LOS – Phase 1+2+3 with Project plus Other Cumulative Projects with Improvements

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
11	Limonite Ave @ Hamner Ave	Signal	*acceptable LOS*		38.2	**D**

[1] Intersection traffic control as analyzed.

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

VIII. BUILDOUT CONDITIONS (2040)

Future Buildout without Project (2040)

Future Intersection Geometrics

The future buildout analysis is based on each City's General Plan ultimate roadway configurations. Based on the City of Eastvale General Plan and expected future developments, this study assumes the following improvements for this scenario:

- **#1 Bellegrave Avenue @ Hamner Avenue:** second westbound through lane is completed.
- **#11 Limonite Avenue @ Hamner Avenue:** third westbound through lane is completed.

Future Traffic Volumes

Based on existing traffic volume data and traffic forecast data from the Riverside County Model (RIVCOM), an average annual growth rate of 2.1% was used to determine future traffic volumes within the study area for the General Plan buildout year (**Table 22**).

Table 22: Horizon Year Traffic Growth Rates

Roadway Segment	Traffic Volumes		% Growth	
	2022[1]	2045[2]	Total	Annual
Bellegrave Avenue				
I-15 - Wineville Ave	13,183	21,431	62.6%	**0.3%**
e/o Wineville Ave	11,312	18,219	61.1%	**0.3%**
Wineville Avenue				
n/o Bellegrave Ave	7,266	11,318	55.8%	**0.2%**
Bellegrave Ave - Shearwater Dr	9,242	13,042	41.1%	**0.2%**
Boca Pl - Limonite Ave	7,584	11,156	47.1%	**0.2%**
Pats Ranch Road				
Bellegrave Ave - Boca Pl	1,232	N/A	N/A	
Boca Pl - Limonite Ave	3,209	N/A	N/A	
Limonite Avenue				
Pats Ranch Rd - Wineville Ave	32,069	44,514	38.8%	**0.2%**
Average Annual Growth Rate			**0.2%**	

[1] Existing traffic volume data collected in March and August 2022.
[2] RIVCOM roadway segment traffic volume outputs.

The existing peak-hour traffic volumes are then increased by 39.6% for the 18 years of growth from 2022 to 2040 to determine expected traffic volumes in the buildout year (**Figure 32**).

Reference Map: Study Area

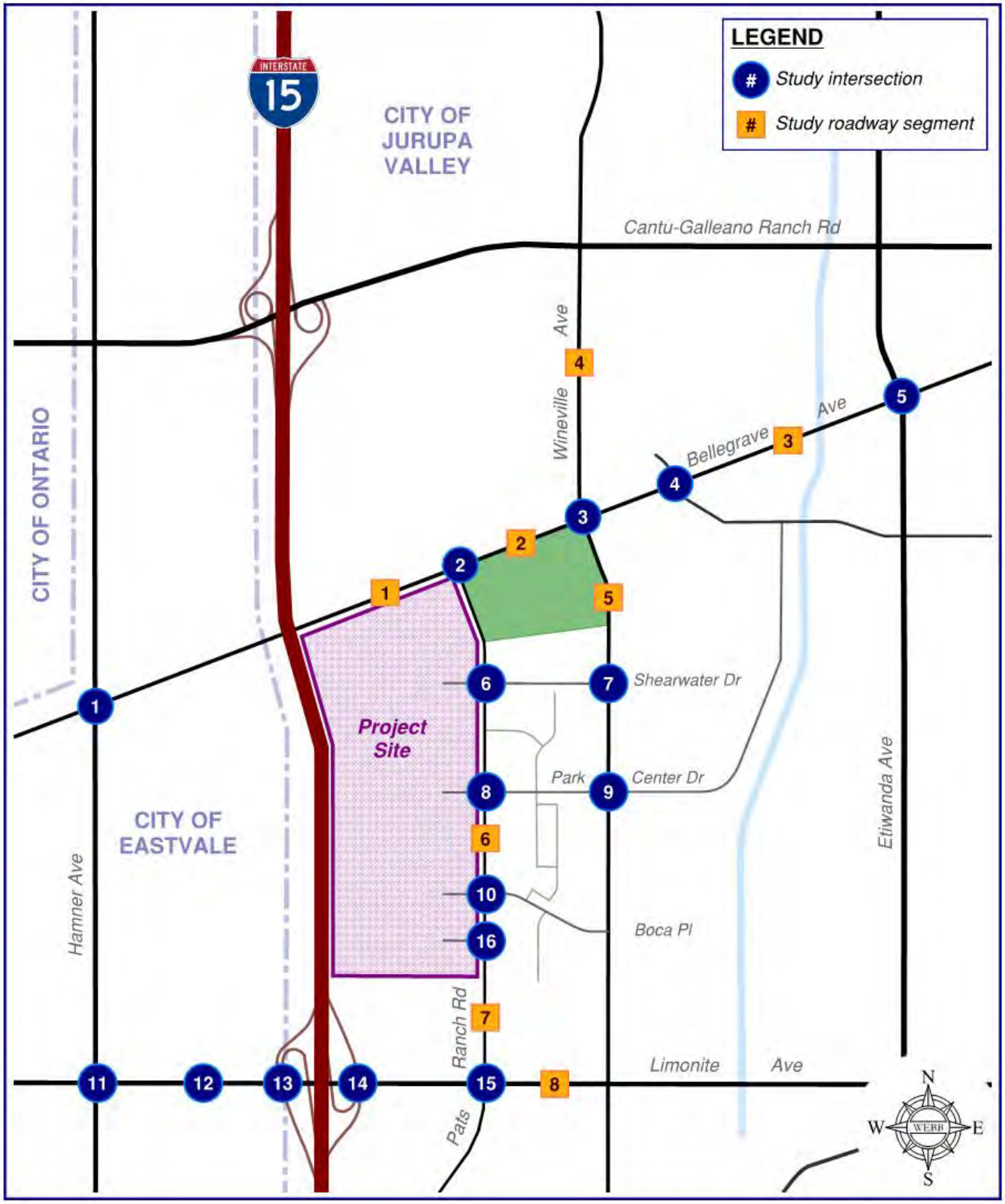
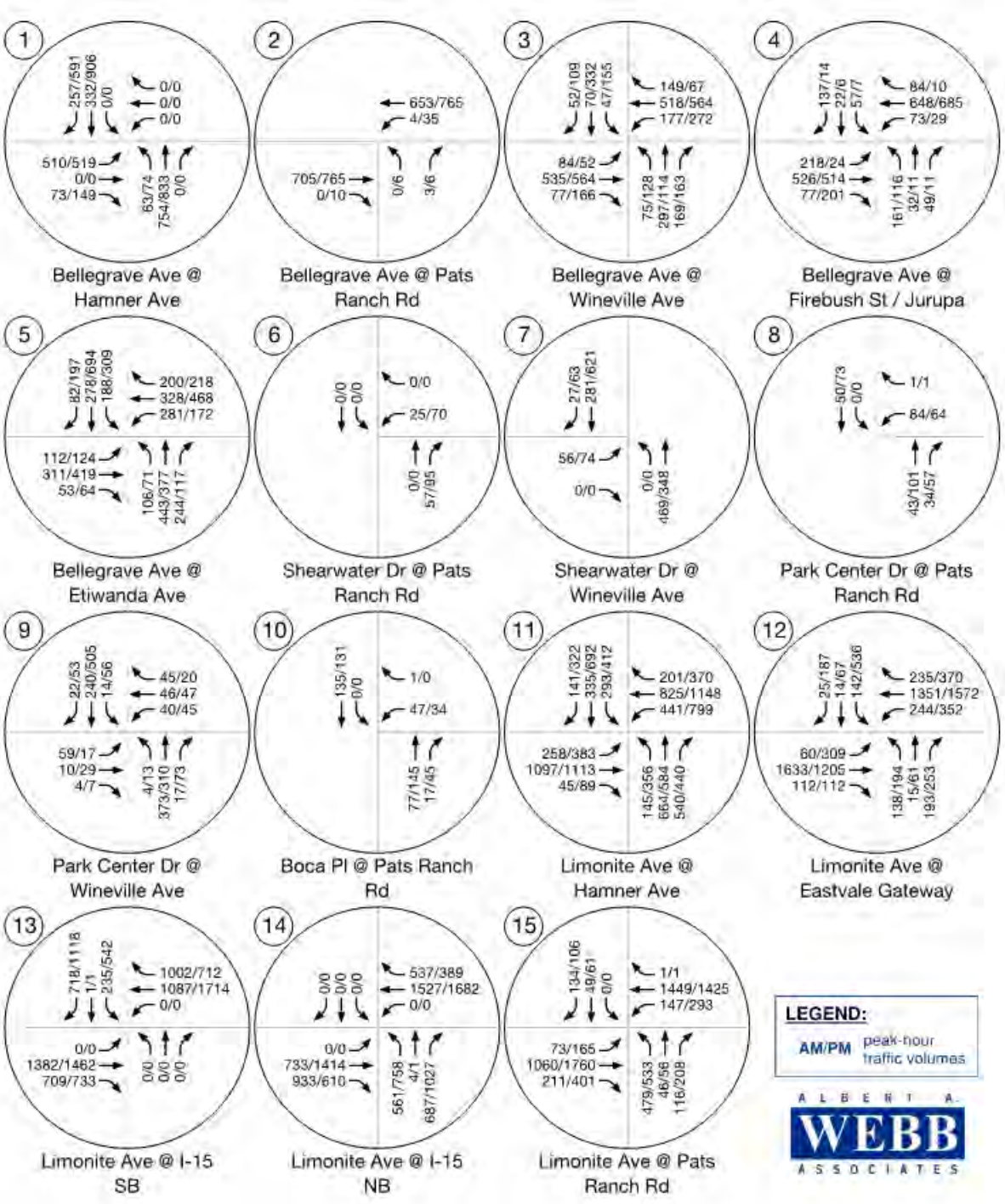


Figure 32: Traffic Volumes – Future Buildout without Project (2040)



Intersection Analysis

Table 23 gives the LOS analysis for the "future buildout" scenario, with detailed worksheets in **Appendix D**. In the future buildout year, the following study intersections are expected to operate below the minimum acceptable LOS:

- #2 Bellegrave Avenue @ Pats Ranch Road (PM peak hour only)
- #11 Limonite Avenue @ Hamner Avenue (PM peak hour only)
- #12 Limonite Avenue @ Eastvale Gateway (PM peak hour only)

Table 23: Intersection LOS – Future Buildout without Project (2040)

	Intersection	Traffic Control[1]	AM Peak Hr Delay	AM Peak Hr LOS[2]	PM Peak Hr Delay	PM Peak Hr LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	14.6	**B**	19.1	**B**
2	Bellegrave Ave @ Pats Ranch Rd	OWSC	13.7	**B**	43.8	**E**
3	Bellegrave Ave @ Wineville Ave	Signal	18.0	**B**	20.1	**C**
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	23.7	**C**	13	**B**
5	Bellegrave Ave @ Etiwanda Ave	Signal	46.4	**D**	41.2	**D**
6	Shearwater Dr @ Pats Ranch Rd	*N/A*				
7	Shearwater Dr @ Wineville Ave	OWSC	13.8	**B**	20.8	**C**
8	Park Center Dr @ Pats Ranch Rd	OWSC	9.5	**A**	10.1	**B**
9	Park Center Dr @ Wineville Ave	Signal	16.6	**B**	11.6	**B**
10	Boca Pl @ Pats Ranch Rd	OWSC	9.7	**A**	10.3	**B**
11	Limonite Ave @ Hamner Ave	Signal	53.2	**D**	67	**E**
12	Limonite Ave @ Eastvale Gateway	Signal	26.8	**C**	66.2	**E**
13	Limonite Ave @ I-15 SB	Signal	16.0	**B**	26.5	**C**
14	Limonite Ave @ I-15 NB	Signal	12.0	**B**	15.7	**B**
15	Limonite Ave @ Pats Ranch Rd	Signal	24.2	**C**	35.9	**D**
16	Pats Ranch Rd @ Apartments Dwy	*Does Not Exist*				

[1] Intersection #6 has no vehicle right-of-way conflicts or traffic control in this scenario.

[2] Intersection traffic control measure as analyzed. OWSC = one-way stop control

[3] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

X = LOS falls below minimum threshold

Future Buildout with Project (2040)

The expected project traffic is then added to the buildout peak-hour traffic volumes (**Figure 33**).

Figure 33: Traffic Volumes – Future Buildout with Project (2040)

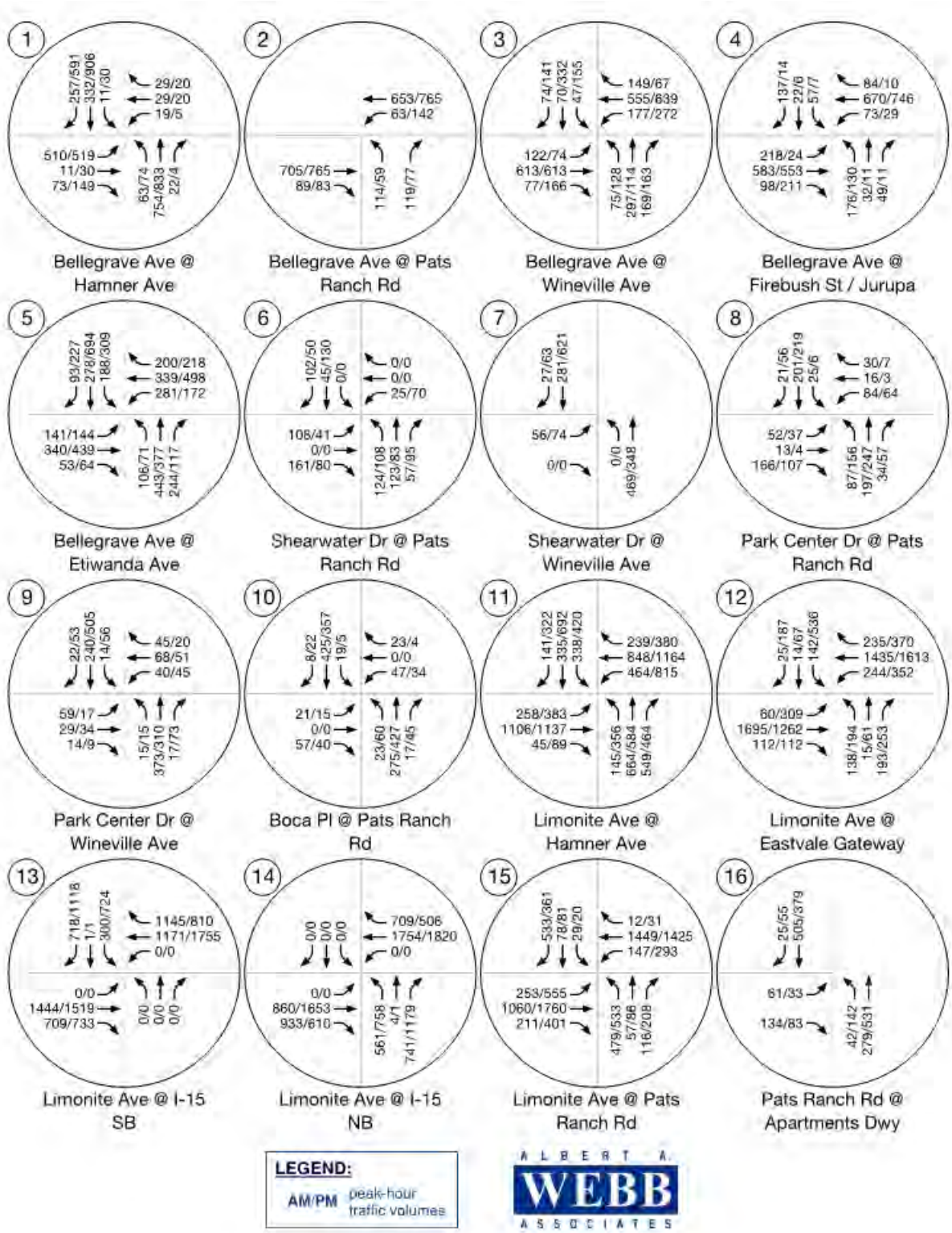


Table 24 gives the LOS analysis for the "future buildout with project" scenario, with detailed worksheets in **Appendix D**. With the addition of project traffic to the future buildout year, the following study intersections are expected to operate below the minimum acceptable LOS:

- #11 Limonite Avenue @ Hamner Avenue
- #12 Limonite Avenue @ Eastvale Gateway (PM peak hour only)

Table 24: Intersection LOS – Future Buildout with Project (2040)

	Intersection	Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
1	Bellegrave Ave @ Hamner Ave	Signal	17.3	B	23.3	C
2	Bellegrave Ave @ Pats Ranch Rd	Signal	15.1	B	18.2	B
3	Bellegrave Ave @ Wineville Ave	Signal	18.4	B	20.6	C
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signal	24.1	C	13.6	B
5	Bellegrave Ave @ Etiwanda Ave	Signal	47.3	D	40.8	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	4.8	A	4.5	A
7	Shearwater Dr @ Wineville Ave	OWSC	13.8	B	20.8	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	5.6	A	6.0	A
9	Park Center Dr @ Wineville Ave	Signal	18.6	B	12.1	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	5.7	A	6.0	A
11	Limonite Ave @ Hamner Ave	Signal	58.2	E	72.7	E
12	Limonite Ave @ Eastvale Gateway	Signal	26.7	C	61.8	E
13	Limonite Ave @ I-15 SB	Signal	17.1	B	26.0	C
14	Limonite Ave @ I-15 NB	Signal	17.4	B	20.8	C
15	Limonite Ave @ Pats Ranch Rd	Signal	40.6	D	50.2	D
16	Pats Ranch Rd @ Apartments Dwy	OWSC	20.9	C	25.8	D

[1] Intersection traffic control as analyzed. OWSC = one-way stop control

[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

X = LOS falls below minimum threshold

Intersection Improvements

The intersections of Limonite Avenue at Hamner Avenue and Eastvale Gateway are expected to operate below the minimum acceptable LOS in the General Plan buildout year. At Hamner Avenue, it is recommended to revise the traffic signal timing to include a right-turn overlap phase for the northbound right turn. At Eastvale Gateway, it is recommended to restripe the northbound approach to provide one exclusive left-turn lane, one exclusive right-turn lane, and one shared left/through/right lane. With these improvements, the intersections are expected to operate above the minimum acceptable LOS (**Table 25**).

Table 25: Intersection LOS – Future Buildout with Project with Improvements (2040)

Intersection		Traffic Control[1]	AM Peak Hr		PM Peak Hr	
			Delay	LOS[2]	Delay	LOS[2]
11	Limonite Ave @ Hamner Ave	Signal	36.6	**D**	50.3	**D**
12	Limonite Ave @ Eastvale Gateway	Signal	*acceptable LOS*		49.5	**D**

[1] Intersection traffic control as analyzed.

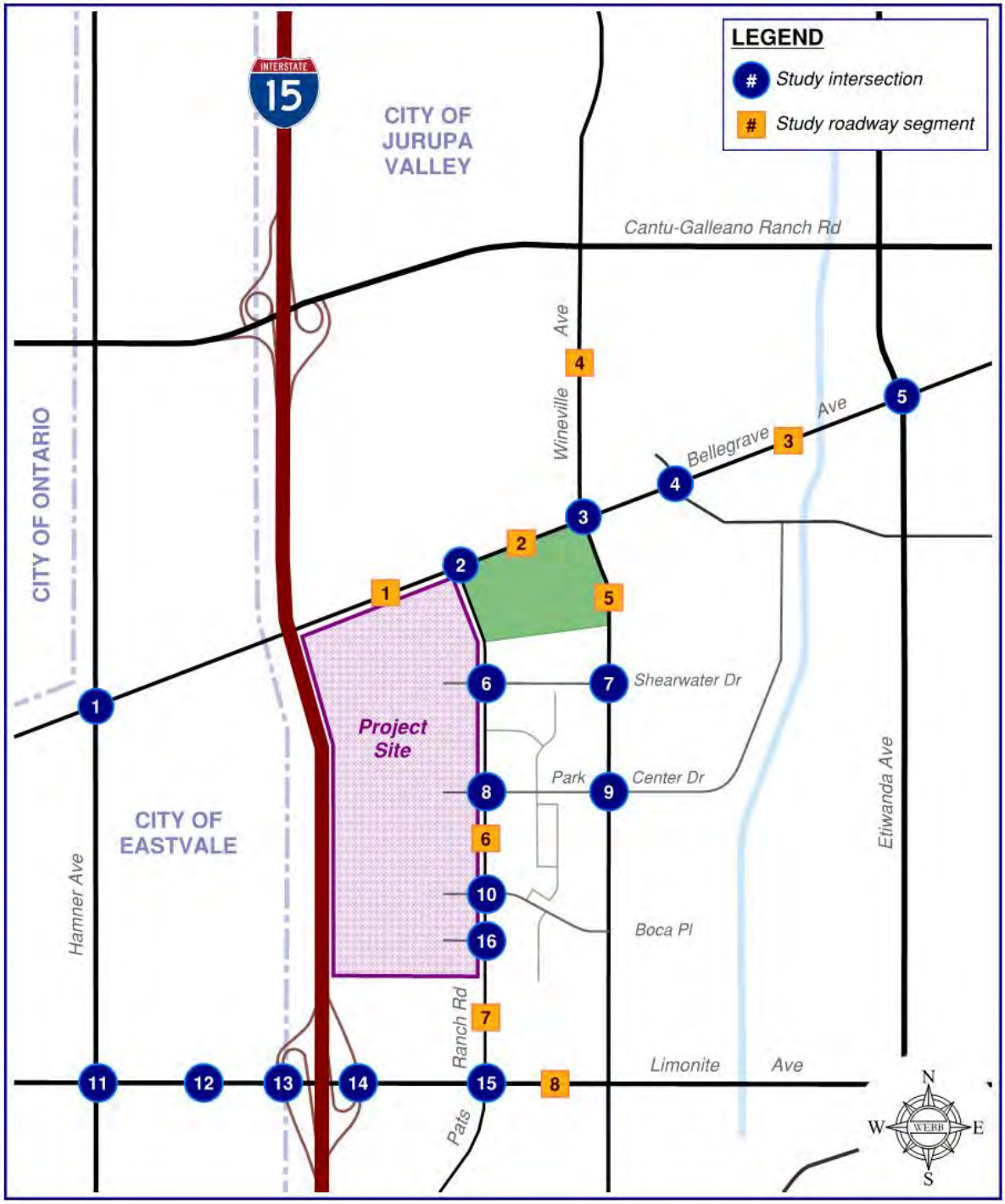
[2] Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Capacity Manual (6e).

IX. OTHER PROJECT CONSIDERATIONS

Roadway Segment Analysis

Roadway segment analysis assigns an LOS ranking from LOS A to LOS F indicating relative vehicle density or congestion, based on roadway classifications and number of travel lanes in the City of Jurupa Valley General Plan. Per the General Plan, the minimum acceptable LOS for roadway segments is LOS D.

Reference Map: Study Area



Existing Conditions (2022)

The roadway segment analysis is based on daily traffic volume data collected on Thursday, March 3 and Wednesday, August 17, 2022 (**Appendix C**). In the existing condition, all study roadway segments currently operate at or above the minimum acceptable LOS (**Table 26**).

Table 26: Roadway Segment LOS – Existing Conditions (2022)

	Roadway Segment	Roadway Classification	# Lanes	Capacity	ADT	V/C	LOS
Bellegrave Avenue							
1	w/o Pats Ranch Rd	Arterial	2	18,000	12,634	0.70	**C**
2	Pats Ranch Rd - Wineville Ave	Major	4	34,100	12,634	0.37	**A**
3	e/o Wineville Ave	Major	4	34,100	11,312	0.33	**A**
Wineville Avenue							
4	n/o Bellegrave Ave	Major	4	34,100	7,266	0.21	**A**
5	s/o Bellegrave Ave	Major	4	34,100	9,242	0.27	**A**
Pats Ranch Road							
6	Bellegrave Ave - Boca Pl	Collector	2	12,500	1,232	0.10	**A**
7	Boca Pl - Limonite Ave	Collector	2	12,500	3,209	0.26	**A**
Limonite Avenue							
8	Pats Ranch Rd - Wineville Ave	Urban Arterial	6	56,300	34,862	0.62	**B**

Phase 1 Conditions (2027)

In the "Phase 1 opening day" condition, all study roadway segments are expected to operate at or above the minimum acceptable LOS (**Table 27**).

Table 27: Roadway Segment LOS – Phase 1 Conditions (2027)

	Roadway Segment	Roadway Classification	# Lanes	Capacity	Existing + Cumulative Projects				Project Phase 1 Opening Day				
					CP ADT	Total ADT	V/C	LOS	Project ADT	Total ADT	V/C	LOS	Impact
Bellegrave Avenue													
1	w/o Pats Ranch Rd	Arterial	2	18,000	648	13,282	0.74	**C**	868	14,150	0.79	**C**	NO
2	Pats Ranch Rd - Wineville Ave	Major	4	34,100	648	13,282	0.39	**A**	868	14,150	0.41	**A**	NO
3	e/o Wineville Ave	Major	4	34,100	523	11,835	0.35	**A**	1,042	12,877	0.38	**A**	NO
Wineville Avenue													
4	n/o Bellegrave Ave	Major	4	34,100	125	7,391	0.22	**A**	435	7,826	0.23	**A**	NO
5	s/o Bellegrave Ave	Major	4	34,100	125	9,367	0.27	**A**	2,344	11,711	0.34	**A**	NO
Pats Ranch Road													
6	Bellegrave Ave - Boca Pl	Collector	2	12,500	0	1,232	0.10	**A**	3,875	5,107	0.41	**A**	NO
7	Boca Pl - Limonite Ave	Collector	4	19,200	0	3,209	0.17	**A**	6,338	9,547	0.50	**A**	NO
Limonite Avenue													
8	Pats Ranch Rd - Wineville Ave	Urban Arterial	6	56,300	254	35,116	0.62	**B**	435	35,551	0.63	**B**	NO

Phase 1 Conditions with Project plus Other Cumulative Projects (2027)

In the "Phase 1 opening day plus other cumulative projects" condition, all study roadway segments are expected to operate at or above the minimum acceptable LOS (**Table 28**).

Table 28: Roadway Segment LOS – Phase 1 with Project plus Other Cumulative Projects (2027)

	Roadway Segment	Roadway Classification	# Lanes	Capacity	Phase 1 plus Other Cumulative				
					Project ADT	CP ADT	Total ADT	V/C	LOS
Bellegrave Avenue									
1	w/o Pats Ranch Rd	Arterial	2	18,000	868	1,080	14,582	0.81	**D**
2	Pats Ranch Rd - Wineville Ave	Major	4	34,100	868	1,080	14,582	0.43	**A**
3	e/o Wineville Ave	Major	4	34,100	1,042	871	13,225	0.39	**A**
Wineville Avenue									
4	n/o Bellegrave Ave	Major	4	34,100	435	209	7,910	0.23	**A**
5	s/o Bellegrave Ave	Major	4	34,100	2,344	209	11,795	0.35	**A**
Pats Ranch Road									
6	Bellegrave Ave - Boca Pl	Collector	2	12,500	3,875	0	5,107	0.41	**A**
7	Boca Pl - Limonite Ave	Collector	4	19,200	6,338	0	9,547	0.50	**A**
Limonite Avenue									
8	Pats Ranch Rd - Wineville Ave	Urban Arterial	6	56,300	435	1,270	36,567	0.65	**B**

Phase 1+2 Conditions (2029)

In the "Phase 2 opening day" condition, all study roadway segments are expected to operate at or above the minimum acceptable LOS (**Table 29**).

Table 29: Roadway Segment LOS – Phase 1+2 Conditions (2029)

	Roadway Segment	Roadway Classification	# Lanes	Capacity	Existing + Cumulative				Project Phase 2 Opening Day				
					CP ADT	Total ADT	V/C	LOS	Project ADT	Total ADT	V/C	LOS	Impact
Bellegrave Avenue													
1	w/o Pats Ranch Rd	Arterial	2	18,000	864	13,498	0.75	**C**	1,187	14,685	0.82	**D**	NO
2	Pats Ranch Rd - Wineville Ave	Major	4	34,100	864	13,498	0.40	**A**	1,187	14,685	0.43	**A**	NO
3	e/o Wineville Ave	Major	4	34,100	697	12,009	0.35	**A**	1,425	13,434	0.39	**A**	NO
Wineville Avenue													
4	n/o Bellegrave Ave	Major	4	34,100	167	7,433	0.22	**A**	594	8,027	0.24	**A**	NO
5	s/o Bellegrave Ave	Major	4	34,100	167	9,409	0.28	**A**	3,205	12,614	0.37	**A**	NO
Pats Ranch Road													
6	Bellegrave Ave - Boca Pl	Collector	2	12,500	0	1,232	0.10	**A**	6,075	7,307	0.58	**A**	NO
7	Boca Pl - Limonite Ave	Collector	4	19,200	0	3,209	0.17	**A**	8,666	11,875	0.62	**B**	NO
Limonite Avenue													
8	Pats Ranch Rd - Wineville Ave	Urban Arterial	6	56,300	381	35,243	0.63	**B**	594	35,837	0.64	**B**	NO

Phase 1+2 Conditions with Project plus Other Cumulative Projects (2029)

In the "Phase 2 opening day with project plus other cumulative projects" condition, all study roadway segments are expected to operate at or above the minimum acceptable LOS (**Table 30**).

Table 30: Roadway Segment LOS – Phase 1+2 with Project plus Other Cumulative Projects (2029)

	Roadway Segment	Roadway Classification	# Lanes	Capacity	Phase 2 plus Other Cumulative				
					Project ADT	CP ADT	Total ADT	V/C	LOS
Bellegrave Avenue									
1	w/o Pats Ranch Rd	Arterial	2	18,000	1,187	1,080	14,901	0.83	**D**
2	Pats Ranch Rd - Wineville Ave	Major	4	34,100	1,187	1,080	14,901	0.44	**A**
3	e/o Wineville Ave	Major	4	34,100	1,425	871	13,608	0.40	**A**
Wineville Avenue									
4	n/o Bellegrave Ave	Major	4	34,100	594	209	8,069	0.24	**A**
5	s/o Bellegrave Ave	Major	4	34,100	3,205	209	12,656	0.37	**A**
Pats Ranch Road									
6	Bellegrave Ave - Boca Pl	Collector	2	12,500	6,075	0	7,307	0.58	**A**
7	Boca Pl - Limonite Ave	Collector	4	19,200	8,666	0	11,875	0.62	**B**
Limonite Avenue									
8	Pats Ranch Rd - Wineville Ave	Urban Arterial	6	56,300	594	1,270	36,726	0.65	**B**

Phase 1+2+3 Conditions (2031)

In the "Phase 3 opening day" condition, all study roadway segments are expected to operate at or above the minimum acceptable LOS (**Table 31**).

Table 31: Roadway Segment LOS – Phase 1+2+3 Conditions (2031)

	Roadway Segment	Roadway Classification	# Lanes	Capacity	Existing + Cumulative				Project Phase 3 Opening Day				
					CP ADT	Total ADT	V/C	LOS	Project ADT	Total ADT	V/C	LOS	Impact
Bellegrave Avenue													
1	w/o Pats Ranch Rd	Arterial	2	18,000	966	13,600	0.76	**C**	1,626	15,226	0.85	**D**	NO
2	Pats Ranch Rd - Wineville Ave	Major	4	34,100	966	13,600	0.40	**A**	2,164	15,764	0.46	**A**	NO
3	e/o Wineville Ave	Major	4	34,100	757	12,069	0.35	**A**	1,498	13,567	0.40	**A**	NO
Wineville Avenue													
4	n/o Bellegrave Ave	Major	4	34,100	186	7,452	0.22	**A**	667	8,119	0.24	**A**	NO
5	s/o Bellegrave Ave	Major	4	34,100	186	9,428	0.28	**A**	0	9,428	0.28	**A**	NO
Pats Ranch Road													
6	Bellegrave Ave - Boca Pl	Collector	2	12,500	0	1,232	0.10	**A**	7,440	8,672	0.69	**B**	NO
7	Boca Pl - Limonite Ave	Collector	4	19,200	0	3,209	0.17	**A**	8,959	12,168	0.63	**B**	NO
Limonite Avenue													
8	Pats Ranch Rd - Wineville Ave	Urban Arterial	6	56,300	508	35,370	0.63	**B**	594	35,964	0.64	**B**	NO

Phase 1+2+3 Conditions with Project plus Other Cumulative Projects (2031)

In the "Phase 3 opening day with project plus other cumulative projects" condition, all study roadway segments are expected to operate at or above the minimum acceptable LOS (Table 32).

Table 32: Roadway Segment LOS – Phase 1+2+3 with Project plus Other Cumulative Projects

	Roadway Segment	Roadway Classification	# Lanes	Capacity	Phase 3 plus Other Cumulative				
					Project ADT	CP ADT	Total ADT	V/C	LOS
Bellegrave Avenue									
1	w/o Pats Ranch Rd	Arterial	2	18,000	1,626	1,080	15,340	0.85	**D**
2	Pats Ranch Rd - Wineville Ave	Major	4	34,100	2,164	1,080	15,878	0.47	**A**
3	e/o Wineville Ave	Major	4	34,100	1,498	871	13,681	0.40	**A**
Wineville Avenue									
4	n/o Bellegrave Ave	Major	4	34,100	667	209	8,142	0.24	**A**
5	s/o Bellegrave Ave	Major	4	34,100	0	209	9,451	0.28	**A**
Pats Ranch Road									
6	Bellegrave Ave - Boca Pl	Collector	2	12,500	7,440	0	8,672	0.69	**B**
7	Boca Pl - Limonite Ave	Collector	4	19,200	8,959	0	12,168	0.63	**B**
Limonite Avenue									
8	Pats Ranch Rd - Wineville Ave	Urban Arterial	6	56,300	594	1,270	36,726	0.65	**B**

Future Buildout (2040)

The Future Buildout scenario assumes that all study roadway segments are built out to their ultimate General Plan designation. This includes the future widening of Bellegrave Avenue within the study area to four travel lanes. In the "future buildout" condition, all study roadway segments are expected to operate at or above the minimum acceptable LOS (Table 33).

Table 33: Roadway Segment LOS – General Plan Buildout (2040)

	Roadway Segment	Roadway Classification	# Lanes	Capacity	Buildout			Buildout with Project				
					ADT	V/C	LOS	Project ADT	Total ADT	V/C	LOS	Impact
Bellegrave Avenue												
1	w/o Pats Ranch Rd	Major	4	34,100	17,637	0.52	**A**	1,626	19,263	0.56	**A**	NO
2	Pats Ranch Rd - Wineville Ave	Major	4	34,100	17,637	0.52	**A**	2,164	19,801	0.58	**A**	NO
3	e/o Wineville Ave	Major	4	34,100	15,792	0.46	**A**	1,498	17,290	0.51	**A**	NO
Wineville Avenue												
4	n/o Bellegrave Ave	Major	4	34,100	10,143	0.30	**A**	667	10,810	0.32	**A**	NO
5	s/o Bellegrave Ave	Major	4	34,100	12,902	0.38	**A**	0	12,902	0.38	**A**	NO
Pats Ranch Road												
6	Bellegrave Ave - Boca Pl	Collector	2	12,500	1,720	0.14	**A**	7,440	9,160	0.73	**C**	NO
7	Boca Pl - Limonite Ave	Collector	4	19,200	4,480	0.23	**A**	8,959	13,439	0.70	**B**	NO
Limonite Avenue												
8	Pats Ranch Rd - Wineville Ave	Urban Arterial	6	56,300	48,667	0.86	**D**	594	49,261	0.87	**D**	NO

Traffic Signal Warrant Analysis

The California Manual on Uniform Control Devices (MUTCD) provides warrant guidelines for the installation of a traffic signal, including volume thresholds and proximity to railroad grade crossings or existing traffic signals. Per the MUTCD, the satisfaction of any single warrant shall not require the installation of a traffic signal, and the peak-hour traffic signal warrant is only an indicator that an unsignalized intersection is likely to meet one or more of the other volume-based signal warrants. The MUTCD further advises that an engineering study should be conducted to assess the effects of installing a traffic control signal on intersection safety, traffic operations, and traffic flow. Based on the traffic volume data, ambient area growth, and proposed project traffic, no study intersections are expected to meet the peak-hour signal warrant threshold in any study scenario (see **Appendix F** for details).

Funding Mechanisms

The analysis shows that the addition of future traffic growth and project traffic is expected to result in deficient traffic operations within the study area. Since the project traffic contributes to these traffic conditions, the project would contribute to the cost of mitigations proportionally. Accordingly, **Table 34** provides the calculated project "fair share" contributions for off-site improvement projects at each study intersection with deficient LOS operations.

Table 34: Project Fair Share Contributions

Intersection	AM Peak Hour				PM Peak Hour				Project Fair Share
	Existing Traffic	Future Growth	Project Traffic	Fair Share	Existing Traffic	Future Growth	Project Traffic	Fair Share	
11 Limonite Ave @ Hamner Ave	3,572	1,512	147	9.7%	4,804	1,933	98	5.1%	**9.7%**

ALBERT A. WEBB ASSOCIATES

Corporate Headquarters
3788 McCray Street
Riverside, CA 92506
T: 951.686.1070

Appendix A

Scoping Agreement

A. City of Jurupa Valley Development Project Scoping Form

This scoping form shall be submitted to the City of Jurupa Valley to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	PAR Case Number: MA21189
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Vernola Ranch Planned Residential Community
Project Address:	APN: 160-050-023
Project Opening Year:	Phase 1: 2026; Phase 2: 2028 Phase 3 / Specific Plan complete: 2030
Project Description:	Residential community with 1,576 dwelling units, recreation/open space, & elementary school

	Consultant:	**Developer:**
Name:	Albert A. Webb Associates	Vernola Trust
Address:	3788 McCray St Riverside, CA 92506	P.O. Box 217 Upland, CA 91785-0217
Telephone:	(951) 686-1070	(951) 318- 0600
Fax/Email:	nick.lowe@webbassociates.com	rickbondar@aol.com

Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual, 11e (2021)

Current General Plan Land Use: vacant

Proposed General Plan Land Use: residential, recreational, school

Current Zoning: R-1: One Family Dwelling; I-P: Industrial Park with Specific Plan Overlay

Proposed Zoning: Specific Plan

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	**0**	**0**	**0**	**438**	**760**	**1,198**
PM Trips	**0**	**0**	**0**	**646**	**436**	**1,082**

Internal Trip Capture: ☒ Yes ☐ No (_____% Trip Discount) see trip generation table

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

Note:
1. See attached detailed trip generation.
2. Pats Ranch Road segment between Shearwater Drive and Bellegrave Avenue will not be constructed before phase 2 of the project.

Potential Screening Checks

Is your project screened from specific analyses?

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

LOS screening justification (see Pages 2-3 of the guidelines):
Proposed project is comprised of over 150 multi-family housing units and over 100 single-family housing units, with over 100 peak-hour trips, therefore a full Traffic Impact Analysis (TIA) including LOS analysis is required.

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

VMT screening justification (see Pages 13-16 of the guidelines):
- The project is not within a Transit Priority Area (TPA)
- The project is not a local serving retail project
- There is no VMT data available and the project is located in a Specific Plan.

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):
- Attach list of Approved and Pending Projects that need to be considered (provided by the Planning Department and adjacent agencies)
- Attach list of study intersections/roadway segments
- Attach site plan
- Other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other _____
- Date of Traffic Counts March 2022
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

VMT Scoping

For projects that are not screened, identify the following:

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

Signatures

TIA Preparer: _____ City (Approved by): _____

Date: 7-2022 Date: _____

Analysis Scenarios

Vernola Ranch Specific Plan | City of Jurupa Valley

Existing Conditions (2022)

- Existing Conditions

Project Phase 1 (2026)

- Opening Year Conditions (existing + anticipated cumulative projects)
- Opening Year + Project
- Opening Year + Project + Other Cumulative Projects

Project Phase 2 (2027)

- Opening Year Conditions (existing + anticipated cumulative projects)
- Opening Year + Project (including previous phase)
- Opening Year + Project + Other Cumulative Projects

Project Phase 3 (2028, full project)

- Opening Year Conditions (existing + anticipated cumulative projects)
- Opening Year + Project (including previous phases)
- Opening Year + Project + Other Cumulative Projects

Horizon Year (2040)

- Horizon Year (no Project)
- Horizon Year + Project

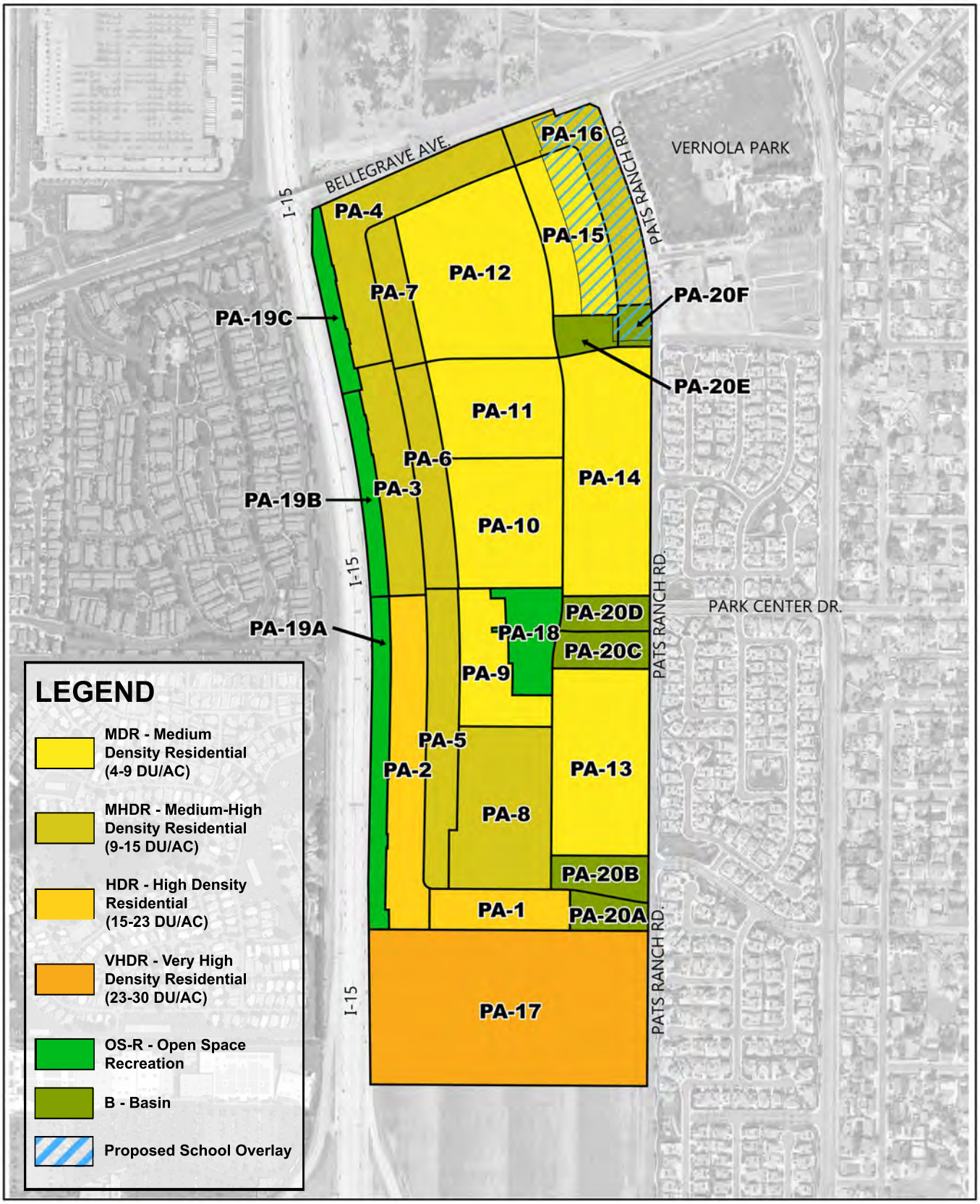


Figure 1: Land Use Plan Exhibit
Vernola Ranch Specific Plan

ALBERT A. WEBB ASSOCIATES

Table 1: Proposed Project Planning Areas

Vernola Ranch Specific Plan

PA[1]	Phase	Designated Land Use	ITE Land Use[2]		Size[3]
1	1	HDR	***215***	*Single-Family Attached Housing*	52 DU
2	1	MHDR	***215***	*Single-Family Attached Housing*	116 DU
3	1	MHDR	***215***	*Single-Family Attached Housing*	68 DU
4	2	MHDR	***215***	*Single-Family Attached Housing*	135 DU
5	1	MHDR	***215***	*Single-Family Attached Housing*	47 DU
6	1	MHDR	***215***	*Single-Family Attached Housing*	39 DU
7	2	MHDR	***215***	*Single-Family Attached Housing*	64 DU
8	1	MHDR	***215***	*Single-Family Attached Housing*	81 DU
9	1	MDR	***210***	*Single-Family Detached Housing*	26 DU
10	1	MDR	***210***	*Single-Family Detached Housing*	42 DU
11	2	MDR	***210***	*Single-Family Detached Housing*	55 DU
12	2	MDR	***210***	*Single-Family Detached Housing*	77 DU
13	1	MDR	***210***	*Single-Family Detached Housing*	61 DU
14	1	MDR	***210***	*Single-Family Detached Housing*	90 DU
15	2	MDR[4]	***215***	*Single-Family Attached Housing*	19 DU
16	3	School	***520***	*Elementary School*	700 STU
17	1	VHDR	***220***	*Multifamily Housing (Low-Rise)*	604 DU
Project Total					**1,576 DU**

[1] PA = Planning Area
[2] Land use codes per ITE Trip Generation Manual, 11th Ed (2021)
[3] DU = dwelling unit, STU = student
[4] School overlay zone includes portions of Planning Areas 15 and 16. DU in the school overlay zone will be kept in Phase 2 if the school is built

Table 2: Trip Generation Rates

Vernola Ranch Specific Plan

ITE Land Use Code[1]		Units[2]	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	**Total**	In	Out	**Total**
220	Multifamily Housing (Low-Rise)	DU	**6.74**	0.096	0.304	**0.4**	0.321	0.189	**0.51**
215	Single-Family Attached Housing	DU	**7.2**	0.149	0.331	**0.48**	0.325	0.245	**0.57**
210	Single-Family Detached Housing	DU	**9.43**	0.182	0.518	**0.7**	0.592	0.348	**0.94**
520	Elementary School	STU	**2.27**	0.40	0.34	**0.74**	0.07	0.09	**0.16**

[1] ITE Trip Generation Manual 11th Ed, 2021
[2] DU = dwelling unit, STU = student

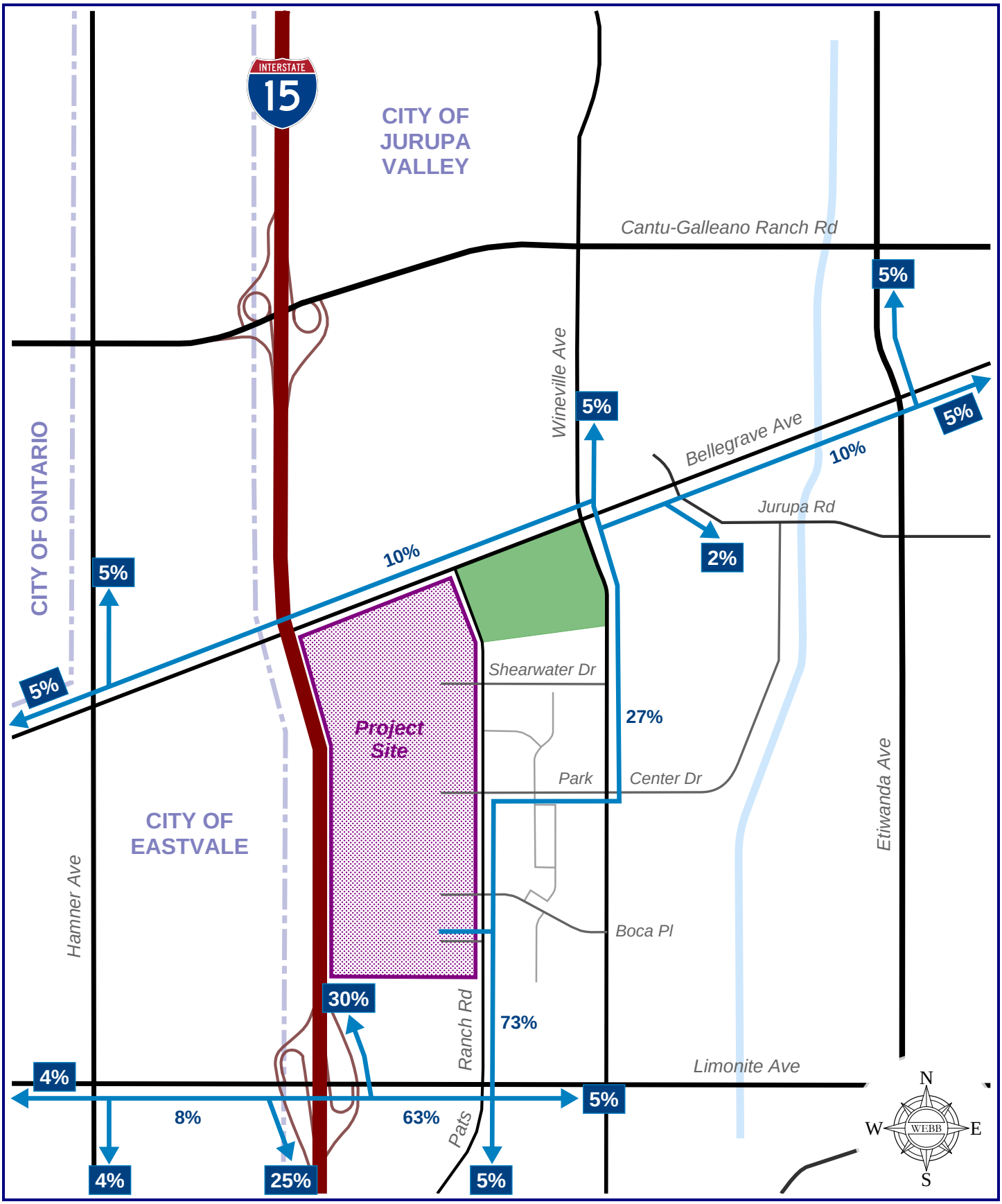
Table 3: Proposed Project Trip Generation by Phase

Vernola Ranch Specific Plan

Project Portion	Land Use[1]	Size[2]	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Phase 1 (2026)									
Apartments	220	604 DU	4,071	58	184	**242**	194	114	**308**
Single-Family Attached Homes	215	403 DU	2,902	60	133	**193**	131	99	**230**
Single-Family Detached Homes	210	219 DU	2,065	40	113	**153**	130	76	**206**
Phase 1 Subtotal		***1,226 DU***	***9,038***	***158***	***430***	***588***	***455***	***289***	***744***
Phase 2 (2027)									
Single-Family Attached Homes	215	218 DU	1,570	32	72	**104**	71	53	**124**
Single-Family Detached Homes	210	132 DU	1,245	24	68	**92**	78	46	**124**
Phase 2 Subtotal		***350 DU***	***2,815***	***56***	***140***	***196***	***149***	***99***	***248***
Phase 3 (2028)[3]									
Elementary School	520	700 STU	1,589	280	238	**518**	52	60	**112**
Internal Trip Credit[3,4]	20%		-126	-56	-48	**-104**	-10	-12	**-22**
Phase 3 Subtotal			***1,463***	***224***	***190***	***414***	***42***	***48***	***90***
Project Total		**1,576 DU**	**13,316**	**438**	**760**	**1,198**	**646**	**436**	**1,082**

[1] Land use codes per ITE Trip Generation Manual, 11th Ed (2021)
[2] DU = dwelling unit, STU = student
[3] Elementary school internal capture rate of 20% based on 140 students living within Vernola Ranch SP single-family homes (PAs 1-15).
[4] Daily trip credit given by the total AM and PM peak-hour trip credits only.
DU in the school overlay zone will be kept in Phase 2 if the school is built.

Figure 2A: Project Trip Distribution - Apartments (Phase 1)



Note: Pats Ranch Rd connection between Bellegrave Ave and Shearwater Dr is planned to be built in Phase 2 of the Project.

Figure 2B: Project Trip Distribution - Single-Family Homes (Phase 1)

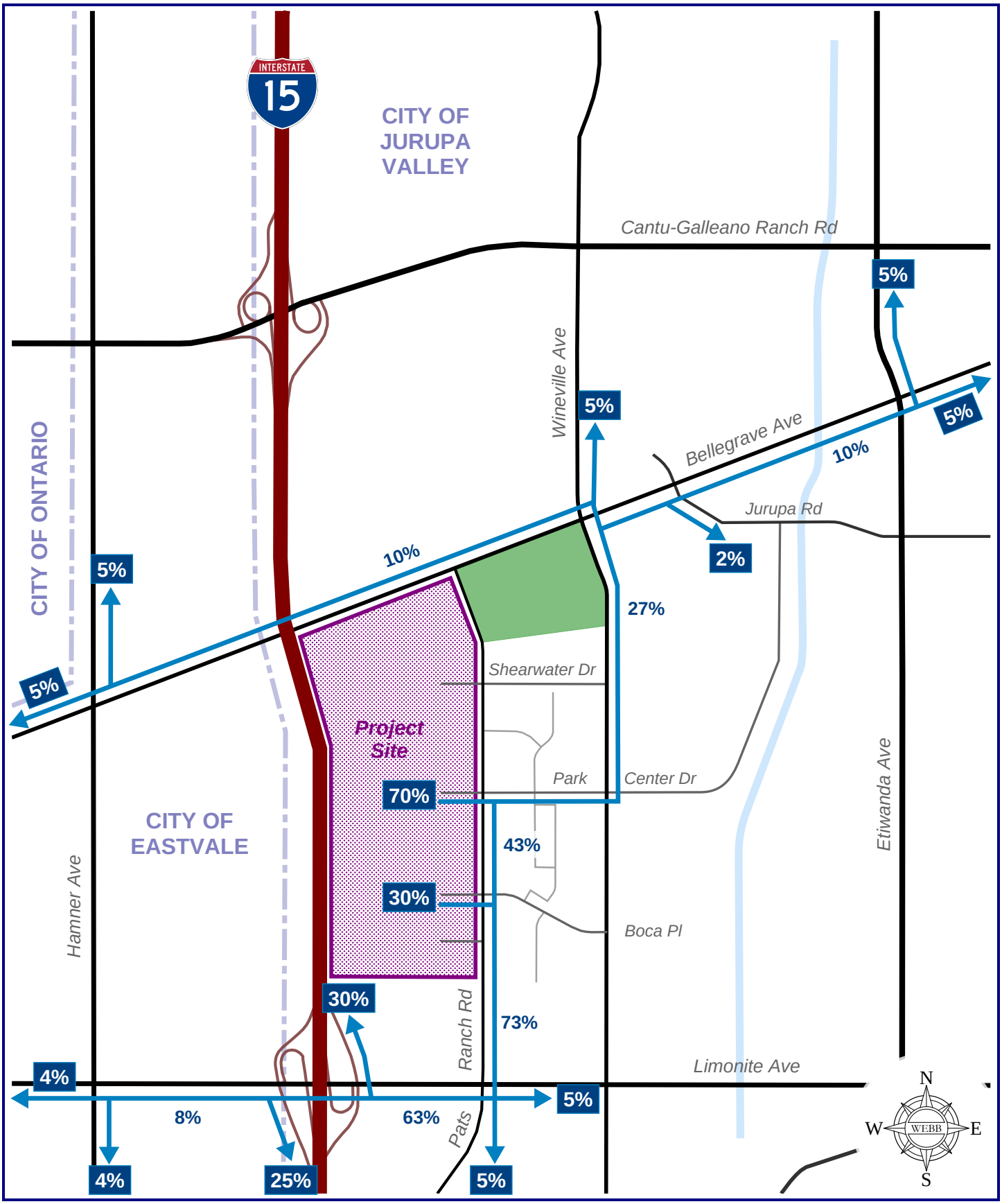


Figure 2C: Project Trip Distribution - Apartments (Phases 2-3)

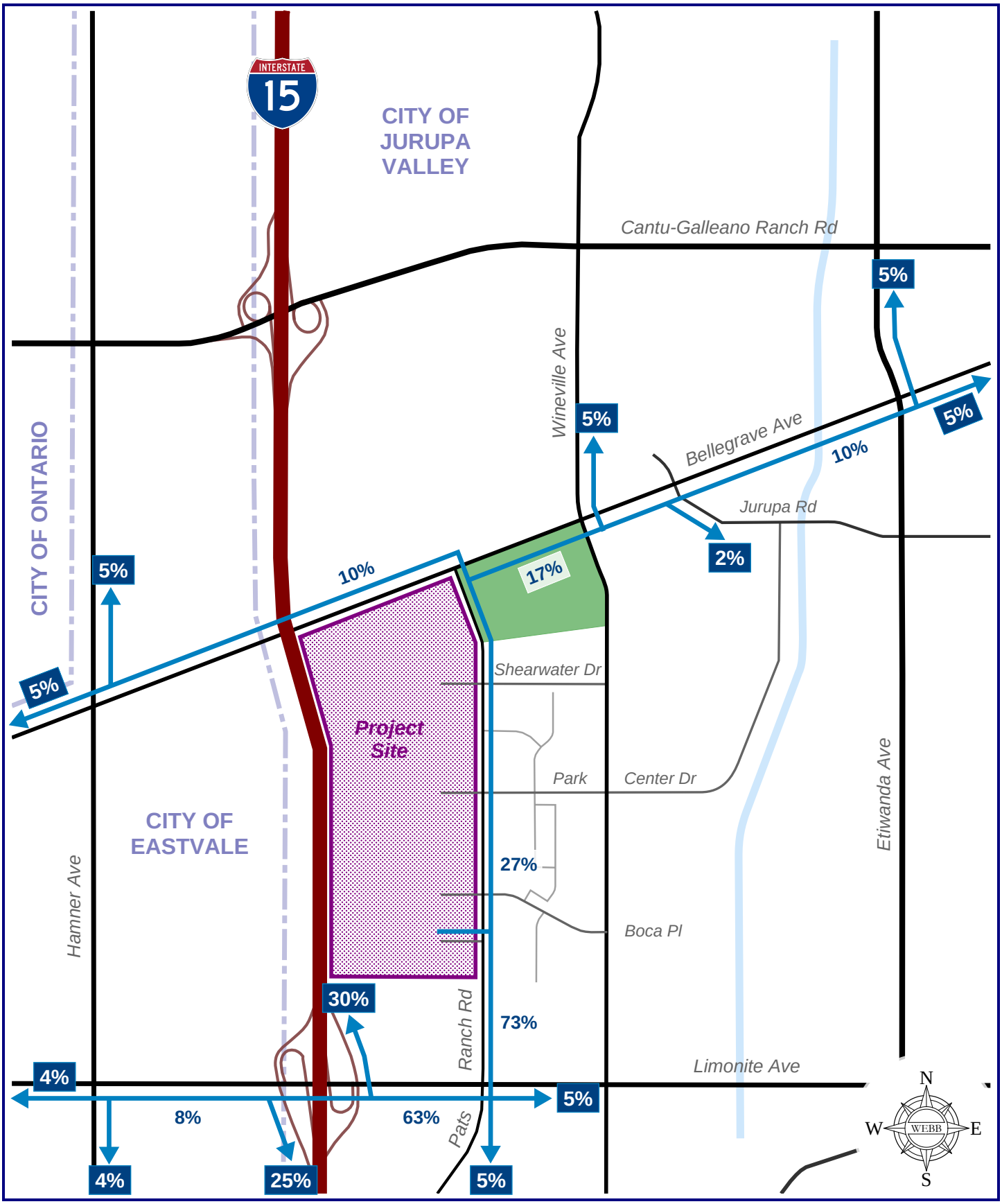


Figure 2D: Project Trip Distribution - Single-Family Homes (Phase 2-3)

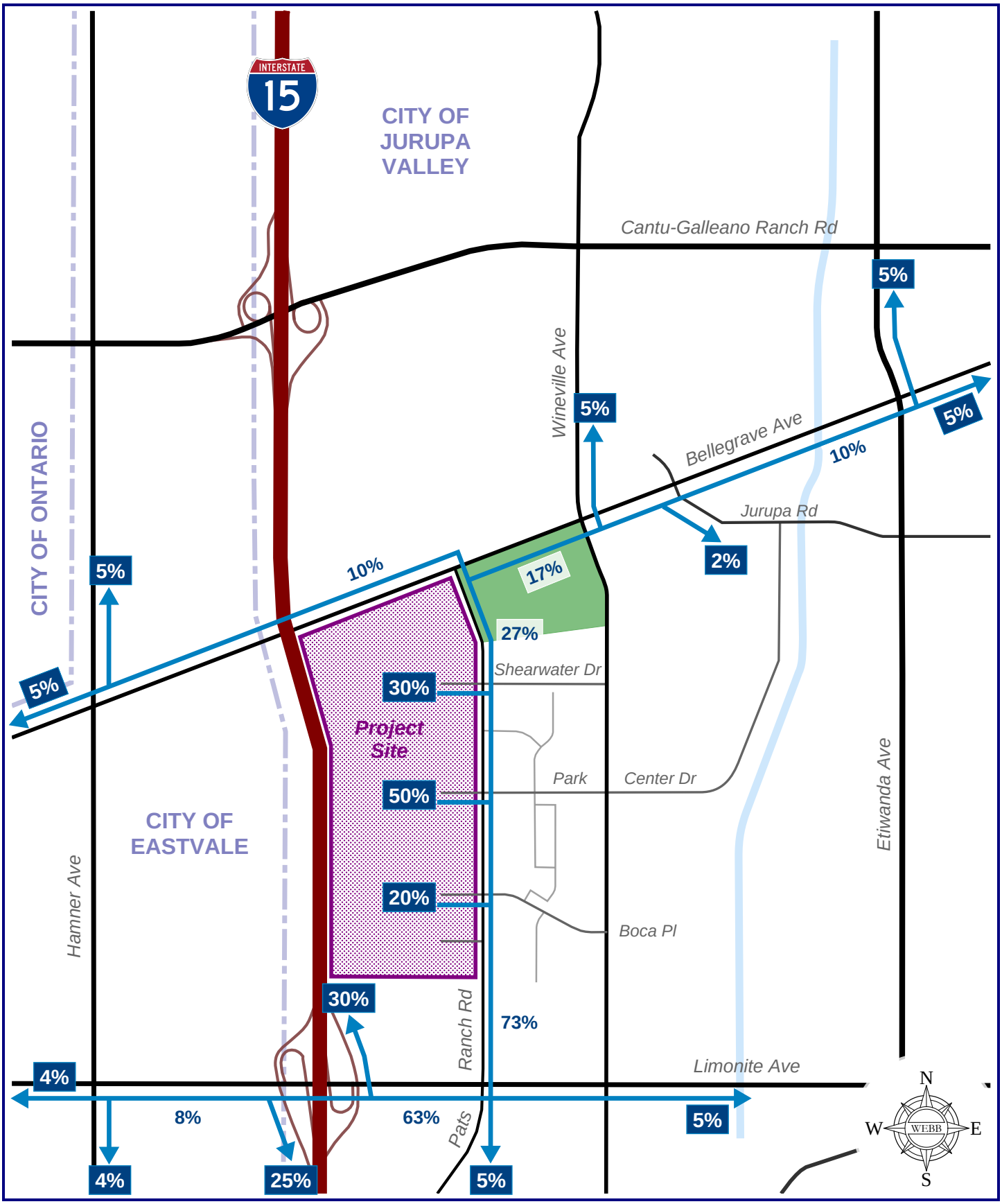


Figure 2E: Project Trip Distribution - Elementary School (Phase 3)

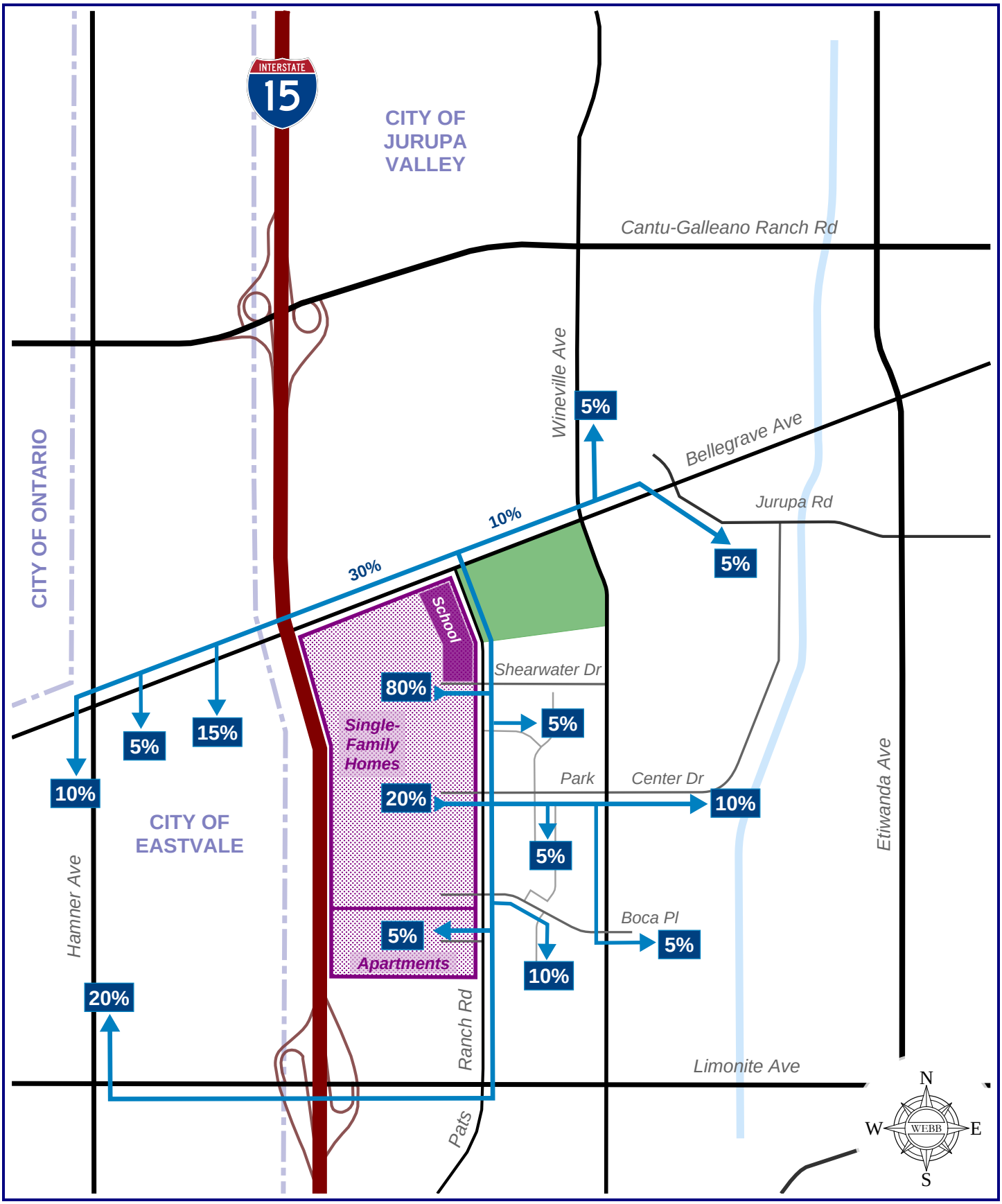


Table 4: Study Intersections

	Intersection	Agency	Traffic Control[1]
1	Bellegrave Ave @ Hamner Ave	Eastvale	Signal
2	Bellegrave Ave @ Pats Ranch Rd	Jurupa Valley	OWSC
3	Bellegrave Ave @ Wineville Ave	Jurupa Valley	Signal
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Jurupa Valley	Signal
5	Bellegrave Ave @ Etiwanda Ave	Jurupa Valley	Signal
6	Shearwater Dr @ Pats Ranch Rd	Jurupa Valley	N/A
7	Shearwater Dr @ Wineville Ave	Jurupa Valley	OWSC
8	Park Center Dr @ Pats Ranch Rd	Jurupa Valley	OWSC
9	Park Center Dr @ Wineville Ave	Jurupa Valley	Signal
10	Boca Pl @ Pats Ranch Rd	Jurupa Valley	OWSC
11	Boca Pl @ Wineville Ave	Jurupa Valley	TWSC
12	Limonite Ave @ Hamner Ave	Eastvale	Signal
13	Limonite Ave @ I-15 SB	Caltrans	Signal
14	Limonite Ave @ I-15 NB	Caltrans	Signal
15	Limonite Ave @ Pats Ranch Rd	Jurupa Valley	Signal
16	Pats Ranch Rd @ Apartments Dwy	Jurupa Valley	Does Not Exist

[1] TWSC = two-way stop control, OWSC = one-way stop control

Table 5: Study Roadway Segments

#	Roadway	Limits	Agency/Location
1	Bellegrave Ave	I-15 - Wineville Ave	City of Jurupa Valley
2		Wineville Ave - Etiwanda Ave	
3	Wineville Ave	Cantu-Galleano Ranch Rd - Bellegrave Ave	
4		Bellegrave Ave - Shearwater Dr	
5		Boca Pl - Limonite Ave	
6	Pats Ranch Rd	Bellegrave Ave - Boca Pl	
7		Boca Pl - Limonite Ave	
8	Limonite Ave	Wineville Ave - Etiwanda Ave	

Figure 3: Study Area

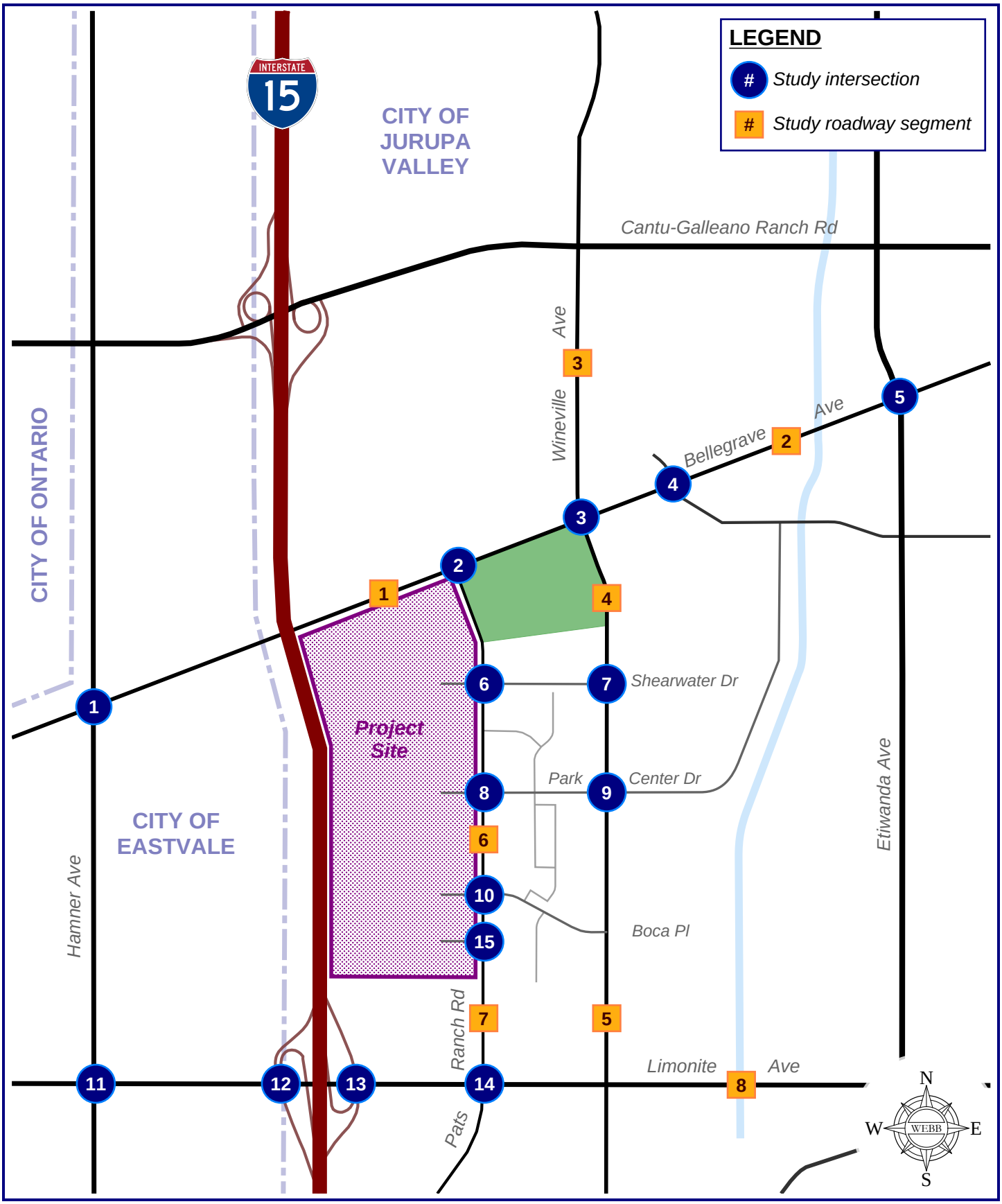
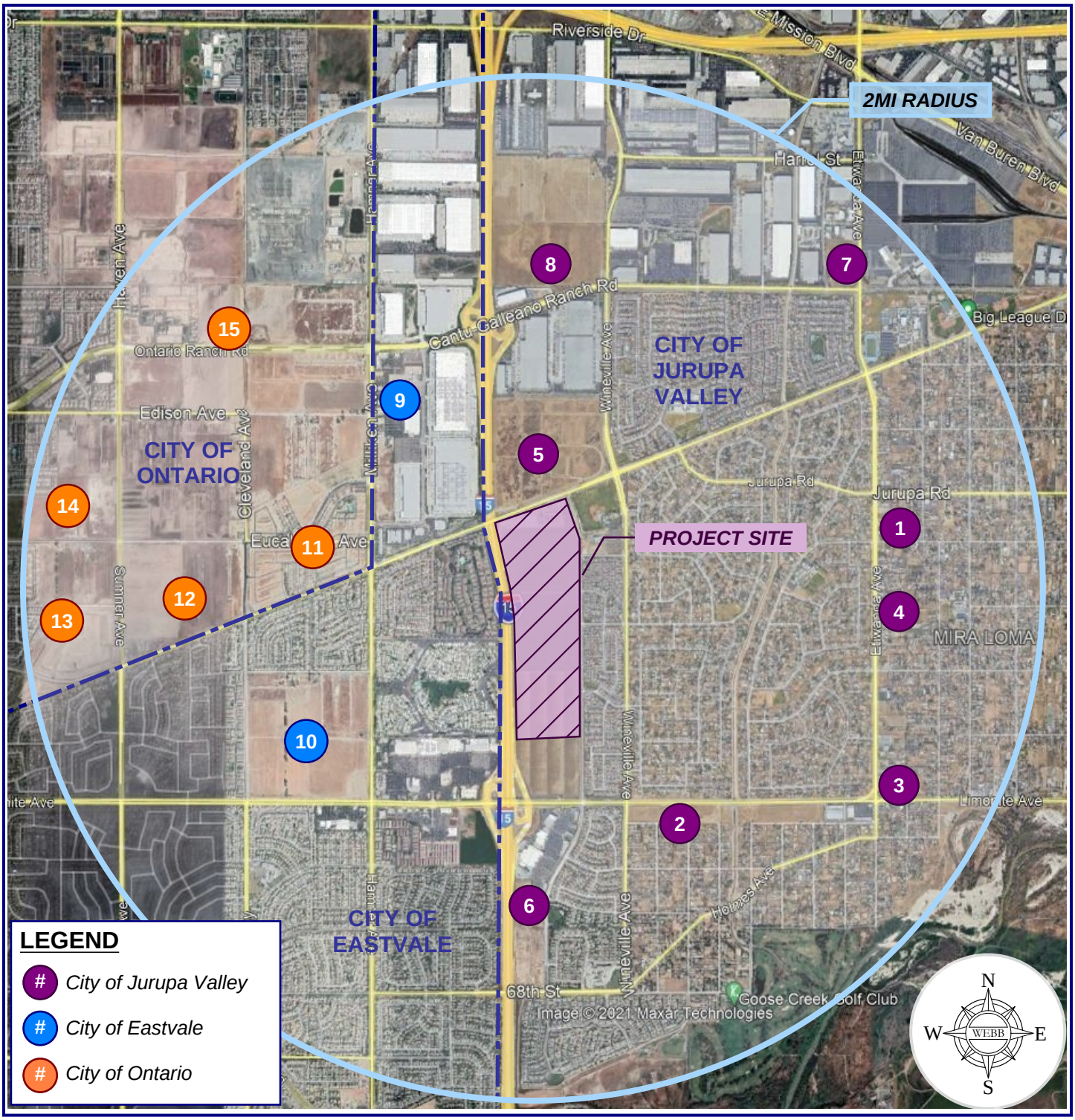


Table 6: Cumulative Projects

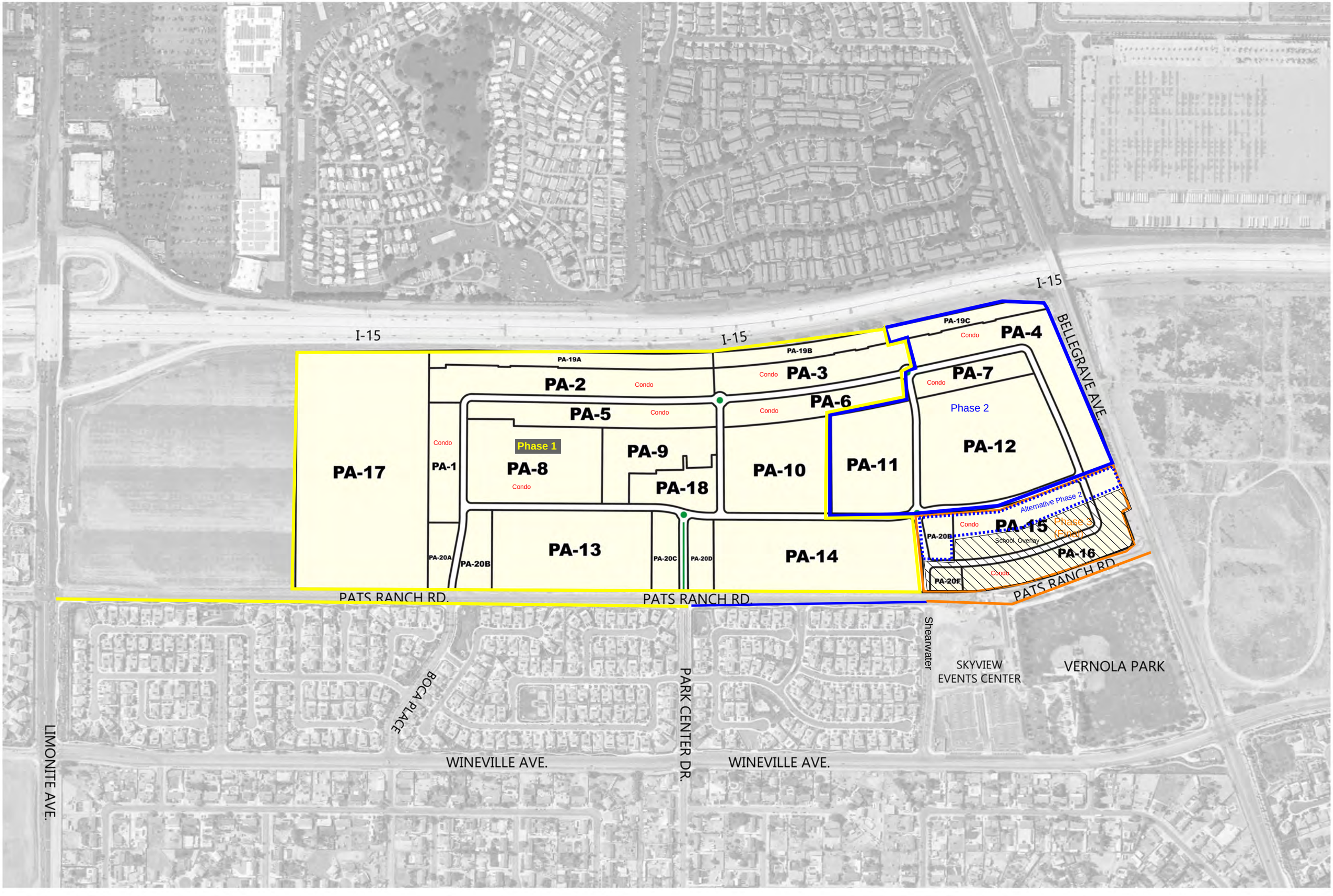
Agency		Project[1]		Location	Land Use	
City of Jurupa Valley	1	**Tacos More Restaurant** (4,500 sf restaurant & sports bar)		5322 Etiwanda	***932***	*High-Turnover (Sit-Down) Restaurant*
	2	**Wineville Marketplace**	Single-Family Homes (130 DU)	SEC Limonite Ave & Wineville Ave	***210***	*Single-Family Detached Housing*
			Retail (37,600 sf)		***820***	*Shopping Center*
	3	**Express Car Wash** (1 tunnel)		6168 Etiwanda Ave	***948***	*Automated Car Wash*
	4	**Mixed Use Development**	Retail (9,500 sf)	5560 Etiwanda Ave	***820***	*Shopping Center*
			Apartments (45 DU)		***220***	*Multifamily Housing (Low-Rise)*
	5	**Light Industrial Business Park** (10,000 sf)		NWC Bellegrave Ave @ Wineville Ave	***770***	*Business Park*
	6	**Vernola Market Place Apartments** (220 DU)		Pats Ranch Rd s/o Limonite Ave	***220***	*Multifamily Housing (Low-Rise)*
	7	**Warehouse Distribution Bldg** (310,760 sf)		NWC Etiwanda & Cantu-Galleano Ranch	***150***	*Warehousing*
	8	**76 Gas Station**	Gas Station w Convenience Store & Car Wash	4585 Pier Enterprise Wy	***945***	*Gasoline/Service Stn w Convenience Mart*
			Fast-Food Restaurant (4,000 sf)		***933***	*Fast-Food Restaurant w/o Drive-Through*
City of Eastvale	9	**Goodman Commerce Center** (additional 96,845 sf planned commercial)		SEC Hamner Ave @ Cantu Galleano Ranch	***820***	*Shopping Center*
	10	**Leal Master Plan**	Lifestyle Center	NWC Hamner Ave @ Limonite Ave	***820***	*Shopping Center*
			General Commercial		***110***	*General Light Industrial*
			Hotel		***310***	*Hotel*
			Housing		***220***	*Multifamily Housing (Low-Rise)*
City of Ontario	11	**Esperanza**	Single-Family Homes (914 DU)	NWC Hamner Ave @ Bellegrave Ave	***210***	*Single-Family Detached Housing*
			Multi-Family Homes (496 DU)		***220***	*Multifamily Housing (Low-Rise)*
	12	**Subarea 29 Addendum**	Single-Family Homes (574 DU)	n/o Bellegrave Ave b/t Scholar Wy & Sumner Ave	***210***	*Single-Family Detached Housing*
	13	**Subarea 29**	Single-Family Homes (2,293 DU)	NWC Bellegrave Ave @ Sumner Ave	***210***	*Single-Family Detached Housing*
			Retail (87,000 sf)		***820***	*Shopping Center*
	14	**Grand Park**	Single-Family Homes (740 DU)	NWC Eucalyptus Ave @ Sumner Ave	***210***	*Single-Family Detached Housing*
			Multi-Family Homes (587 DU)		***220***	*Multifamily Housing (Low-Rise)*
	15	**Rich Haven**	Single-Family Homes (1,833 DU)	NWC Haven Ave @ Edison Ave	***210***	*Single-Family Detached Housing*
			Multi-Family Homes (3,033 DU)		***220***	*Multifamily Housing (Low-Rise)*

Figure 4: Cumulative Projects



Appendix B

Proposed Project Site Plan


I-15
I-15
I-15
BELLEGRAVE AVE.
PA-19A
PA-19B
PA-19C
PA-2
Condo
PA-3
Condo
PA-4
Condo
PA-5
Condo
PA-6
Condo
PA-7
Condo
Phase 2
PA-17
Condo
PA-1
Phase 1
PA-8
Condo
PA-9
PA-18
PA-10
PA-11
PA-12
Alternative Phase 2
Phase 3 (Hotel)
PA-15
School Overlay
PA-20B
Condo
PA-16
PA-20F
Condo
PA-20A
PA-20B
PA-13
PA-20C
PA-20D
PA-14
PATS RANCH RD.
PATS RANCH RD.
PATS RANCH RD.
Shearwater
SKYVIEW
EVENTS CENTER
VERNOLA PARK
BOCA PLACE
PARK CENTER DR.
WINEVILLE AVE.
WINEVILLE AVE.
LIMONITE AVE.

Appendix C

Existing Traffic Volume Data

Appendix C-1

Roadway Segment Data

Counts Unlimited, Inc.

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

City of Jurupa Valley
Bellegrave Avenue
B/ Interstate 15 - Wineville Avenue
24 Hour Directional Volume Count

JVY001
Site Code: 067-22719

Start Time	8/23/22 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		8	79			0	68				
12:15		9	76			7	99				
12:30		9	79			7	77				
12:45		11	82	37	316	7	61	21	305	58	621
01:00		5	81			10	63				
01:15		7	92			1	75				
01:30		4	129			12	81				
01:45		6	105	22	407	8	81	31	300	53	707
02:00		4	139			4	72				
02:15		2	**136**			1	158				
02:30		8	**126**			2	140				
02:45		6	**134**	20	535	8	100	15	470	35	1005
03:00		9	**150**			5	79				
03:15		18	125			9	105				
03:30		18	124			4	119				
03:45		12	112	57	511	10	126	28	429	85	940
04:00		7	156			4	88				
04:15		13	113			14	109				
04:30		21	116			28	101				
04:45		32	136	73	521	26	108	72	406	145	927
05:00		44	138			34	123				
05:15		20	103			42	**133**				
05:30		18	129			53	**124**				
05:45		37	99	119	469	46	**135**	175	515	294	984
06:00		29	136			50	**130**				
06:15		33	123			59	114				
06:30		52	116			93	102				
06:45		56	97	170	472	104	101	306	447	476	919
07:00		76	79			108	81				
07:15		93	112			**131**	101				
07:30		**158**	102			**116**	84				
07:45		**190**	69	517	362	**143**	71	498	337	1015	699
08:00		**111**	91			**168**	65				
08:15		**123**	89			92	59				
08:30		79	90			101	57				
08:45		63	46	376	316	67	52	428	233	804	549
09:00		50	57			74	52				
09:15		53	42			67	41				
09:30		57	35			72	26				
09:45		55	31	215	165	60	30	273	149	488	314
10:00		65	37			73	11				
10:15		74	33			74	16				
10:30		77	23			89	21				
10:45		76	17	292	110	91	14	327	62	619	172
11:00		84	14			68	16				
11:15		75	16			85	17				
11:30		64	13			98	7				
11:45		79	9	302	52	65	15	316	55	618	107
Total		2200	4236	2200	4236	2490	3708	2490	3708	4690	7944
Combined Total		6436		6436		6198		6198		12634	
AM Peak	-	07:30	-	-	-	07:15	-	-	-	-	-
Vol.	-	582	-	-	-	558	-	-	-	-	-
P.H.F.		0.766				0.830					
PM Peak	-	-	02:15	-	-	-	05:15	-	-	-	-
Vol.	-	-	546	-	-	-	522	-	-	-	-
P.H.F.			0.910				0.967				
Percentage		34.2%	65.8%			40.2%	59.8%				
ADT/AADT		ADT 12,634		AADT 12,634							

Counts Unlimited, Inc.

PO Box 1178
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JVY007
Site Code: 221510073566

Start Time	3/03/22 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		8	77			4	72				
12:15		10	81			11	66				
12:30		5	115			10	85				
12:45		7	69	30	342	6	81	31	304	61	646
01:00		6	84			8	75				
01:15		7	87			5	65				
01:30		6	74			4	56				
01:45		3	76	22	321	15	86	32	282	54	603
02:00		3	92			5	70				
02:15		6	96			7	123				
02:30		5	81			4	130				
02:45		6	**139**	20	408	15	101	31	424	51	832
03:00		5	**132**			6	110				
03:15		9	**118**			10	86				
03:30		13	**155**			5	104				
03:45		10	114	37	519	10	118	31	418	68	937
04:00		11	155			15	125				
04:15		10	112			18	122				
04:30		19	108			26	102				
04:45		8	108	48	483	28	113	87	462	135	945
05:00		23	123			26	122				
05:15		20	108			39	**140**				
05:30		24	124			46	**142**				
05:45		30	110	97	465	45	**148**	156	552	253	1017
06:00		24	126			42	**150**				
06:15		25	123			48	110				
06:30		45	85			65	90				
06:45		52	95	146	429	96	70	251	420	397	849
07:00		56	80			74	82				
07:15		59	69			66	60				
07:30		**88**	72			78	55				
07:45		**94**	65	297	286	109	64	327	261	624	547
08:00		**103**	54			114	53				
08:15		**76**	50			**105**	46				
08:30		87	53			**77**	32				
08:45		83	34	349	191	**107**	47	403	178	752	369
09:00		71	34			**122**	35				
09:15		59	46			71	27				
09:30		67	28			56	33				
09:45		61	28	258	136	73	20	322	115	580	251
10:00		61	33			62	18				
10:15		55	18			78	21				
10:30		60	14			52	27				
10:45		64	14	240	79	56	24	248	90	488	169
11:00		67	17			80	10				
11:15		61	17			74	18				
11:30		72	13			90	6				
11:45		67	16	267	63	62	14	306	48	573	111
Total		1811	3722	1811	3722	2225	3554	2225	3554	4036	7276
Combined Total		5533		5533		5779		5779		11312	
AM Peak	-	07:30	-	-	-	08:15	-	-	-	-	-
Vol.	-	361	-	-	-	411	-	-	-	-	-
P.H.F.		0.876				0.842					
PM Peak	-	-	02:45	-	-	-	05:15	-	-	-	-
Vol.	-	-	544	-	-	-	580	-	-	-	-
P.H.F.			0.877				0.967				
Percentage		32.7%	67.3%			38.5%	61.5%				
ADT/AADT		ADT 11,312		AADT 11,312							

Counts Unlimited, Inc.

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JVY007
Site Code: 221510073566

Start Time	3/03/22 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		8	77			4	72				
12:15		10	81			11	66				
12:30		5	115			10	85				
12:45		7	69	30	342	6	81	31	304	61	646
01:00		6	84			8	75				
01:15		7	87			5	65				
01:30		6	74			4	56				
01:45		3	76	22	321	15	86	32	282	54	603
02:00		3	92			5	70				
02:15		6	96			7	123				
02:30		5	81			4	130				
02:45		6	**139**	20	408	15	101	31	424	51	832
03:00		5	**132**			6	110				
03:15		9	**118**			10	86				
03:30		13	**155**			5	104				
03:45		10	114	37	519	10	118	31	418	68	937
04:00		11	155			15	125				
04:15		10	112			18	122				
04:30		19	108			26	102				
04:45		8	108	48	483	28	113	87	462	135	945
05:00		23	123			26	122				
05:15		20	108			39	**140**				
05:30		24	124			46	**142**				
05:45		30	110	97	465	45	**148**	156	552	253	1017
06:00		24	126			42	**150**				
06:15		25	123			48	110				
06:30		45	85			65	90				
06:45		52	95	146	429	96	70	251	420	397	849
07:00		56	80			74	82				
07:15		59	69			66	60				
07:30		**88**	72			78	55				
07:45		**94**	65	297	286	109	64	327	261	624	547
08:00		**103**	54			114	53				
08:15		**76**	50			**105**	46				
08:30		87	53			**77**	32				
08:45		83	34	349	191	**107**	47	403	178	752	369
09:00		71	34			**122**	35				
09:15		59	46			71	27				
09:30		67	28			56	33				
09:45		61	28	258	136	73	20	322	115	580	251
10:00		61	33			62	18				
10:15		55	18			78	21				
10:30		60	14			52	27				
10:45		64	14	240	79	56	24	248	90	488	169
11:00		67	17			80	10				
11:15		61	17			74	18				
11:30		72	13			90	6				
11:45		67	16	267	63	62	14	306	48	573	111
Total		1811	3722	1811	3722	2225	3554	2225	3554	4036	7276
Combined Total		5533		5533		5779		5779		11312	
AM Peak	-	07:30	-	-	-	08:15	-	-	-	-	-
Vol.	-	361	-	-	-	411	-	-	-	-	-
P.H.F.		0.876				0.842					
PM Peak	-	-	02:45	-	-	-	05:15	-	-	-	-
Vol.	-	-	544	-	-	-	580	-	-	-	-
P.H.F.			0.877				0.967				
Percentage		32.7%	67.3%			38.5%	61.5%				
ADT/AADT		ADT 11,312		AADT 11,312							

Counts Unlimited, Inc.

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City of Jurupa Valley
Wineville Avenue
B/ Bellegrave Avenue - Cantu-Galleano Ranch Road
24 Hour Directional Volume Count

JVY005
Site Code: 067-22151

Start Time	3/03/22 Thu	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	45			10	67				
12:15		3	59			4	56				
12:30		3	48			8	59				
12:45		1	55	12	207	7	49	29	231	41	438
01:00		6	42			8	69				
01:15		3	35			5	46				
01:30		4	48			11	55				
01:45		7	34	20	159	10	50	34	220	54	379
02:00		8	46			1	56				
02:15		3	52			5	48				
02:30		5	54			8	92				
02:45		3	**53**	19	205	1	88	15	284	34	489
03:00		6	**59**			3	62				
03:15		7	**50**			4	69				
03:30		18	**58**			8	114				
03:45		27	42	58	209	2	100	17	345	75	554
04:00		9	49			6	100				
04:15		23	51			6	99				
04:30		34	56			14	95				
04:45		45	46	111	202	6	**104**	32	398	143	600
05:00		25	40			3	**91**				
05:15		31	36			10	**124**				
05:30		55	51			9	**114**				
05:45		54	41	165	168	9	104	31	433	196	601
06:00		39	36			17	71				
06:15		53	45			17	81				
06:30		76	36			25	59				
06:45		85	36	253	153	29	56	88	267	341	420
07:00		68	24			35	51				
07:15		68	24			34	56				
07:30		**107**	37			29	54				
07:45		**108**	28	351	113	26	52	124	213	475	326
08:00		**89**	29			34	31				
08:15		**78**	24			33	46				
08:30		64	21			32	34				
08:45		62	19	293	93	29	53	128	164	421	257
09:00		39	15			35	33				
09:15		57	20			29	33				
09:30		49	20			38	24				
09:45		43	17	188	72	26	26	128	116	316	188
10:00		27	15			37	26				
10:15		38	9			25	16				
10:30		47	15			30	19				
10:45		30	13	142	52	52	20	144	81	286	133
11:00		49	10			**47**	14				
11:15		48	10			**53**	12				
11:30		56	4			**48**	16				
11:45		65	3	218	27	**58**	6	206	48	424	75
Total		1830	1660	1830	1660	976	2800	976	2800	2806	4460
Combined Total		3490		3490		3776		3776		7266	
AM Peak	-	07:30	-	-	-	11:00	-	-	-	-	-
Vol.	-	382	-	-	-	206	-	-	-	-	-
P.H.F.		0.884				0.888					
PM Peak	-	-	02:45	-	-	-	04:45	-	-	-	-
Vol.	-	-	220	-	-	-	433	-	-	-	-
P.H.F.			0.932				0.873				
Percentage		52.4%	47.6%			25.8%	74.2%				
ADT/AADT		ADT 7,266		AADT 7,266							

Counts Unlimited, Inc.

PO Box 1178
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(951) 268-6268
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City of Jurupa Valley
Wineville Avenue
B/ Bellegrave Avenue - Shearwater Drive
24 Hour Directional Volume Count

JVY006
Site Code: 067-22151

Start Time	3/03/22 Thu	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		8	63			17	65				
12:15		2	67			7	68				
12:30		9	69			12	86				
12:45		1	52	20	251	7	84	43	303	63	554
01:00		4	63			8	66				
01:15		4	62			4	73				
01:30		4	58			5	47				
01:45		3	62	15	245	13	66	30	252	45	497
02:00		1	46			2	59				
02:15		9	70			3	80				
02:30		6	67			4	72				
02:45		3	75	19	258	7	99	16	310	35	568
03:00		5	69			6	115				
03:15		5	76			15	86				
03:30		6	65			5	93				
03:45		20	71	36	281	8	110	34	404	70	685
04:00		10	67			10	114				
04:15		12	76			8	101				
04:30		18	79			10	114				
04:45		25	71	65	293	12	126	40	455	105	748
05:00		18	79			9	118				
05:15		19	63			20	**145**				
05:30		31	69			22	**137**				
05:45		39	**82**	107	293	15	**152**	66	552	173	845
06:00		42	**90**			14	**137**				
06:15		39	**67**			18	94				
06:30		50	**72**			29	103				
06:45		78	67	209	296	40	83	101	417	310	713
07:00		80	60			32	68				
07:15		**87**	51			53	72				
07:30		**98**	53			36	55				
07:45		**124**	63	389	227	40	69	161	264	550	491
08:00		**98**	50			**75**	56				
08:15		86	61			**69**	48				
08:30		62	43			**67**	48				
08:45		63	39	309	193	**56**	58	267	210	576	403
09:00		49	23			67	44				
09:15		51	41			59	35				
09:30		53	30			45	31				
09:45		61	25	214	119	45	21	216	131	430	250
10:00		40	37			48	31				
10:15		42	16			43	17				
10:30		52	18			40	22				
10:45		54	13	188	84	42	20	173	90	361	174
11:00		64	16			68	13				
11:15		50	13			69	12				
11:30		65	9			58	10				
11:45		64	9	243	47	66	10	261	45	504	92
Total		1814	2587	1814	2587	1408	3433	1408	3433	3222	6020
Combined Total		4401		4401		4841		4841		9242	
AM Peak	-	07:15	-	-	-	08:00	-	-	-	-	-
Vol.	-	407	-	-	-	267	-	-	-	-	-
P.H.F.		0.821				0.890					
PM Peak	-	-	05:45	-	-	-	05:15	-	-	-	-
Vol.	-	-	311	-	-	-	571	-	-	-	-
P.H.F.			0.864				0.939				
Percentage		41.2%	58.8%			29.1%	70.9%				
ADT/AADT		ADT 9,242		AADT 9,242							

Counts Unlimited, Inc.

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City of Jurupa Valley
Pats Ranch Road
B/ Boca Drive - Bellegrave Avenue
24 Hour Directional Volume Count

JVY003
Site Code: 067-22151

Start Time	3/03/22 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	16			0	10				
12:15		0	16			1	10				
12:30		1	13			0	9				
12:45		0	14	1	59	0	11	1	40	2	99
01:00		0	9			0	6				
01:15		0	12			1	11				
01:30		0	18			0	8				
01:45		2	8	2	47	1	4	2	29	4	76
02:00		0	16			0	8				
02:15		0	9			0	11				
02:30		1	17			2	5				
02:45		0	11	1	53	1	10	3	34	4	87
03:00		1	14			0	5				
03:15		1	**21**			1	7				
03:30		0	**11**			1	7				
03:45		2	**19**	4	65	0	5	2	24	6	89
04:00		0	**24**			0	**13**				
04:15		1	20			0	**18**				
04:30		0	12			1	**9**				
04:45		0	17	1	73	2	**13**	3	53	4	126
05:00		2	13			2	7				
05:15		2	17			2	13				
05:30		0	18			1	13				
05:45		1	16	5	64	3	10	8	43	13	107
06:00		5	13			1	15				
06:15		1	20			1	7				
06:30		6	10			3	7				
06:45		7	12	19	55	2	11	7	40	26	95
07:00		4	5			**14**	10				
07:15		11	8			**6**	5				
07:30		10	16			**5**	8				
07:45		9	22	34	51	**11**	5	36	28	70	79
08:00		5	12			5	4				
08:15		9	8			4	3				
08:30		7	8			9	5				
08:45		5	6	26	34	4	3	22	15	48	49
09:00		8	7			8	2				
09:15		8	9			11	1				
09:30		7	5			5	2				
09:45		6	5	29	26	4	1	28	6	57	32
10:00		4	8			7	2				
10:15		10	4			7	1				
10:30		8	2			10	0				
10:45		9	1	31	15	3	1	27	4	58	19
11:00		**9**	3			8	1				
11:15		**11**	1			11	1				
11:30		**10**	1			7	0				
11:45		**13**	1	43	6	5	0	31	2	74	8
Total		196	548	196	548	170	318	170	318	366	866
Combined Total		744		744		488		488		1232	
AM Peak	-	11:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	43	-	-	-	36	-	-	-	-	-
P.H.F.		0.827				0.643					
PM Peak	-	-	03:15	-	-	-	04:00	-	-	-	-
Vol.	-	-	75	-	-	-	53	-	-	-	-
P.H.F.			0.781				0.736				
Percentage		26.3%	73.7%			34.8%	65.2%				
ADT/AADT		ADT 1,232		AADT 1,232							

Counts Unlimited, Inc.

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City of Jurupa Valley
Pats Ranch Road
B/ Limonite Avenue - Boca Drive
24 Hour Directional Volume Count

JVY002
Site Code: 067-22151

Start Time	3/03/22 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	39			0	33				
12:15		3	27			3	28				
12:30		0	16			0	33				
12:45		0	29	3	111	0	21	3	115	6	226
01:00		0	21			0	20				
01:15		0	39			2	27				
01:30		1	26			0	30				
01:45		2	22	3	108	1	20	3	97	6	205
02:00		0	27			0	28				
02:15		1	32			0	20				
02:30		1	25			4	20				
02:45		2	25	4	109	2	27	6	95	10	204
03:00		2	34			1	22				
03:15		0	**50**			1	19				
03:30		1	**33**			4	23				
03:45		1	**44**	4	161	3	18	9	82	13	243
04:00		0	**42**			2	26				
04:15		2	40			5	35				
04:30		1	29			5	24				
04:45		0	25	3	136	10	27	22	112	25	248
05:00		3	30			14	31				
05:15		2	42			8	24				
05:30		0	32			12	**35**				
05:45		4	37	9	141	15	**31**	49	121	58	262
06:00		5	44			10	**32**				
06:15		5	43			12	**28**				
06:30		7	31			15	19				
06:45		10	32	27	150	20	23	57	102	84	252
07:00		16	26			**40**	24				
07:15		9	40			**37**	19				
07:30		24	29			**23**	20				
07:45		22	42	71	137	**31**	11	131	74	202	211
08:00		14	16			34	11				
08:15		21	32			22	7				
08:30		13	23			30	13				
08:45		12	18	60	89	20	11	106	42	166	131
09:00		18	21			24	10				
09:15		10	22			31	6				
09:30		15	11			21	8				
09:45		13	13	56	67	20	6	96	30	152	97
10:00		11	18			18	6				
10:15		24	6			27	1				
10:30		18	7			19	4				
10:45		13	4	66	35	22	1	86	12	152	47
11:00		**20**	3			26	2				
11:15		**16**	3			24	4				
11:30		**19**	1			21	2				
11:45		**36**	2	91	9	24	6	95	14	186	23
Total		397	1253	397	1253	663	896	663	896	1060	2149
Combined Total		1650		1650		1559		1559		3209	
AM Peak	-	11:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	91	-	-	-	131	-	-	-	-	-
P.H.F.		0.632				0.819					
PM Peak	-	-	03:15	-	-	-	05:30	-	-	-	-
Vol.	-	-	169	-	-	-	126	-	-	-	-
P.H.F.			0.845				0.900				
Percentage		24.1%	75.9%			42.5%	57.5%				
ADT/AADT		ADT 3,209		AADT 3,209							

Counts Unlimited, Inc.

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

City of Jurupa Valley
Limonite Avenue
B/ Pats Ranch Road - Wineville Avenue
24 Hour Directional Volume Count

JVY003
Site Code: 067-22719

Start Time	8/23/22 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		52	226			20	227				
12:15		37	225			21	236				
12:30		35	217			20	255				
12:45		29	274	153	942	16	231	77	949	230	1891
01:00		21	240			9	237				
01:15		24	266			13	230				
01:30		25	252			23	241				
01:45		19	275	89	1033	22	222	67	930	156	1963
02:00		17	325			19	218				
02:15		22	280			19	251				
02:30		12	292			24	252				
02:45		17	358	68	1255	28	222	90	943	158	2198
03:00		26	344			37	224				
03:15		20	311			44	258				
03:30		35	335			60	281				
03:45		22	385	103	1375	83	272	224	1035	327	2410
04:00		25	310			111	273				
04:15		32	353			134	266				
04:30		44	306			194	256				
04:45		39	**359**	140	1328	225	262	664	1057	804	2385
05:00		51	**388**			188	270				
05:15		71	**360**			237	**271**				
05:30		88	**326**			279	**255**				
05:45		81	294	291	1368	257	**299**	961	1095	1252	2463
06:00		85	316			256	**273**				
06:15		101	333			240	255				
06:30		118	267			287	242				
06:45		136	277	440	1193	**318**	251	1101	1021	1541	2214
07:00		151	250			**289**	211				
07:15		188	291			**291**	194				
07:30		203	268			**294**	228				
07:45		200	265	742	1074	302	194	1176	827	1918	1901
08:00		192	258			264	202				
08:15		215	244			281	183				
08:30		194	227			260	163				
08:45		185	243	786	972	287	133	1092	681	1878	1653
09:00		199	213			220	117				
09:15		176	195			229	104				
09:30		170	206			213	98				
09:45		206	181	751	795	226	94	888	413	1639	1208
10:00		192	134			230	76				
10:15		176	127			205	67				
10:30		203	93			225	44				
10:45		193	102	764	456	258	53	918	240	1682	696
11:00		**203**	79			218	52				
11:15		**226**	80			231	46				
11:30		**235**	62			245	42				
11:45		**205**	77	869	298	252	42	946	182	1815	480
Total		5196	12089	5196	12089	8204	9373	8204	9373	13400	21462
Combined Total		17285		17285		17577		17577		34862	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	869	-	-	-	1192	-	-	-	-	-
P.H.F.		0.924				0.937					
PM Peak	-	-	04:45	-	-	-	05:15	-	-	-	-
Vol.	-	-	1433	-	-	-	1098	-	-	-	-
P.H.F.			0.923				0.918				
Percentage		30.1%	69.9%			46.7%	53.3%				
ADT/AADT		ADT 34,862		AADT 34,862							

Appendix C-2

Intersection Turning Movement Data

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

City of Eastvale
N/S: Hamner Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 06_ESV_Hamner_Belle AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

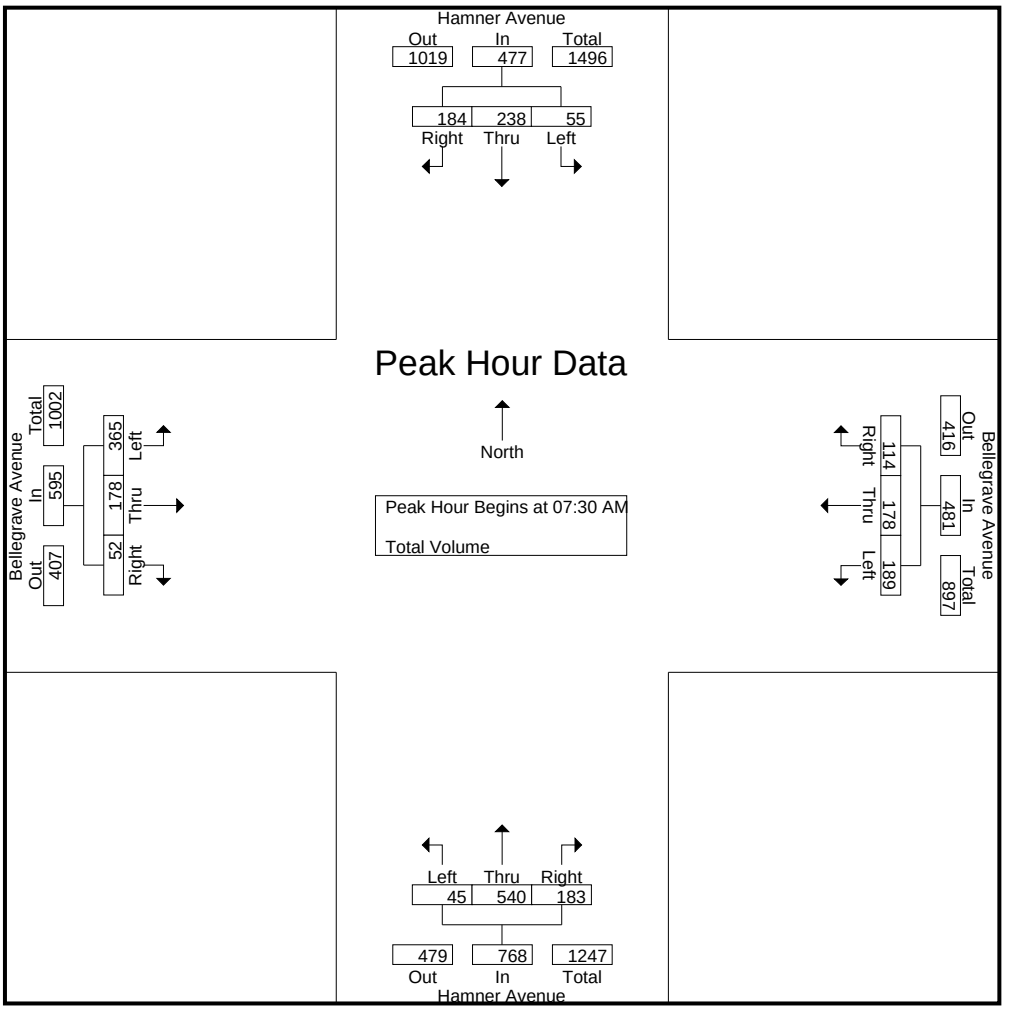
	Hamner Avenue Southbound				Bellegrave Avenue Westbound				Hamner Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	38	33	77	37	58	21	116	14	125	10	149	93	29	12	134	476
07:15 AM	10	34	42	86	28	60	38	126	10	148	20	178	118	49	6	173	563
07:30 AM	10	45	43	98	32	53	33	118	12	147	33	192	94	41	12	147	555
07:45 AM	11	67	58	136	30	33	25	88	10	163	53	226	95	50	12	157	607
Total	37	184	176	397	127	204	117	448	46	583	116	745	400	169	42	611	2201
08:00 AM	12	61	48	121	59	45	26	130	12	122	59	193	89	48	12	149	593
08:15 AM	22	65	35	122	68	47	30	145	11	108	38	157	87	39	16	142	566
08:30 AM	18	68	38	124	29	22	29	80	9	142	44	195	68	42	13	123	522
08:45 AM	16	54	31	101	41	31	29	101	5	106	41	152	63	39	17	119	473
Total	68	248	152	468	197	145	114	456	37	478	182	697	307	168	58	533	2154
Grand Total	105	432	328	865	324	349	231	904	83	1061	298	1442	707	337	100	1144	4355
Apprch %	12.1	49.9	37.9		35.8	38.6	25.6		5.8	73.6	20.7		61.8	29.5	8.7		
Total %	2.4	9.9	7.5	19.9	7.4	8	5.3	20.8	1.9	24.4	6.8	33.1	16.2	7.7	2.3	26.3	

	Hamner Avenue Southbound				Bellegrave Avenue Westbound				Hamner Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	10	45	43	98	32	**53**	**33**	118	**12**	147	33	192	94	41	12	147	555
07:45 AM	11	**67**	**58**	**136**	30	33	25	88	10	**163**	53	**226**	**95**	**50**	12	**157**	**607**
08:00 AM	12	61	48	121	59	45	26	130	12	122	**59**	193	89	48	12	149	593
08:15 AM	**22**	65	35	122	**68**	47	30	**145**	11	108	38	157	87	39	**16**	142	566
Total Volume	55	238	184	477	189	178	114	481	45	540	183	768	365	178	52	595	2321
% App. Total	11.5	49.9	38.6		39.3	37	23.7		5.9	70.3	23.8		61.3	29.9	8.7		
PHF	.625	.888	.793	.877	.695	.840	.864	.829	.938	.828	.775	.850	.961	.890	.813	.947	.956

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City of Eastvale
N/S: Hamner Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 06_ESV_Hamner_Belle AM
Site Code : 06722151
Start Date : 3/3/2022



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

	07:45 AM				07:30 AM				07:15 AM				07:15 AM			
+0 mins.	11	67	**58**	**136**	32	**53**	**33**	118	10	148	20	178	**118**	49	6	**173**
+15 mins.	12	61	48	121	30	33	25	88	**12**	147	33	192	94	41	**12**	147
+30 mins.	**22**	65	35	122	59	45	26	130	10	**163**	53	**226**	95	**50**	12	157
+45 mins.	18	**68**	38	124	**68**	47	30	**145**	12	122	**59**	193	89	48	12	149
Total Volume	63	261	179	503	189	178	114	481	44	580	165	789	396	188	42	626
% App. Total	12.5	51.9	35.6		39.3	37	23.7		5.6	73.5	20.9		63.3	30	6.7	
PHF	.716	.960	.772	.925	.695	.840	.864	.829	.917	.890	.699	.873	.839	.940	.875	.905

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City of Eastvale
N/S: Hamner Avenue
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File Name : 06_ESV_Hamner_Belle PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

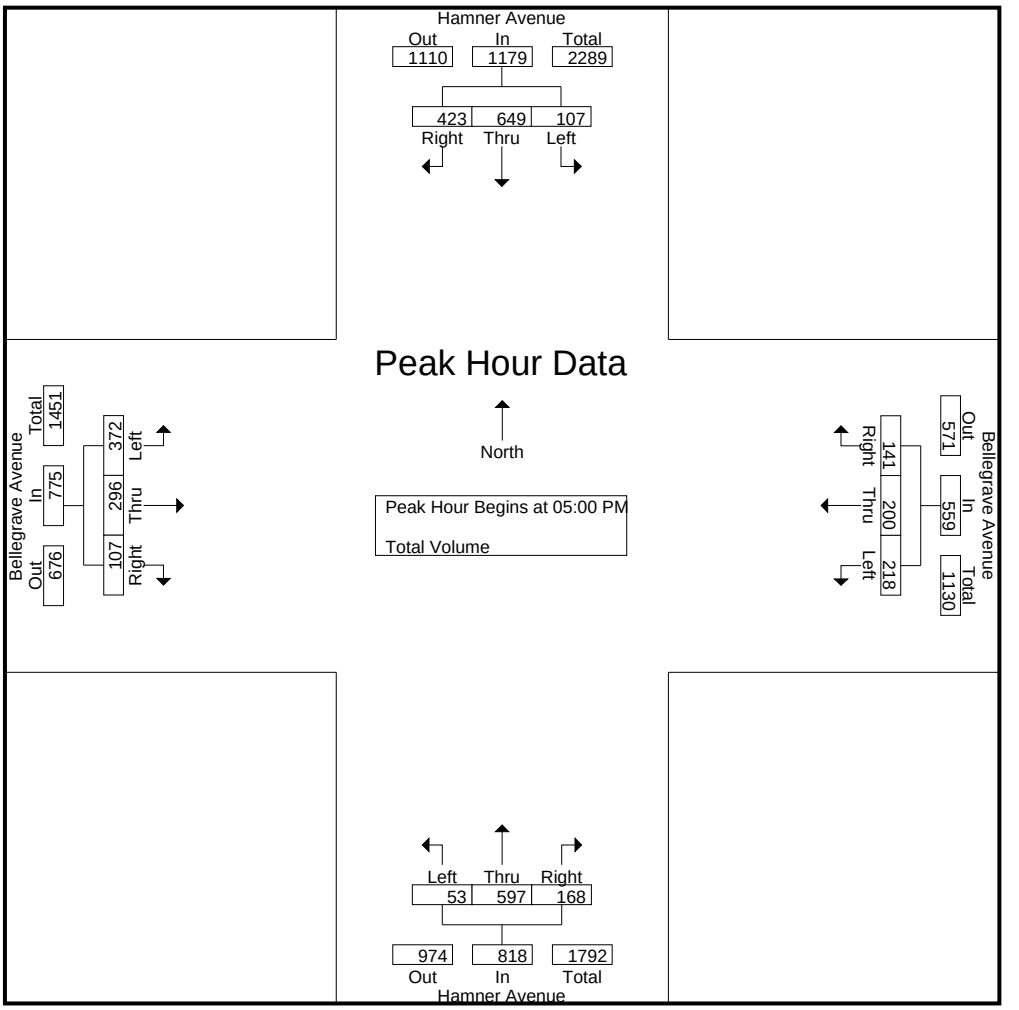
	Hamner Avenue Southbound				Bellegrave Avenue Westbound				Hamner Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	25	151	87	263	73	47	39	159	14	145	38	197	50	68	29	147	766
04:15 PM	20	137	76	233	58	45	30	133	17	126	59	202	92	68	25	185	753
04:30 PM	18	158	109	285	48	35	32	115	14	126	53	193	64	76	28	168	761
04:45 PM	20	158	73	251	49	41	32	122	9	145	55	209	68	64	28	160	742
Total	83	604	345	1032	228	168	133	529	54	542	205	801	274	276	110	660	3022
05:00 PM	20	149	94	263	58	51	39	148	14	128	41	183	95	81	23	199	793
05:15 PM	33	157	144	334	58	39	24	121	10	133	43	186	85	70	37	192	833
05:30 PM	32	176	87	295	55	70	40	165	13	152	42	207	91	68	26	185	852
05:45 PM	22	167	98	287	47	40	38	125	16	184	42	242	101	77	21	199	853
Total	107	649	423	1179	218	200	141	559	53	597	168	818	372	296	107	775	3331
Grand Total	190	1253	768	2211	446	368	274	1088	107	1139	373	1619	646	572	217	1435	6353
Apprch %	8.6	56.7	34.7		41	33.8	25.2		6.6	70.4	23		45	39.9	15.1		
Total %	3	19.7	12.1	34.8	7	5.8	4.3	17.1	1.7	17.9	5.9	25.5	10.2	9	3.4	22.6	

	Hamner Avenue Southbound				Bellegrave Avenue Westbound				Hamner Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	20	149	94	263	**58**	51	39	148	14	128	41	183	95	**81**	23	**199**	793
05:15 PM	**33**	157	**144**	**334**	58	39	24	121	10	133	**43**	186	85	70	**37**	192	833
05:30 PM	32	**176**	87	295	55	**70**	**40**	**165**	13	152	42	207	91	68	26	185	852
05:45 PM	22	167	98	287	47	40	38	125	**16**	**184**	42	**242**	**101**	77	21	199	**853**
Total Volume	107	649	423	1179	218	200	141	559	53	597	168	818	372	296	107	775	3331
% App. Total	9.1	55	35.9		39	35.8	25.2		6.5	73	20.5		48	38.2	13.8		
PHF	.811	.922	.734	.882	.940	.714	.881	.847	.828	.811	.977	.845	.921	.914	.723	.974	.976

Counts Unlimited, Inc.
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(951)268-6268

City of Eastvale
N/S: Hamner Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 06_ESV_Hamner_Belle PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	20	149	94	263	**58**	51	39	148	14	128	41	183	95	**81**	23	**199**
+15 mins.	**33**	157	**144**	**334**	58	39	24	121	10	133	**43**	186	85	70	**37**	192
+30 mins.	32	**176**	87	295	55	**70**	**40**	**165**	13	152	42	207	91	68	26	185
+45 mins.	22	167	98	287	47	40	38	125	**16**	**184**	42	**242**	**101**	77	21	199
Total Volume	107	649	423	1179	218	200	141	559	53	597	168	818	372	296	107	775
% App. Total	9.1	55	35.9		39	35.8	25.2		6.5	73	20.5		48	38.2	13.8	
PHF	.811	.922	.734	.882	.940	.714	.881	.847	.828	.811	.977	.845	.921	.914	.723	.974

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Bellegrave Avenue
Weather: Clear

File Name : 07_JVY_Pat_Belle AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

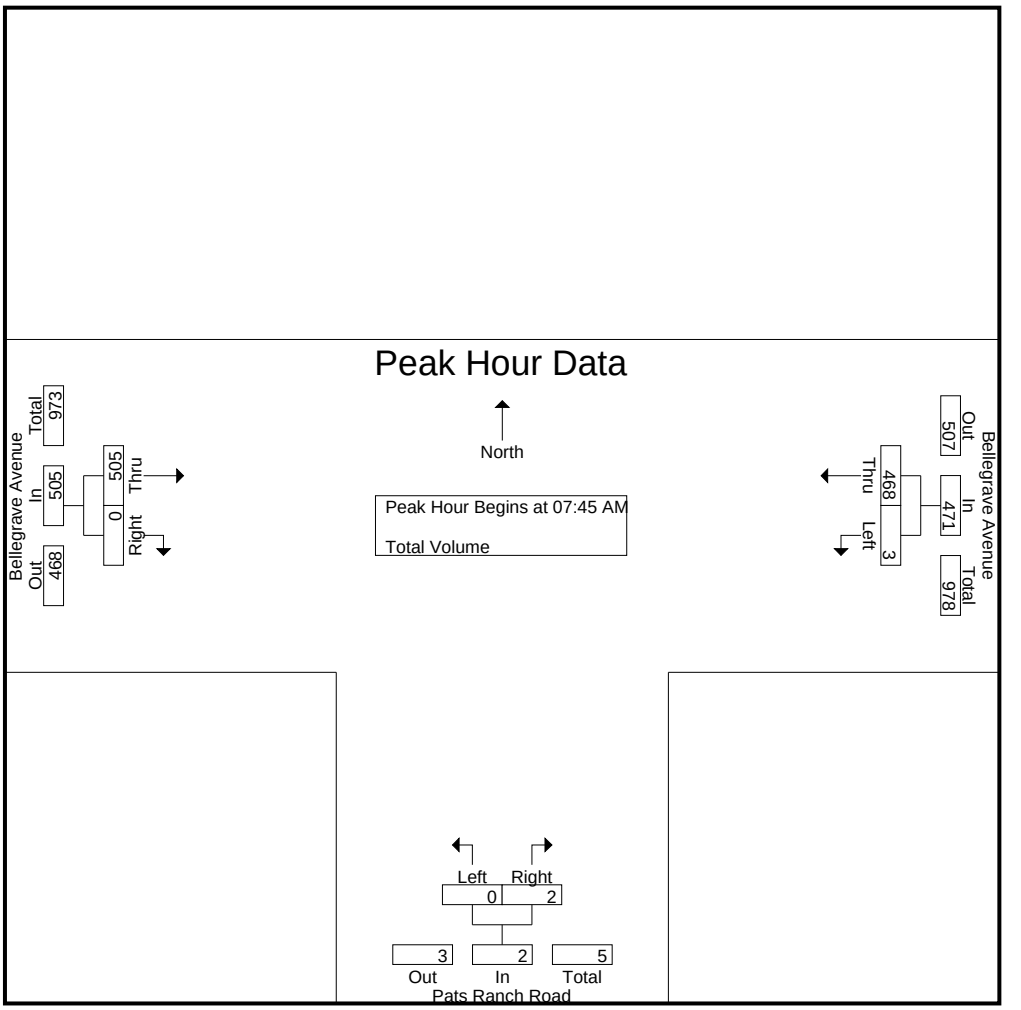
	Bellegrave Avenue Westbound			Pats Ranch Road Northbound			Bellegrave Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	2	122	124	0	0	0	64	0	64	188
07:15 AM	1	106	107	0	0	0	84	0	84	191
07:30 AM	0	92	92	0	2	2	100	0	100	194
07:45 AM	0	112	112	0	0	0	145	0	145	257
Total	3	432	435	0	2	2	393	0	393	830
08:00 AM	0	131	131	0	1	1	157	0	157	289
08:15 AM	0	137	137	0	0	0	92	0	92	229
08:30 AM	3	88	91	0	1	1	111	0	111	203
08:45 AM	0	97	97	0	0	0	98	1	99	196
Total	3	453	456	0	2	2	458	1	459	917
Grand Total	6	885	891	0	4	4	851	1	852	1747
Apprch %	0.7	99.3		0	100		99.9	0.1		
Total %	0.3	50.7	51	0	0.2	0.2	48.7	0.1	48.8	

	Bellegrave Avenue Westbound			Pats Ranch Road Northbound			Bellegrave Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	112	112	0	0	0	145	0	145	257
08:00 AM	0	131	131	0	**1**	**1**	**157**	0	**157**	**289**
08:15 AM	0	**137**	**137**	0	0	0	92	0	92	229
08:30 AM	**3**	88	91	0	1	1	111	0	111	203
Total Volume	3	468	471	0	2	2	505	0	505	978
% App. Total	0.6	99.4		0	100		100	0		
PHF	.250	.854	.859	.000	.500	.500	.804	.000	.804	.846

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Bellegrave Avenue
Weather: Clear

File Name : 07_JVY_Pat_Belle AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	07:30 AM			07:15 AM			07:45 AM		
+0 mins.	0	92	92	0	0	0	145	0	145
+15 mins.	0	112	112	0	**2**	**2**	**157**	0	**157**
+30 mins.	0	131	131	0	0	0	92	0	92
+45 mins.	0	**137**	**137**	0	1	1	111	0	111
Total Volume	0	472	472	0	3	3	505	0	505
% App. Total	0	100		0	100		100	0	
PHF	.000	.861	.861	.000	.375	.375	.804	.000	.804

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City of Jurupa Valley
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Weather: Clear

File Name : 07_JVY_Pat_Belle PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

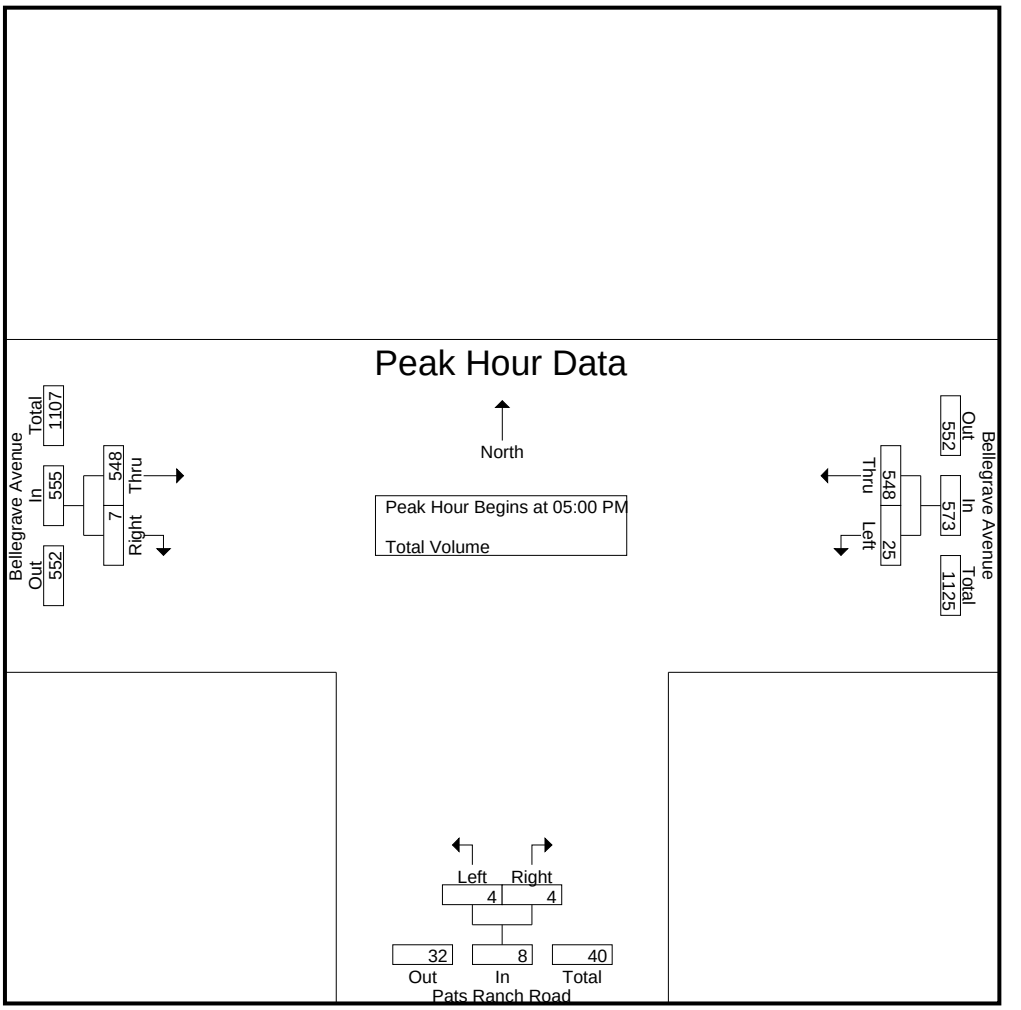
	Bellegrave Avenue Westbound			Pats Ranch Road Northbound			Bellegrave Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	151	151	0	0	0	145	0	145	296
04:15 PM	3	117	120	0	1	1	145	0	145	266
04:30 PM	1	120	121	1	0	1	139	0	139	261
04:45 PM	3	129	132	1	1	2	135	1	136	270
Total	7	517	524	2	2	4	564	1	565	1093
05:00 PM	4	128	132	1	1	2	146	1	147	281
05:15 PM	4	133	137	0	1	1	134	0	134	272
05:30 PM	3	144	147	0	1	1	146	1	147	295
05:45 PM	14	143	157	3	1	4	122	5	127	288
Total	25	548	573	4	4	8	548	7	555	1136
Grand Total	32	1065	1097	6	6	12	1112	8	1120	2229
Apprch %	2.9	97.1		50	50		99.3	0.7		
Total %	1.4	47.8	49.2	0.3	0.3	0.5	49.9	0.4	50.2	

	Bellegrave Avenue Westbound			Pats Ranch Road Northbound			Bellegrave Avenue Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	4	128	132	1	**1**	2	**146**	1	**147**	281
05:15 PM	4	133	137	0	1	1	134	0	134	272
05:30 PM	3	**144**	147	0	1	1	146	1	147	**295**
05:45 PM	**14**	143	**157**	**3**	1	**4**	122	**5**	127	288
Total Volume	25	548	573	4	4	8	548	7	555	1136
% App. Total	4.4	95.6		50	50		98.7	1.3		
PHF	.446	.951	.912	.333	1.00	.500	.938	.350	.944	.963

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Bellegrave Avenue
Weather: Clear

File Name : 07_JVY_Pat_Belle PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	05:00 PM			05:00 PM			04:15 PM		
+0 mins.	4	128	132	1	**1**	2	145	0	145
+15 mins.	4	133	137	0	1	1	139	0	139
+30 mins.	3	**144**	147	0	1	1	135	**1**	136
+45 mins.	**14**	143	**157**	**3**	1	**4**	**146**	1	**147**
Total Volume	25	548	573	4	4	8	565	2	567
% App. Total	4.4	95.6		50	50		99.6	0.4	
PHF	.446	.951	.912	.333	1.000	.500	.967	.500	.964

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 08_JVY_Wine_Belle AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

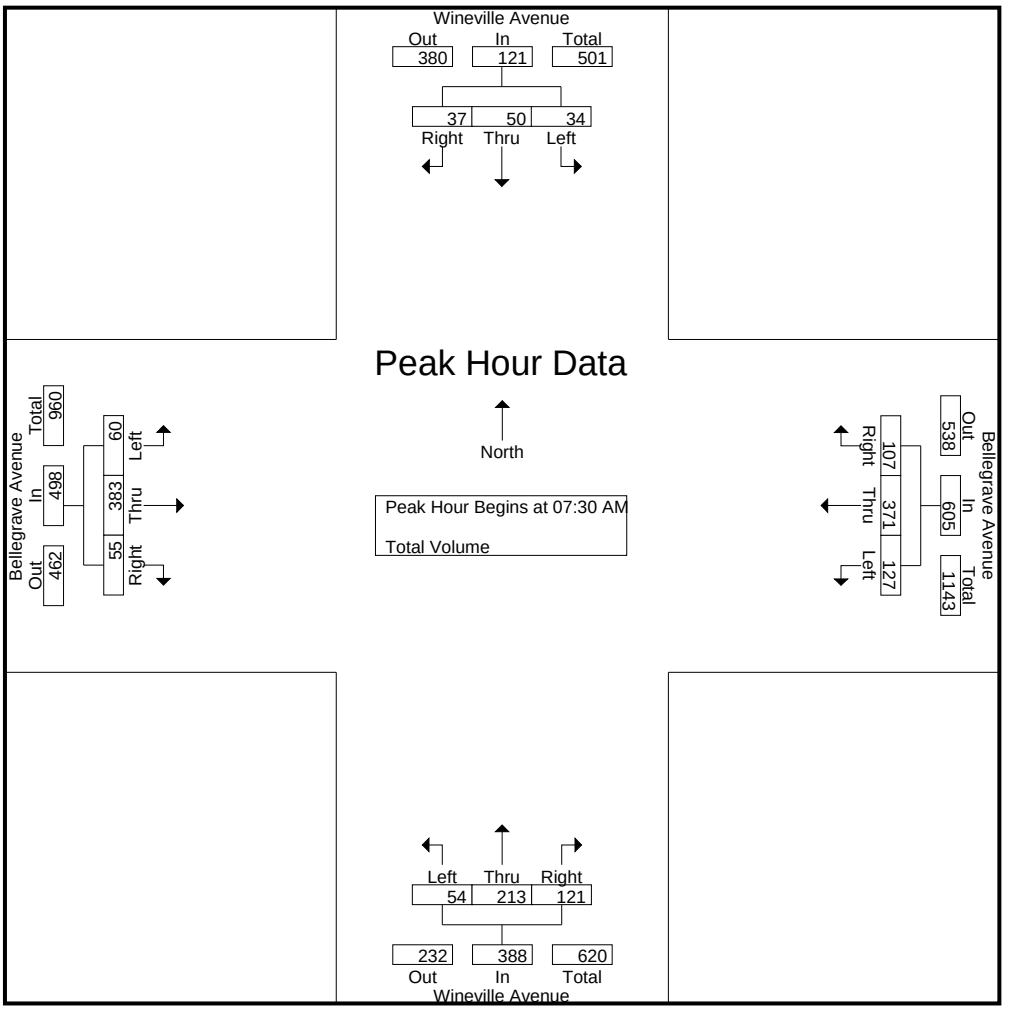
	Wineville Avenue Southbound				Bellegrave Avenue Westbound				Wineville Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	16	15	35	14	73	21	108	39	31	21	91	12	44	9	65	299
07:15 AM	6	13	12	31	16	68	18	102	30	41	11	82	7	54	17	78	293
07:30 AM	9	12	8	29	10	65	24	99	12	65	32	109	18	69	16	103	340
07:45 AM	9	8	8	25	35	92	25	152	14	64	41	119	18	118	11	147	443
Total	28	49	43	120	75	298	88	461	95	201	105	401	55	285	53	393	1375
08:00 AM	10	9	12	31	41	101	37	179	13	42	31	86	11	132	11	154	450
08:15 AM	6	21	9	36	41	113	21	175	15	42	17	74	13	64	17	94	379
08:30 AM	6	16	10	32	23	60	21	104	19	29	16	64	16	77	21	114	314
08:45 AM	7	13	7	27	33	74	21	128	17	28	20	65	12	74	13	99	319
Total	29	59	38	126	138	348	100	586	64	141	84	289	52	347	62	461	1462
Grand Total	57	108	81	246	213	646	188	1047	159	342	189	690	107	632	115	854	2837
Apprch %	23.2	43.9	32.9		20.3	61.7	18		23	49.6	27.4		12.5	74	13.5		
Total %	2	3.8	2.9	8.7	7.5	22.8	6.6	36.9	5.6	12.1	6.7	24.3	3.8	22.3	4.1	30.1	

	Wineville Avenue Southbound				Bellegrave Avenue Westbound				Wineville Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	12	8	29	10	65	24	99	12	**65**	32	109	**18**	69	16	103	340
07:45 AM	9	8	8	25	35	92	25	152	14	64	**41**	**119**	18	118	11	147	443
08:00 AM	**10**	9	**12**	31	**41**	101	**37**	**179**	13	42	31	86	11	**132**	11	**154**	**450**
08:15 AM	6	**21**	9	**36**	41	**113**	21	175	**15**	42	17	74	13	64	**17**	94	379
Total Volume	34	50	37	121	127	371	107	605	54	213	121	388	60	383	55	498	1612
% App. Total	28.1	41.3	30.6		21	61.3	17.7		13.9	54.9	31.2		12	76.9	11		
PHF	.850	.595	.771	.840	.774	.821	.723	.845	.900	.819	.738	.815	.833	.725	.809	.808	.896

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 08_JVY_Wine_Belle AM
Site Code : 06722151
Start Date : 3/3/2022
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				07:45 AM				07:00 AM				07:45 AM			
+0 mins.	**10**	9	**12**	31	35	92	25	152	**39**	31	21	91	**18**	118	11	147
+15 mins.	6	**21**	9	**36**	**41**	101	**37**	**179**	30	41	11	82	11	**132**	11	**154**
+30 mins.	6	16	10	32	41	**113**	21	175	12	**65**	32	109	13	64	17	94
+45 mins.	7	13	7	27	23	60	21	104	14	64	**41**	**119**	16	77	**21**	114
Total Volume	29	59	38	126	140	366	104	610	95	201	105	401	58	391	60	509
% App. Total	23	46.8	30.2		23	60	17		23.7	50.1	26.2		11.4	76.8	11.8	
PHF	.725	.702	.792	.875	.854	.810	.703	.852	.609	.773	.640	.842	.806	.741	.714	.826

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 08_JVY_Wine_Belle PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

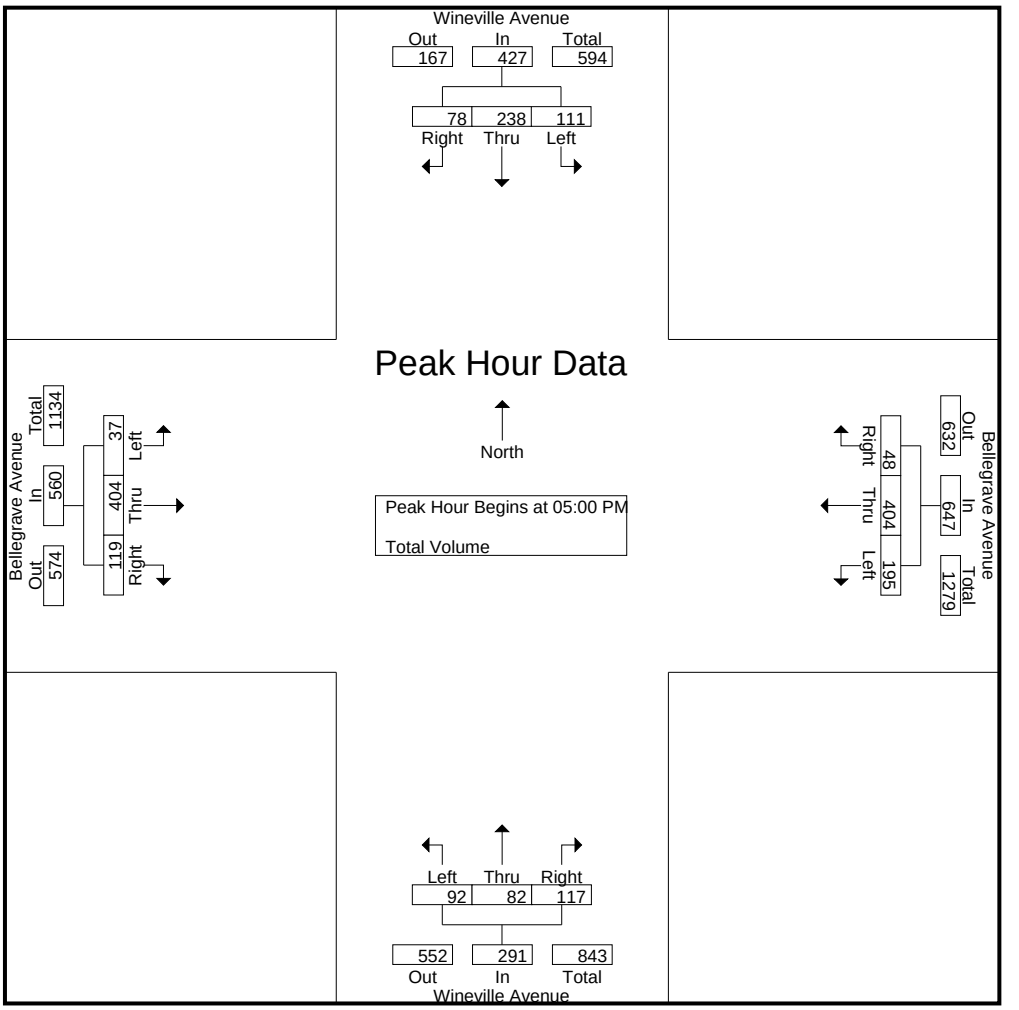
	Wineville Avenue Southbound				Bellegrave Avenue Westbound				Wineville Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	28	54	15	97	41	126	12	179	12	20	39	71	17	110	18	145	492
04:15 PM	34	46	16	96	36	93	12	141	12	26	36	74	18	98	26	142	453
04:30 PM	29	47	21	97	44	76	12	132	26	26	25	77	16	96	30	142	448
04:45 PM	34	52	15	101	44	88	11	143	25	25	26	76	13	93	28	134	454
Total	125	199	67	391	165	383	47	595	75	97	126	298	64	397	102	563	1847
05:00 PM	34	40	22	96	38	93	14	145	17	20	32	69	7	111	33	151	461
05:15 PM	39	70	13	122	59	110	8	177	19	17	31	67	9	94	25	128	494
05:30 PM	20	68	24	112	58	93	14	165	25	26	16	67	11	111	37	159	503
05:45 PM	18	60	19	97	40	108	12	160	31	19	38	88	10	88	24	122	467
Total	111	238	78	427	195	404	48	647	92	82	117	291	37	404	119	560	1925
Grand Total	236	437	145	818	360	787	95	1242	167	179	243	589	101	801	221	1123	3772
Apprch %	28.9	53.4	17.7		29	63.4	7.6		28.4	30.4	41.3		9	71.3	19.7		
Total %	6.3	11.6	3.8	21.7	9.5	20.9	2.5	32.9	4.4	4.7	6.4	15.6	2.7	21.2	5.9	29.8	

	Wineville Avenue Southbound				Bellegrave Avenue Westbound				Wineville Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	34	40	22	96	38	93	**14**	145	17	20	32	69	7	**111**	33	151	461
05:15 PM	**39**	**70**	13	**122**	**59**	**110**	8	**177**	19	17	31	67	9	94	25	128	494
05:30 PM	20	68	**24**	112	58	93	14	165	25	**26**	16	67	**11**	111	**37**	**159**	**503**
05:45 PM	18	60	19	97	40	108	12	160	**31**	19	**38**	**88**	10	88	24	122	467
Total Volume	111	238	78	427	195	404	48	647	92	82	117	291	37	404	119	560	1925
% App. Total	26	55.7	18.3		30.1	62.4	7.4		31.6	28.2	40.2		6.6	72.1	21.2		
PHF	.712	.850	.813	.875	.826	.918	.857	.914	.742	.788	.770	.827	.841	.910	.804	.881	.957

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 08_JVY_Wine_Belle PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	04:45 PM				05:00 PM				04:00 PM				04:45 PM			
+0 mins.	34	52	15	101	38	93	**14**	145	12	20	**39**	71	**13**	93	28	134
+15 mins.	34	40	22	96	**59**	**110**	8	**177**	12	**26**	36	74	7	**111**	33	151
+30 mins.	**39**	**70**	13	**122**	58	93	14	165	**26**	26	25	**77**	9	94	25	128
+45 mins.	20	68	**24**	112	40	108	12	160	25	25	26	76	11	111	**37**	**159**
Total Volume	127	230	74	431	195	404	48	647	75	97	126	298	40	409	123	572
% App. Total	29.5	53.4	17.2		30.1	62.4	7.4		25.2	32.6	42.3		7	71.5	21.5	
PHF	.814	.821	.771	.883	.826	.918	.857	.914	.721	.933	.808	.968	.769	.921	.831	.899

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City of Jurupa Valley
N/S: Firebush Street/Jurupa Road
E/W: Bellegrave Avenue
Weather: Clear

File Name : JVY_Fire_Belle AM
Site Code : 06722719
Start Date : 8/17/2022
Page No : 1

Groups Printed- Total Volume

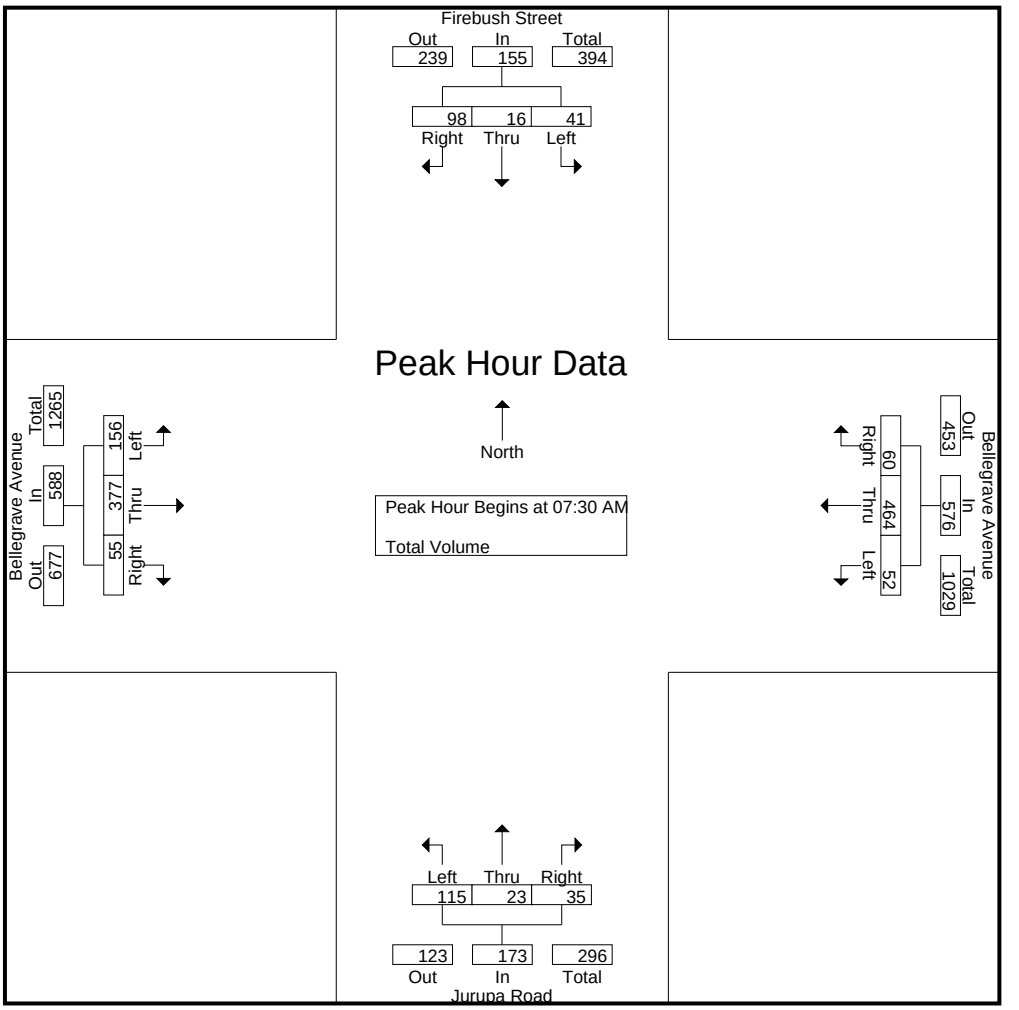
	Firebush Street Southbound				Bellegrave Avenue Westbound				Jurupa Road Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	1	3	0	77	11	88	26	2	3	31	3	59	9	71	193
07:15 AM	2	0	5	7	0	78	14	92	38	8	6	52	23	63	10	96	247
07:30 AM	9	4	20	33	3	108	34	145	43	7	5	55	59	89	8	156	389
07:45 AM	20	6	34	60	11	122	15	148	17	11	9	37	75	135	13	223	468
Total	31	12	60	103	14	385	74	473	124	28	23	175	160	346	40	546	1297
08:00 AM	7	5	34	46	10	140	10	160	29	5	9	43	18	72	18	108	357
08:15 AM	5	1	10	16	28	94	1	123	26	0	12	38	4	81	16	101	278
08:30 AM	1	0	3	4	13	87	1	101	30	1	7	38	5	58	19	82	225
08:45 AM	0	0	6	6	2	90	3	95	24	3	1	28	5	66	12	83	212
Total	13	6	53	72	53	411	15	479	109	9	29	147	32	277	65	374	1072
Grand Total	44	18	113	175	67	796	89	952	233	37	52	322	192	623	105	920	2369
Apprch %	25.1	10.3	64.6		7	83.6	9.3		72.4	11.5	16.1		20.9	67.7	11.4		
Total %	1.9	0.8	4.8	7.4	2.8	33.6	3.8	40.2	9.8	1.6	2.2	13.6	8.1	26.3	4.4	38.8	

	Firebush Street Southbound				Bellegrave Avenue Westbound				Jurupa Road Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	4	20	33	3	108	**34**	145	**43**	7	5	**55**	59	89	8	156	389
07:45 AM	**20**	**6**	**34**	**60**	11	122	15	148	17	**11**	9	37	**75**	**135**	13	**223**	**468**
08:00 AM	7	5	34	46	10	**140**	10	**160**	29	5	9	43	18	72	**18**	108	357
08:15 AM	5	1	10	16	**28**	94	1	123	26	0	**12**	38	4	81	16	101	278
Total Volume	41	16	98	155	52	464	60	576	115	23	35	173	156	377	55	588	1492
% App. Total	26.5	10.3	63.2		9	80.6	10.4		66.5	13.3	20.2		26.5	64.1	9.4		
PHF	.513	.667	.721	.646	.464	.829	.441	.900	.669	.523	.729	.786	.520	.698	.764	.659	.797

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City of Jurupa Valley
N/S: Firebush Street/Jurupa Road
E/W: Bellegrave Avenue
Weather: Clear

File Name : JVY_Fire_Belle AM
Site Code : 06722719
Start Date : 8/17/2022



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				07:15 AM				07:30 AM			
+0 mins.	9	4	20	33	3	108	**34**	145	38	8	6	52	59	89	8	156
+15 mins.	**20**	**6**	**34**	**60**	11	122	15	148	**43**	7	5	**55**	**75**	**135**	13	**223**
+30 mins.	7	5	34	46	10	**140**	10	**160**	17	**11**	**9**	37	18	72	**18**	108
+45 mins.	5	1	10	16	**28**	94	1	123	29	5	9	43	4	81	16	101
Total Volume	41	16	98	155	52	464	60	576	127	31	29	187	156	377	55	588
% App. Total	26.5	10.3	63.2		9	80.6	10.4		67.9	16.6	15.5		26.5	64.1	9.4	
PHF	.513	.667	.721	.646	.464	.829	.441	.900	.738	.705	.806	.850	.520	.698	.764	.659

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City of Jurupa Valley
N/S: Firebush Street/Jurupa Road
E/W: Bellegrave Avenue
Weather: Clear

File Name : JVY_Fire_Belle PM
Site Code : 06722719
Start Date : 8/17/2022
Page No : 1

Groups Printed- Total Volume

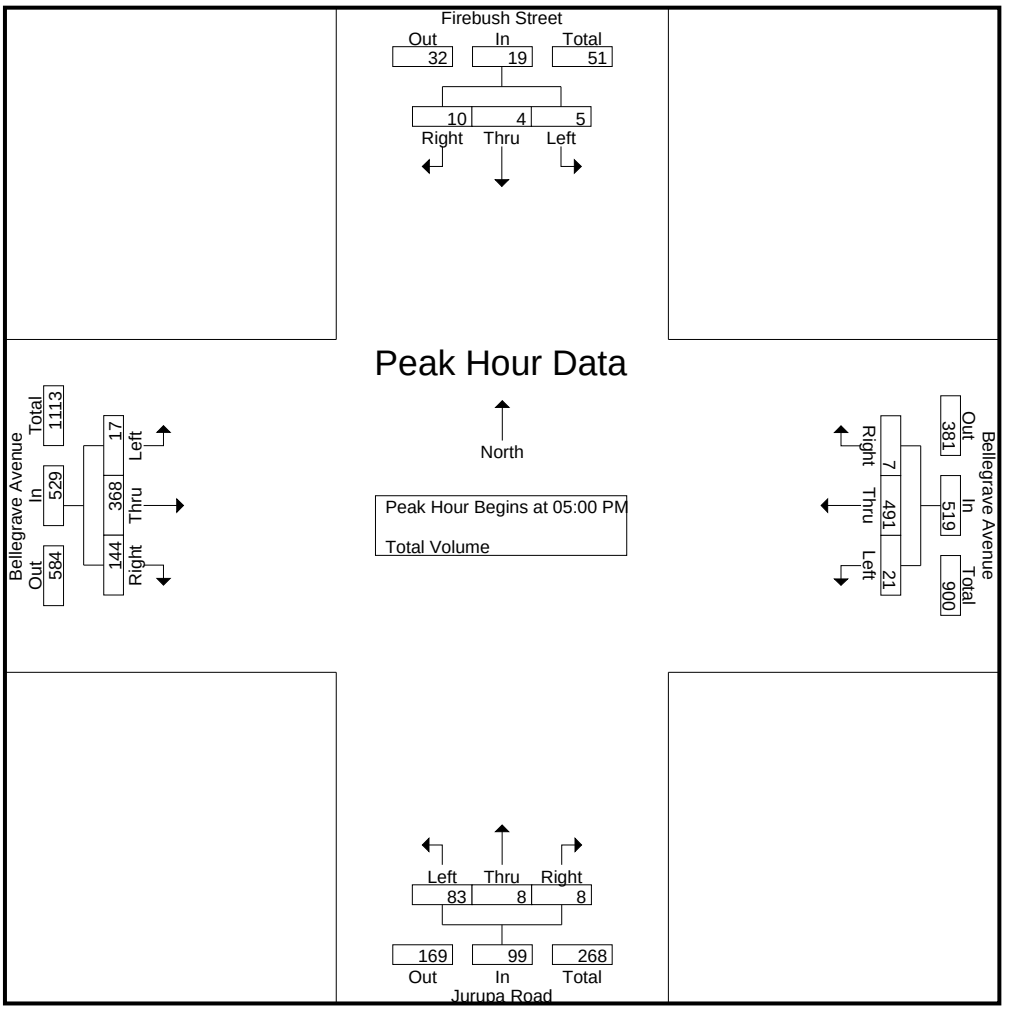
	Firebush Street Southbound				Bellegrave Avenue Westbound				Jurupa Road Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	9	10	4	89	7	100	19	1	3	23	5	89	37	131	264
04:15 PM	1	1	1	3	3	87	1	91	32	2	4	38	5	84	42	131	263
04:30 PM	4	1	4	9	4	89	2	95	28	4	2	34	5	105	31	141	279
04:45 PM	0	2	2	4	5	103	2	110	19	1	7	27	4	97	48	149	290
Total	5	5	16	26	16	368	12	396	98	8	16	122	19	375	158	552	1096
05:00 PM	2	1	1	4	6	105	1	112	23	1	2	26	3	95	39	137	279
05:15 PM	0	1	4	5	2	105	2	109	19	3	3	25	7	83	31	121	260
05:30 PM	3	1	1	5	9	113	1	123	15	1	1	17	5	105	31	141	286
05:45 PM	0	1	4	5	4	168	3	175	26	3	2	31	2	85	43	130	341
Total	5	4	10	19	21	491	7	519	83	8	8	99	17	368	144	529	1166
Grand Total	10	9	26	45	37	859	19	915	181	16	24	221	36	743	302	1081	2262
Apprch %	22.2	20	57.8		4	93.9	2.1		81.9	7.2	10.9		3.3	68.7	27.9		
Total %	0.4	0.4	1.1	2	1.6	38	0.8	40.5	8	0.7	1.1	9.8	1.6	32.8	13.4	47.8	

	Firebush Street Southbound				Bellegrave Avenue Westbound				Jurupa Road Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	**1**	1	4	6	105	1	112	23	1	2	26	3	95	39	137	279
05:15 PM	0	1	**4**	**5**	2	105	2	109	19	**3**	**3**	25	**7**	83	31	121	260
05:30 PM	**3**	1	1	5	**9**	113	1	123	15	1	1	17	5	**105**	31	**141**	286
05:45 PM	0	1	4	5	4	**168**	**3**	**175**	**26**	3	2	**31**	2	85	**43**	130	**341**
Total Volume	5	4	10	19	21	491	7	519	83	8	8	99	17	368	144	529	1166
% App. Total	26.3	21.1	52.6		4	94.6	1.3		83.8	8.1	8.1		3.2	69.6	27.2		
PHF	.417	1.00	.625	.950	.583	.731	.583	.741	.798	.667	.667	.798	.607	.876	.837	.938	.855

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City of Jurupa Valley
N/S: Firebush Street/Jurupa Road
E/W: Bellegrave Avenue
Weather: Clear

File Name : JVY_Fire_Belle PM
Site Code : 06722719
Start Date : 8/17/2022



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				04:15 PM			
+0 mins.	0	1	**9**	**10**	6	105	1	112	**32**	2	4	**38**	**5**	84	42	131
+15 mins.	1	1	1	3	2	105	2	109	28	**4**	2	34	5	**105**	31	141
+30 mins.	**4**	1	4	9	**9**	113	1	123	19	1	**7**	27	4	97	**48**	**149**
+45 mins.	0	**2**	2	4	4	**168**	**3**	**175**	23	1	2	26	3	95	39	137
Total Volume	5	5	16	26	21	491	7	519	102	8	15	125	17	381	160	558
% App. Total	19.2	19.2	61.5		4	94.6	1.3		81.6	6.4	12		3	68.3	28.7	
PHF	.313	.625	.444	.650	.583	.731	.583	.741	.797	.500	.536	.822	.850	.907	.833	.936

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City of Jurupa Valley
N/S: Etiwanda Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 09_JVY_Eti_Belle AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

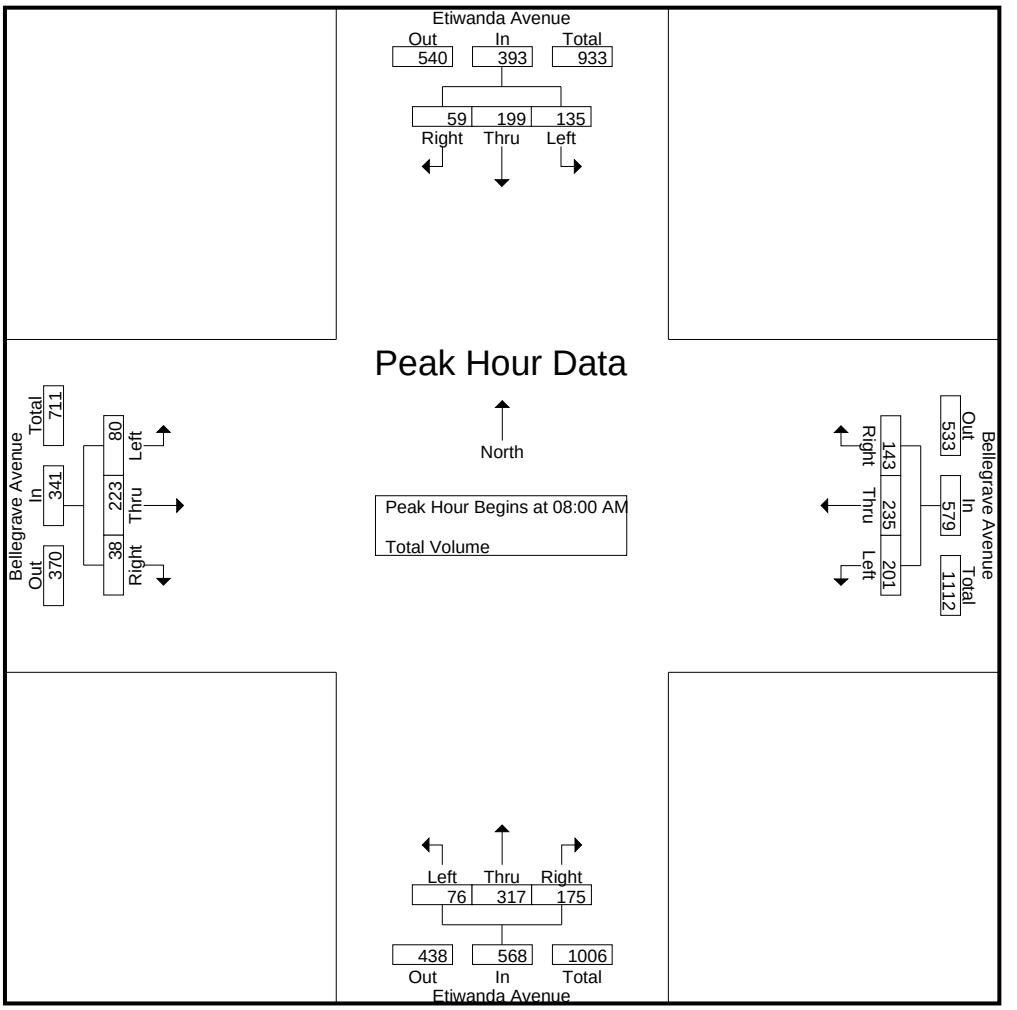
	Etiwanda Avenue Southbound				Bellegrave Avenue Westbound				Etiwanda Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	20	33	10	63	10	35	18	63	16	88	11	115	18	27	5	50	291
07:15 AM	16	27	3	46	9	46	27	82	11	94	10	115	18	47	5	70	313
07:30 AM	16	45	16	77	12	51	35	98	19	84	11	114	24	55	2	81	370
07:45 AM	23	39	11	73	20	35	28	83	18	92	11	121	21	62	7	90	367
Total	75	144	40	259	51	167	108	326	64	358	43	465	81	191	19	291	1341
08:00 AM	21	50	14	85	20	52	32	104	21	61	27	109	25	53	12	90	388
08:15 AM	26	50	15	91	45	54	28	127	18	85	19	122	19	45	12	76	416
08:30 AM	48	32	14	94	55	50	37	142	12	82	49	143	13	61	5	79	458
08:45 AM	40	67	16	123	81	79	46	206	25	89	80	194	23	64	9	96	619
Total	135	199	59	393	201	235	143	579	76	317	175	568	80	223	38	341	1881
Grand Total	210	343	99	652	252	402	251	905	140	675	218	1033	161	414	57	632	3222
Apprch %	32.2	52.6	15.2		27.8	44.4	27.7		13.6	65.3	21.1		25.5	65.5	9		
Total %	6.5	10.6	3.1	20.2	7.8	12.5	7.8	28.1	4.3	20.9	6.8	32.1	5	12.8	1.8	19.6	

	Etiwanda Avenue Southbound				Bellegrave Avenue Westbound				Etiwanda Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	21	50	14	85	20	52	32	104	21	61	27	109	**25**	53	**12**	90	388
08:15 AM	26	50	15	91	45	54	28	127	18	85	19	122	19	45	12	76	416
08:30 AM	**48**	32	14	94	55	50	37	142	12	82	49	143	13	61	5	79	458
08:45 AM	40	**67**	**16**	**123**	**81**	**79**	**46**	**206**	**25**	**89**	**80**	**194**	23	**64**	9	**96**	**619**
Total Volume	135	199	59	393	201	235	143	579	76	317	175	568	80	223	38	341	1881
% App. Total	34.4	50.6	15		34.7	40.6	24.7		13.4	55.8	30.8		23.5	65.4	11.1		
PHF	.703	.743	.922	.799	.620	.744	.777	.703	.760	.890	.547	.732	.800	.871	.792	.888	.760

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City of Jurupa Valley
N/S: Etiwanda Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 09_JVY_Eti_Belle AM
Site Code : 06722151
Start Date : 3/3/2022
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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:

	08:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	21	50	14	85	20	52	32	104	21	61	27	109	**25**	53	**12**	90
+15 mins.	26	50	15	91	45	54	28	127	18	85	19	122	19	45	12	76
+30 mins.	**48**	32	14	94	55	50	37	142	12	82	49	143	13	61	5	79
+45 mins.	40	**67**	**16**	**123**	**81**	**79**	**46**	**206**	**25**	**89**	**80**	**194**	23	**64**	9	**96**
Total Volume	135	199	59	393	201	235	143	579	76	317	175	568	80	223	38	341
% App. Total	34.4	50.6	15		34.7	40.6	24.7		13.4	55.8	30.8		23.5	65.4	11.1	
PHF	.703	.743	.922	.799	.620	.744	.777	.703	.760	.890	.547	.732	.800	.871	.792	.888

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City of Jurupa Valley
N/S: Etiwanda Avenue
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Weather: Clear

File Name : 09_JVY_Eti_Belle PM
Site Code : 06722151
Start Date : 3/3/2022
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Groups Printed- Total Volume

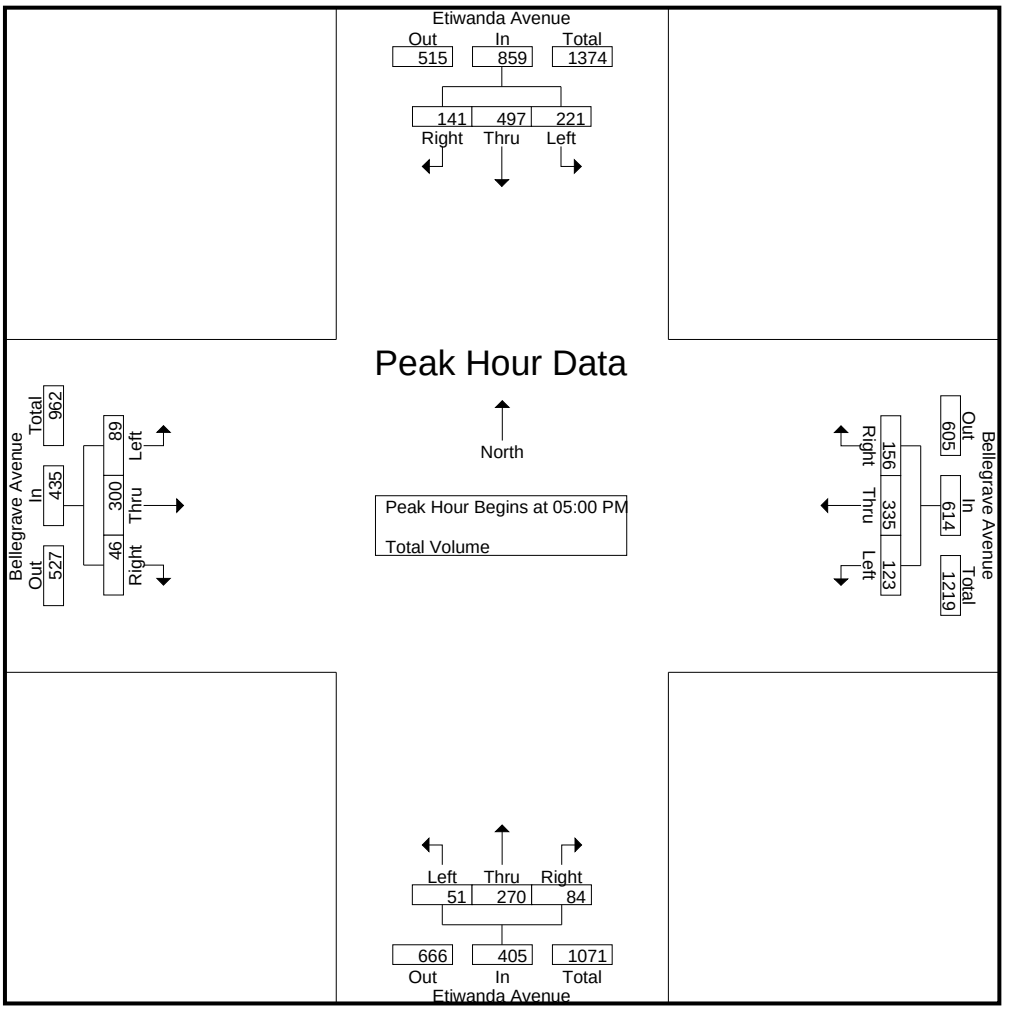
	Etiwanda Avenue Southbound				Bellegrave Avenue Westbound				Etiwanda Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	42	131	28	201	22	88	26	136	17	66	25	108	29	87	17	133	578
04:15 PM	44	111	19	174	34	77	24	135	10	60	26	96	27	74	5	106	511
04:30 PM	56	108	20	184	37	75	39	151	8	74	20	102	20	64	8	92	529
04:45 PM	47	128	32	207	25	74	34	133	12	59	18	89	28	55	12	95	524
Total	189	478	99	766	118	314	123	555	47	259	89	395	104	280	42	426	2142
05:00 PM	73	119	32	224	32	72	46	150	10	79	23	112	26	73	14	113	599
05:15 PM	52	128	32	212	25	79	33	137	14	70	25	109	11	73	9	93	551
05:30 PM	49	133	40	222	32	92	39	163	11	53	17	81	22	88	15	125	591
05:45 PM	47	117	37	201	34	92	38	164	16	68	19	103	30	66	8	104	572
Total	221	497	141	859	123	335	156	614	51	270	84	405	89	300	46	435	2313
Grand Total	410	975	240	1625	241	649	279	1169	98	529	173	800	193	580	88	861	4455
Apprch %	25.2	60	14.8		20.6	55.5	23.9		12.2	66.1	21.6		22.4	67.4	10.2		
Total %	9.2	21.9	5.4	36.5	5.4	14.6	6.3	26.2	2.2	11.9	3.9	18	4.3	13	2	19.3	

	Etiwanda Avenue Southbound				Bellegrave Avenue Westbound				Etiwanda Avenue Northbound				Bellegrave Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**73**	119	32	**224**	32	72	**46**	150	10	**79**	23	**112**	26	73	14	113	**599**
05:15 PM	52	128	32	212	25	79	33	137	14	70	**25**	109	11	73	9	93	551
05:30 PM	49	**133**	**40**	222	32	**92**	39	163	11	53	17	81	22	**88**	**15**	**125**	591
05:45 PM	47	117	37	201	**34**	92	38	**164**	**16**	68	19	103	**30**	66	8	104	572
Total Volume	221	497	141	859	123	335	156	614	51	270	84	405	89	300	46	435	2313
% App. Total	25.7	57.9	16.4		20	54.6	25.4		12.6	66.7	20.7		20.5	69	10.6		
PHF	.757	.934	.881	.959	.904	.910	.848	.936	.797	.854	.840	.904	.742	.852	.767	.870	.965

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City of Jurupa Valley
N/S: Etiwanda Avenue
E/W: Bellegrave Avenue
Weather: Clear

File Name : 09_JVY_Eti_Belle PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	04:45 PM				05:00 PM				04:30 PM				05:00 PM			
+0 mins.	47	128	32	207	32	72	**46**	150	8	74	20	102	26	73	14	113
+15 mins.	**73**	119	32	**224**	25	79	33	137	12	59	18	89	11	73	9	93
+30 mins.	52	128	32	212	32	**92**	39	163	10	**79**	23	**112**	22	**88**	**15**	**125**
+45 mins.	49	**133**	**40**	222	**34**	92	38	**164**	**14**	70	**25**	109	**30**	66	8	104
Total Volume	221	508	136	865	123	335	156	614	44	282	86	412	89	300	46	435
% App. Total	25.5	58.7	15.7		20	54.6	25.4		10.7	68.4	20.9		20.5	69	10.6	
PHF	.757	.955	.850	.965	.904	.910	.848	.936	.786	.892	.860	.920	.742	.852	.767	.870

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Shearwater Drive
Weather: Clear

File Name : 14_JVY_Pat_Shear AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

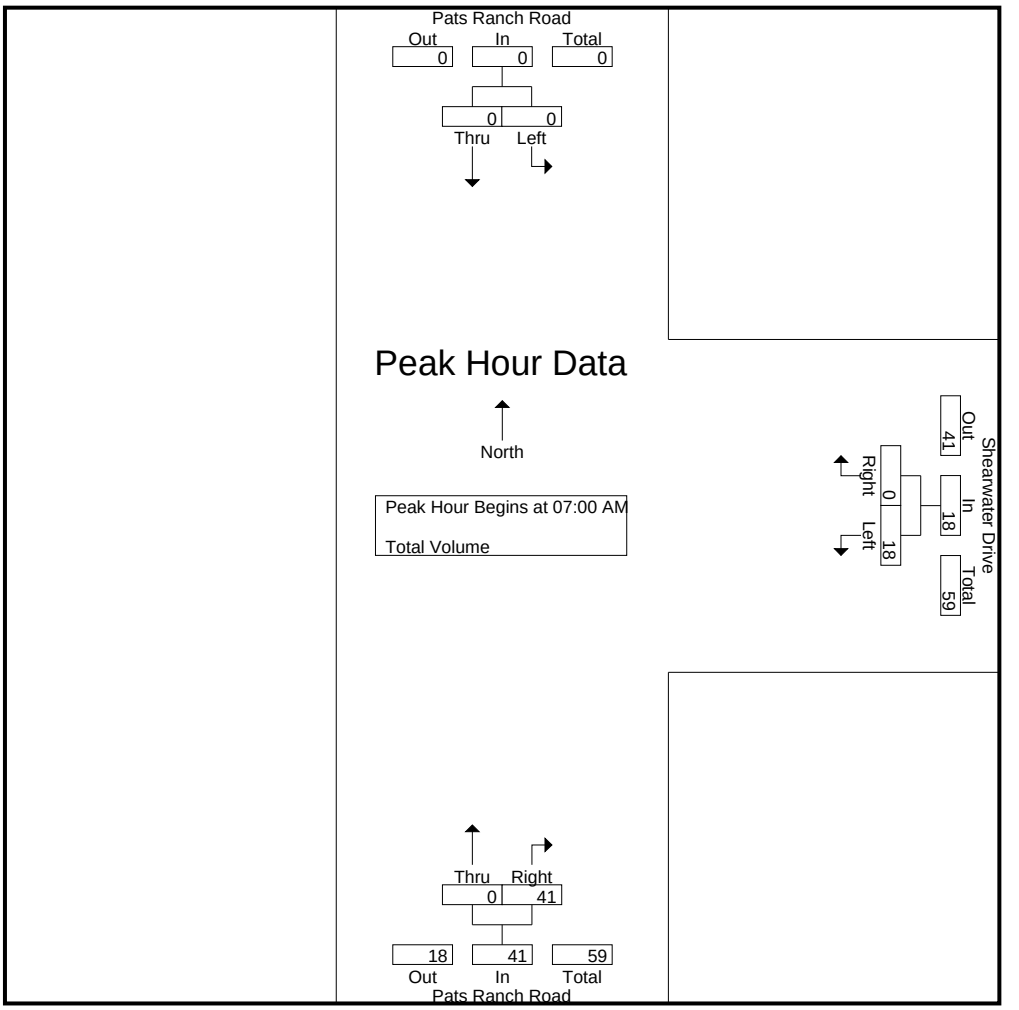
	Pats Ranch Road Southbound			Shearwater Drive Westbound			Pats Ranch Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	8	0	8	0	7	7	15
07:15 AM	0	0	0	1	0	1	0	12	12	13
07:30 AM	0	0	0	3	0	3	0	15	15	18
07:45 AM	0	0	0	6	0	6	0	7	7	13
Total	0	0	0	18	0	18	0	41	41	59
08:00 AM	0	0	0	5	0	5	0	9	9	14
08:15 AM	0	0	0	5	0	5	0	9	9	14
08:30 AM	0	0	0	5	0	5	0	9	9	14
08:45 AM	0	0	0	3	0	3	0	8	8	11
Total	0	0	0	18	0	18	0	35	35	53
Grand Total	0	0	0	36	0	36	0	76	76	112
Apprch %	0	0		100	0		0	100		
Total %	0	0	0	32.1	0	32.1	0	67.9	67.9	

	Pats Ranch Road Southbound			Shearwater Drive Westbound			Pats Ranch 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	0	0	0	**8**	0	**8**	0	7	7	15
07:15 AM	0	0	0	1	0	1	0	12	12	13
07:30 AM	0	0	0	3	0	3	0	**15**	**15**	**18**
07:45 AM	0	0	0	6	0	6	0	7	7	13
Total Volume	0	0	0	18	0	18	0	41	41	59
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.563	.000	.563	.000	.683	.683	.819

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Shearwater Drive
Weather: Clear

File Name : 14_JVY_Pat_Shear AM
Site Code : 06722151
Start Date : 3/3/2022
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			07:45 AM			07:15 AM		
+0 mins.	0	0	0	**6**	0	**6**	0	12	12
+15 mins.	0	0	0	5	0	5	0	**15**	**15**
+30 mins.	0	0	0	5	0	5	0	7	7
+45 mins.	0	0	0	5	0	5	0	9	9
Total Volume	0	0	0	21	0	21	0	43	43
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.875	.000	.875	.000	.717	.717

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Shearwater Drive
Weather: Clear

File Name : 14_JVY_Pat_Shear PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

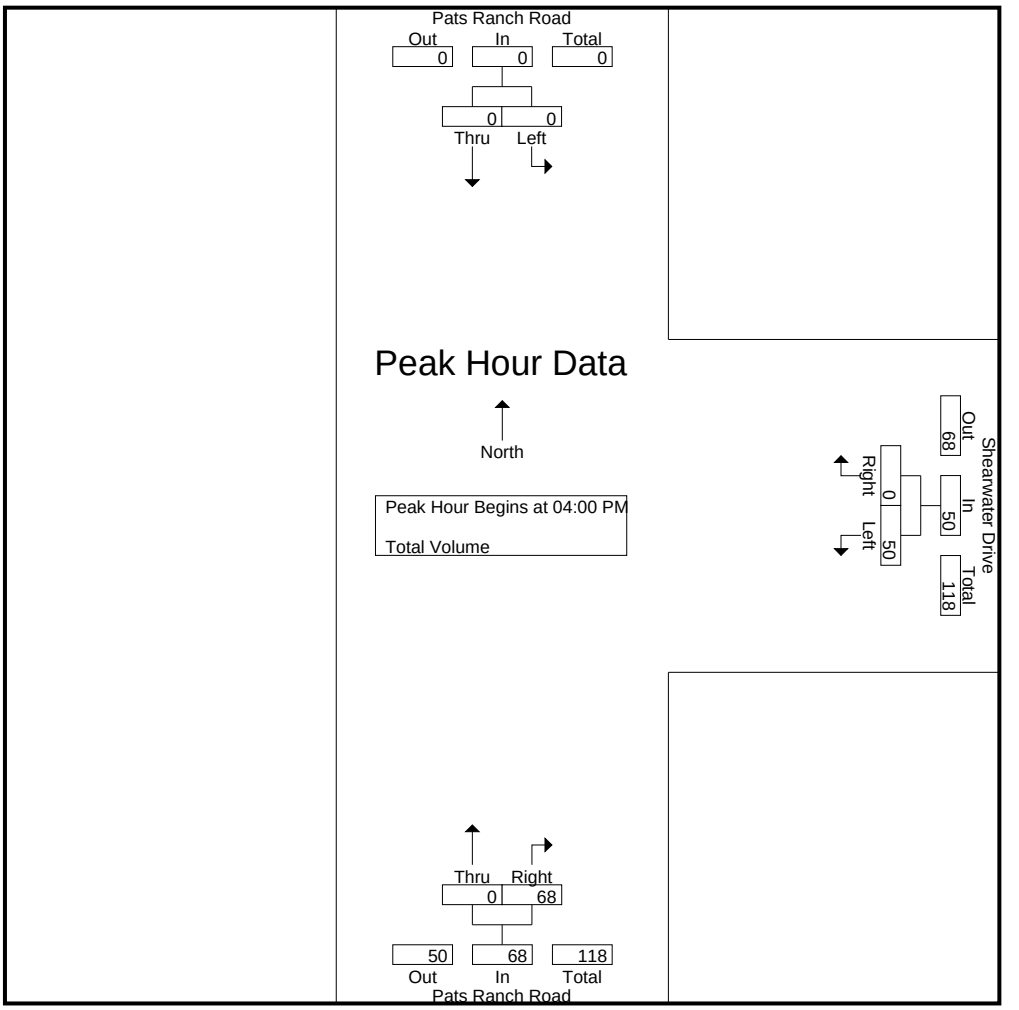
	Pats Ranch Road Southbound			Shearwater Drive Westbound			Pats Ranch Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	12	0	12	0	22	22	34
04:15 PM	0	0	0	16	0	16	0	19	19	35
04:30 PM	0	0	0	12	0	12	0	15	15	27
04:45 PM	0	0	0	10	0	10	0	12	12	22
Total	0	0	0	50	0	50	0	68	68	118
05:00 PM	0	0	0	10	0	10	0	13	13	23
05:15 PM	0	0	0	12	0	12	0	15	15	27
05:30 PM	0	0	0	10	0	10	0	13	13	23
05:45 PM	0	0	0	14	0	14	0	19	19	33
Total	0	0	0	46	0	46	0	60	60	106
Grand Total	0	0	0	96	0	96	0	128	128	224
Apprch %	0	0		100	0		0	100		
Total %	0	0	0	42.9	0	42.9	0	57.1	57.1	

	Pats Ranch Road Southbound			Shearwater Drive Westbound			Pats Ranch 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 04:00 PM										
04:00 PM	0	0	0	12	0	12	0	**22**	**22**	34
04:15 PM	0	0	0	**16**	0	**16**	0	19	19	**35**
04:30 PM	0	0	0	12	0	12	0	15	15	27
04:45 PM	0	0	0	10	0	10	0	12	12	22
Total Volume	0	0	0	50	0	50	0	68	68	118
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.781	.000	.781	.000	.773	.773	.843

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Shearwater Drive
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File Name : 14_JVY_Pat_Shear PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	12	0	12	0	**22**	**22**
+15 mins.	0	0	0	**16**	0	**16**	0	19	19
+30 mins.	0	0	0	12	0	12	0	15	15
+45 mins.	0	0	0	10	0	10	0	12	12
Total Volume	0	0	0	50	0	50	0	68	68
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.781	.000	.781	.000	.773	.773

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Shearwater Drive
Weather: Clear

File Name : 18_JVY_Wine_Shear AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

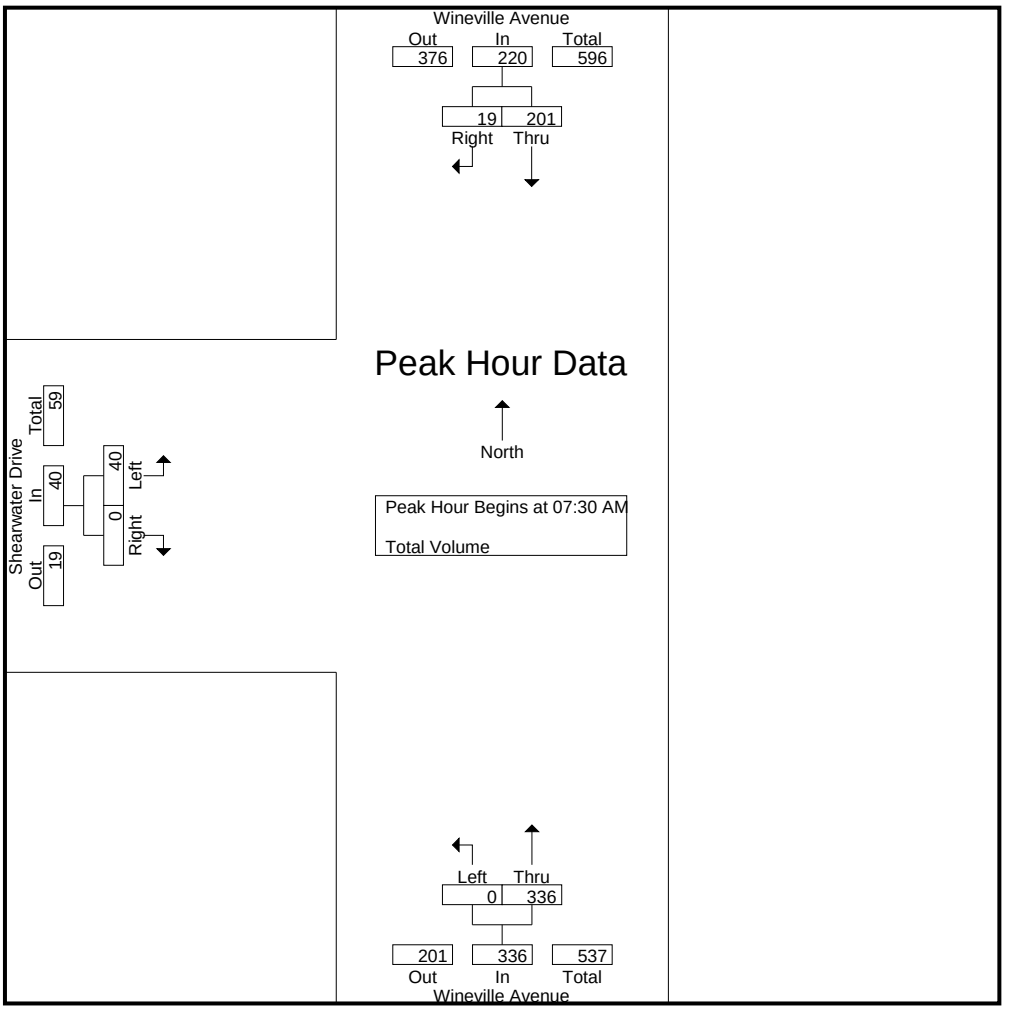
	Wineville Avenue Southbound			Wineville Avenue Northbound			Shearwater Drive Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	31	7	38	0	81	81	8	0	8	127
07:15 AM	44	1	45	0	69	69	12	0	12	126
07:30 AM	33	3	36	0	96	96	14	0	14	146
07:45 AM	45	6	51	0	110	110	8	0	8	169
Total	153	17	170	0	356	356	42	0	42	568
08:00 AM	56	5	61	0	70	70	9	0	9	140
08:15 AM	67	5	72	0	60	60	9	0	9	141
08:30 AM	49	5	54	0	53	53	9	0	9	116
08:45 AM	56	3	59	0	54	54	7	0	7	120
Total	228	18	246	0	237	237	34	0	34	517
Grand Total	381	35	416	0	593	593	76	0	76	1085
Apprch %	91.6	8.4		0	100		100	0		
Total %	35.1	3.2	38.3	0	54.7	54.7	7	0	7	

	Wineville Avenue Southbound			Wineville Avenue Northbound			Shearwater Drive Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	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	33	3	36	0	96	96	**14**	0	**14**	146
07:45 AM	45	**6**	51	0	**110**	**110**	8	0	8	**169**
08:00 AM	56	5	61	0	70	70	9	0	9	140
08:15 AM	**67**	5	**72**	0	60	60	9	0	9	141
Total Volume	201	19	220	0	336	336	40	0	40	596
% App. Total	91.4	8.6		0	100		100	0		
PHF	.750	.792	.764	.000	.764	.764	.714	.000	.714	.882

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Shearwater Drive
Weather: Clear

File Name : 18_JVY_Wine_Shear AM
Site Code : 06722151
Start Date : 3/3/2022
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		
+0 mins.	56	**5**	61	0	81	81	12	0	12
+15 mins.	**67**	5	**72**	0	69	69	**14**	0	**14**
+30 mins.	49	5	54	0	96	96	8	0	8
+45 mins.	56	3	59	0	**110**	**110**	9	0	9
Total Volume	228	18	246	0	356	356	43	0	43
% App. Total	92.7	7.3		0	100		100	0	
PHF	.851	.900	.854	.000	.809	.809	.768	.000	.768

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City of Jurupa Valley
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File Name : 18_JVY_Wine_Shear PM
Site Code : 06722151
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Groups Printed- Total Volume

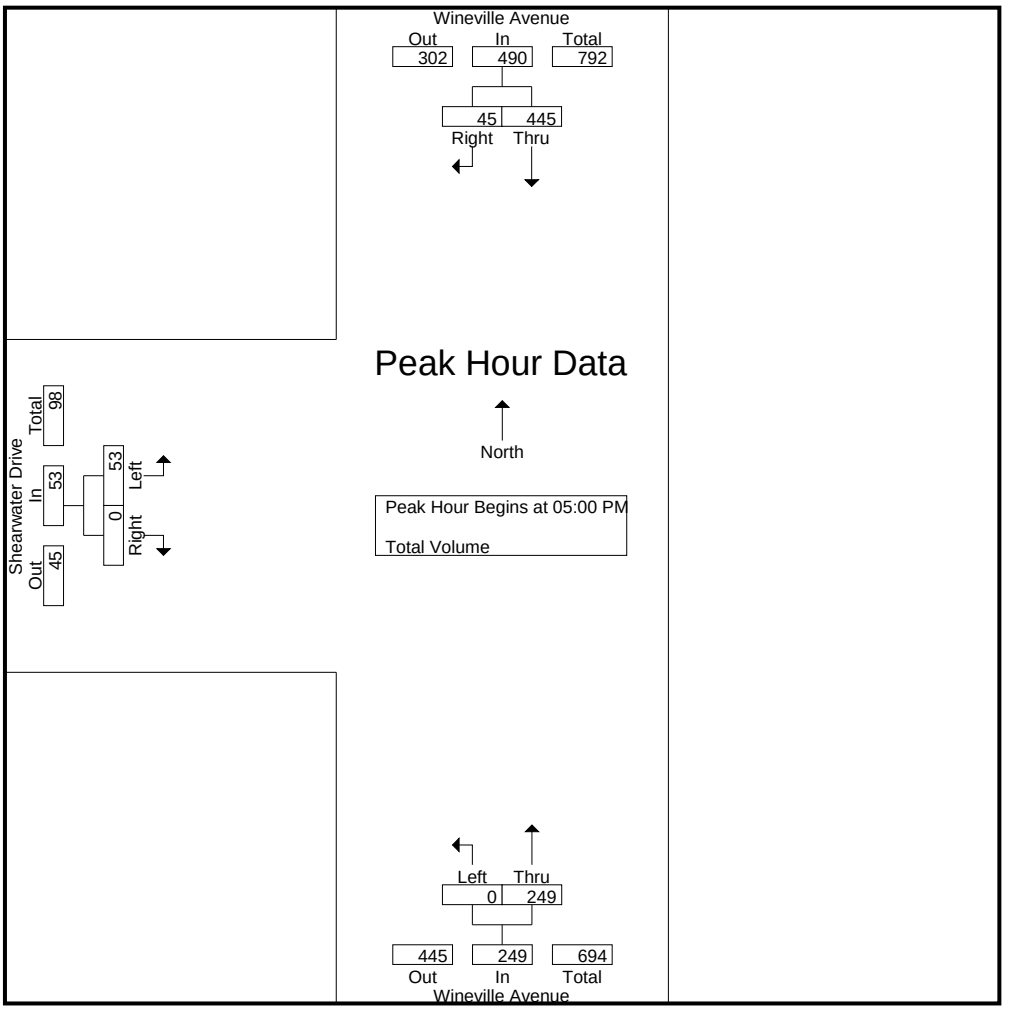
	Wineville Avenue Southbound			Wineville Avenue Northbound			Shearwater Drive Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	104	10	114	1	50	51	23	0	23	188
04:15 PM	79	16	95	0	52	52	18	1	19	166
04:30 PM	108	12	120	0	68	68	16	0	16	204
04:45 PM	92	11	103	0	56	56	14	0	14	173
Total	383	49	432	1	226	227	71	1	72	731
05:00 PM	88	9	97	0	54	54	13	0	13	164
05:15 PM	128	13	141	0	54	54	9	0	9	204
05:30 PM	132	9	141	0	65	65	12	0	12	218
05:45 PM	97	14	111	0	76	76	19	0	19	206
Total	445	45	490	0	249	249	53	0	53	792
Grand Total	828	94	922	1	475	476	124	1	125	1523
Apprch %	89.8	10.2		0.2	99.8		99.2	0.8		
Total %	54.4	6.2	60.5	0.1	31.2	31.3	8.1	0.1	8.2	

	Wineville Avenue Southbound			Wineville Avenue Northbound			Shearwater Drive Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	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	88	9	97	0	54	54	13	0	13	164
05:15 PM	128	13	**141**	0	54	54	9	0	9	204
05:30 PM	**132**	9	141	0	65	65	12	0	12	**218**
05:45 PM	97	**14**	111	0	**76**	**76**	**19**	0	**19**	206
Total Volume	445	45	490	0	249	249	53	0	53	792
% App. Total	90.8	9.2		0	100		100	0		
PHF	.843	.804	.869	.000	.819	.819	.697	.000	.697	.908

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E/W: Shearwater Drive
Weather: Clear

File Name : 18_JVY_Wine_Shear PM
Site Code : 06722151
Start Date : 3/3/2022



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		
+0 mins.	88	9	97	0	54	54	**23**	0	**23**
+15 mins.	128	13	**141**	0	54	54	18	**1**	19
+30 mins.	**132**	9	141	0	65	65	16	0	16
+45 mins.	97	**14**	111	0	**76**	**76**	14	0	14
Total Volume	445	45	490	0	249	249	71	1	72
% App. Total	90.8	9.2		0	100		98.6	1.4	
PHF	.843	.804	.869	.000	.819	.819	.772	.250	.783

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Park Center Drive
Weather: Clear

File Name : 15_JVY_Pat_Park AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

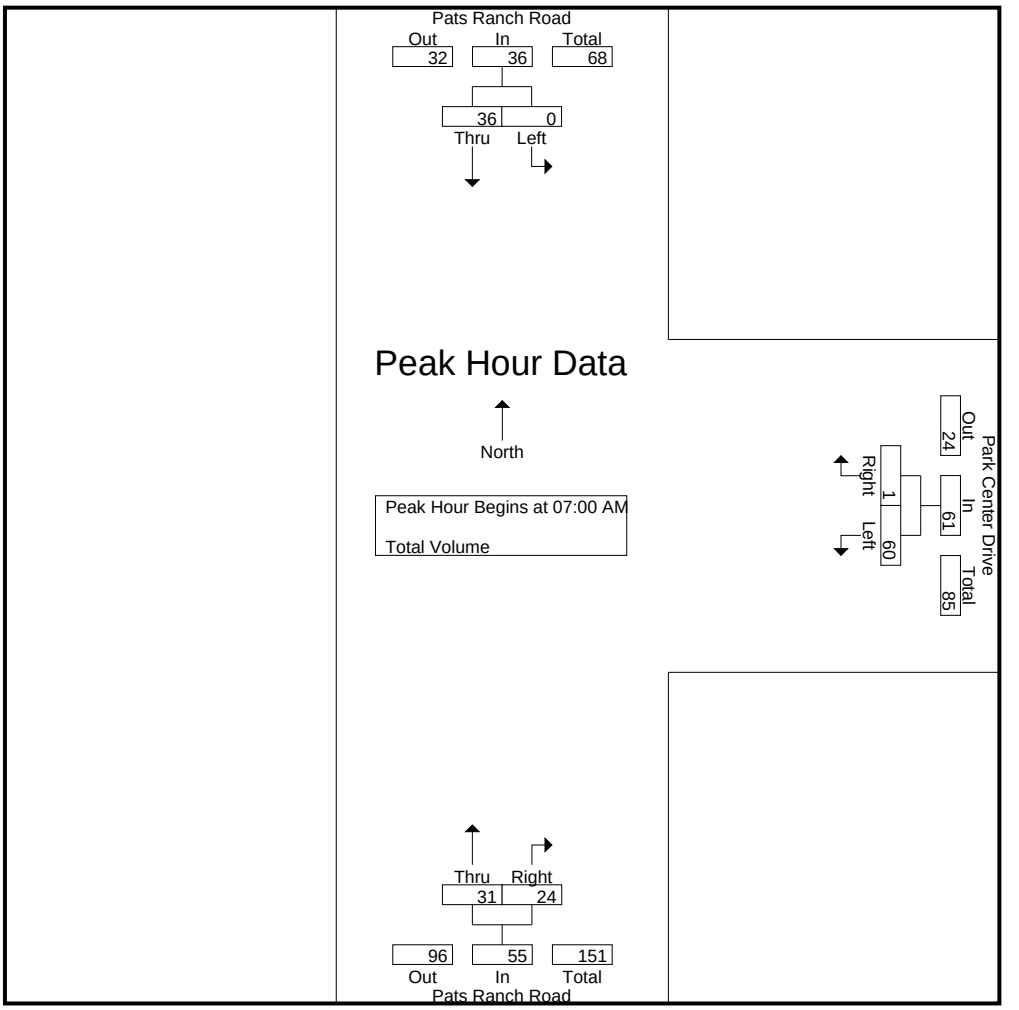
	Pats Ranch Road Southbound			Park Center Drive Westbound			Pats Ranch Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	14	14	15	1	16	2	6	8	38
07:15 AM	0	7	7	22	0	22	11	2	13	42
07:30 AM	0	5	5	11	0	11	10	3	13	29
07:45 AM	0	10	10	12	0	12	8	13	21	43
Total	0	36	36	60	1	61	31	24	55	152
08:00 AM	0	5	5	23	0	23	6	4	10	38
08:15 AM	0	4	4	7	0	7	9	3	12	23
08:30 AM	0	9	9	12	0	12	7	4	11	32
08:45 AM	0	4	4	11	0	11	5	4	9	24
Total	0	22	22	53	0	53	27	15	42	117
Grand Total	0	58	58	113	1	114	58	39	97	269
Apprch %	0	100		99.1	0.9		59.8	40.2		
Total %	0	21.6	21.6	42	0.4	42.4	21.6	14.5	36.1	

	Pats Ranch Road Southbound			Park Center Drive Westbound			Pats Ranch 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	0	**14**	**14**	15	**1**	16	2	6	8	38
07:15 AM	0	7	7	**22**	0	**22**	**11**	2	13	42
07:30 AM	0	5	5	11	0	11	10	3	13	29
07:45 AM	0	10	10	12	0	12	8	**13**	**21**	**43**
Total Volume	0	36	36	60	1	61	31	24	55	152
% App. Total	0	100		98.4	1.6		56.4	43.6		
PHF	.000	.643	.643	.682	.250	.693	.705	.462	.655	.884

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Park Center Drive
Weather: Clear

File Name : 15_JVY_Pat_Park AM
Site Code : 06722151
Start Date : 3/3/2022
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			07:15 AM			07:15 AM		
+0 mins.	0	**14**	**14**	22	0	22	**11**	2	13
+15 mins.	0	7	7	11	0	11	10	3	13
+30 mins.	0	5	5	12	0	12	8	**13**	**21**
+45 mins.	0	10	10	**23**	0	**23**	6	4	10
Total Volume	0	36	36	68	0	68	35	22	57
% App. Total	0	100		100	0		61.4	38.6	
PHF	.000	.643	.643	.739	.000	.739	.795	.423	.679

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Park Center Drive
Weather: Clear

File Name : 15_JVY_Pat_Park PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

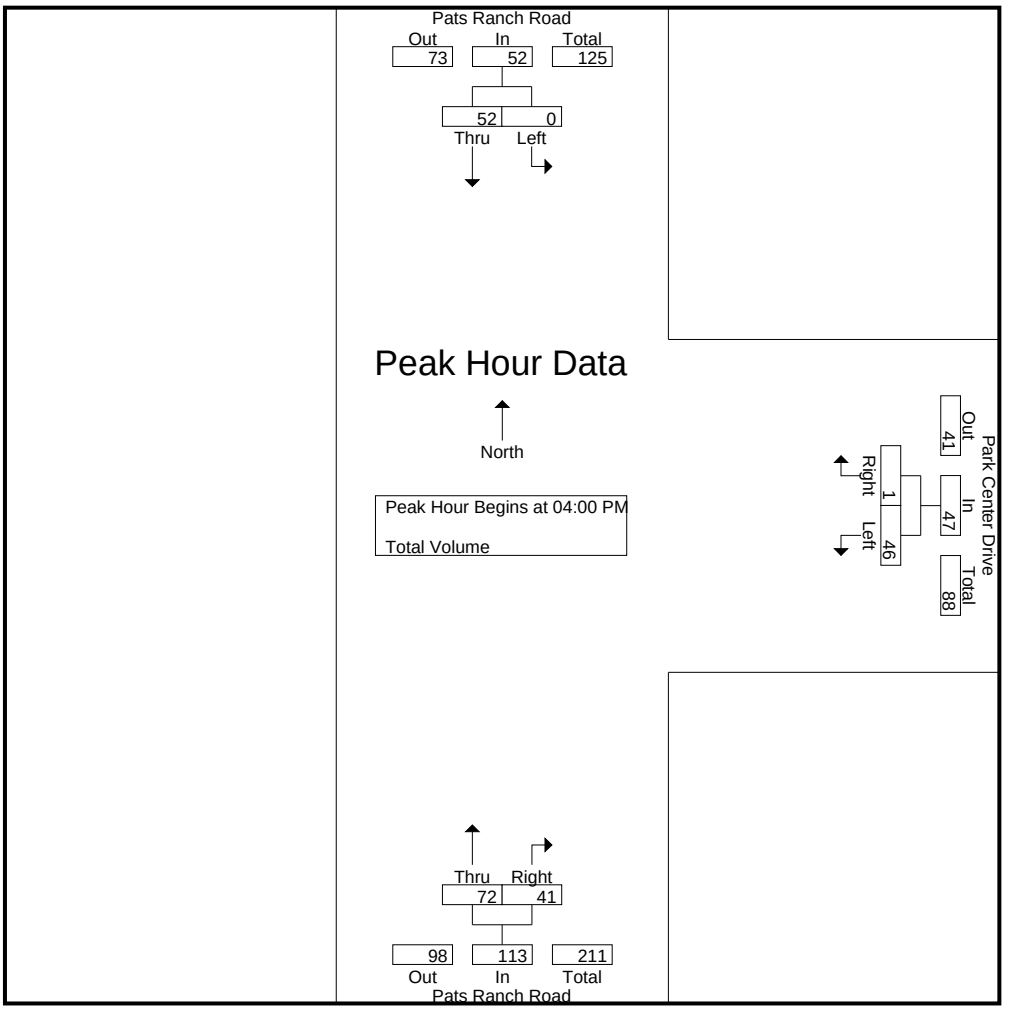
	Pats Ranch Road Southbound			Park Center Drive Westbound			Pats Ranch Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	13	13	9	0	9	25	11	36	58
04:15 PM	0	17	17	15	0	15	19	12	31	63
04:30 PM	0	9	9	3	0	3	14	12	26	38
04:45 PM	0	13	13	19	1	20	14	6	20	53
Total	0	52	52	46	1	47	72	41	113	212
05:00 PM	0	7	7	14	1	15	15	7	22	44
05:15 PM	1	12	13	11	0	11	16	12	28	52
05:30 PM	0	13	13	12	1	13	15	10	25	51
05:45 PM	0	9	9	16	0	16	18	11	29	54
Total	1	41	42	53	2	55	64	40	104	201
Grand Total	1	93	94	99	3	102	136	81	217	413
Apprch %	1.1	98.9		97.1	2.9		62.7	37.3		
Total %	0.2	22.5	22.8	24	0.7	24.7	32.9	19.6	52.5	

	Pats Ranch Road Southbound			Park Center Drive Westbound			Pats Ranch 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 04:00 PM										
04:00 PM	0	13	13	9	0	9	**25**	11	**36**	58
04:15 PM	0	**17**	**17**	15	0	15	19	**12**	31	**63**
04:30 PM	0	9	9	3	0	3	14	12	26	38
04:45 PM	0	13	13	**19**	**1**	**20**	14	6	20	53
Total Volume	0	52	52	46	1	47	72	41	113	212
% App. Total	0	100		97.9	2.1		63.7	36.3		
PHF	.000	.765	.765	.605	.250	.588	.720	.854	.785	.841

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Park Center Drive
Weather: Clear

File Name : 15_JVY_Pat_Park PM
Site Code : 06722151
Start Date : 3/3/2022
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			04:45 PM			04:00 PM		
+0 mins.	0	13	13	**19**	**1**	**20**	**25**	11	**36**
+15 mins.	0	**17**	**17**	14	1	15	19	**12**	31
+30 mins.	0	9	9	11	0	11	14	12	26
+45 mins.	0	13	13	12	1	13	14	6	20
Total Volume	0	52	52	56	3	59	72	41	113
% App. Total	0	100		94.9	5.1		63.7	36.3	
PHF	.000	.765	.765	.737	.750	.738	.720	.854	.785

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Park Center Drive
Weather: Clear

File Name : 19_JVY_Wine_Park AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

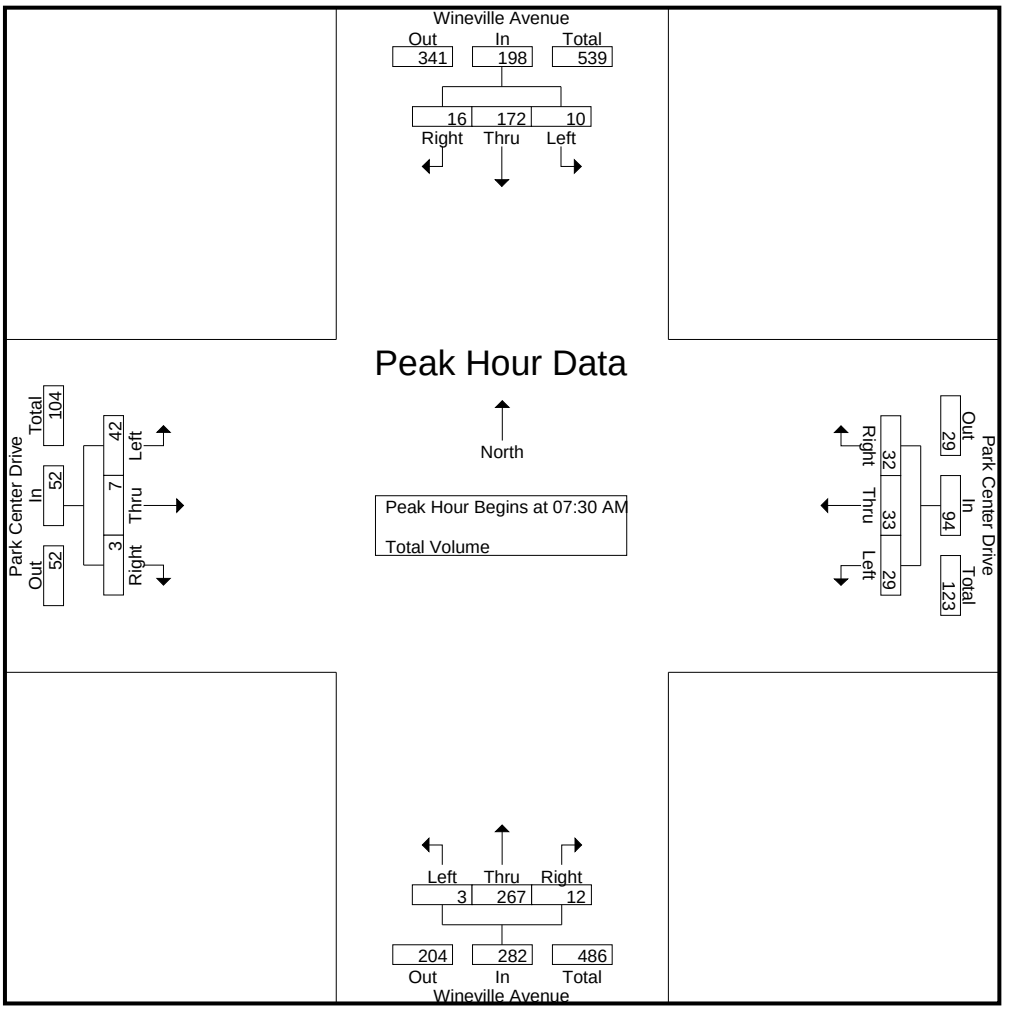
	Wineville Avenue Southbound				Park Center Drive Westbound				Wineville Avenue Northbound				Park Center Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	27	3	32	12	9	7	28	1	74	5	80	4	5	0	9	149
07:15 AM	1	40	3	44	10	8	7	25	0	55	1	56	6	0	3	9	134
07:30 AM	1	30	3	34	14	7	15	36	0	74	2	76	8	0	0	8	154
07:45 AM	2	38	3	43	3	5	8	16	0	91	5	96	14	3	0	17	172
Total	6	135	12	153	39	29	37	105	1	294	13	308	32	8	3	43	609
08:00 AM	4	45	7	56	4	16	6	26	3	49	1	53	15	2	3	20	155
08:15 AM	3	59	3	65	8	5	3	16	0	53	4	57	5	2	0	7	145
08:30 AM	5	41	6	52	4	5	10	19	1	38	7	46	4	1	0	5	122
08:45 AM	2	45	4	51	6	7	5	18	1	43	10	54	5	2	0	7	130
Total	14	190	20	224	22	33	24	79	5	183	22	210	29	7	3	39	552
Grand Total	20	325	32	377	61	62	61	184	6	477	35	518	61	15	6	82	1161
Apprch %	5.3	86.2	8.5		33.2	33.7	33.2		1.2	92.1	6.8		74.4	18.3	7.3		
Total %	1.7	28	2.8	32.5	5.3	5.3	5.3	15.8	0.5	41.1	3	44.6	5.3	1.3	0.5	7.1	

	Wineville Avenue Southbound				Park Center Drive Westbound				Wineville Avenue Northbound				Park Center 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 07:30 AM																	
07:30 AM	1	30	3	34	**14**	7	**15**	**36**	0	74	2	76	8	0	0	8	154
07:45 AM	2	38	3	43	3	5	8	16	0	**91**	**5**	**96**	14	**3**	0	17	**172**
08:00 AM	**4**	45	**7**	56	4	**16**	6	26	**3**	49	1	53	**15**	2	**3**	**20**	155
08:15 AM	3	**59**	3	**65**	8	5	3	16	0	53	4	57	5	2	0	7	145
Total Volume	10	172	16	198	29	33	32	94	3	267	12	282	42	7	3	52	626
% App. Total	5.1	86.9	8.1		30.9	35.1	34		1.1	94.7	4.3		80.8	13.5	5.8		
PHF	.625	.729	.571	.762	.518	.516	.533	.653	.250	.734	.600	.734	.700	.583	.250	.650	.910

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Park Center Drive
Weather: Clear

File Name : 19_JVY_Wine_Park AM
Site Code : 06722151
Start Date : 3/3/2022



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				07:00 AM				07:15 AM			
+0 mins.	4	45	**7**	56	12	**9**	7	28	**1**	74	**5**	80	6	0	**3**	9
+15 mins.	3	**59**	3	**65**	10	8	7	25	0	55	1	56	8	0	0	8
+30 mins.	**5**	41	6	52	**14**	7	**15**	**36**	0	74	2	76	14	**3**	0	17
+45 mins.	2	45	4	51	3	5	8	16	0	**91**	5	**96**	**15**	2	3	**20**
Total Volume	14	190	20	224	39	29	37	105	1	294	13	308	43	5	6	54
% App. Total	6.2	84.8	8.9		37.1	27.6	35.2		0.3	95.5	4.2		79.6	9.3	11.1	
PHF	.700	.805	.714	.862	.696	.806	.617	.729	.250	.808	.650	.802	.717	.417	.500	.675

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Park Center Drive
Weather: Clear

File Name : 19_JVY_Wine_Park PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

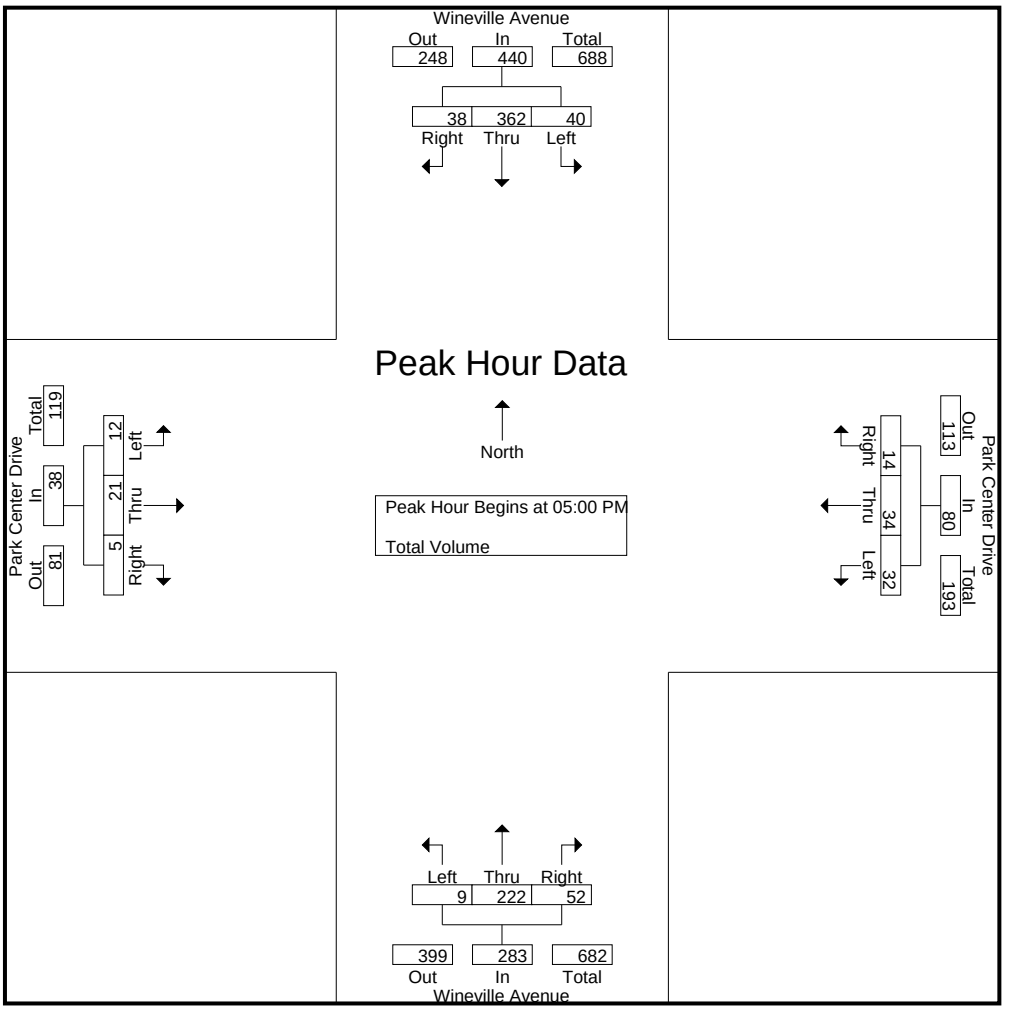
	Wineville Avenue Southbound				Park Center Drive Westbound				Wineville Avenue Northbound				Park Center Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	8	83	15	106	4	3	2	9	0	39	13	52	8	5	2	15	182
04:15 PM	4	71	4	79	2	11	4	17	2	42	9	53	8	2	0	10	159
04:30 PM	12	90	5	107	4	4	5	13	0	60	1	61	4	9	1	14	195
04:45 PM	9	74	8	91	3	11	3	17	0	46	15	61	5	5	3	13	182
Total	33	318	32	383	13	29	14	56	2	187	38	227	25	21	6	52	718
05:00 PM	4	74	7	85	10	5	4	19	4	45	18	67	2	4	1	7	178
05:15 PM	15	96	10	121	10	7	3	20	2	48	11	61	3	4	2	9	211
05:30 PM	12	113	11	136	4	8	3	15	1	61	12	74	1	5	0	6	231
05:45 PM	9	79	10	98	8	14	4	26	2	68	11	81	6	8	2	16	221
Total	40	362	38	440	32	34	14	80	9	222	52	283	12	21	5	38	841
Grand Total	73	680	70	823	45	63	28	136	11	409	90	510	37	42	11	90	1559
Apprch %	8.9	82.6	8.5		33.1	46.3	20.6		2.2	80.2	17.6		41.1	46.7	12.2		
Total %	4.7	43.6	4.5	52.8	2.9	4	1.8	8.7	0.7	26.2	5.8	32.7	2.4	2.7	0.7	5.8	

	Wineville Avenue Southbound				Park Center Drive Westbound				Wineville Avenue Northbound				Park Center 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 05:00 PM																	
05:00 PM	4	74	7	85	**10**	5	**4**	19	**4**	45	**18**	67	2	4	1	7	178
05:15 PM	**15**	96	10	121	10	7	3	20	2	48	11	61	3	4	**2**	9	211
05:30 PM	12	**113**	**11**	**136**	4	8	3	15	1	61	12	74	1	5	0	6	**231**
05:45 PM	9	79	10	98	8	**14**	4	**26**	2	**68**	11	**81**	**6**	**8**	2	**16**	221
Total Volume	40	362	38	440	32	34	14	80	9	222	52	283	12	21	5	38	841
% App. Total	9.1	82.3	8.6		40	42.5	17.5		3.2	78.4	18.4		31.6	55.3	13.2		
PHF	.667	.801	.864	.809	.800	.607	.875	.769	.563	.816	.722	.873	.500	.656	.625	.594	.910

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City of Jurupa Valley
N/S: Wineville Avenue
E/W: Park Center Drive
Weather: Clear

File Name : 19_JVY_Wine_Park PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				04:00 PM			
+0 mins.	4	74	7	85	**10**	5	**4**	19	**4**	45	**18**	67	**8**	5	2	**15**
+15 mins.	**15**	96	10	121	10	7	3	20	2	48	11	61	8	2	0	10
+30 mins.	12	**113**	**11**	**136**	4	8	3	15	1	61	12	74	4	**9**	1	14
+45 mins.	9	79	10	98	8	**14**	4	**26**	2	**68**	11	**81**	5	5	**3**	13
Total Volume	40	362	38	440	32	34	14	80	9	222	52	283	25	21	6	52
% App. Total	9.1	82.3	8.6		40	42.5	17.5		3.2	78.4	18.4		48.1	40.4	11.5	
PHF	.667	.801	.864	.809	.800	.607	.875	.769	.563	.816	.722	.873	.781	.583	.500	.867

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Boca Place
Weather: Clear

File Name : 16_JVY_Pat_Boca AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

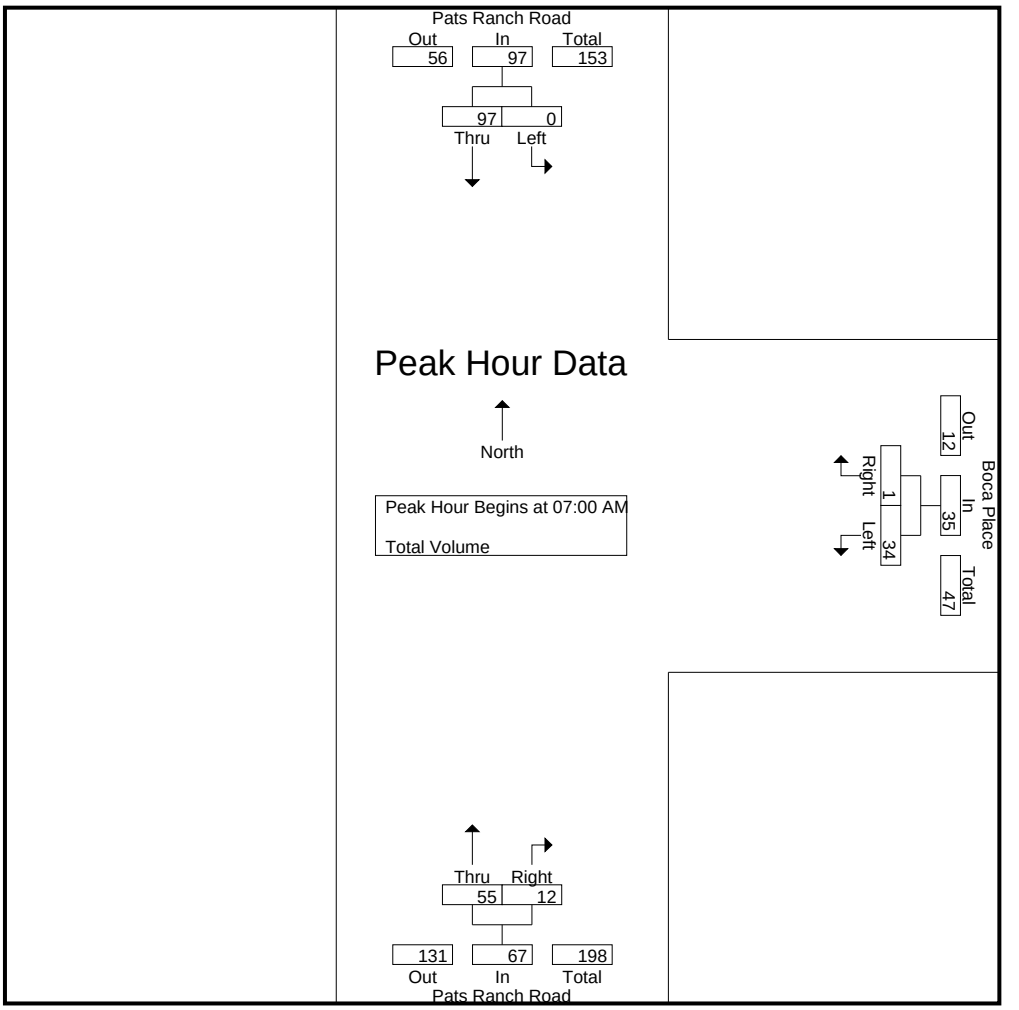
	Pats Ranch Road Southbound			Boca Place Westbound			Pats Ranch Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	30	30	10	0	10	9	0	9	49
07:15 AM	0	30	30	8	1	9	11	3	14	53
07:30 AM	0	16	16	7	0	7	13	6	19	42
07:45 AM	0	21	21	9	0	9	22	3	25	55
Total	0	97	97	34	1	35	55	12	67	199
08:00 AM	0	28	28	9	1	10	8	2	10	48
08:15 AM	0	11	11	6	0	6	12	6	18	35
08:30 AM	0	20	20	11	0	11	11	7	18	49
08:45 AM	0	14	14	4	0	4	9	1	10	28
Total	0	73	73	30	1	31	40	16	56	160
Grand Total	0	170	170	64	2	66	95	28	123	359
Apprch %	0	100		97	3		77.2	22.8		
Total %	0	47.4	47.4	17.8	0.6	18.4	26.5	7.8	34.3	

	Pats Ranch Road Southbound			Boca Place Westbound			Pats Ranch 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	0	**30**	**30**	**10**	0	**10**	9	0	9	49
07:15 AM	0	30	30	8	**1**	9	11	3	14	53
07:30 AM	0	16	16	7	0	7	13	**6**	19	42
07:45 AM	0	21	21	9	0	9	**22**	3	**25**	**55**
Total Volume	0	97	97	34	1	35	55	12	67	199
% App. Total	0	100		97.1	2.9		82.1	17.9		
PHF	.000	.808	.808	.850	.250	.875	.625	.500	.670	.905

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Boca Place
Weather: Clear

File Name : 16_JVY_Pat_Boca AM
Site Code : 06722151
Start Date : 3/3/2022
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			07:45 AM			07:30 AM		
+0 mins.	0	**30**	**30**	9	0	9	13	**6**	19
+15 mins.	0	30	30	9	**1**	10	**22**	3	**25**
+30 mins.	0	16	16	6	0	6	8	2	10
+45 mins.	0	21	21	**11**	0	**11**	12	6	18
Total Volume	0	97	97	35	1	36	55	17	72
% App. Total	0	100		97.2	2.8		76.4	23.6	
PHF	.000	.808	.808	.795	.250	.818	.625	.708	.720

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Boca Place
Weather: Clear

File Name : 16_JVY_Pat_Boca PM
Site Code : 06722151
Start Date : 3/3/2022

Groups Printed- Total Volume

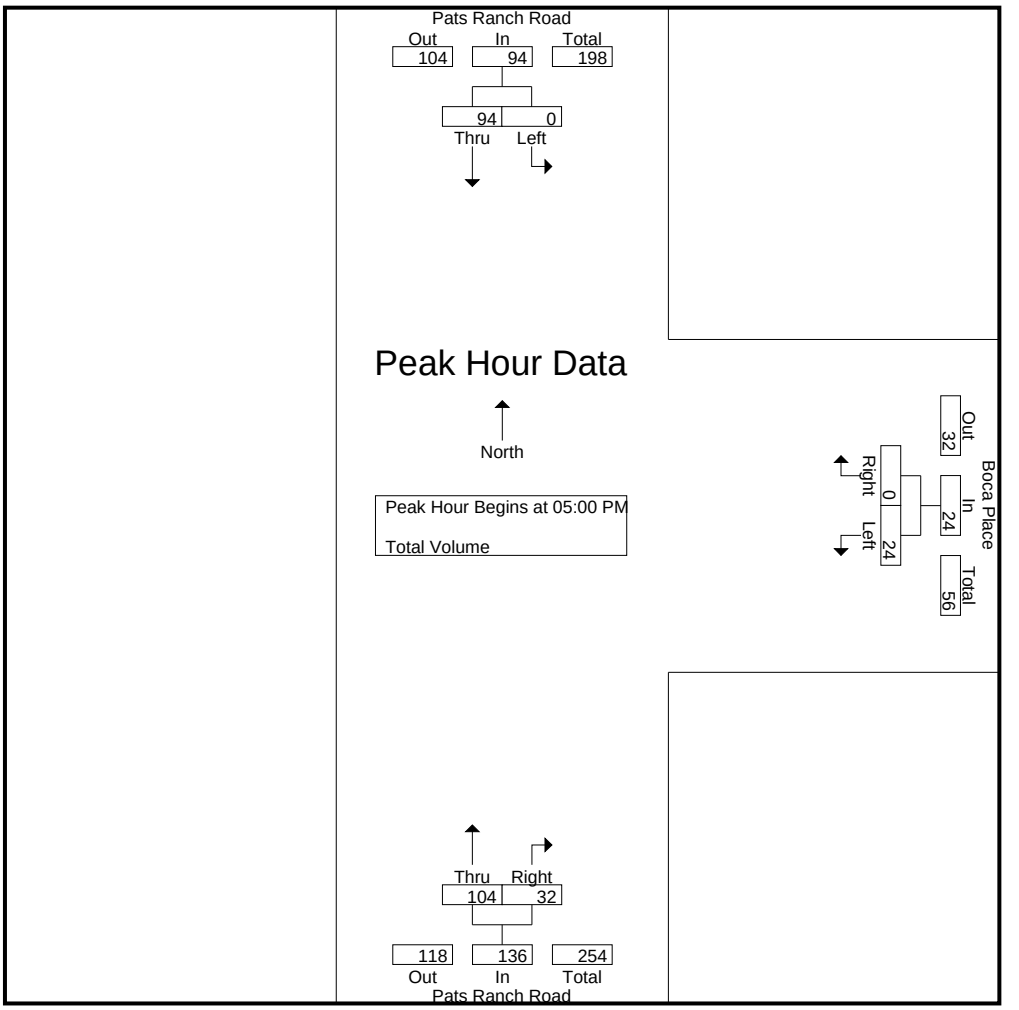
	Pats Ranch Road Southbound			Boca Place Westbound			Pats Ranch Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	21	21	3	0	3	35	9	44	68
04:15 PM	0	33	33	5	0	5	31	8	39	77
04:30 PM	0	11	11	5	0	5	23	7	30	46
04:45 PM	0	31	31	3	0	3	22	3	25	59
Total	0	96	96	16	0	16	111	27	138	250
05:00 PM	0	21	21	6	0	6	20	8	28	55
05:15 PM	0	24	24	4	0	4	30	10	40	68
05:30 PM	0	24	24	6	0	6	26	8	34	64
05:45 PM	0	25	25	8	0	8	28	6	34	67
Total	0	94	94	24	0	24	104	32	136	254
Grand Total	0	190	190	40	0	40	215	59	274	504
Apprch %	0	100		100	0		78.5	21.5		
Total %	0	37.7	37.7	7.9	0	7.9	42.7	11.7	54.4	

	Pats Ranch Road Southbound			Boca Place Westbound			Pats Ranch 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	0	21	21	6	0	6	20	8	28	55
05:15 PM	0	24	24	4	0	4	**30**	**10**	**40**	**68**
05:30 PM	0	24	24	6	0	6	26	8	34	64
05:45 PM	0	**25**	**25**	**8**	0	**8**	28	6	34	67
Total Volume	0	94	94	24	0	24	104	32	136	254
% App. Total	0	100		100	0		76.5	23.5		
PHF	.000	.940	.940	.750	.000	.750	.867	.800	.850	.934

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Boca Place
Weather: Clear

File Name : 16_JVY_Pat_Boca PM
Site Code : 06722151
Start Date : 3/3/2022



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

	04:45 PM			05:00 PM			04:00 PM		
+0 mins.	0	**31**	**31**	6	0	6	**35**	**9**	**44**
+15 mins.	0	21	21	4	0	4	31	8	39
+30 mins.	0	24	24	6	0	6	23	7	30
+45 mins.	0	24	24	**8**	0	**8**	22	3	25
Total Volume	0	100	100	24	0	24	111	27	138
% App. Total	0	100		100	0		80.4	19.6	
PHF	.000	.806	.806	.750	.000	.750	.793	.750	.784

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City of Eastvale
N/S: Hamner Avenue
E/W: Limonite Avenue
Weather: Clear

File Name : 01_ESV_Hamner_Limonite AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

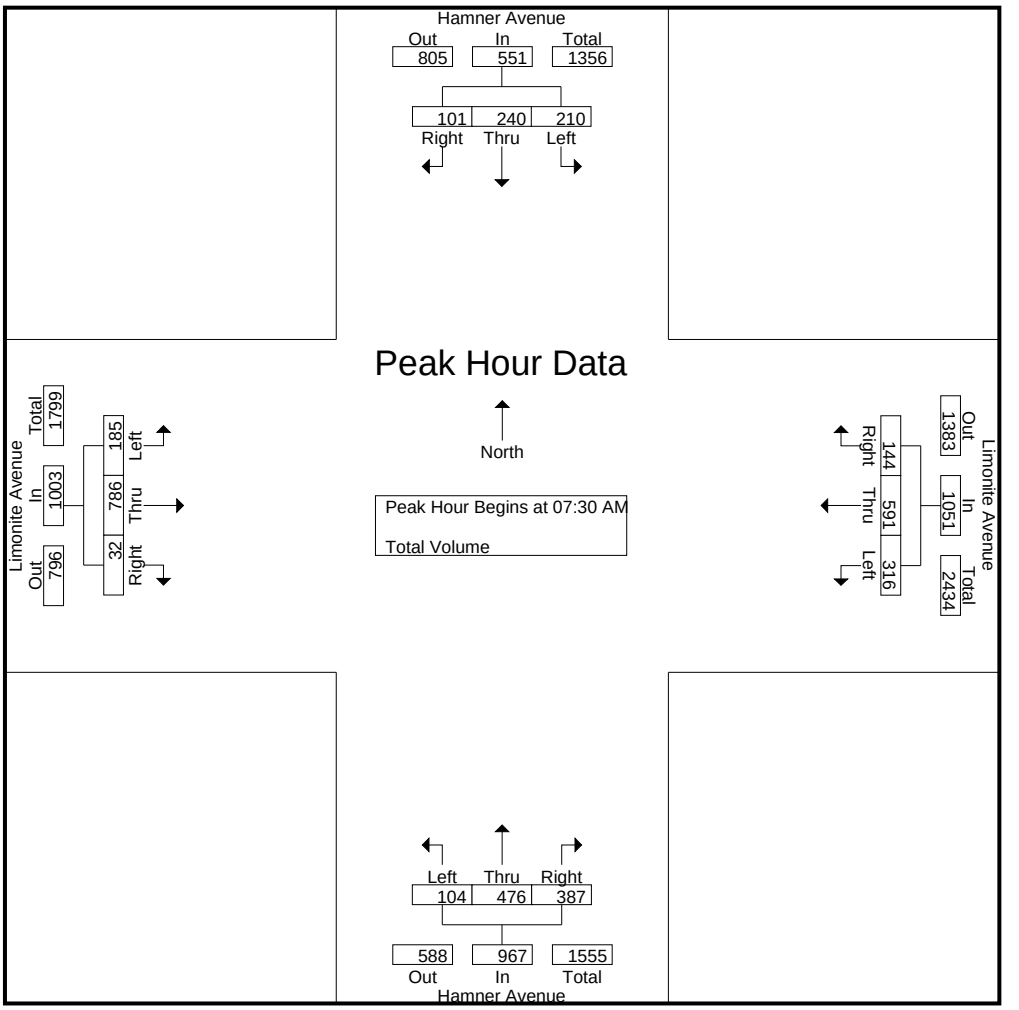
	Hamner Avenue Southbound				Limonite Avenue Westbound				Hamner Avenue Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	51	54	16	121	80	140	52	272	20	77	100	197	22	172	8	202	792
07:15 AM	42	68	10	120	97	154	49	300	18	95	104	217	30	207	12	249	886
07:30 AM	59	51	15	125	71	147	37	255	24	112	110	246	28	241	7	276	902
07:45 AM	46	53	21	120	77	174	36	287	27	130	103	260	50	189	12	251	918
Total	198	226	62	486	325	615	174	1114	89	414	417	920	130	809	39	978	3498
08:00 AM	50	81	32	163	70	143	37	250	22	114	84	220	46	151	6	203	836
08:15 AM	55	55	33	143	98	127	34	259	31	120	90	241	61	205	7	273	916
08:30 AM	55	44	30	129	73	132	34	239	33	96	93	222	49	175	10	234	824
08:45 AM	58	45	29	132	91	151	38	280	22	72	74	168	40	178	6	224	804
Total	218	225	124	567	332	553	143	1028	108	402	341	851	196	709	29	934	3380
Grand Total	416	451	186	1053	657	1168	317	2142	197	816	758	1771	326	1518	68	1912	6878
Apprch %	39.5	42.8	17.7		30.7	54.5	14.8		11.1	46.1	42.8		17.1	79.4	3.6		
Total %	6	6.6	2.7	15.3	9.6	17	4.6	31.1	2.9	11.9	11	25.7	4.7	22.1	1	27.8	

	Hamner Avenue Southbound				Limonite Avenue Westbound				Hamner Avenue Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**59**	51	15	125	71	147	**37**	255	24	112	**110**	246	28	**241**	7	**276**	902
07:45 AM	46	53	21	120	77	**174**	36	**287**	27	**130**	103	**260**	50	189	**12**	251	**918**
08:00 AM	50	**81**	32	**163**	70	143	37	250	22	114	84	220	46	151	6	203	836
08:15 AM	55	55	**33**	143	**98**	127	34	259	**31**	120	90	241	**61**	205	7	273	916
Total Volume	210	240	101	551	316	591	144	1051	104	476	387	967	185	786	32	1003	3572
% App. Total	38.1	43.6	18.3		30.1	56.2	13.7		10.8	49.2	40		18.4	78.4	3.2		
PHF	.890	.741	.765	.845	.806	.849	.973	.916	.839	.915	.880	.930	.758	.815	.667	.909	.973

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City of Eastvale
N/S: Hamner Avenue
E/W: Limonite Avenue
Weather: Clear

File Name : 01_ESV_Hamner_Limonite AM
Site Code : 06722151
Start Date : 3/3/2022
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				07:30 AM				07:30 AM			
+0 mins.	50	**81**	32	**163**	80	140	**52**	272	24	112	**110**	246	28	**241**	7	**276**
+15 mins.	55	55	**33**	143	**97**	154	49	**300**	27	**130**	103	**260**	50	189	**12**	251
+30 mins.	55	44	30	129	71	147	37	255	22	114	84	220	46	151	6	203
+45 mins.	**58**	45	29	132	77	**174**	36	287	**31**	120	90	241	**61**	205	7	273
Total Volume	218	225	124	567	325	615	174	1114	104	476	387	967	185	786	32	1003
% App. Total	38.4	39.7	21.9		29.2	55.2	15.6		10.8	49.2	40		18.4	78.4	3.2	
PHF	.940	.694	.939	.870	.838	.884	.837	.928	.839	.915	.880	.930	.758	.815	.667	.909

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City of Eastvale
N/S: Hamner Avenue
E/W: Limonite Avenue
Weather: Clear

File Name : 01_ESV_Hamner_Limonite PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

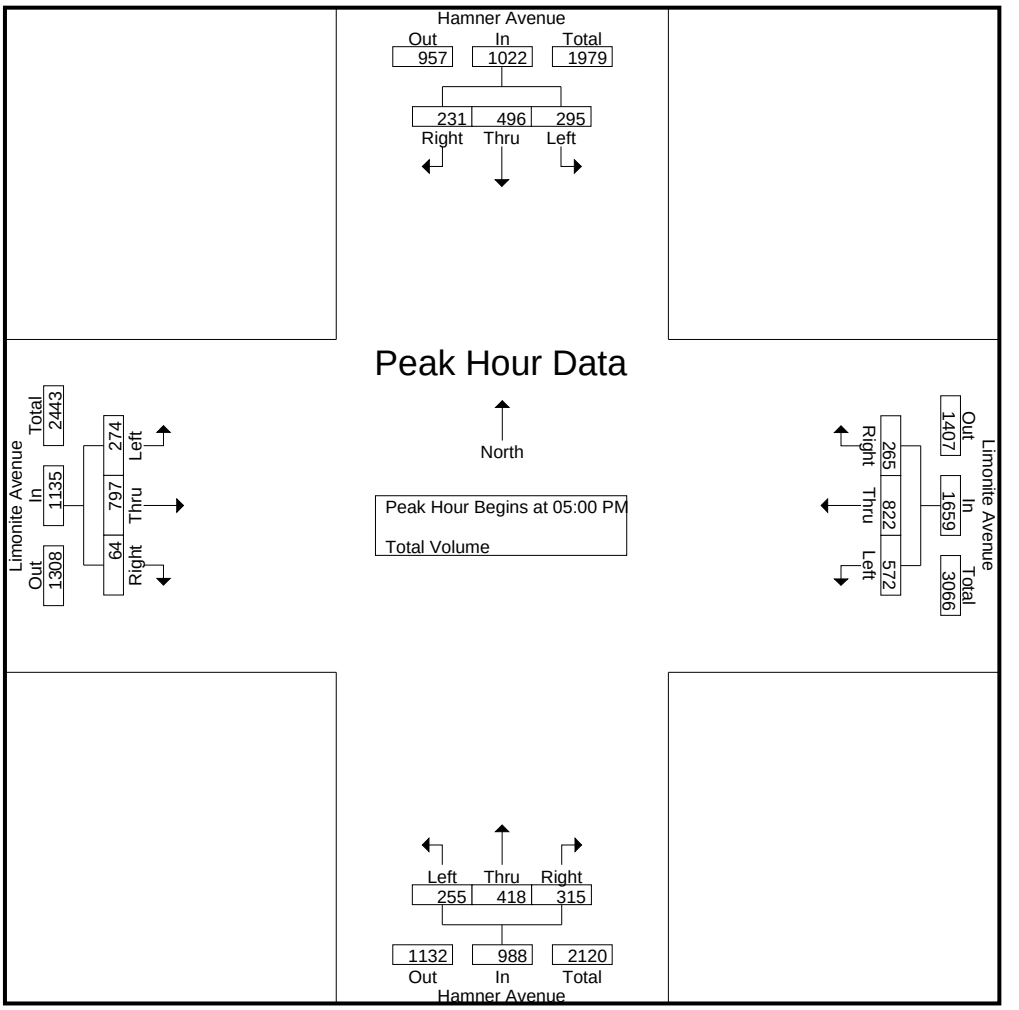
	Hamner Avenue Southbound				Limonite Avenue Westbound				Hamner Avenue Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	62	118	48	228	111	128	62	301	64	108	80	252	60	155	13	228	1009
04:15 PM	75	105	52	232	128	174	62	364	47	101	73	221	54	221	12	287	1104
04:30 PM	62	133	56	251	124	195	76	395	40	120	77	237	65	153	15	233	1116
04:45 PM	61	99	39	199	163	253	56	472	52	74	64	190	62	222	16	300	1161
Total	260	455	195	910	526	750	256	1532	203	403	294	900	241	751	56	1048	4390
05:00 PM	80	126	47	253	133	157	47	337	61	107	76	244	62	191	15	268	1102
05:15 PM	68	114	61	243	150	193	60	403	67	115	73	255	95	182	19	296	1197
05:30 PM	80	117	64	261	168	239	75	482	69	97	73	239	61	223	20	304	1286
05:45 PM	67	139	59	265	121	233	83	437	58	99	93	250	56	201	10	267	1219
Total	295	496	231	1022	572	822	265	1659	255	418	315	988	274	797	64	1135	4804
Grand Total	555	951	426	1932	1098	1572	521	3191	458	821	609	1888	515	1548	120	2183	9194
Apprch %	28.7	49.2	22		34.4	49.3	16.3		24.3	43.5	32.3		23.6	70.9	5.5		
Total %	6	10.3	4.6	21	11.9	17.1	5.7	34.7	5	8.9	6.6	20.5	5.6	16.8	1.3	23.7	

	Hamner Avenue Southbound				Limonite Avenue Westbound				Hamner Avenue Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**80**	126	47	253	133	157	47	337	61	107	76	244	62	191	15	268	1102
05:15 PM	68	114	61	243	150	193	60	403	67	**115**	73	**255**	**95**	182	19	296	1197
05:30 PM	80	117	**64**	261	**168**	**239**	75	**482**	**69**	97	73	239	61	**223**	**20**	**304**	**1286**
05:45 PM	67	**139**	59	**265**	121	233	**83**	437	58	99	**93**	250	56	201	10	267	1219
Total Volume	295	496	231	1022	572	822	265	1659	255	418	315	988	274	797	64	1135	4804
% App. Total	28.9	48.5	22.6		34.5	49.5	16		25.8	42.3	31.9		24.1	70.2	5.6		
PHF	.922	.892	.902	.964	.851	.860	.798	.860	.924	.909	.847	.969	.721	.893	.800	.933	.934

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City of Eastvale
N/S: Hamner Avenue
E/W: Limonite Avenue
Weather: Clear

File Name : 01_ESV_Hamner_Limonite PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	05:00 PM				04:45 PM				05:00 PM				04:45 PM			
+0 mins.	**80**	126	47	253	163	**253**	56	472	61	107	76	244	62	222	16	300
+15 mins.	68	114	61	243	133	157	47	337	67	**115**	73	**255**	62	191	15	268
+30 mins.	80	117	**64**	261	150	193	60	403	**69**	97	73	239	**95**	182	19	296
+45 mins.	67	**139**	59	**265**	**168**	239	**75**	**482**	58	99	**93**	250	61	**223**	**20**	**304**
Total Volume	295	496	231	1022	614	842	238	1694	255	418	315	988	280	818	70	1168
% App. Total	28.9	48.5	22.6		36.2	49.7	14		25.8	42.3	31.9		24	70	6	
PHF	.922	.892	.902	.964	.914	.832	.793	.879	.924	.909	.847	.969	.737	.917	.875	.961

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City of Eastvale
N/S: Eastvale Gateway
E/W: Limonite Avenue
Weather: Clear

File Name : 08_ESV_Eastv_Lime AM
Site Code : 23222299
Start Date : 4/7/2022
Page No : 1

Groups Printed- Total Volume

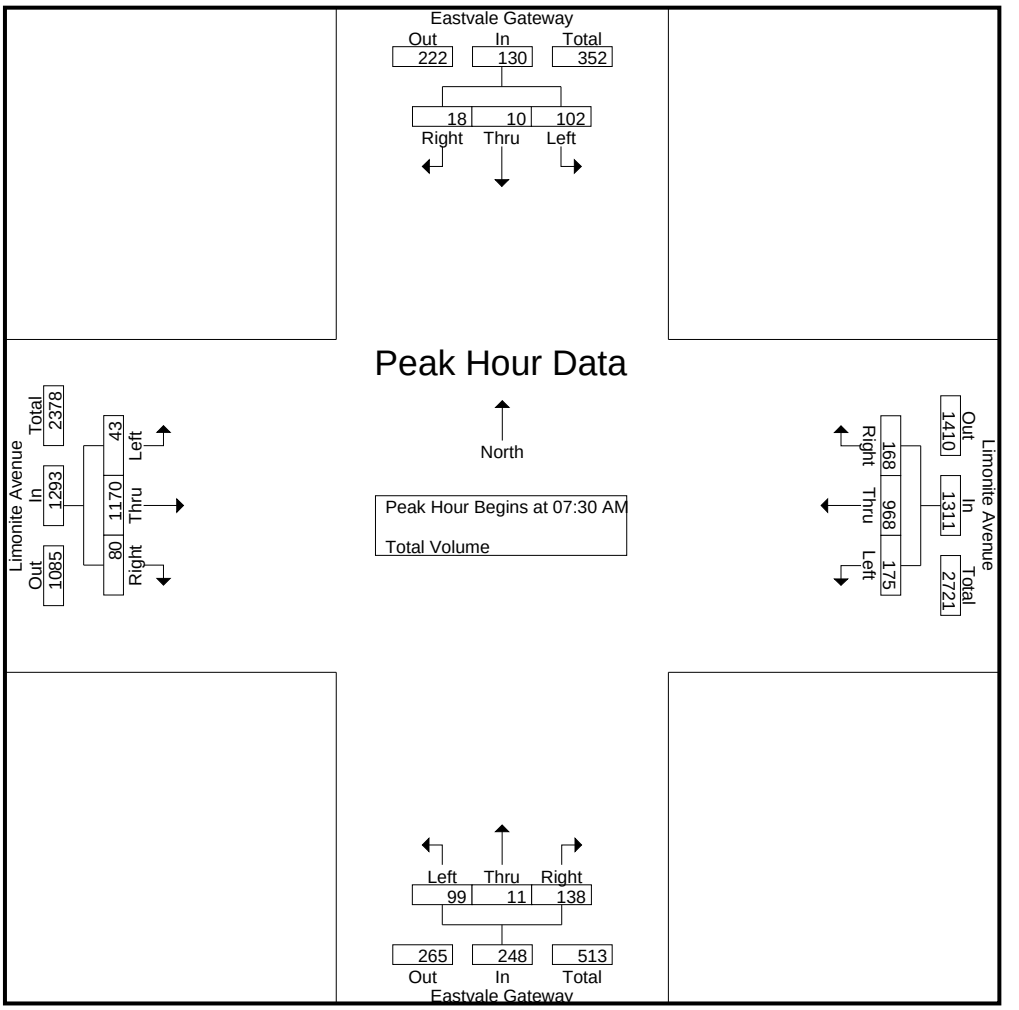
	Eastvale Gateway Southbound				Limonite Avenue Westbound				Eastvale Gateway Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:30 AM	12	3	3	18	17	228	15	260	13	6	23	42	2	247	13	262	582
06:45 AM	12	3	3	18	24	253	22	299	21	2	36	59	10	283	15	308	684
Total	24	6	6	36	41	481	37	559	34	8	59	101	12	530	28	570	1266
07:00 AM	13	0	1	14	31	230	25	286	21	2	31	54	7	259	15	281	635
07:15 AM	33	2	0	35	26	250	21	297	25	2	34	61	4	301	11	316	709
07:30 AM	16	3	0	19	40	242	36	318	20	1	32	53	4	338	18	360	750
07:45 AM	21	2	3	26	39	245	34	318	24	4	34	62	9	305	18	332	738
Total	83	7	4	94	136	967	116	1219	90	9	131	230	24	1203	62	1289	2832
08:00 AM	27	2	4	33	55	252	50	357	30	2	30	62	12	246	24	282	734
08:15 AM	38	3	11	52	41	229	48	318	25	4	42	71	18	281	20	319	760
08:30 AM	42	6	9	57	48	211	37	296	20	5	35	60	19	263	29	311	724
08:45 AM	49	8	13	70	54	259	55	368	27	5	29	61	18	191	21	230	729
Total	156	19	37	212	198	951	190	1339	102	16	136	254	67	981	94	1142	2947
Grand Total	263	32	47	342	375	2399	343	3117	226	33	326	585	103	2714	184	3001	7045
Apprch %	76.9	9.4	13.7		12	77	11		38.6	5.6	55.7		3.4	90.4	6.1		
Total %	3.7	0.5	0.7	4.9	5.3	34.1	4.9	44.2	3.2	0.5	4.6	8.3	1.5	38.5	2.6	42.6	

	Eastvale Gateway Southbound				Limonite Avenue Westbound				Eastvale Gateway Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	16	**3**	0	19	40	242	36	318	20	1	32	53	4	**338**	18	**360**	750
07:45 AM	21	2	3	26	39	245	34	318	24	**4**	34	62	9	305	18	332	738
08:00 AM	27	2	4	33	**55**	**252**	**50**	**357**	**30**	2	30	62	12	246	**24**	282	734
08:15 AM	**38**	3	**11**	**52**	41	229	48	318	25	4	**42**	**71**	**18**	281	20	319	**760**
Total Volume	102	10	18	130	175	968	168	1311	99	11	138	248	43	1170	80	1293	2982
% App. Total	78.5	7.7	13.8		13.3	73.8	12.8		39.9	4.4	55.6		3.3	90.5	6.2		
PHF	.671	.833	.409	.625	.795	.960	.840	.918	.825	.688	.821	.873	.597	.865	.833	.898	.981

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City of Eastvale
N/S: Eastvale Gateway
E/W: Limonite Avenue
Weather: Clear

File Name : 08_ESV_Eastv_Lime AM
Site Code : 23222299
Start Date : 4/7/2022



Peak Hour Analysis From 06:30 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:45 AM				07:30 AM			
+0 mins.	27	2	4	33	**55**	252	50	357	24	4	34	62	4	**338**	18	**360**
+15 mins.	38	3	11	52	41	229	48	318	**30**	2	30	62	9	305	18	332
+30 mins.	42	6	9	57	48	211	37	296	25	4	**42**	**71**	12	246	**24**	282
+45 mins.	**49**	**8**	**13**	**70**	54	**259**	**55**	**368**	20	**5**	35	60	**18**	281	20	319
Total Volume	156	19	37	212	198	951	190	1339	99	15	141	255	43	1170	80	1293
% App. Total	73.6	9	17.5		14.8	71	14.2		38.8	5.9	55.3		3.3	90.5	6.2	
PHF	.796	.594	.712	.757	.900	.918	.864	.910	.825	.750	.839	.898	.597	.865	.833	.898

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City of Eastvale
N/S: Eastvale Gateway
E/W: Limonite Avenue
Weather: Clear

File Name : 08_ESV_Eastv_Lime MD
Site Code : 23222299
Start Date : 4/7/2022
Page No : 1

Groups Printed- Total Volume

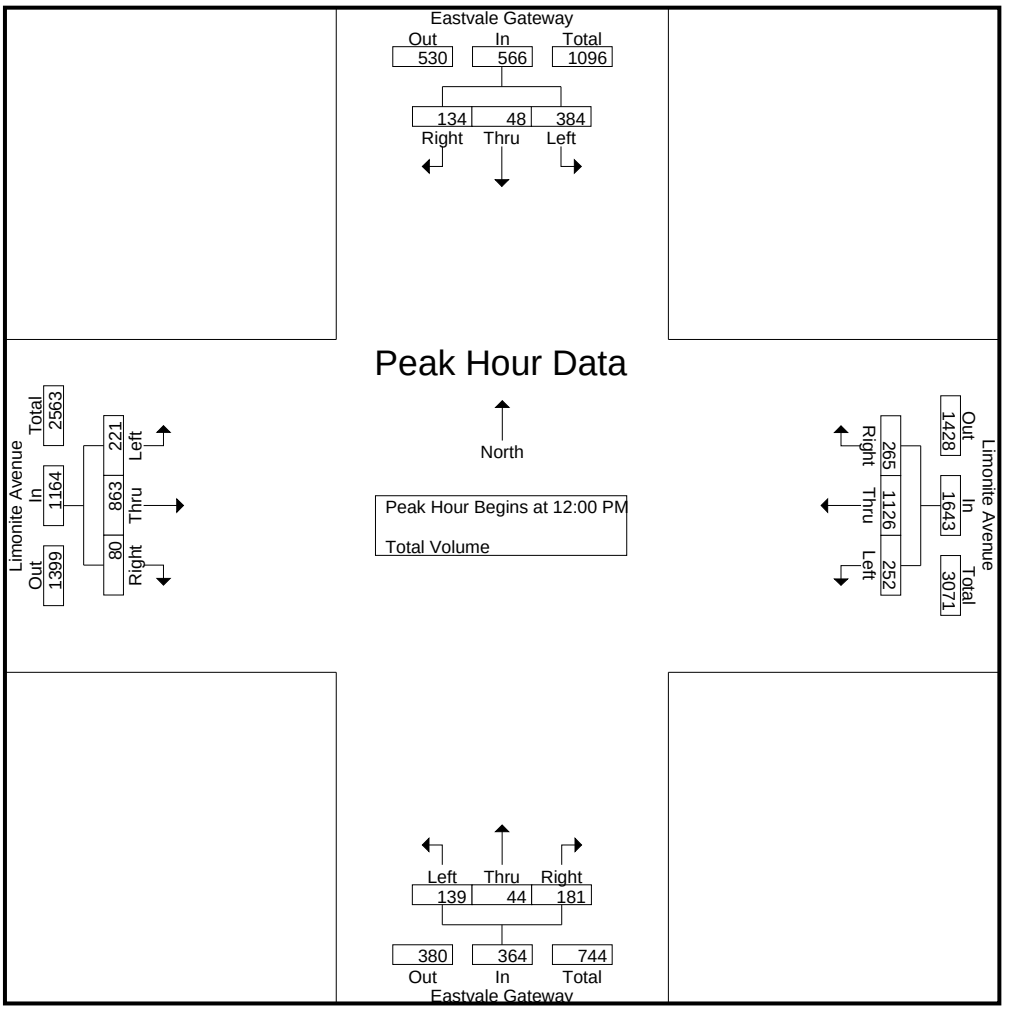
	Eastvale Gateway Southbound				Limonite Avenue Westbound				Eastvale Gateway Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	93	13	27	133	45	279	69	393	33	6	27	66	54	190	17	261	853
11:15 AM	75	7	22	104	62	285	63	410	22	7	39	68	53	197	15	265	847
11:30 AM	99	10	38	147	48	283	78	409	31	15	39	85	52	197	22	271	912
11:45 AM	97	13	28	138	64	296	68	428	30	6	36	72	56	164	12	232	870
Total	364	43	115	522	219	1143	278	1640	116	34	141	291	215	748	66	1029	3482
12:00 PM	77	13	36	126	68	282	66	416	48	14	51	113	61	217	24	302	957
12:15 PM	120	7	34	161	59	284	62	405	34	10	40	84	53	210	21	284	934
12:30 PM	75	13	35	123	61	273	71	405	32	13	47	92	64	242	18	324	944
12:45 PM	112	15	29	156	64	287	66	417	25	7	43	75	43	194	17	254	902
Total	384	48	134	566	252	1126	265	1643	139	44	181	364	221	863	80	1164	3737
Grand Total	748	91	249	1088	471	2269	543	3283	255	78	322	655	436	1611	146	2193	7219
Apprch %	68.8	8.4	22.9		14.3	69.1	16.5		38.9	11.9	49.2		19.9	73.5	6.7		
Total %	10.4	1.3	3.4	15.1	6.5	31.4	7.5	45.5	3.5	1.1	4.5	9.1	6	22.3	2	30.4	

	Eastvale Gateway Southbound				Limonite Avenue Westbound				Eastvale Gateway Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	77	13	**36**	126	**68**	282	66	416	**48**	**14**	**51**	**113**	61	217	**24**	302	**957**
12:15 PM	**120**	7	34	**161**	59	284	62	405	34	10	40	84	53	210	21	284	934
12:30 PM	75	13	35	123	61	273	**71**	405	32	13	47	92	**64**	**242**	18	**324**	944
12:45 PM	112	**15**	29	156	64	**287**	66	**417**	25	7	43	75	43	194	17	254	902
Total Volume	384	48	134	566	252	1126	265	1643	139	44	181	364	221	863	80	1164	3737
% App. Total	67.8	8.5	23.7		15.3	68.5	16.1		38.2	12.1	49.7		19	74.1	6.9		
PHF	.800	.800	.931	.879	.926	.981	.933	.985	.724	.786	.887	.805	.863	.892	.833	.898	.976

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City of Eastvale
N/S: Eastvale Gateway
E/W: Limonite Avenue
Weather: Clear

File Name : 08_ESV_Eastv_Lime MD
Site Code : 23222299
Start Date : 4/7/2022
Page No : 2



Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:30 AM				11:15 AM				12:00 PM				12:00 PM			
+0 mins.	99	10	**38**	147	62	285	63	410	**48**	**14**	**51**	**113**	61	217	**24**	302
+15 mins.	97	**13**	28	138	48	283	**78**	409	34	10	40	84	53	210	21	284
+30 mins.	77	13	36	126	64	**296**	68	**428**	32	13	47	92	**64**	**242**	18	**324**
+45 mins.	**120**	7	34	**161**	**68**	282	66	416	25	7	43	75	43	194	17	254
Total Volume	393	43	136	572	242	1146	275	1663	139	44	181	364	221	863	80	1164
% App. Total	68.7	7.5	23.8		14.6	68.9	16.5		38.2	12.1	49.7		19	74.1	6.9	
PHF	.819	.827	.895	.888	.890	.968	.881	.971	.724	.786	.887	.805	.863	.892	.833	.898

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City of Eastvale
N/S: Eastvale Gateway
E/W: Limonite Avenue
Weather: Clear

File Name : 08_ESV_Eastv_Lime PM
Site Code : 23222299
Start Date : 4/7/2022
Page No : 1

Groups Printed- Total Volume

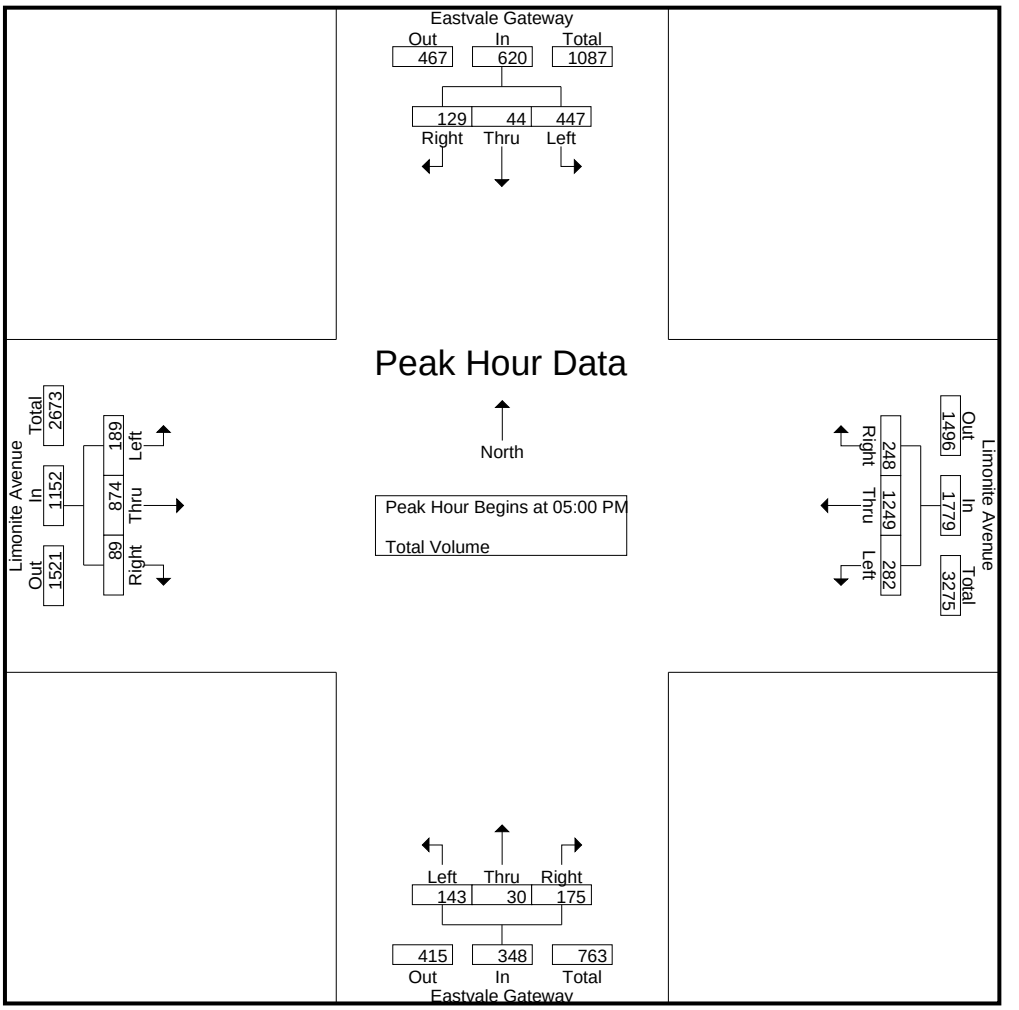
	Eastvale Gateway Southbound				Limonite Avenue Westbound				Eastvale Gateway Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	116	12	31	159	85	275	61	421	29	5	31	65	53	268	25	346	991
04:15 PM	80	19	23	122	72	274	66	412	28	12	55	95	37	207	23	267	896
04:30 PM	92	12	28	132	59	302	67	428	35	15	38	88	42	256	20	318	966
04:45 PM	121	6	20	147	79	295	58	432	35	9	43	87	42	211	31	284	950
Total	409	49	102	560	295	1146	252	1693	127	41	167	335	174	942	99	1215	3803
05:00 PM	106	13	35	154	76	288	54	418	46	7	54	107	47	205	19	271	950
05:15 PM	127	10	27	164	72	332	61	465	31	4	44	79	51	230	26	307	1015
05:30 PM	110	9	33	152	74	305	68	447	31	14	39	84	34	216	19	269	952
05:45 PM	104	12	34	150	60	324	65	449	35	5	38	78	57	223	25	305	982
Total	447	44	129	620	282	1249	248	1779	143	30	175	348	189	874	89	1152	3899
Grand Total	856	93	231	1180	577	2395	500	3472	270	71	342	683	363	1816	188	2367	7702
Apprch %	72.5	7.9	19.6		16.6	69	14.4		39.5	10.4	50.1		15.3	76.7	7.9		
Total %	11.1	1.2	3	15.3	7.5	31.1	6.5	45.1	3.5	0.9	4.4	8.9	4.7	23.6	2.4	30.7	

	Eastvale Gateway Southbound				Limonite Avenue Westbound				Eastvale Gateway Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	106	**13**	**35**	154	**76**	288	54	418	**46**	7	**54**	**107**	47	205	19	271	950
05:15 PM	**127**	10	27	**164**	72	**332**	61	**465**	31	4	44	79	51	**230**	**26**	**307**	**1015**
05:30 PM	110	9	33	152	74	305	**68**	447	31	**14**	39	84	34	216	19	269	952
05:45 PM	104	12	34	150	60	324	65	449	35	5	38	78	**57**	223	25	305	982
Total Volume	447	44	129	620	282	1249	248	1779	143	30	175	348	189	874	89	1152	3899
% App. Total	72.1	7.1	20.8		15.9	70.2	13.9		41.1	8.6	50.3		16.4	75.9	7.7		
PHF	.880	.846	.921	.945	.928	.941	.912	.956	.777	.536	.810	.813	.829	.950	.856	.938	.960

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City of Eastvale
N/S: Eastvale Gateway
E/W: Limonite Avenue
Weather: Clear

File Name : 08_ESV_Eastv_Lime PM
Site Code : 23222299
Start Date : 4/7/2022
Page No : 2



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

	05:00 PM				05:00 PM				04:15 PM				04:00 PM			
+0 mins.	106	**13**	**35**	154	**76**	288	54	418	28	12	**55**	95	**53**	**268**	25	**346**
+15 mins.	**127**	10	27	**164**	72	**332**	61	**465**	35	**15**	38	88	37	207	23	267
+30 mins.	110	9	33	152	74	305	**68**	447	35	9	43	87	42	256	20	318
+45 mins.	104	12	34	150	60	324	65	449	**46**	7	54	**107**	42	211	**31**	284
Total Volume	447	44	129	620	282	1249	248	1779	144	43	190	377	174	942	99	1215
% App. Total	72.1	7.1	20.8		15.9	70.2	13.9		38.2	11.4	50.4		14.3	77.5	8.1	
PHF	.880	.846	.921	.945	.928	.941	.912	.956	.783	.717	.864	.881	.821	.879	.798	.878

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City of Eastvale
N/S: I-15 Southbound Ramps
E/W: Limonite Avenue
Weather: Clear

File Name : 02_ESV_15S_Limonite AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

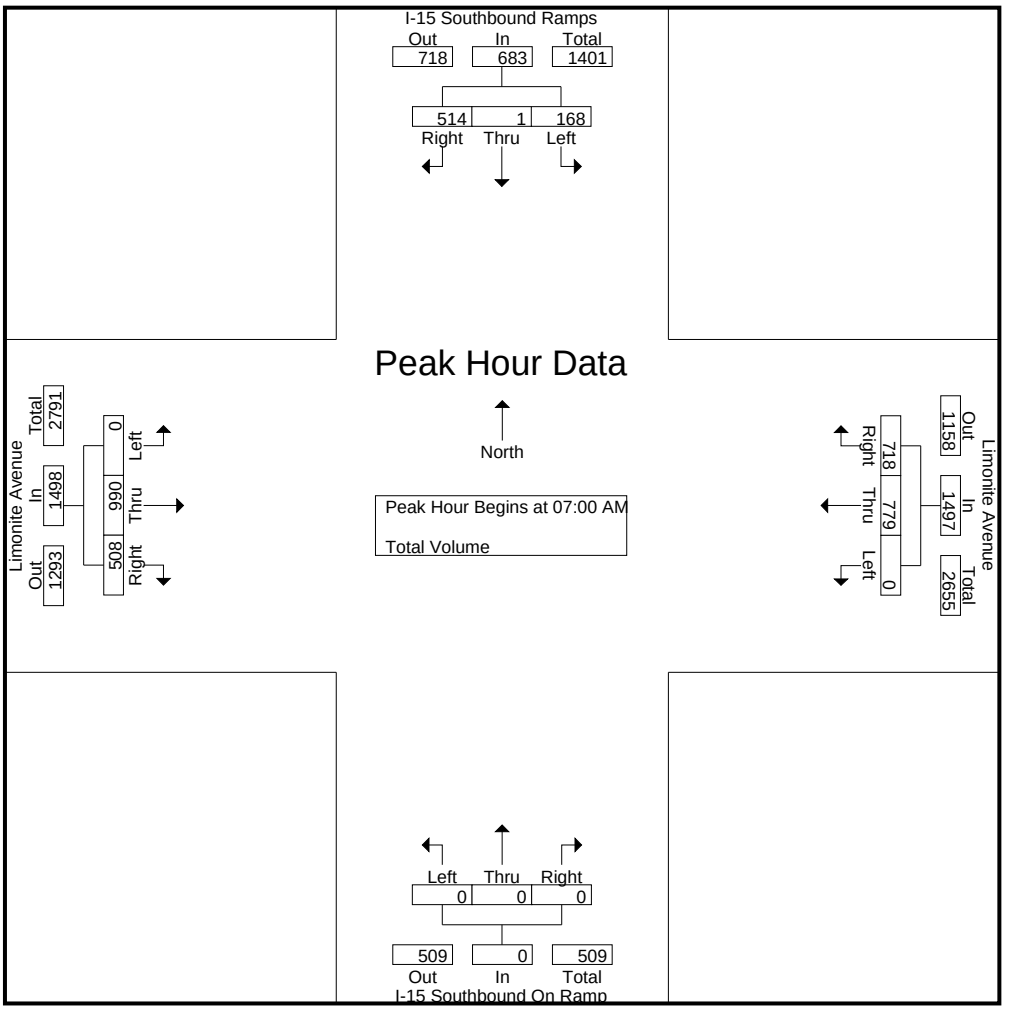
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	55	0	152	207	0	176	166	342	0	0	0	0	0	254	125	379	928
07:15 AM	48	0	117	165	0	213	197	410	0	0	0	0	0	243	126	369	944
07:30 AM	33	0	117	150	0	169	208	377	0	0	0	0	0	271	141	412	939
07:45 AM	32	1	128	161	0	221	147	368	0	0	0	0	0	222	116	338	867
Total	168	1	514	683	0	779	718	1497	0	0	0	0	0	990	508	1498	3678
08:00 AM	38	0	115	153	0	230	168	398	0	0	0	0	0	209	102	311	862
08:15 AM	47	1	157	205	0	197	130	327	0	0	0	0	0	211	107	318	850
08:30 AM	51	0	131	182	0	192	153	345	0	0	0	0	0	244	137	381	908
08:45 AM	48	0	138	186	0	213	137	350	0	0	0	0	0	192	102	294	830
Total	184	1	541	726	0	832	588	1420	0	0	0	0	0	856	448	1304	3450
Grand Total	352	2	1055	1409	0	1611	1306	2917	0	0	0	0	0	1846	956	2802	7128
Apprch %	25	0.1	74.9		0	55.2	44.8		0	0	0		0	65.9	34.1		
Total %	4.9	0	14.8	19.8	0	22.6	18.3	40.9	0	0	0	0	0	25.9	13.4	39.3	

	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**55**	0	**152**	**207**	0	176	166	342	0	0	0	0	0	254	125	379	928
07:15 AM	48	0	117	165	0	213	197	**410**	0	0	0	0	0	243	126	369	**944**
07:30 AM	33	0	117	150	0	169	**208**	377	0	0	0	0	0	**271**	**141**	**412**	939
07:45 AM	32	**1**	128	161	0	**221**	147	368	0	0	0	0	0	222	116	338	867
Total Volume	168	1	514	683	0	779	718	1497	0	0	0	0	0	990	508	1498	3678
% App. Total	24.6	0.1	75.3		0	52	48		0	0	0		0	66.1	33.9		
PHF	.764	.250	.845	.825	.000	.881	.863	.913	.000	.000	.000	.000	.000	.913	.901	.909	.974

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City of Eastvale
N/S: I-15 Southbound Ramps
E/W: Limonite Avenue
Weather: Clear

File Name : 02_ESV_15S_Limonite AM
Site Code : 06722151
Start Date : 3/3/2022
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				07:15 AM				07:00 AM				07:00 AM			
+0 mins.	38	0	115	153	0	213	197	**410**	0	0	0	0	0	254	125	379
+15 mins.	47	**1**	**157**	**205**	0	169	**208**	377	0	0	0	0	0	243	126	369
+30 mins.	**51**	0	131	182	0	221	147	368	0	0	0	0	0	**271**	**141**	**412**
+45 mins.	48	0	138	186	0	**230**	168	398	0	0	0	0	0	222	116	338
Total Volume	184	1	541	726	0	833	720	1553	0	0	0	0	0	990	508	1498
% App. Total	25.3	0.1	74.5		0	53.6	46.4		0	0	0		0	66.1	33.9	
PHF	.902	.250	.861	.885	.000	.905	.865	.947	.000	.000	.000	.000	.000	.913	.901	.909

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City of Eastvale
N/S: I-15 Southbound Ramps
E/W: Limonite Avenue
Weather: Clear

File Name : 02_ESV_15S_Limonite PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

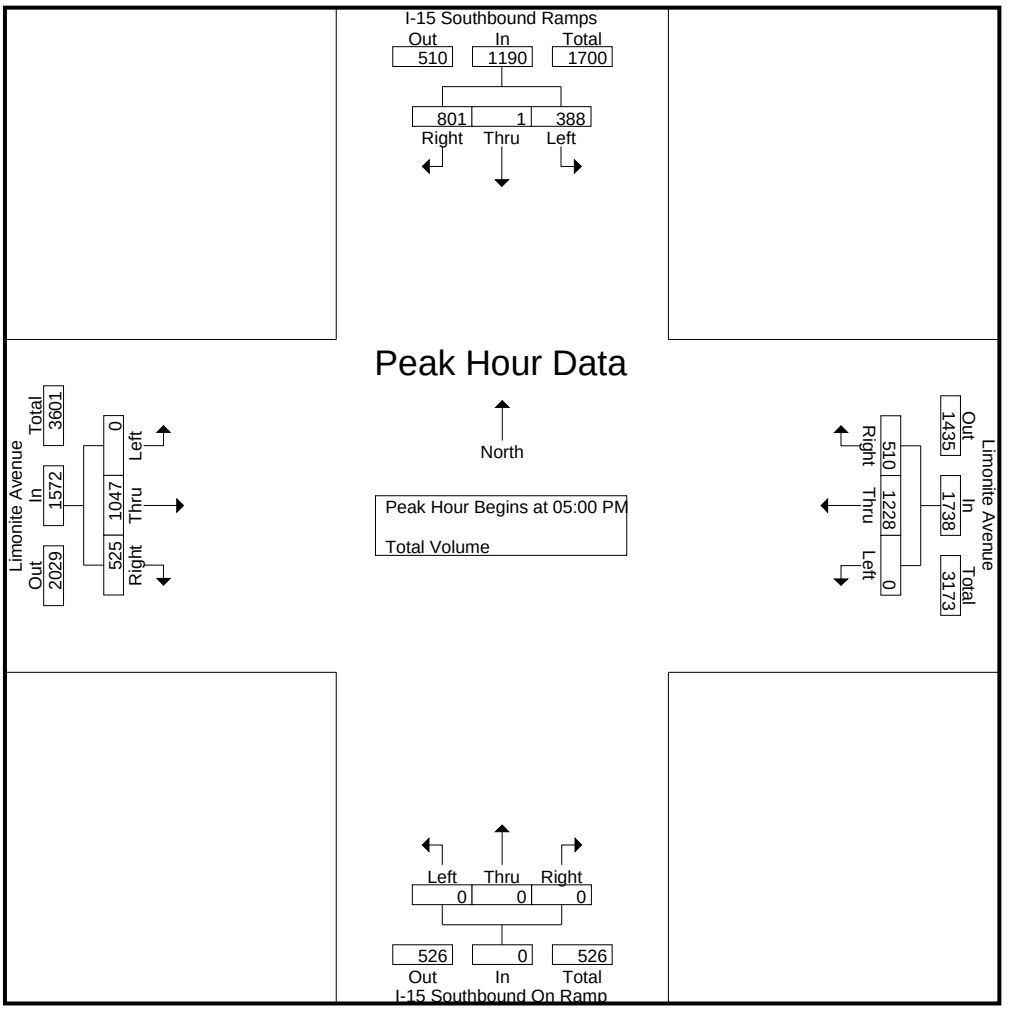
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	103	0	171	274	0	230	105	335	0	0	0	0	0	249	107	356	965
04:15 PM	62	0	174	236	0	276	143	419	0	0	0	0	0	291	118	409	1064
04:30 PM	90	0	200	290	0	277	146	423	0	0	0	0	0	270	115	385	1098
04:45 PM	85	0	212	297	0	297	111	408	0	0	0	0	0	258	140	398	1103
Total	340	0	757	1097	0	1080	505	1585	0	0	0	0	0	1068	480	1548	4230
05:00 PM	90	0	164	254	0	261	125	386	0	0	0	0	0	257	136	393	1033
05:15 PM	105	0	221	326	0	303	126	429	0	0	0	0	0	263	128	391	1146
05:30 PM	100	0	209	309	0	328	134	462	0	0	0	0	0	261	133	394	1165
05:45 PM	93	1	207	301	0	336	125	461	0	0	0	0	0	266	128	394	1156
Total	388	1	801	1190	0	1228	510	1738	0	0	0	0	0	1047	525	1572	4500
Grand Total	728	1	1558	2287	0	2308	1015	3323	0	0	0	0	0	2115	1005	3120	8730
Apprch %	31.8	0	68.1		0	69.5	30.5		0	0	0		0	67.8	32.2		
Total %	8.3	0	17.8	26.2	0	26.4	11.6	38.1	0	0	0	0	0	24.2	11.5	35.7	

	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	90	0	164	254	0	261	125	386	0	0	0	0	0	257	**136**	393	1033
05:15 PM	**105**	0	**221**	**326**	0	303	126	429	0	0	0	0	0	263	128	391	1146
05:30 PM	100	0	209	309	0	328	**134**	**462**	0	0	0	0	0	261	133	**394**	**1165**
05:45 PM	93	**1**	207	301	0	**336**	125	461	0	0	0	0	0	**266**	128	394	1156
Total Volume	388	1	801	1190	0	1228	510	1738	0	0	0	0	0	1047	525	1572	4500
% App. Total	32.6	0.1	67.3		0	70.7	29.3		0	0	0		0	66.6	33.4		
PHF	.924	.250	.906	.913	.000	.914	.951	.940	.000	.000	.000	.000	.000	.984	.965	.997	.966

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City of Eastvale
N/S: I-15 Southbound Ramps
E/W: Limonite Avenue
Weather: Clear

File Name : 02_ESV_15S_Limonite PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	05:00 PM				05:00 PM				04:00 PM				04:15 PM			
+0 mins.	90	0	164	254	0	261	125	386	0	0	0	0	0	**291**	118	**409**
+15 mins.	**105**	0	**221**	**326**	0	303	126	429	0	0	0	0	0	270	115	385
+30 mins.	100	0	209	309	0	328	**134**	**462**	0	0	0	0	0	258	**140**	398
+45 mins.	93	**1**	207	301	0	**336**	125	461	0	0	0	0	0	257	136	393
Total Volume	388	1	801	1190	0	1228	510	1738	0	0	0	0	0	1076	509	1585
% App. Total	32.6	0.1	67.3		0	70.7	29.3		0	0	0		0	67.9	32.1	
PHF	.924	.250	.906	.913	.000	.914	.951	.940	.000	.000	.000	.000	.000	.924	.909	.969

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City of Jurupa Valley
N/S: I-15 Northbound Ramps
E/W: Limonite Avenue
Weather: Clear

File Name : 03_JVY_15N_Limonite AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

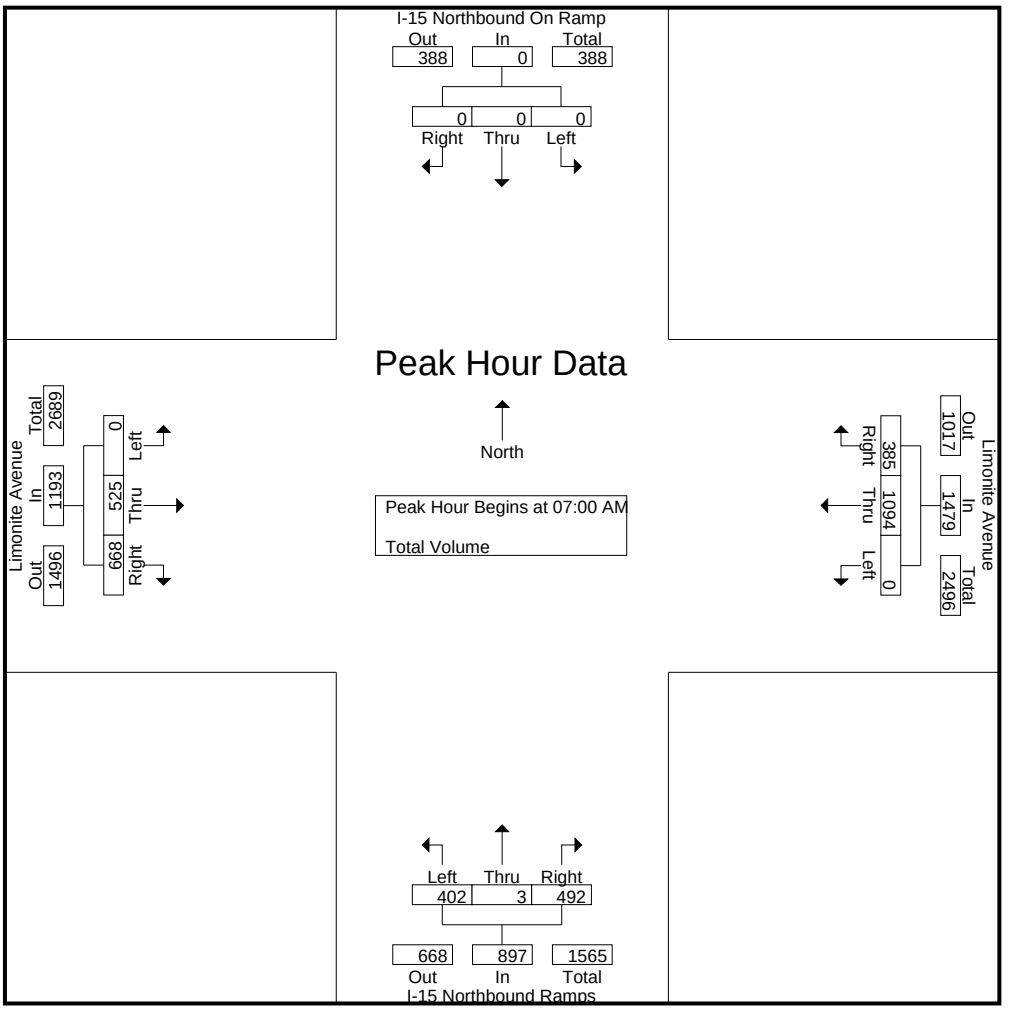
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	248	106	354	96	1	105	202	0	124	194	318	874
07:15 AM	0	0	0	0	0	314	117	431	90	1	96	187	0	131	164	295	913
07:30 AM	0	0	0	0	0	273	95	368	100	1	137	238	0	132	181	313	919
07:45 AM	0	0	0	0	0	259	67	326	116	0	154	270	0	138	129	267	863
Total	0	0	0	0	0	1094	385	1479	402	3	492	897	0	525	668	1193	3569
08:00 AM	0	0	0	0	0	295	85	380	96	1	102	199	0	124	126	250	829
08:15 AM	0	0	0	0	0	251	96	347	74	1	123	198	0	132	134	266	811
08:30 AM	0	0	0	0	0	252	101	353	86	1	117	204	0	147	143	290	847
08:45 AM	0	0	0	0	0	259	82	341	95	0	109	204	0	136	117	253	798
Total	0	0	0	0	0	1057	364	1421	351	3	451	805	0	539	520	1059	3285
Grand Total	0	0	0	0	0	2151	749	2900	753	6	943	1702	0	1064	1188	2252	6854
Apprch %	0	0	0		0	74.2	25.8		44.2	0.4	55.4		0	47.2	52.8		
Total %	0	0	0	0	0	31.4	10.9	42.3	11	0.1	13.8	24.8	0	15.5	17.3	32.9	

	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	248	106	354	96	**1**	105	202	0	124	**194**	**318**	874
07:15 AM	0	0	0	0	0	**314**	**117**	**431**	90	1	96	187	0	131	164	295	913
07:30 AM	0	0	0	0	0	273	95	368	100	1	137	238	0	132	181	313	**919**
07:45 AM	0	0	0	0	0	259	67	326	**116**	0	**154**	**270**	0	**138**	129	267	863
Total Volume	0	0	0	0	0	1094	385	1479	402	3	492	897	0	525	668	1193	3569
% App. Total	0	0	0		0	74	26		44.8	0.3	54.8		0	44	56		
PHF	.000	.000	.000	.000	.000	.871	.823	.858	.866	.750	.799	.831	.000	.951	.861	.938	.971

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City of Jurupa Valley
N/S: I-15 Northbound Ramps
E/W: Limonite Avenue
Weather: Clear

File Name : 03_JVY_15N_Limonite AM
Site Code : 06722151
Start Date : 3/3/2022
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				07:15 AM				07:30 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**314**	**117**	**431**	100	**1**	137	238	0	124	**194**	**318**
+15 mins.	0	0	0	0	0	273	95	368	**116**	0	**154**	**270**	0	131	164	295
+30 mins.	0	0	0	0	0	259	67	326	96	1	102	199	0	132	181	313
+45 mins.	0	0	0	0	0	295	85	380	74	1	123	198	0	**138**	129	267
Total Volume	0	0	0	0	0	1141	364	1505	386	3	516	905	0	525	668	1193
% App. Total	0	0	0		0	75.8	24.2		42.7	0.3	57		0	44	56	
PHF	.000	.000	.000	.000	.000	.908	.778	.873	.832	.750	.838	.838	.000	.951	.861	.938

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City of Jurupa Valley
N/S: I-15 Northbound Ramps
E/W: Limonite Avenue
Weather: Clear

File Name : 03_JVY_15N_Limonite PM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

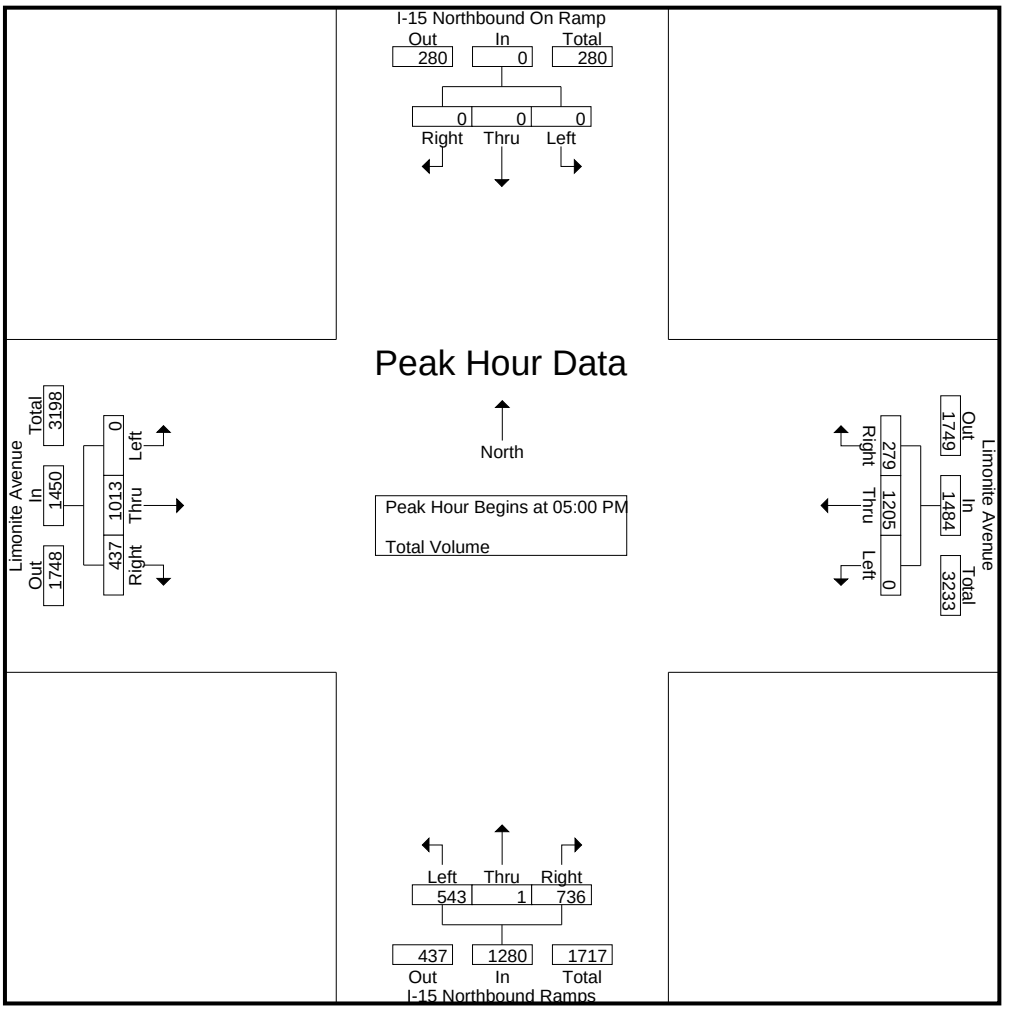
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	248	53	301	98	0	224	322	0	253	114	367	990
04:15 PM	0	0	0	0	0	295	71	366	123	0	208	331	0	229	122	351	1048
04:30 PM	0	0	0	0	0	327	62	389	97	0	211	308	0	229	116	345	1042
04:45 PM	0	0	0	0	0	292	80	372	122	1	187	310	0	231	112	343	1025
Total	0	0	0	0	0	1162	266	1428	440	1	830	1271	0	942	464	1406	4105
05:00 PM	0	0	0	0	0	272	82	354	113	0	178	291	0	228	113	341	986
05:15 PM	0	0	0	0	0	305	58	363	139	1	186	326	0	268	105	373	1062
05:30 PM	0	0	0	0	0	320	67	387	144	0	191	335	0	267	108	375	1097
05:45 PM	0	0	0	0	0	308	72	380	147	0	181	328	0	250	111	361	1069
Total	0	0	0	0	0	1205	279	1484	543	1	736	1280	0	1013	437	1450	4214
Grand Total	0	0	0	0	0	2367	545	2912	983	2	1566	2551	0	1955	901	2856	8319
Apprch %	0	0	0		0	81.3	18.7		38.5	0.1	61.4		0	68.5	31.5		
Total %	0	0	0	0	0	28.5	6.6	35	11.8	0	18.8	30.7	0	23.5	10.8	34.3	

	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	272	**82**	354	113	0	178	291	0	228	**113**	341	986
05:15 PM	0	0	0	0	0	305	58	363	139	**1**	186	326	0	**268**	105	373	1062
05:30 PM	0	0	0	0	0	**320**	67	**387**	144	0	**191**	**335**	0	267	108	**375**	**1097**
05:45 PM	0	0	0	0	0	308	72	380	**147**	0	181	328	0	250	111	361	1069
Total Volume	0	0	0	0	0	1205	279	1484	543	1	736	1280	0	1013	437	1450	4214
% App. Total	0	0	0		0	81.2	18.8		42.4	0.1	57.5		0	69.9	30.1		
PHF	.000	.000	.000	.000	.000	.941	.851	.959	.923	.250	.963	.955	.000	.945	.967	.967	.960

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File Name : 03_JVY_15N_Limonite PM
Site Code : 06722151
Start Date : 3/3/2022
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				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	272	**82**	354	113	0	178	291	0	228	**113**	341
+15 mins.	0	0	0	0	0	305	58	363	139	**1**	186	326	0	**268**	105	373
+30 mins.	0	0	0	0	0	**320**	67	**387**	144	0	**191**	**335**	0	267	108	**375**
+45 mins.	0	0	0	0	0	308	72	380	**147**	0	181	328	0	250	111	361
Total Volume	0	0	0	0	0	1205	279	1484	543	1	736	1280	0	1013	437	1450
% App. Total	0	0	0		0	81.2	18.8		42.4	0.1	57.5		0	69.9	30.1	
PHF	.000	.000	.000	.000	.000	.941	.851	.959	.923	.250	.963	.955	.000	.945	.967	.967

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Limonite Avenue
Weather: Clear

File Name : 04_JVY_Pats_Limonite AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 1

Groups Printed- Total Volume

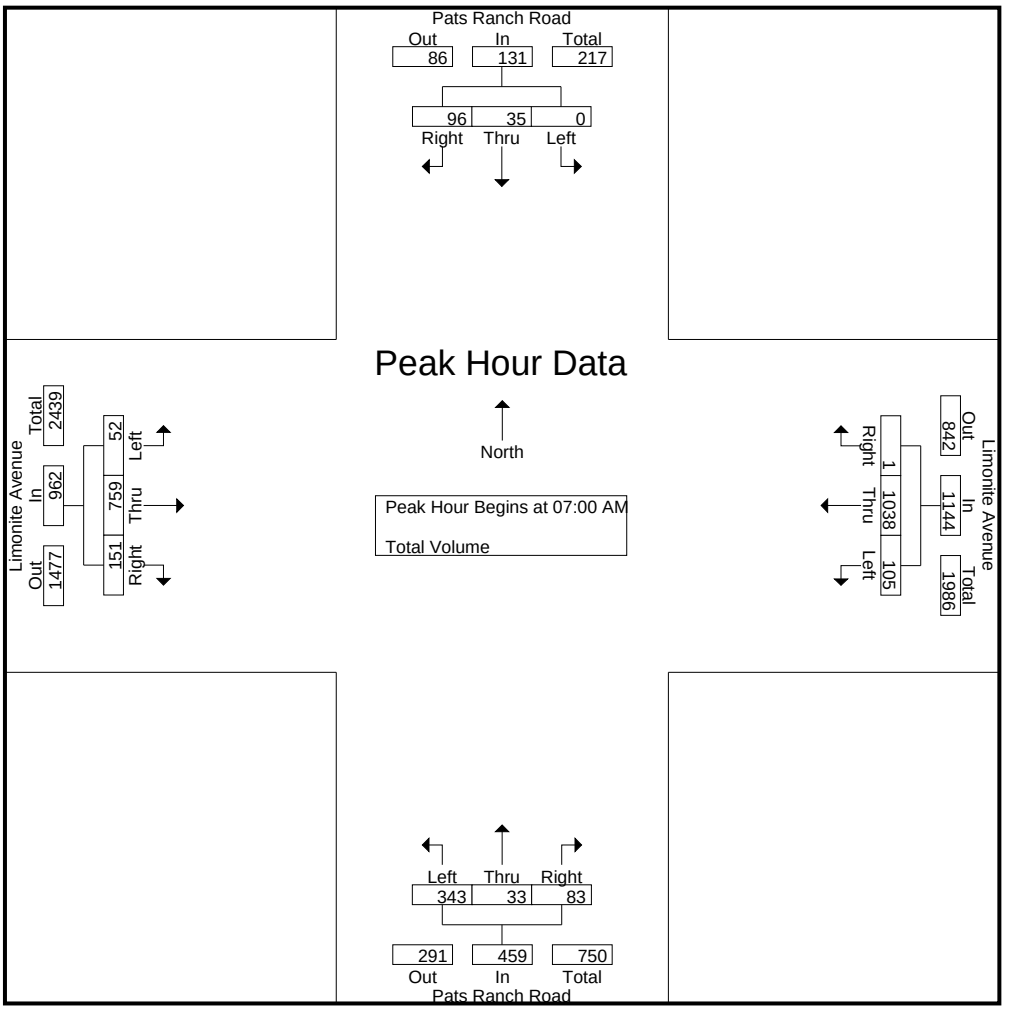
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	12	26	38	27	248	0	275	84	2	23	109	14	149	46	209	631
07:15 AM	0	12	24	36	30	307	0	337	90	9	23	122	7	174	32	213	708
07:30 AM	0	8	20	28	20	248	0	268	99	13	13	125	11	210	38	259	680
07:45 AM	0	3	26	29	28	235	1	264	70	9	24	103	20	226	35	281	677
Total	0	35	96	131	105	1038	1	1144	343	33	83	459	52	759	151	962	2696
08:00 AM	1	7	31	39	22	256	1	279	83	5	24	112	7	148	33	188	618
08:15 AM	0	4	14	18	33	247	1	281	91	8	25	124	12	188	42	242	665
08:30 AM	0	6	26	32	19	240	0	259	86	6	26	118	16	186	25	227	636
08:45 AM	0	4	15	19	24	243	0	267	97	6	22	125	11	171	32	214	625
Total	1	21	86	108	98	986	2	1086	357	25	97	479	46	693	132	871	2544
Grand Total	1	56	182	239	203	2024	3	2230	700	58	180	938	98	1452	283	1833	5240
Apprch %	0.4	23.4	76.2		9.1	90.8	0.1		74.6	6.2	19.2		5.3	79.2	15.4		
Total %	0	1.1	3.5	4.6	3.9	38.6	0.1	42.6	13.4	1.1	3.4	17.9	1.9	27.7	5.4	35	

	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**12**	**26**	**38**	27	248	0	275	84	2	23	109	14	149	**46**	209	631
07:15 AM	0	12	24	36	**30**	**307**	0	**337**	90	9	23	122	7	174	32	213	**708**
07:30 AM	0	8	20	28	20	248	0	268	**99**	**13**	13	**125**	11	210	38	259	680
07:45 AM	0	3	26	29	28	235	**1**	264	70	9	**24**	103	**20**	**226**	35	**281**	677
Total Volume	0	35	96	131	105	1038	1	1144	343	33	83	459	52	759	151	962	2696
% App. Total	0	26.7	73.3		9.2	90.7	0.1		74.7	7.2	18.1		5.4	78.9	15.7		
PHF	.000	.729	.923	.862	.875	.845	.250	.849	.866	.635	.865	.918	.650	.840	.821	.856	.952

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File Name : 04_JVY_Pats_Limonite AM
Site Code : 06722151
Start Date : 3/3/2022
Page No : 2



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

	07:15 AM				07:15 AM				08:00 AM				07:30 AM			
+0 mins.	0	**12**	24	36	**30**	**307**	0	**337**	83	5	24	112	11	210	38	259
+15 mins.	0	8	20	28	20	248	0	268	91	**8**	25	124	**20**	**226**	35	**281**
+30 mins.	0	3	26	29	28	235	**1**	264	86	6	**26**	118	7	148	33	188
+45 mins.	**1**	7	**31**	**39**	22	256	1	279	**97**	6	22	**125**	12	188	**42**	242
Total Volume	1	30	101	132	100	1046	2	1148	357	25	97	479	50	772	148	970
% App. Total	0.8	22.7	76.5		8.7	91.1	0.2		74.5	5.2	20.3		5.2	79.6	15.3	
PHF	.250	.625	.815	.846	.833	.852	.500	.852	.920	.781	.933	.958	.625	.854	.881	.863

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Groups Printed- Total Volume

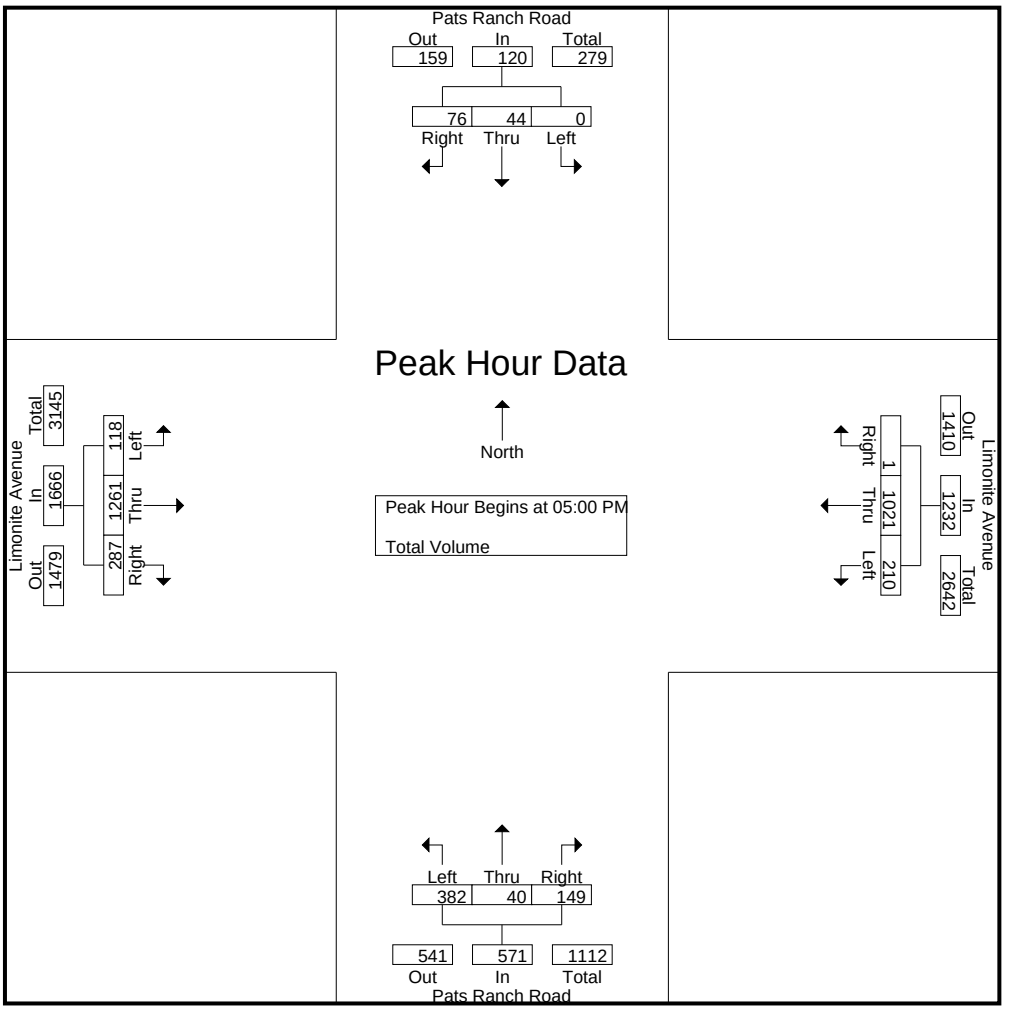
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	8	12	21	53	216	2	271	80	13	40	133	36	366	72	474	899
04:15 PM	0	13	27	40	48	229	0	277	95	13	52	160	33	323	54	410	887
04:30 PM	1	5	10	16	34	263	2	299	93	6	47	146	33	338	62	433	894
04:45 PM	0	10	21	31	38	261	0	299	88	10	28	126	23	303	65	391	847
Total	2	36	70	108	173	969	4	1146	356	42	167	565	125	1330	253	1708	3527
05:00 PM	0	12	13	25	37	243	0	280	84	12	29	125	29	284	69	382	812
05:15 PM	0	9	21	30	46	237	0	283	105	9	42	156	29	327	70	426	895
05:30 PM	0	13	16	29	65	273	0	338	82	9	36	127	31	350	74	455	949
05:45 PM	0	10	26	36	62	268	1	331	111	10	42	163	29	300	74	403	933
Total	0	44	76	120	210	1021	1	1232	382	40	149	571	118	1261	287	1666	3589
Grand Total	2	80	146	228	383	1990	5	2378	738	82	316	1136	243	2591	540	3374	7116
Apprch %	0.9	35.1	64		16.1	83.7	0.2		65	7.2	27.8		7.2	76.8	16		
Total %	0	1.1	2.1	3.2	5.4	28	0.1	33.4	10.4	1.2	4.4	16	3.4	36.4	7.6	47.4	

	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	12	13	25	37	243	0	280	84	**12**	29	125	29	284	69	382	812
05:15 PM	0	9	21	30	46	237	0	283	105	9	**42**	156	29	327	70	426	895
05:30 PM	0	**13**	16	29	**65**	**273**	0	**338**	82	9	36	127	**31**	**350**	**74**	**455**	**949**
05:45 PM	0	10	**26**	**36**	62	268	**1**	331	**111**	10	42	**163**	29	300	74	403	933
Total Volume	0	44	76	120	210	1021	1	1232	382	40	149	571	118	1261	287	1666	3589
% App. Total	0	36.7	63.3		17	82.9	0.1		66.9	7	26.1		7.1	75.7	17.2		
PHF	.000	.846	.731	.833	.808	.935	.250	.911	.860	.833	.887	.876	.952	.901	.970	.915	.945

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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				04:00 PM			
+0 mins.	0	12	13	25	37	243	0	280	84	**12**	29	125	**36**	**366**	**72**	**474**
+15 mins.	0	9	21	30	46	237	0	283	105	9	**42**	156	33	323	54	410
+30 mins.	0	**13**	16	29	**65**	**273**	0	**338**	82	9	36	127	33	338	62	433
+45 mins.	0	10	**26**	**36**	62	268	**1**	331	**111**	10	42	**163**	23	303	65	391
Total Volume	0	44	76	120	210	1021	1	1232	382	40	149	571	125	1330	253	1708
% App. Total	0	36.7	63.3		17	82.9	0.1		66.9	7	26.1		7.3	77.9	14.8	
PHF	.000	.846	.731	.833	.808	.935	.250	.911	.860	.833	.887	.876	.868	.908	.878	.901

Appendix D

Level of Service Analysis Worksheets

Appendix D-1

Existing Conditions (2022)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\1 Existing AM.pdf

Scenario 1 Existing AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.258	13.0	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.004	12.2	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.257	16.8	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.376	22.2	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.427	43.9	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.080	12.0	B
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.075	9.3	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.182	15.8	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.046	9.6	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.565	27.2	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.404	22.0	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	SB Right	0.516	7.9	A
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.486	7.8	A
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	EB Left	0.432	20.1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.258

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	45	540	0	0	238	184	365	0	52	0	0	0
Peak Hour Factor	0.9560	0.9560	0.9500	0.9500	0.9560	0.9560	0.9560	0.9500	0.9560	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]	12	141	0	0	62	48	95	0	14	0	0	0
Total Analysis Volume [veh/h]	47	565	0	0	249	192	382	0	54	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	13	46	0	20	49	0	24	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39	39
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	12	12	0	10	10	7	7	7	0	0	0
g / C, Green / Cycle	0.05	0.31	0.31	0.00	0.25	0.25	0.18	0.18	0.18	0.00	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.10	0.00	0.05	0.12	0.11	0.00	0.03	0.00	0.00	0.00
s, saturation flow rate [veh/h]	1781	3560	1870	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	95	1092	574	1	1295	404	628	646	289	3	1	1
d1, Uniform Delay [s]	18.04	10.51	10.51	0.00	11.46	12.40	14.76	0.00	13.59	0.00	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	3.96	0.18	0.35	0.00	0.07	0.87	0.96	0.00	0.31	0.00	0.00	0.00
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	0.50	0.34	0.34	0.00	0.19	0.48	0.61	0.00	0.19	0.00	0.00	0.00
d, Delay for Lane Group [s/veh]	22.00	10.70	10.86	0.00	11.53	13.27	15.71	0.00	13.90	0.00	0.00	0.00
Lane Group LOS	C	B	B	A	B	B	B	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.46	0.99	1.06	0.00	0.46	1.23	1.37	0.00	0.36	0.00	0.00	0.00
50th-Percentile Queue Length [ft/ln]	11.53	24.65	26.55	0.00	11.56	30.82	34.32	0.00	9.01	0.00	0.00	0.00
95th-Percentile Queue Length [veh/ln]	0.83	1.77	1.91	0.00	0.83	2.22	2.47	0.00	0.65	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	20.75	44.37	47.78	0.00	20.80	55.48	61.77	0.00	16.22	0.00	0.00	0.00

Movement, Approach, & Intersection Results

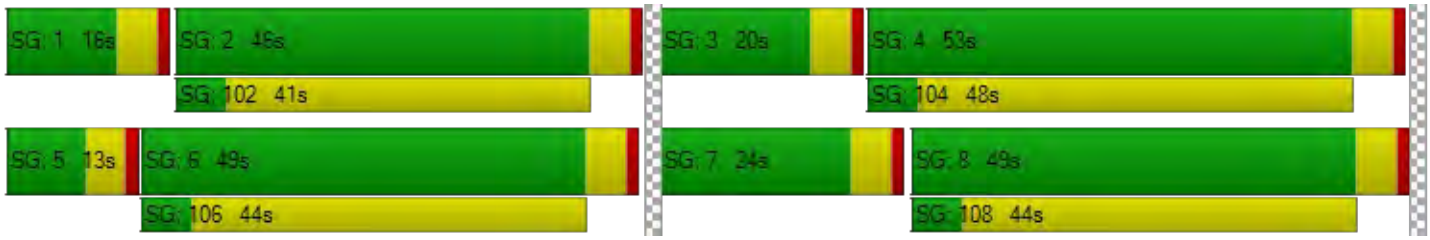
d_M, Delay for Movement [s/veh]	22.00	10.75	10.86	0.00	11.53	13.27	15.71	0.00	13.90	0.00	0.00	0.00
Movement LOS	C	B	B	A	B	B	B	A	B	A	A	A
d_A, Approach Delay [s/veh]	11.62			12.29			15.49			0.00		
Approach LOS	B			B			B			A		
d_I, Intersection Delay [s/veh]	12.95											
Intersection LOS	B											
Intersection V/C	0.258											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	11.56	11.56	11.56	11.56
l_p,int, Pedestrian LOS Score for Intersection	2.677	2.850	2.643	2.408
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2254	2100	2254	2459
d_b, Bicycle Delay [s]	0.32	0.05	0.32	1.03
l_b,int, Bicycle LOS Score for Intersection	1.896	1.802	1.919	1.560
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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
Total Hourly Volume [veh/h]	0	2	505	0	3	468
Peak Hour Factor	0.8460	0.8460	0.8460	0.8460	0.8460	0.8460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	149	0	1	138
Total Analysis Volume [veh/h]	0	2	597	0	4	553
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

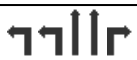
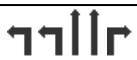
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	21.68	12.19	0.00	0.00	8.69	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.30	0.00	0.00	0.31	0.00
d_A, Approach Delay [s/veh]	12.19		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.257

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	54	213	121	34	50	37	60	383	55	127	371	107
Peak Hour Factor	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960
Other Adjustment Factor	1.0000	1.0000	1.0000	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	59	34	9	14	10	17	107	15	35	104	30
Total Analysis Volume [veh/h]	60	238	135	38	56	41	67	427	61	142	414	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	50	0	10	48	0	12	47	0	13	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	46	46	46	46	46	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	3	10	10	4	11	11
g / C, Green / Cycle	0.06	0.22	0.22	0.04	0.20	0.20	0.06	0.22	0.22	0.09	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.08	0.01	0.02	0.03	0.02	0.12	0.04	0.04	0.12	0.07
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	210	765	342	153	707	316	224	772	345	321	871	389
d1, Uniform Delay [s]	20.82	15.31	15.61	21.42	15.13	15.29	20.67	16.16	14.79	19.90	14.97	14.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.74	0.23	0.74	0.84	0.05	0.18	0.74	0.62	0.24	0.96	0.40	0.44
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	0.29	0.31	0.40	0.25	0.08	0.13	0.30	0.55	0.18	0.44	0.48	0.31
d, Delay for Lane Group [s/veh]	21.56	15.54	16.35	22.26	15.18	15.47	21.41	16.78	15.03	20.86	15.37	14.74
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	0.94	1.13	0.20	0.22	0.33	0.33	1.81	0.48	0.69	1.64	0.92
50th-Percentile Queue Length [ft/ln]	7.55	23.52	28.27	4.96	5.38	8.19	8.37	45.13	11.95	17.30	41.08	23.08
95th-Percentile Queue Length [veh/ln]	0.54	1.69	2.04	0.36	0.39	0.59	0.60	3.25	0.86	1.25	2.96	1.66
95th-Percentile Queue Length [ft/ln]	13.59	42.34	50.88	8.93	9.68	14.74	15.07	81.24	21.50	31.14	73.94	41.54

Movement, Approach, & Intersection Results

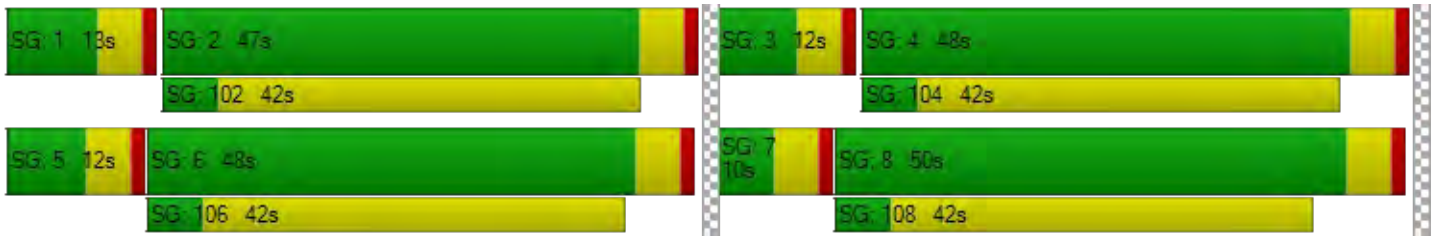
d_M, Delay for Movement [s/veh]	21.56	15.54	16.35	22.26	15.18	15.47	21.41	16.78	15.03	20.86	15.37	14.74
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.63			17.26			17.15			16.41		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.76											
Intersection LOS	B											
Intersection V/C	0.257											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.98	14.98	14.98	14.98
l_p,int, Pedestrian LOS Score for Intersection	2.656	2.638	2.709	2.737
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1948	1861	1818	1861
d_b, Bicycle Delay [s]	0.02	0.11	0.19	0.11
l_b,int, Bicycle LOS Score for Intersection	1.917	1.671	2.017	2.116
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.376

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	115	23	35	41	16	98	156	377	55	52	464	60
Peak Hour Factor	0.7970	0.7970	0.7970	0.7970	0.7970	0.7970	0.7970	0.7970	0.7970	0.7970	0.7970	0.7970
Other Adjustment Factor	1.0000	1.0000	1.0000	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	7	11	13	5	31	49	118	17	16	146	19
Total Analysis Volume [veh/h]	144	29	44	51	20	123	196	473	69	65	582	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	39	0	37	53	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	12	20	20	5	13	81	71	71	81	71	71
g / C, Green / Cycle	0.10	0.16	0.16	0.04	0.11	0.67	0.59	0.59	0.67	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.08	0.02	0.03	0.03	0.09	0.22	0.13	0.04	0.07	0.16	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	877	3560	1589	949	3560	1589
c, Capacity [veh/h]	173	308	262	68	172	611	2111	942	667	2094	935
d1, Uniform Delay [s]	53.25	42.55	43.09	57.18	52.65	7.88	11.48	10.41	7.01	12.18	10.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.89	0.13	0.30	15.11	9.97	1.39	0.25	0.15	0.06	0.33	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.83	0.09	0.17	0.75	0.83	0.32	0.22	0.07	0.10	0.28	0.08
d, Delay for Lane Group [s/veh]	63.14	42.69	43.39	72.29	62.62	9.26	11.72	10.56	7.08	12.51	10.86
Lane Group LOS	E	D	D	E	E	A	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.74	0.75	1.15	1.82	4.70	2.00	2.98	0.81	0.55	3.86	0.90
50th-Percentile Queue Length [ft/ln]	118.53	18.67	28.80	45.46	117.51	50.09	74.50	20.21	13.83	96.50	22.38
95th-Percentile Queue Length [veh/ln]	8.31	1.34	2.07	3.27	8.26	3.61	5.36	1.46	1.00	6.95	1.61
95th-Percentile Queue Length [ft/ln]	207.81	33.61	51.84	81.84	206.39	90.16	134.11	36.39	24.90	173.71	40.29

Movement, Approach, & Intersection Results

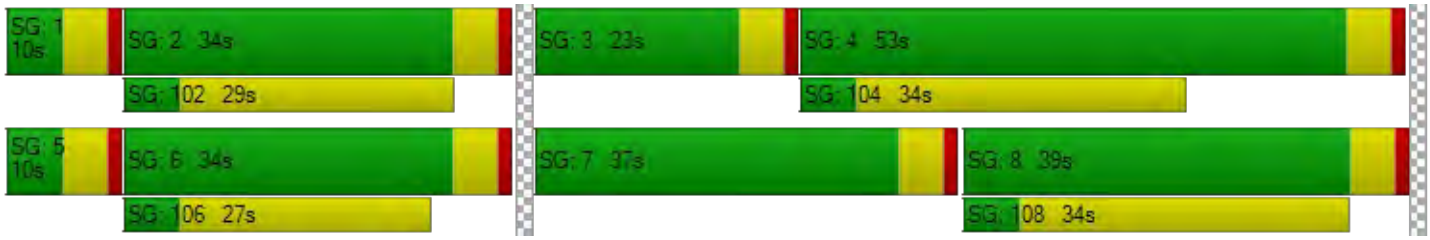
d_M, Delay for Movement [s/veh]	63.14	42.69	43.39	72.29	62.62	62.62	9.26	11.72	10.56	7.08	12.51	10.86
Movement LOS	E	D	D	E	E	E	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	56.40			65.16			10.96			11.85		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.19											
Intersection LOS	C											
Intersection V/C	0.376											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.293	2.285	2.726	2.678
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	800	483	483
d_b, Bicycle Delay [s]	30.83	21.62	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	1.918	1.880	2.168	2.155
Bicycle LOS	A	A	B	B

Sequence

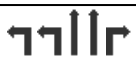
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	43.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.427

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	76	317	175	135	199	59	80	223	38	201	235	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	104	58	44	65	19	26	73	13	66	77	47
Total Analysis Volume [veh/h]	100	417	230	178	262	78	105	293	50	264	309	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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	42	0	19	46	46	20	43	0	26	49	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	67	67	9	67	81	10	13	13	21	25	25
g / C, Green / Cycle	0.07	0.52	0.52	0.07	0.51	0.63	0.07	0.10	0.10	0.16	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.14	0.05	0.07	0.05	0.06	0.08	0.03	0.15	0.14	0.14
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1637
c, Capacity [veh/h]	124	1833	818	235	1828	994	131	362	162	288	355	310
d1, Uniform Delay [s]	59.65	17.33	17.89	59.55	16.62	9.59	59.28	57.16	54.16	53.66	49.72	49.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.17	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]	11.68	0.29	0.86	4.94	0.16	0.15	10.61	4.32	1.07	16.68	3.12	3.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.23	0.28	0.76	0.14	0.08	0.80	0.81	0.31	0.92	0.75	0.75
d, Delay for Lane Group [s/veh]	71.33	17.62	18.75	64.49	16.79	9.74	69.89	61.48	55.23	70.34	52.84	53.40
Lane Group LOS	E	B	B	E	B	A	E	E	E	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	3.53	4.13	3.05	2.12	0.91	3.80	4.94	1.57	9.83	8.43	7.47
50th-Percentile Queue Length [ft/ln]	91.43	88.14	103.15	76.25	52.91	22.86	94.97	123.41	39.36	245.66	210.71	186.76
95th-Percentile Queue Length [veh/ln]	6.58	6.35	7.43	5.49	3.81	1.65	6.84	8.58	2.83	14.97	13.19	11.95
95th-Percentile Queue Length [ft/ln]	164.58	158.66	185.66	137.25	95.24	41.15	170.94	214.51	70.84	374.18	329.74	298.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.33	17.62	18.75	64.49	16.79	9.74	69.89	61.48	55.23	70.34	52.92	53.40
Movement LOS	E	B	B	E	B	A	E	E	E	E	D	D
d_A, Approach Delay [s/veh]	25.16			32.12			62.75			59.09		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	43.86											
Intersection LOS	D											
Intersection V/C	0.427											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.687	2.784	2.624	2.604
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	677
d_b, Bicycle Delay [s]	33.27	30.47	32.56	28.45
l_b,int, Bicycle LOS Score for Intersection	2.176	1.987	1.929	2.187
Bicycle LOS	B	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	0	0	18	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	41	0	0	18	0
Peak Hour Factor	1.0000	0.8190	0.9500	0.8190	0.8190	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	0	0	5	0
Total Analysis Volume [veh/h]	0	50	0	0	22	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.11	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.11		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.080

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	336	201	19	40	0
Peak Hour Factor	0.8820	0.8820	0.8820	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	95	57	5	11	0
Total Analysis Volume [veh/h]	0	381	228	22	45	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.08	0.00
d_M, Delay for Movement [s/veh]	7.74	0.00	0.00	0.00	11.95	9.48
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.26	0.26
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.49	6.49
d_A, Approach Delay [s/veh]	0.00		0.00		11.95	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.80					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	31	24	0	36	60	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	24	0	36	60	1
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]	9	7	0	10	17	0
Total Analysis Volume [veh/h]	35	27	0	41	68	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.27	8.85
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.24	0.24
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.12	6.12
d_A, Approach Delay [s/veh]	0.00		0.00		9.27	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.182

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	3	267	12	10	172	16	42	7	3	29	33	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	73	3	3	47	4	12	2	1	8	9	9
Total Analysis Volume [veh/h]	3	293	13	11	189	18	46	8	3	32	36	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	96	89	89	96	90	90	14	14	14
g / C, Green / Cycle	0.80	0.74	0.74	0.80	0.75	0.75	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.08	0.01	0.05	0.01	0.06	0.00	0.10
s, saturation flow rate [veh/h]	1197	1870	1842	1107	3560	1589	868	1589	1055
c, Capacity [veh/h]	1033	1392	1372	953	2683	1198	157	187	163
d1, Uniform Delay [s]	2.43	4.26	4.27	2.46	3.85	3.69	49.56	46.82	51.91
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.00	0.16	0.16	0.02	0.05	0.02	1.28	0.03	3.98
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	0.00	0.11	0.11	0.01	0.07	0.02	0.34	0.02	0.63
d, Delay for Lane Group [s/veh]	2.43	4.42	4.43	2.48	3.90	3.71	50.84	46.85	55.88
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.01	1.01	1.00	0.05	0.55	0.11	1.58	0.08	3.25
50th-Percentile Queue Length [ft/ln]	0.30	25.17	25.01	1.21	13.82	2.63	39.48	2.04	81.16
95th-Percentile Queue Length [veh/ln]	0.02	1.81	1.80	0.09	1.00	0.19	2.84	0.15	5.84
95th-Percentile Queue Length [ft/ln]	0.53	45.30	45.01	2.17	24.88	4.73	71.07	3.67	146.08

Movement, Approach, & Intersection Results

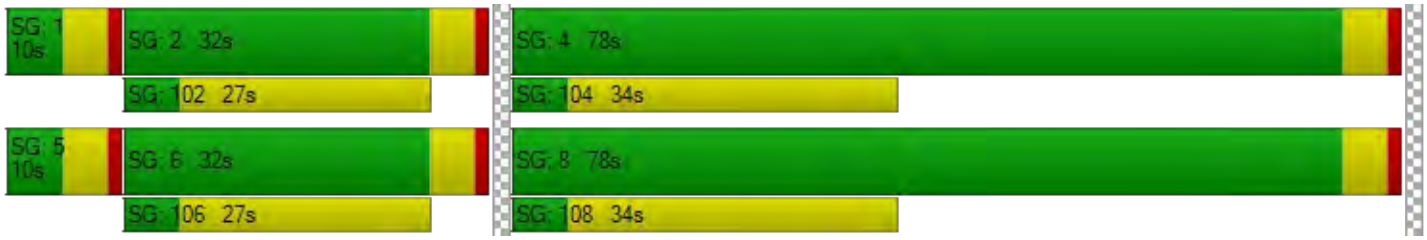
d_M, Delay for Movement [s/veh]	2.43	4.43	4.43	2.48	3.90	3.71	50.84	50.84	46.85	55.88	55.88	55.88
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	4.41			3.81			50.63			55.88		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	15.77											
Intersection LOS	B											
Intersection V/C	0.182											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.465	2.757	1.996	1.808
Crosswalk LOS	B	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.815	1.739	1.654	1.730
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	55	12	0	97	34	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	12	0	97	34	1
Peak Hour Factor	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	3	0	27	9	0
Total Analysis Volume [veh/h]	61	13	0	107	38	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

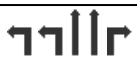
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.05	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.36	0.00	9.59	8.80
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.15	0.15
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	3.71	3.71
d_A, Approach Delay [s/veh]	0.00		0.00		9.57	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.70					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	27.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.565

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	104	476	387	210	240	101	185	786	32	316	591	144
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	122	99	54	62	26	48	202	8	81	152	37
Total Analysis Volume [veh/h]	107	489	398	216	247	104	190	808	33	325	607	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	70	0	10	50	0	10	50	0	10	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	73	73	73	73	73	73	73	73	73	73	73	73
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	22	22	7	24	24	6	15	15	10	19	19
g / C, Green / Cycle	0.06	0.29	0.29	0.09	0.33	0.33	0.09	0.21	0.21	0.13	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.25	0.06	0.05	0.07	0.05	0.16	0.02	0.09	0.17	0.09
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	209	1496	467	328	1671	521	296	1068	333	450	905	420
d1, Uniform Delay [s]	33.55	20.32	24.50	32.19	17.48	17.79	32.58	27.34	23.49	30.75	24.69	22.49
k, delay calibration	0.11	0.11	0.15	0.11	0.11	0.11	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]	1.93	0.13	6.27	2.26	0.04	0.19	2.31	1.12	0.13	2.20	0.87	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	0.51	0.33	0.85	0.66	0.15	0.20	0.64	0.76	0.10	0.72	0.67	0.35
d, Delay for Lane Group [s/veh]	35.48	20.44	30.77	34.45	17.52	17.98	34.89	28.45	23.62	32.95	25.56	23.00
Lane Group LOS	D	C	C	C	B	B	C	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.96	2.10	6.94	1.90	0.94	1.23	1.61	4.13	0.44	2.80	4.62	2.06
50th-Percentile Queue Length [ft/ln]	23.88	52.43	173.43	47.48	23.60	30.82	40.32	103.33	10.88	70.11	115.60	51.61
95th-Percentile Queue Length [veh/ln]	1.72	3.77	11.26	3.42	1.70	2.22	2.90	7.44	0.78	5.05	8.15	3.72
95th-Percentile Queue Length [ft/ln]	42.99	94.37	281.42	85.46	42.48	55.48	72.57	186.00	19.59	126.20	203.76	92.90

Movement, Approach, & Intersection Results

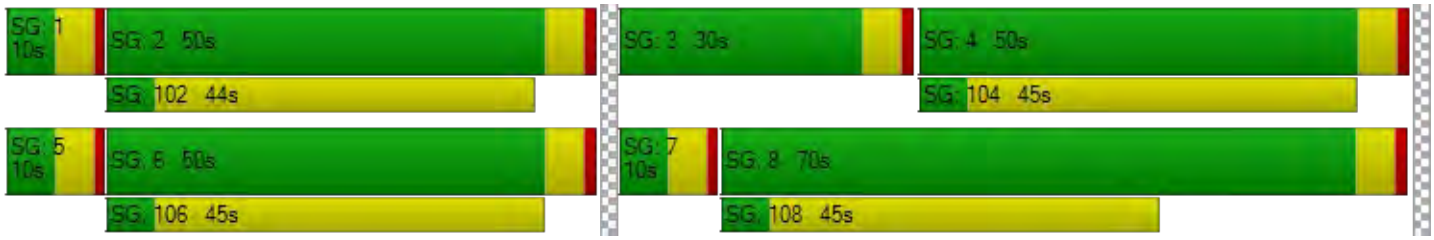
d_M, Delay for Movement [s/veh]	35.48	20.44	30.77	34.45	17.52	17.98	34.89	28.45	23.62	32.95	25.56	23.00
Movement LOS	D	C	C	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	26.20			24.05			29.49			27.43		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.15											
Intersection LOS	C											
Intersection V/C	0.565											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	28.29	28.29	28.29	28.29
l_p,int, Pedestrian LOS Score for Intersection	3.014	2.992	3.141	3.022
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1769	1225	1225	1225
d_b, Bicycle Delay [s]	0.49	5.52	5.52	5.52
l_b,int, Bicycle LOS Score for Intersection	2.106	1.871	2.127	2.451
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	99	11	138	102	10	18	43	1170	80	175	968	168
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]	25	3	35	26	3	5	11	298	20	45	247	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1193	82	178	987	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	14	0	0	36	0	67	57	0	33	23	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	10	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.23	0.05	0.05	0.19	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	188	190	168	248	120	59	3262	1018	236	3442	1074
d1, Uniform Delay [s]	57.82	57.82	61.46	62.20	61.35	67.12	11.81	9.54	64.06	9.12	8.24
k, delay calibration	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
d2, Incremental Delay [s]	0.87	0.86	10.70	1.13	0.98	17.34	0.32	0.15	4.85	0.21	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.75	0.37	0.08	0.75	0.29	0.16
d, Delay for Lane Group [s/veh]	58.70	58.68	72.17	63.34	62.33	84.46	12.13	9.69	68.91	9.33	8.56
Lane Group LOS	E	E	E	E	E	F	B	A	E	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.43	1.82	0.98	1.85	5.85	1.00	3.29	4.02	1.95
50th-Percentile Queue Length [ft/ln]	47.08	47.41	135.87	45.51	24.47	46.23	146.20	25.04	82.21	100.61	48.82
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.26	3.28	1.76	3.33	9.81	1.80	5.92	7.24	3.52
95th-Percentile Queue Length [ft/ln]	84.75	85.34	231.45	81.92	44.05	83.22	245.34	45.07	147.99	181.09	87.88

Movement, Approach, & Intersection Results

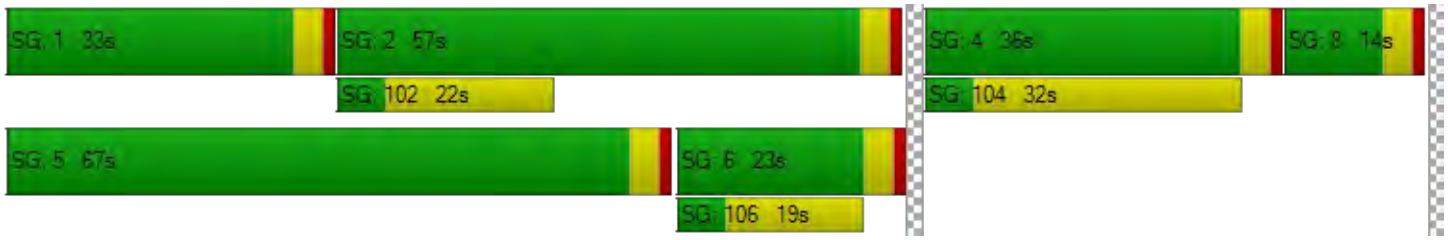
d_M, Delay for Movement [s/veh]	58.69	58.68	72.17	63.34	62.33	62.33	84.46	12.13	9.69	68.91	9.33	8.56
Movement LOS	E	E	E	E	E	E	F	B	A	E	A	A
d_A, Approach Delay [s/veh]	66.20			63.12			14.39			17.17		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.04											
Intersection LOS	C											
Intersection V/C	0.404											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.043	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	143	457	757	271
d_b, Bicycle Delay [s]	60.35	41.65	27.03	52.29
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.285	2.294
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	7.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	0	0	0	168	1	514	0	990	508	0	779	718
Peak Hour Factor	0.9500	0.9500	0.9500	0.9740	0.9740	0.9740	0.9500	0.9740	0.9740	0.9500	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	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	43	0	132	0	254	130	0	200	184
Total Analysis Volume [veh/h]	0	0	0	172	1	528	0	1016	522	0	800	737
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	15	0	0	55	0	0	55	55
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		13	13	13	19	19	19	37
g / C, Green / Cycle		0.32	0.32	0.32	0.44	0.44	0.44	0.88
(v / s)_i Volume / Saturation Flow Rate		0.05	0.05	0.19	0.20	0.33	0.16	0.46
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		570	570	900	2255	704	2255	1401
d1, Uniform Delay [s]		10.24	10.24	11.99	8.17	9.74	7.76	0.55
k, delay calibration		0.11	0.11	0.11	0.11	0.11	0.11	0.18
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.12	0.12	0.61	0.14	1.57	0.09	0.51
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		0.15	0.15	0.59	0.45	0.74	0.35	0.53
d, Delay for Lane Group [s/veh]		10.36	10.36	12.61	8.31	11.31	7.86	1.07
Lane Group LOS		B	B	B	A	B	A	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.48	0.48	1.72	1.56	3.12	1.17	0.20
50th-Percentile Queue Length [ft/ln]		11.97	11.98	42.98	39.06	78.07	29.16	4.99
95th-Percentile Queue Length [veh/ln]		0.86	0.86	3.09	2.81	5.62	2.10	0.36
95th-Percentile Queue Length [ft/ln]		21.55	21.56	77.37	70.32	140.53	52.48	8.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	10.36	10.36	12.61	0.00	8.31	11.31	0.00	7.86	1.07
Movement LOS				B	B	B		A	B		A	A
d_A, Approach Delay [s/veh]	0.00			12.05			9.33			4.60		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	7.91											
Intersection LOS	A											
Intersection V/C	0.516											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	12.97	12.97	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.070	2.754	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	476	2380	2380
d_b, Bicycle Delay [s]	21.01	12.20	0.76	0.76
l_b,int, Bicycle LOS Score for Intersection	4.132	2.716	2.406	2.405
Bicycle LOS	D	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	7.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	402	3	492	0	0	0	0	525	668	0	1094	385
Peak Hour Factor	0.9710	0.9710	0.9710	0.9500	0.9500	0.9500	0.9500	0.9710	0.9710	0.9500	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	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	1	127	0	0	0	0	135	172	0	282	99
Total Analysis Volume [veh/h]	414	3	507	0	0	0	0	541	688	0	1127	396
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	38	38	38		38	38	38	38
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	13	13	13		15	33	15	15
g / C, Green / Cycle	0.34	0.34	0.34		0.40	0.87	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.18		0.11	0.43	0.22	0.25
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	603	603	952		2038	1382	2038	636
d1, Uniform Delay [s]	9.48	9.48	10.21		7.70	0.58	8.84	9.16
k, delay calibration	0.11	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
d2, Incremental Delay [s]	0.34	0.34	0.46		0.07	0.28	0.24	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.35	0.53		0.27	0.50	0.55	0.62
d, Delay for Lane Group [s/veh]	9.82	9.82	10.68		7.77	0.86	9.07	10.17
Lane Group LOS	A	A	B		A	A	A	B
Critical Lane Group	No	No	No		No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.03	1.03	1.33		0.71	0.11	1.72	2.01
50th-Percentile Queue Length [ft/ln]	25.74	25.74	33.37		17.81	2.71	42.91	50.13
95th-Percentile Queue Length [veh/ln]	1.85	1.85	2.40		1.28	0.19	3.09	3.61
95th-Percentile Queue Length [ft/ln]	46.33	46.33	60.07		32.06	4.87	77.24	90.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.82	9.82	10.68	0.00	0.00	0.00	0.00	7.77	0.86	0.00	9.07	10.17
Movement LOS	A	A	B					A	A		A	B
d_A, Approach Delay [s/veh]	10.29			0.00			3.90			9.36		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	7.77											
Intersection LOS	A											
Intersection V/C	0.486											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	11.10	11.10	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.772	2.024	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	788	0	2364	2364
d_b, Bicycle Delay [s]	6.99	19.04	0.63	0.63
l_b,int, Bicycle LOS Score for Intersection	3.084	4.132	2.236	2.397
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	1	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	343	33	83	0	35	96	52	759	151	105	1038	1
Peak Hour Factor	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520
Other Adjustment Factor	1.0000	1.0000	1.0000	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	9	22	0	9	25	14	199	40	28	273	0
Total Analysis Volume [veh/h]	360	35	87	0	37	101	55	797	159	110	1090	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	43	0	10	43	0	41	54	0	18	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R	L	C	R
C, Cycle Length [s]	57	57	57	57	57	57	57	57	57	57	57
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	18	18	0	9	3	16	16	4	17	17
g / C, Green / Cycle	0.15	0.31	0.31	0.00	0.16	0.05	0.27	0.27	0.07	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.10	0.02	0.05	0.00	0.08	0.03	0.16	0.10	0.03	0.21	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1656	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	525	574	488	0	257	92	1388	433	251	1495	466
d1, Uniform Delay [s]	23.08	14.06	14.60	0.00	22.37	26.69	18.04	16.91	25.55	18.26	14.36
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream 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]	1.60	0.04	0.17	0.00	1.73	6.17	0.38	0.52	1.21	0.70	0.00
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	0.69	0.06	0.18	0.00	0.54	0.60	0.57	0.37	0.44	0.73	0.00
d, Delay for Lane Group [s/veh]	24.68	14.11	14.77	0.00	24.10	32.86	18.42	17.43	26.75	18.96	14.36
Lane Group LOS	C	B	B	A	C	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.25	0.30	0.77	0.00	1.71	0.85	2.79	1.60	0.72	3.97	0.01
50th-Percentile Queue Length [ft/ln]	56.32	7.45	19.35	0.00	42.87	21.27	69.83	40.06	17.94	99.23	0.22
95th-Percentile Queue Length [veh/ln]	4.05	0.54	1.39	0.00	3.09	1.53	5.03	2.88	1.29	7.14	0.02
95th-Percentile Queue Length [ft/ln]	101.37	13.41	34.84	0.00	77.17	38.29	125.69	72.10	32.29	178.61	0.39

Movement, Approach, & Intersection Results

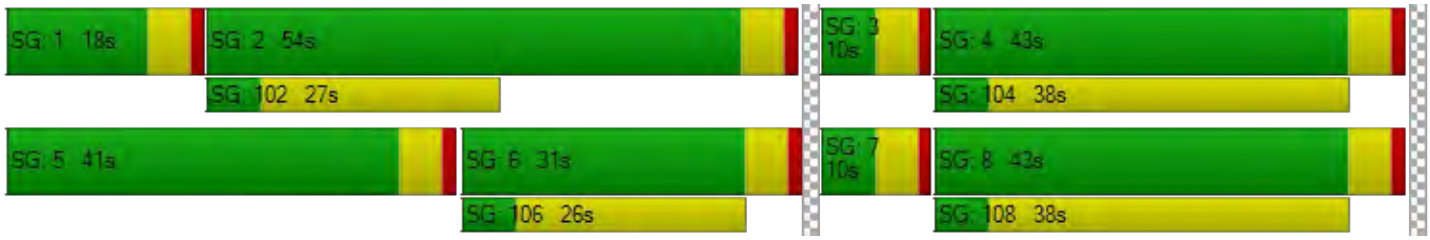
d_M, Delay for Movement [s/veh]	24.68	14.11	14.77	0.00	24.10	24.10	32.86	18.42	17.43	26.75	18.96	14.36
Movement LOS	C	B	B	A	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	22.12			24.10			19.05			19.67		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.08											
Intersection LOS	C											
Intersection V/C	0.432											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.38	20.38	20.38	20.38
l_p,int, Pedestrian LOS Score for Intersection	2.559	2.165	3.016	3.053
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1325	1325	1709	907
d_b, Bicycle Delay [s]	3.26	3.26	0.61	8.57
l_b,int, Bicycle LOS Score for Intersection	2.355	1.787	2.116	2.220
Bicycle LOS	B	A	B	B

Sequence

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



Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\1 Existing PM.pdf

Scenario 2 Existing PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.413	13.8	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Left	0.020	23.3	C
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.288	18.0	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.229	11.9	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.371	38.1	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.140	15.1	C
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.067	9.7	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.182	10.8	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.033	9.7	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.648	34.9	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.583	38.9	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.636	11.8	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.519	10.3	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	EB Left	0.518	23.7	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.413

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	53	597	0	0	649	423	372	0	107	0	0	0
Peak Hour Factor	0.9760	0.9760	0.9500	0.9500	0.9760	0.9760	0.9760	0.9500	0.9760	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	153	0	0	166	108	95	0	27	0	0	0
Total Analysis Volume [veh/h]	54	612	0	0	665	433	381	0	110	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	17	46	0	21	49	0	25	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	47	47	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	19	19	0	17	17	8	8	8	0	0	0
g / C, Green / Cycle	0.05	0.41	0.41	0.00	0.35	0.35	0.17	0.17	0.17	0.00	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.00	0.13	0.27	0.11	0.00	0.07	0.00	0.00	0.00
s, saturation flow rate [veh/h]	1781	3560	1870	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	97	1454	763	0	1803	563	583	600	268	0	0	0
d1, Uniform Delay [s]	21.80	9.33	9.33	0.00	11.35	13.56	18.36	0.00	17.56	0.00	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	4.93	0.10	0.19	0.00	0.13	2.26	1.25	0.00	1.01	0.00	0.00	0.00
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	0.56	0.28	0.28	0.00	0.37	0.77	0.65	0.00	0.41	0.00	0.00	0.00
d, Delay for Lane Group [s/veh]	26.73	9.43	9.52	0.00	11.48	15.82	19.61	0.00	18.56	0.00	0.00	0.00
Lane Group LOS	C	A	A	A	B	B	B	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.66	1.12	1.20	0.00	1.44	3.68	1.82	0.00	1.02	0.00	0.00	0.00
50th-Percentile Queue Length [ft/ln]	16.55	28.08	29.98	0.00	36.12	91.93	45.40	0.00	25.54	0.00	0.00	0.00
95th-Percentile Queue Length [veh/ln]	1.19	2.02	2.16	0.00	2.60	6.62	3.27	0.00	1.84	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	29.79	50.54	53.96	0.00	65.02	165.47	81.72	0.00	45.97	0.00	0.00	0.00

Movement, Approach, & Intersection Results

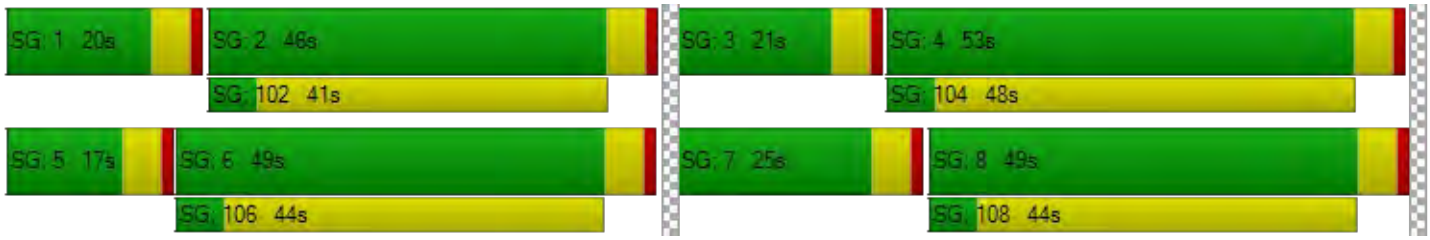
d_M, Delay for Movement [s/veh]	26.73	9.46	9.52	0.00	11.48	15.82	19.61	0.00	18.56	0.00	0.00	0.00
Movement LOS	C	A	A	A	B	B	B	A	B	A	A	A
d_A, Approach Delay [s/veh]	10.86			13.19			19.38			0.00		
Approach LOS	B			B			B			A		
d_I, Intersection Delay [s/veh]	13.85											
Intersection LOS	B											
Intersection V/C	0.413											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.44	15.44	15.44	15.44
l_p,int, Pedestrian LOS Score for Intersection	2.762	2.947	2.697	2.420
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1866	1739	1866	2036
d_b, Bicycle Delay [s]	0.11	0.40	0.11	0.01
l_b,int, Bicycle LOS Score for Intersection	1.926	2.164	1.965	1.560
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	23.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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
Total Hourly Volume [veh/h]	4	4	548	7	25	548
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	142	2	6	142
Total Analysis Volume [veh/h]	4	4	569	7	26	569
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

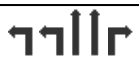
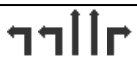
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	23.28	11.99	0.00	0.00	8.71	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.02	0.00	0.00	0.08	0.00
95th-Percentile Queue Length [ft/ln]	1.52	0.58	0.00	0.00	2.01	0.00
d_A, Approach Delay [s/veh]	17.63		0.00		0.38	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.288

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	92	82	117	111	238	78	37	404	119	195	404	48
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]	24	21	31	29	62	20	10	106	31	51	106	13
Total Analysis Volume [veh/h]	96	86	122	116	249	82	39	422	124	204	422	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	48	0	11	49	0	10	47	0	14	51	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	2	10	10	5	13	13
g / C, Green / Cycle	0.08	0.20	0.20	0.08	0.20	0.20	0.04	0.21	0.21	0.10	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.03	0.02	0.08	0.03	0.07	0.05	0.01	0.12	0.08	0.06	0.12	0.03
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	266	701	313	288	724	323	154	733	327	362	948	423
d1, Uniform Delay [s]	21.43	16.15	17.08	21.25	16.68	16.35	22.58	17.49	16.72	20.82	14.93	13.59
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	0.08	0.79	0.90	0.28	0.41	0.86	0.72	0.72	1.38	0.33	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.12	0.39	0.40	0.34	0.25	0.25	0.58	0.38	0.56	0.45	0.12
d, Delay for Lane Group [s/veh]	22.25	16.23	17.87	22.16	16.96	16.76	23.43	18.21	17.44	22.20	15.26	13.71
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.50	0.36	1.12	0.61	1.08	0.72	0.22	1.95	1.12	1.07	1.73	0.38
50th-Percentile Queue Length [ft/ln]	12.62	8.97	28.06	15.19	27.09	17.96	5.41	48.82	28.05	26.77	43.22	9.45
95th-Percentile Queue Length [veh/ln]	0.91	0.65	2.02	1.09	1.95	1.29	0.39	3.52	2.02	1.93	3.11	0.68
95th-Percentile Queue Length [ft/ln]	22.72	16.15	50.51	27.35	48.77	32.33	9.75	87.88	50.49	48.18	77.80	17.01

Movement, Approach, & Intersection Results

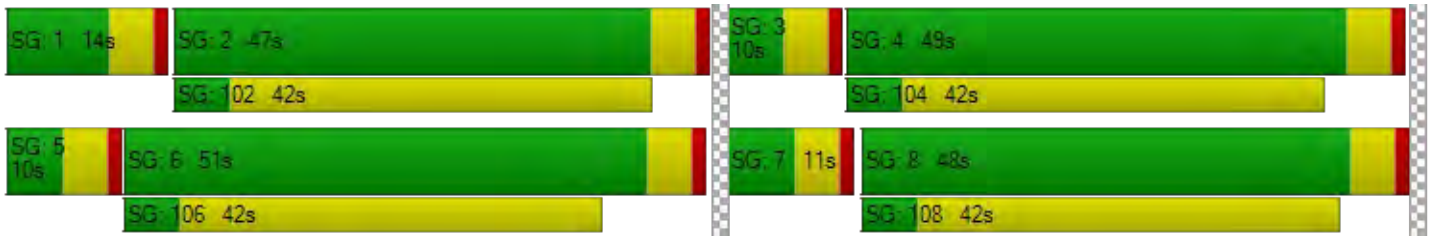
d_M, Delay for Movement [s/veh]	22.25	16.23	17.87	22.16	16.96	16.76	23.43	18.21	17.44	22.20	15.26	13.71
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.79			18.27			18.39			17.24		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.04											
Intersection LOS	B											
Intersection V/C	0.288											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.17	16.17	16.17	16.17
l_p,int, Pedestrian LOS Score for Intersection	2.686	2.649	2.728	2.749
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1766	1808	1725	1890
d_b, Bicycle Delay [s]	0.33	0.23	0.46	0.07
l_b,int, Bicycle LOS Score for Intersection	1.810	1.928	2.042	2.117
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.229

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	83	8	8	5	4	10	17	368	144	21	491	7
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	2	2	1	1	3	5	108	42	6	144	2
Total Analysis Volume [veh/h]	97	9	9	6	5	12	20	430	168	25	574	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	8	12	12	1	4	92	85	85	92	85	85
g / C, Green / Cycle	0.07	0.10	0.10	0.01	0.04	0.77	0.70	0.70	0.77	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.05	0.00	0.01	0.00	0.01	0.02	0.12	0.11	0.03	0.16	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	889	3560	1589	881	3560	1589
c, Capacity [veh/h]	123	183	155	14	61	721	2505	1118	730	2517	1123
d1, Uniform Delay [s]	54.99	49.09	49.14	59.26	56.29	3.47	6.00	5.90	3.37	6.15	5.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	10.45	0.11	0.15	18.30	2.47	0.07	0.15	0.28	0.02	0.21	0.01
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
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	0.79	0.05	0.06	0.42	0.28	0.03	0.17	0.15	0.03	0.23	0.01
d, Delay for Lane Group [s/veh]	65.44	49.20	49.29	77.56	58.76	3.54	6.15	6.18	3.39	6.36	5.20
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.25	0.25	0.25	0.25	0.54	0.11	1.76	1.40	0.13	2.42	0.06
50th-Percentile Queue Length [ft/ln]	81.15	6.29	6.32	6.36	13.60	2.78	43.96	34.98	3.14	60.61	1.47
95th-Percentile Queue Length [veh/ln]	5.84	0.45	0.46	0.46	0.98	0.20	3.17	2.52	0.23	4.36	0.11
95th-Percentile Queue Length [ft/ln]	146.08	11.32	11.38	11.46	24.48	5.01	79.13	62.97	5.65	109.09	2.65

Movement, Approach, & Intersection Results

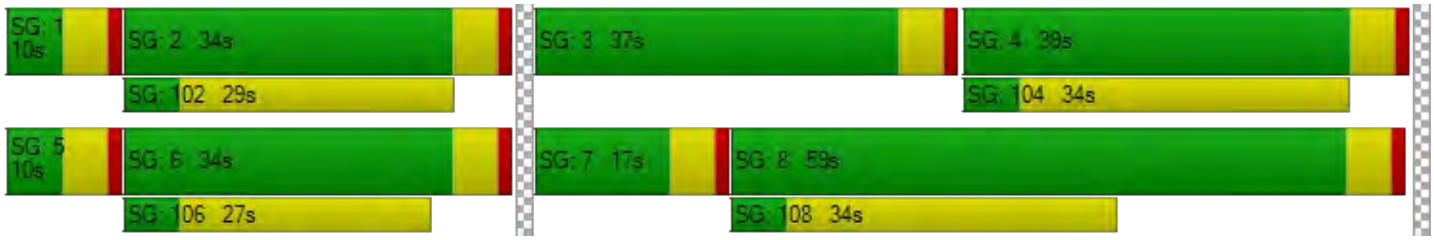
d_M, Delay for Movement [s/veh]	65.44	49.20	49.29	77.56	58.76	58.76	3.54	6.15	6.18	3.39	6.36	5.20
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	62.91			63.66			6.07			6.22		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	11.91											
Intersection LOS	B											
Intersection V/C	0.229											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.248	1.996	2.680	2.639
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.749	1.598	2.069	2.060
Bicycle LOS	A	A	B	B

Sequence

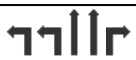
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.371

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	51	270	84	221	497	141	89	300	46	123	335	156
Peak Hour Factor	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	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]	13	70	22	57	129	37	23	78	12	32	87	40
Total Analysis Volume [veh/h]	53	280	87	229	515	146	92	311	48	127	347	162
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	16	42	0	20	46	46	13	43	0	15	45	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	62	62	10	67	80	8	18	18	10	20	20
g / C, Green / Cycle	0.04	0.52	0.52	0.08	0.56	0.67	0.06	0.15	0.15	0.08	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.05	0.07	0.14	0.09	0.05	0.09	0.03	0.07	0.14	0.14
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1672
c, Capacity [veh/h]	70	1837	820	292	1998	1062	116	531	237	149	314	281
d1, Uniform Delay [s]	57.11	15.27	14.88	53.89	13.51	7.29	55.33	47.64	44.83	54.25	48.51	48.62
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]	15.24	0.18	0.26	4.59	0.31	0.27	11.41	1.03	0.42	12.42	6.47	7.71
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	0.76	0.15	0.11	0.78	0.26	0.14	0.79	0.59	0.20	0.85	0.85	0.86
d, Delay for Lane Group [s/veh]	72.36	15.44	15.14	58.48	13.83	7.56	66.73	48.67	45.25	66.68	54.98	56.33
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.06	1.28	3.58	3.61	1.39	3.11	4.42	1.29	4.30	8.31	7.64
50th-Percentile Queue Length [ft/ln]	47.23	51.38	31.92	89.42	90.35	34.82	77.83	110.52	32.24	107.50	207.84	190.90
95th-Percentile Queue Length [veh/ln]	3.40	3.70	2.30	6.44	6.51	2.51	5.60	7.87	2.32	7.70	13.04	12.17
95th-Percentile Queue Length [ft/ln]	85.02	92.49	57.46	160.96	162.64	62.67	140.09	196.72	58.03	192.52	326.05	304.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.36	15.44	15.14	58.48	13.83	7.56	66.73	48.67	45.25	66.68	55.29	56.33
Movement LOS	E	B	B	E	B	A	E	D	D	E	E	E
d_A, Approach Delay [s/veh]	22.56			24.29			51.99			57.83		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.10											
Intersection LOS	D											
Intersection V/C	0.371											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.648	2.808	2.630	2.561
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	616	683	633	666
d_b, Bicycle Delay [s]	28.72	26.02	28.03	26.68
l_b,int, Bicycle LOS Score for Intersection	1.906	2.294	1.932	2.084
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	68	0	0	50	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	68	0	0	50	0
Peak Hour Factor	0.8400	0.8430	0.8400	0.8430	0.8430	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	0	0	15	0
Total Analysis Volume [veh/h]	0	81	0	0	59	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.31	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.31		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.140

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	249	445	45	53	0
Peak Hour Factor	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	69	123	12	15	0
Total Analysis Volume [veh/h]	0	274	490	50	58	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.14	0.00
d_M, Delay for Movement [s/veh]	8.51	0.00	0.00	0.00	15.06	11.17
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.48	0.48
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	12.03	12.03
d_A, Approach Delay [s/veh]	0.00		0.00		15.06	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	72	41	0	52	46	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	41	0	52	46	1
Peak Hour Factor	0.8410	0.8410	0.8410	0.8410	0.8410	0.8410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	12	0	15	14	0
Total Analysis Volume [veh/h]	86	49	0	62	55	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.48	0.00	9.73	9.14
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.22	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	5.49	5.49
d_A, Approach Delay [s/veh]	0.00		0.00		9.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.15					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.182

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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]	9	222	52	40	362	38	12	21	5	32	34	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	61	14	11	99	10	3	6	1	9	9	4
Total Analysis Volume [veh/h]	10	244	57	44	398	42	13	23	5	35	37	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	100	91	91	100	93	93	10	10	10
g / C, Green / Cycle	0.83	0.76	0.76	0.83	0.78	0.78	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.08	0.04	0.11	0.03	0.02	0.00	0.07
s, saturation flow rate [veh/h]	986	1870	1751	1126	3560	1589	1666	1589	1262
c, Capacity [veh/h]	884	1420	1329	1003	2776	1239	180	133	147
d1, Uniform Delay [s]	1.73	3.78	3.79	1.74	3.28	2.99	51.40	50.56	54.63
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.15	0.17	0.08	0.11	0.05	0.54	0.12	3.73
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	0.01	0.11	0.11	0.04	0.14	0.03	0.20	0.04	0.59
d, Delay for Lane Group [s/veh]	1.73	3.94	3.96	1.83	3.39	3.04	51.94	50.68	58.37
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.03	0.92	0.89	0.14	1.05	0.21	1.04	0.14	2.75
50th-Percentile Queue Length [ft/ln]	0.71	23.02	22.37	3.61	26.15	5.27	26.04	3.57	68.75
95th-Percentile Queue Length [veh/ln]	0.05	1.66	1.61	0.26	1.88	0.38	1.88	0.26	4.95
95th-Percentile Queue Length [ft/ln]	1.28	41.44	40.27	6.50	47.07	9.49	46.88	6.43	123.75

Movement, Approach, & Intersection Results

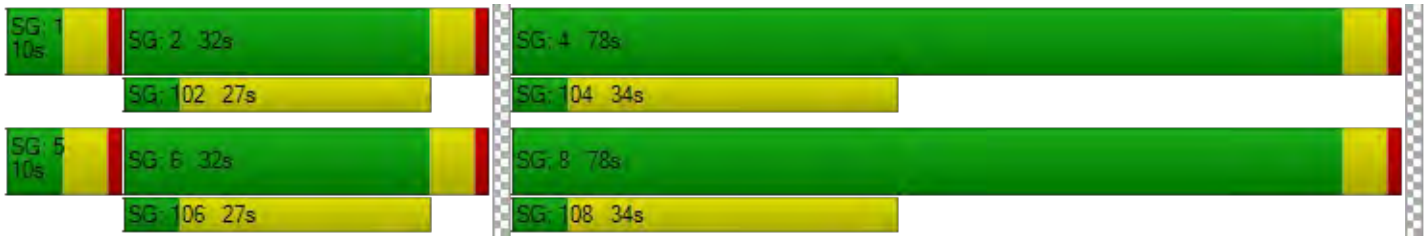
d_M, Delay for Movement [s/veh]	1.73	3.95	3.96	1.83	3.39	3.04	51.94	51.94	50.68	58.37	58.37	58.37
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	3.88			3.22			51.78			58.37		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	10.80											
Intersection LOS	B											
Intersection V/C	0.182											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	51.33	51.33	51.33
l_p,int, Pedestrian LOS Score for Intersection	2.511	2.733	2.009	1.881
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.03	36.03	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.816	1.959	1.627	1.703
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	104	32	0	94	24	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	32	0	94	24	0
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	28	9	0	25	6	0
Total Analysis Volume [veh/h]	111	34	0	101	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

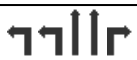
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.51	0.00	9.69	8.85
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	2.54	2.54
d_A, Approach Delay [s/veh]	0.00		0.00		9.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	34.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.648

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	255	418	315	295	496	231	274	797	64	572	822	265
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]	68	112	84	79	133	62	73	213	17	153	220	71
Total Analysis Volume [veh/h]	273	448	337	316	531	247	293	853	69	612	880	284
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	50	0	16	50	0	24	49	0	25	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	92	92	92	92	92	92	92	92	92	92	92	92
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	10	23	23	11	24	24	10	19	19	19	28	28
g / C, Green / Cycle	0.11	0.24	0.24	0.12	0.26	0.26	0.11	0.21	0.21	0.21	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.21	0.09	0.10	0.16	0.08	0.17	0.04	0.18	0.25	0.17
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	369	1248	389	415	1316	411	390	1064	332	727	1090	506
d1, Uniform Delay [s]	40.11	28.93	33.49	39.45	28.42	30.14	39.82	34.81	30.29	35.10	29.60	26.90
k, delay calibration	0.11	0.11	0.18	0.11	0.11	0.11	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]	2.93	0.17	9.38	2.90	0.20	1.42	2.95	1.46	0.31	2.75	1.47	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	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.36	0.87	0.76	0.40	0.60	0.75	0.80	0.21	0.84	0.81	0.56
d, Delay for Lane Group [s/veh]	43.04	29.11	42.87	42.35	28.62	31.56	42.77	36.26	30.60	37.85	31.07	27.88
Lane Group LOS	D	C	D	D	C	C	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.12	2.72	8.06	3.59	3.21	4.88	3.23	5.86	1.24	6.74	8.94	5.25
50th-Percentile Queue Length [ft/ln]	77.96	67.98	201.62	89.77	80.35	122.05	80.80	146.43	30.88	168.49	223.49	131.30
95th-Percentile Queue Length [veh/ln]	5.61	4.89	12.72	6.46	5.78	8.51	5.82	9.83	2.22	11.00	13.84	9.01
95th-Percentile Queue Length [ft/ln]	140.33	122.37	318.06	161.59	144.62	212.64	145.43	245.66	55.58	274.93	346.08	225.26

Movement, Approach, & Intersection Results

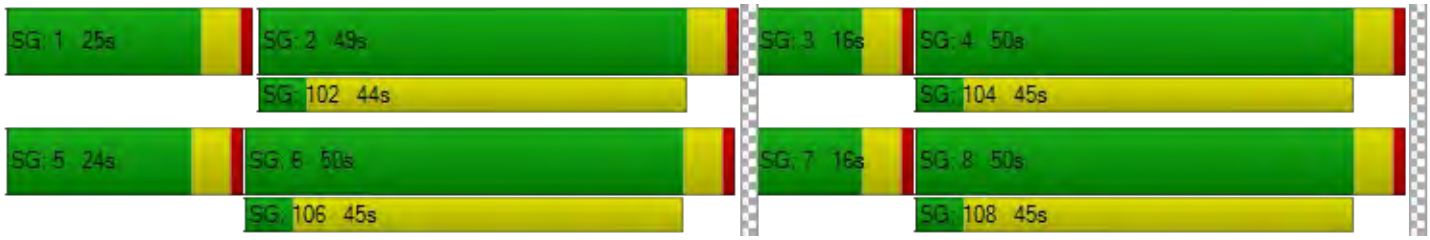
d_M, Delay for Movement [s/veh]	43.04	29.11	42.87	42.35	28.62	31.56	42.77	36.26	30.60	37.85	31.07	27.88
Movement LOS	D	C	D	D	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	37.09			33.25			37.51			32.89		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	34.92											
Intersection LOS	C											
Intersection V/C	0.648											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.61	37.61	37.61	37.61
l_p,int, Pedestrian LOS Score for Intersection	3.098	3.082	3.277	3.128
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	975	975	953	975
d_b, Bicycle Delay [s]	12.13	12.13	12.65	12.13
l_b,int, Bicycle LOS Score for Intersection	2.142	2.161	2.228	3.025
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	38.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	139	44	181	384	48	134	221	863	80	252	1126	265
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]	36	11	46	98	12	34	57	221	20	65	288	68
Total Analysis Volume [veh/h]	142	45	185	393	49	137	226	884	82	258	1154	272
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	31	0	0	36	0	50	49	0	24	23	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	73	73	13	66	66
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.52	0.52	0.09	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.17	0.05	0.07	0.23	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	240	246	214	470	225	254	2669	833	315	2407	751
d1, Uniform Delay [s]	55.27	55.26	59.30	58.97	58.89	58.93	19.19	16.72	62.46	25.17	23.48
k, delay calibration	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
d2, Incremental Delay [s]	1.01	0.99	9.92	4.03	7.57	10.29	0.33	0.24	5.20	0.69	1.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.38	0.86	0.84	0.83	0.89	0.33	0.10	0.82	0.48	0.36
d, Delay for Lane Group [s/veh]	56.28	56.25	69.21	62.99	66.46	69.22	19.52	16.96	67.66	25.85	24.84
Lane Group LOS	E	E	E	E	E	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.13	7.03	7.07	6.91	8.61	5.65	1.40	4.75	8.91	6.06
50th-Percentile Queue Length [ft/ln]	76.72	78.35	175.77	176.84	172.77	215.24	141.19	35.10	118.84	222.83	151.57
95th-Percentile Queue Length [veh/ln]	5.52	5.64	11.38	11.44	11.22	13.42	9.54	2.53	8.33	13.81	10.10
95th-Percentile Queue Length [ft/ln]	138.09	141.04	284.49	285.89	280.56	335.54	238.62	63.18	208.23	345.23	252.52

Movement, Approach, & Intersection Results

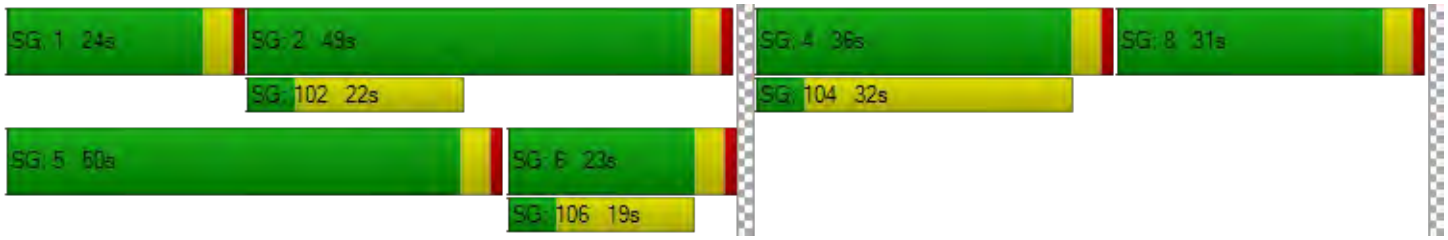
d_M, Delay for Movement [s/veh]	56.27	56.25	69.21	62.99	66.46	66.46	69.22	19.52	16.96	67.66	25.85	24.84
Movement LOS	E	E	E	E	E	E	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	62.70			64.11			28.77			32.09		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.88											
Intersection LOS	D											
Intersection V/C	0.583											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.28	61.28	61.28	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.599	2.541	3.068	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	386	457	643	271
d_b, Bicycle Delay [s]	45.60	41.65	32.23	52.28
l_b,int, Bicycle LOS Score for Intersection	2.173	2.515	2.215	2.486
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	0	0	0	388	1	801	0	1047	525	0	1228	510
Peak Hour Factor	0.9500	0.9500	0.9500	0.9660	0.9660	0.9660	0.9500	0.9660	0.9660	0.9500	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]	0	0	0	100	0	207	0	271	136	0	318	132
Total Analysis Volume [veh/h]	0	0	0	402	1	829	0	1084	543	0	1271	528
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	70	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		21	21	21	23	23	23	49
g / C, Green / Cycle		0.39	0.39	0.39	0.42	0.42	0.42	0.91
(v / s)_i Volume / Saturation Flow Rate		0.11	0.11	0.29	0.21	0.34	0.25	0.33
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		696	696	1100	2166	676	2166	1443
d1, Uniform Delay [s]		11.37	11.37	14.30	11.41	13.64	11.97	0.34
k, delay calibration		0.11	0.11	0.11	0.11	0.16	0.11	0.15
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.23	0.23	1.07	0.18	3.30	0.25	0.21
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		0.29	0.29	0.75	0.50	0.80	0.59	0.37
d, Delay for Lane Group [s/veh]		11.60	11.60	15.37	11.59	16.94	12.22	0.55
Lane Group LOS		B	B	B	B	B	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.47	1.47	3.86	2.69	5.38	3.31	0.08
50th-Percentile Queue Length [ft/ln]		36.84	36.83	96.53	67.17	134.56	82.78	2.09
95th-Percentile Queue Length [veh/ln]		2.65	2.65	6.95	4.84	9.19	5.96	0.15
95th-Percentile Queue Length [ft/ln]		66.30	66.30	173.75	120.90	229.68	149.00	3.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	11.60	11.60	15.37	0.00	11.59	16.94	0.00	12.22	0.55
Movement LOS				B	B	B		B	B		B	A
d_A, Approach Delay [s/veh]	0.00			14.14			13.38			8.80		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	11.81											
Intersection LOS	B											
Intersection V/C	0.636											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	18.85	18.85	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.092	2.814	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	2398	1660	1660
d_b, Bicycle Delay [s]	27.10	1.08	0.78	0.78
l_b,int, Bicycle LOS Score for Intersection	4.132	3.592	2.454	2.549
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	543	1	736	0	0	0	0	1013	437	0	1205	279
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	141	0	192	0	0	0	0	264	114	0	314	73
Total Analysis Volume [veh/h]	566	1	767	0	0	0	0	1055	455	0	1255	291
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	70	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	45	45	45		45	45	45	45
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	18	18		17	40	17	17
g / C, Green / Cycle	0.40	0.40	0.40		0.38	0.89	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.27		0.21	0.29	0.25	0.18
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	709	709	1120		1939	1413	1939	605
d1, Uniform Delay [s]	9.73	9.73	11.25		10.93	0.39	11.49	10.60
k, delay calibration	0.11	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
d2, Incremental Delay [s]	0.37	0.37	0.75		0.24	0.13	0.37	0.59
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	0.40	0.40	0.69		0.54	0.32	0.65	0.48
d, Delay for Lane Group [s/veh]	10.10	10.10	12.00		11.16	0.52	11.86	11.20
Lane Group LOS	B	B	B		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.64	1.64	2.57		2.20	0.05	2.76	1.83
50th-Percentile Queue Length [ft/ln]	40.95	40.95	64.14		54.97	1.28	69.10	45.78
95th-Percentile Queue Length [veh/ln]	2.95	2.95	4.62		3.96	0.09	4.98	3.30
95th-Percentile Queue Length [ft/ln]	73.71	73.70	115.45		98.94	2.31	124.38	82.40

Movement, Approach, & Intersection Results

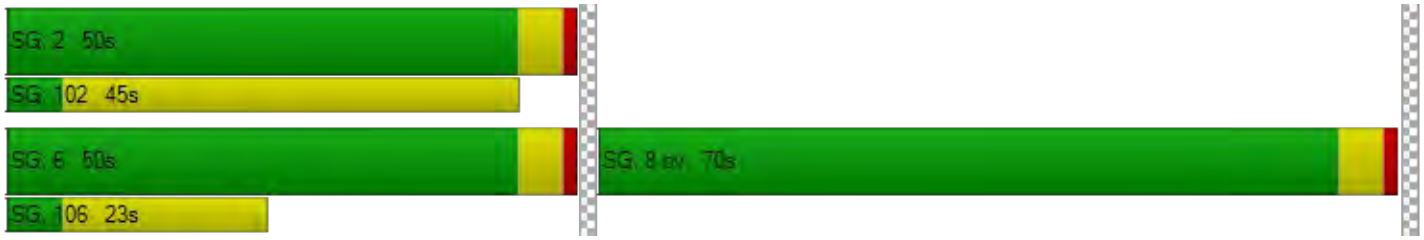
d_M, Delay for Movement [s/veh]	10.10	10.10	12.00	0.00	0.00	0.00	0.00	11.16	0.52	0.00	11.86	11.20
Movement LOS	B	B	B					B	A		B	B
d_A, Approach Delay [s/veh]	11.19			0.00			7.96			11.74		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	10.27											
Intersection LOS	B											
Intersection V/C	0.519											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.39	14.39	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.807	1.999	0.000	0.000
Crosswalk LOS	C	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2890	0	2001	2001
d_b, Bicycle Delay [s]	4.45	22.49	0.00	0.00
l_b,int, Bicycle LOS Score for Intersection	3.761	4.132	2.390	2.410
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	1	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	382	40	149	0	44	76	118	1261	287	210	1021	1
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	11	39	0	12	20	31	334	76	56	270	0
Total Analysis Volume [veh/h]	404	42	158	0	47	80	125	1334	304	222	1080	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	46	0	10	46	0	53	37	0	47	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R	L	C	R
C, Cycle Length [s]	71	71	71	71	71	71	71	71	71	71	71
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	11	20	20	0	9	7	24	24	7	24	24
g / C, Green / Cycle	0.16	0.29	0.29	0.00	0.13	0.09	0.34	0.34	0.10	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.12	0.02	0.10	0.00	0.08	0.07	0.26	0.19	0.06	0.21	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1683	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	542	534	454	0	217	165	1718	536	339	1744	544
d1, Uniform Delay [s]	28.85	18.71	20.31	0.00	29.41	31.72	21.33	19.47	31.16	19.67	15.51
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream 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]	2.06	0.06	0.46	0.00	2.49	6.85	0.78	0.95	2.15	0.36	0.00
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	0.75	0.08	0.35	0.00	0.59	0.76	0.78	0.57	0.66	0.62	0.00
d, Delay for Lane Group [s/veh]	30.91	18.78	20.77	0.00	31.90	38.56	22.11	20.41	33.31	20.03	15.51
Lane Group LOS	C	B	C	A	C	D	C	C	C	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.33	0.49	2.04	0.00	2.13	2.35	6.32	4.00	1.88	4.71	0.01
50th-Percentile Queue Length [ft/ln]	83.13	12.37	51.00	0.00	53.22	58.71	157.89	100.10	47.09	117.66	0.26
95th-Percentile Queue Length [veh/ln]	5.99	0.89	3.67	0.00	3.83	4.23	10.44	7.21	3.39	8.26	0.02
95th-Percentile Queue Length [ft/ln]	149.63	22.26	91.81	0.00	95.80	105.68	260.92	180.18	84.76	206.60	0.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.91	18.78	20.77	0.00	31.90	31.90	38.56	22.11	20.41	33.31	20.03	15.51
Movement LOS	C	B	C	A	C	C	D	C	C	C	C	B
d_A, Approach Delay [s/veh]	27.41			31.90			22.98			22.29		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.75											
Intersection LOS	C											
Intersection V/C	0.518											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	27.30	27.30	27.30	27.30
l_p,int, Pedestrian LOS Score for Intersection	2.634	2.193	3.121	3.142
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1148	1148	896	728
d_b, Bicycle Delay [s]	6.49	6.49	10.89	14.46
l_b,int, Bicycle LOS Score for Intersection	2.556	1.769	2.529	2.276
Bicycle LOS	B	A	B	B

Sequence

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



Appendix D-2

Phase 1 without Project (2027)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\2 P1 AM.pdf

Scenario 3 P1 no Project AM
2023-03-13

Intersection Analysis Summary

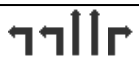
ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	WB Left	0.272	13.8	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.004	12.4	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.261	16.9	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.382	22.5	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.437	43.7	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.081	12.0	B
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.075	9.3	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.183	15.6	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.043	9.4	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.582	28.4	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.415	21.8	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	SB Right	0.535	8.3	A
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.513	8.5	A
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	EB Left	0.408	20.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.272

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	3	4	4	0	9	9	4	16	8	4	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	544	4	0	247	193	369	16	60	4	11	0
Peak Hour Factor	0.9600	0.9600	0.9500	0.9500	0.9600	0.9600	0.9600	0.9500	0.9600	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]	13	142	1	0	64	50	96	4	16	1	3	0
Total Analysis Volume [veh/h]	50	567	4	0	257	201	384	17	63	4	12	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	13	46	0	20	49	0	24	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	41	41	41	41	41	41	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	12	12	0	10	10	7	8	8	0	1	1
g / C, Green / Cycle	0.05	0.30	0.30	0.00	0.24	0.24	0.18	0.20	0.20	0.01	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.00	0.05	0.13	0.11	0.00	0.04	0.00	0.01	0.00
s, saturation flow rate [veh/h]	1781	3560	1863	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	97	1062	556	1	1245	388	618	730	326	21	60	51
d1, Uniform Delay [s]	18.77	11.22	11.22	0.00	12.26	13.33	15.48	12.95	13.42	20.18	19.22	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	4.21	0.20	0.38	0.00	0.08	1.07	1.03	0.01	0.29	4.53	1.59	0.00
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	0.52	0.35	0.35	0.00	0.21	0.52	0.62	0.02	0.19	0.19	0.20	0.00
d, Delay for Lane Group [s/veh]	22.98	11.42	11.60	0.00	12.34	14.40	16.50	12.96	13.71	24.71	20.82	0.00
Lane Group LOS	C	B	B	A	B	B	B	B	B	C	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.51	1.09	1.17	0.00	0.52	1.42	1.47	0.05	0.43	0.03	0.12	0.00
50th-Percentile Queue Length [ft/ln]	12.87	27.13	29.14	0.00	12.98	35.38	36.79	1.34	10.67	0.74	3.10	0.00
95th-Percentile Queue Length [veh/ln]	0.93	1.95	2.10	0.00	0.93	2.55	2.65	0.10	0.77	0.05	0.22	0.00
95th-Percentile Queue Length [ft/ln]	23.17	48.84	52.45	0.00	23.36	63.68	66.22	2.41	19.20	1.33	5.58	0.00

Movement, Approach, & Intersection Results

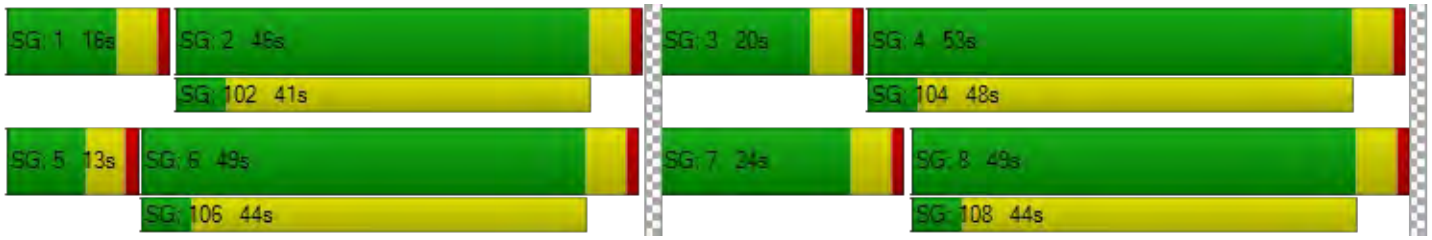
d_M, Delay for Movement [s/veh]	22.98	11.48	11.60	0.00	12.34	14.40	16.50	12.96	13.71	24.71	20.82	0.00
Movement LOS	C	B	B	A	B	B	B	B	B	C	C	A
d_A, Approach Delay [s/veh]	12.41			13.25			15.99			21.79		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	13.82											
Intersection LOS	B											
Intersection V/C	0.272											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	12.33	12.33	12.33	12.33
l_p,int, Pedestrian LOS Score for Intersection	2.684	2.855	2.653	2.417
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2163	2016	2163	2360
d_b, Bicycle Delay [s]	0.14	0.00	0.14	0.66
l_b,int, Bicycle LOS Score for Intersection	1.901	1.812	1.942	1.586
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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	20	0	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	525	0	3	483
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	154	0	1	142
Total Analysis Volume [veh/h]	0	2	618	0	4	568
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

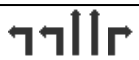
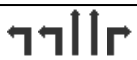
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	22.53	12.39	0.00	0.00	8.76	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.31	0.00	0.00	0.31	0.00
d_A, Approach Delay [s/veh]	12.39		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.261

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	4	0	4	4	8	8	12	0	0	7	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	217	121	38	54	45	68	395	55	127	378	111
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	60	34	11	15	13	19	110	15	35	105	31
Total Analysis Volume [veh/h]	60	241	134	42	60	50	76	439	61	141	420	123
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	50	0	10	49	0	12	47	0	13	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	46	46	46	46	46	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	3	10	10	4	11	11
g / C, Green / Cycle	0.06	0.21	0.21	0.05	0.20	0.20	0.07	0.22	0.22	0.09	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.08	0.01	0.02	0.03	0.02	0.12	0.04	0.04	0.12	0.08
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	209	763	341	164	716	320	241	769	344	319	850	379
d1, Uniform Delay [s]	20.90	15.41	15.69	21.37	15.10	15.33	20.59	16.31	14.87	19.98	15.29	14.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.74	0.24	0.74	0.81	0.05	0.23	0.74	0.67	0.24	0.96	0.45	0.49
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	0.29	0.32	0.39	0.26	0.08	0.16	0.31	0.57	0.18	0.44	0.49	0.32
d, Delay for Lane Group [s/veh]	21.64	15.64	16.43	22.18	15.15	15.55	21.33	16.98	15.11	20.94	15.74	15.11
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	0.96	1.13	0.22	0.23	0.40	0.38	1.88	0.48	0.69	1.70	0.97
50th-Percentile Queue Length [ft/ln]	7.58	23.99	28.20	5.46	5.77	10.05	9.47	46.93	12.02	17.26	42.49	24.35
95th-Percentile Queue Length [veh/ln]	0.55	1.73	2.03	0.39	0.42	0.72	0.68	3.38	0.87	1.24	3.06	1.75
95th-Percentile Queue Length [ft/ln]	13.65	43.18	50.77	9.82	10.38	18.09	17.04	84.47	21.63	31.07	76.48	43.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.64	15.64	16.43	22.18	15.15	15.55	21.33	16.98	15.11	20.94	15.74	15.11
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.71			17.23			17.35			16.70		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.95											
Intersection LOS	B											
Intersection V/C	0.261											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.06	15.06	15.06	15.06
l_p,int, Pedestrian LOS Score for Intersection	2.657	2.642	2.714	2.741
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1941	1898	1812	1855
d_b, Bicycle Delay [s]	0.02	0.06	0.21	0.12
l_b,int, Bicycle LOS Score for Intersection	1.918	1.685	2.035	2.124
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.382

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	8	0	0	0	0	0	0	8	8	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	23	35	41	16	98	156	385	63	52	467	60
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	7	11	13	5	31	49	120	20	16	146	19
Total Analysis Volume [veh/h]	154	29	44	51	20	123	195	481	79	65	584	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	39	0	37	52	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	12	20	20	5	13	80	71	71	80	70	70
g / C, Green / Cycle	0.10	0.17	0.17	0.04	0.11	0.67	0.59	0.59	0.67	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.09	0.02	0.03	0.03	0.09	0.22	0.14	0.04	0.07	0.16	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	877	3560	2000	937	3560	1589
c, Capacity [veh/h]	183	319	271	68	172	604	2090	1174	653	2073	926
d1, Uniform Delay [s]	52.89	41.96	42.49	57.18	52.65	8.15	11.84	10.66	7.27	12.53	10.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.80	0.12	0.28	15.11	9.97	1.41	0.26	0.11	0.07	0.34	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.84	0.09	0.16	0.75	0.83	0.32	0.23	0.07	0.10	0.28	0.08
d, Delay for Lane Group [s/veh]	62.69	42.08	42.76	72.29	62.62	9.56	12.10	10.77	7.34	12.87	11.17
Lane Group LOS	E	D	D	E	E	A	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.06	0.74	1.14	1.82	4.70	2.04	3.09	0.93	0.57	3.95	0.91
50th-Percentile Queue Length [ft/ln]	126.42	18.52	28.56	45.46	117.51	50.95	77.34	23.23	14.17	98.64	22.78
95th-Percentile Queue Length [veh/ln]	8.74	1.33	2.06	3.27	8.26	3.67	5.57	1.67	1.02	7.10	1.64
95th-Percentile Queue Length [ft/ln]	218.62	33.33	51.40	81.84	206.40	91.71	139.22	41.81	25.50	177.55	41.00

Movement, Approach, & Intersection Results

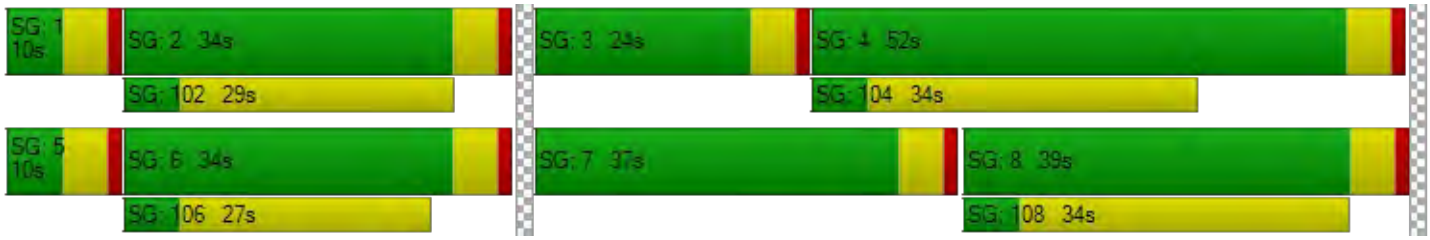
d_M, Delay for Movement [s/veh]	62.69	42.08	42.76	72.29	62.62	62.62	9.56	12.10	10.77	7.34	12.87	11.17
Movement LOS	E	D	D	E	E	E	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	56.19			65.16			11.30			12.20		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.51											
Intersection LOS	C											
Intersection V/C	0.382											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.298	2.282	2.731	2.679
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	783	483	483
d_b, Bicycle Delay [s]	30.83	22.22	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	1.934	1.880	2.182	2.157
Bicycle LOS	A	A	B	B

Sequence

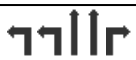
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	43.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	8	4	0	8	0	0	8	0	4	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	325	179	135	207	59	80	231	38	205	238	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	107	59	44	68	19	26	76	13	67	78	47
Total Analysis Volume [veh/h]	100	428	236	178	272	78	105	304	50	270	313	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	20	43	0	27	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	66	66	9	66	80	10	14	14	21	26	26
g / C, Green / Cycle	0.07	0.51	0.51	0.07	0.51	0.62	0.07	0.10	0.10	0.17	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.15	0.05	0.08	0.05	0.06	0.09	0.03	0.15	0.14	0.14
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1638
c, Capacity [veh/h]	124	1810	808	234	1804	984	131	374	167	294	367	322
d1, Uniform Delay [s]	59.66	17.87	18.46	59.57	17.13	9.94	59.28	56.95	53.78	53.41	48.95	49.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.18	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]	11.75	0.31	0.92	5.02	0.18	0.16	10.61	4.31	0.99	17.20	2.73	3.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.24	0.29	0.76	0.15	0.08	0.80	0.81	0.30	0.92	0.73	0.73
d, Delay for Lane Group [s/veh]	71.41	18.18	19.38	64.59	17.31	10.09	69.89	61.26	54.77	70.61	51.68	52.16
Lane Group LOS	E	B	B	E	B	B	E	E	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	3.69	4.32	3.05	2.24	0.93	3.80	5.12	1.57	10.08	8.40	7.44
50th-Percentile Queue Length [ft/ln]	91.50	92.27	108.08	76.32	56.01	23.37	94.97	127.94	39.16	252.10	209.94	186.02
95th-Percentile Queue Length [veh/ln]	6.59	6.64	7.73	5.49	4.03	1.68	6.84	8.83	2.82	15.29	13.15	11.91
95th-Percentile Queue Length [ft/ln]	164.69	166.09	193.32	137.37	100.83	42.07	170.94	220.69	70.48	382.30	328.75	297.86

Movement, Approach, & Intersection Results

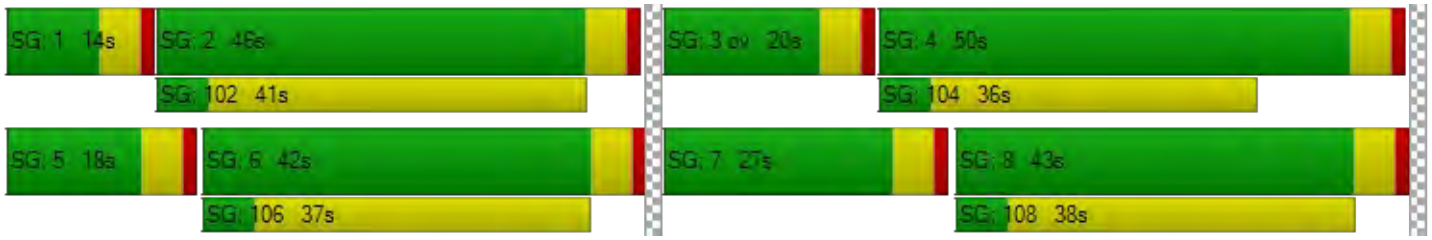
d_M, Delay for Movement [s/veh]	71.41	18.18	19.38	64.59	17.31	10.09	69.89	61.26	54.77	70.61	51.76	52.16
Movement LOS	E	B	B	E	B	B	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	25.52			32.18			62.53			58.46		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	43.72											
Intersection LOS	D											
Intersection V/C	0.437											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.692	2.787	2.626	2.609
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	692
d_b, Bicycle Delay [s]	33.27	30.47	32.56	27.80
l_b,int, Bicycle LOS Score for Intersection	2.190	1.995	1.938	2.196
Bicycle LOS	B	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	0	0	18	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	41	0	0	18	0
Peak Hour Factor	1.0000	0.8200	0.9500	0.8200	0.8200	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	0	0	5	0
Total Analysis Volume [veh/h]	0	50	0	0	22	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.11	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.11		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.081

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	4	4	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	340	205	19	40	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	97	58	5	11	0
Total Analysis Volume [veh/h]	0	386	233	22	45	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.08	0.00
d_M, Delay for Movement [s/veh]	7.75	0.00	0.00	0.00	12.04	9.51
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.26	0.26
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.57	6.57
d_A, Approach Delay [s/veh]	0.00		0.00		12.04	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	31	24	0	36	60	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	24	0	36	60	1
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	7	0	10	17	0
Total Analysis Volume [veh/h]	35	27	0	41	68	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.27	8.85
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.24	0.24
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.12	6.12
d_A, Approach Delay [s/veh]	0.00		0.00		9.27	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.183

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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	4	0	0	4	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	271	12	10	176	16	42	7	3	29	33	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	74	3	3	48	4	12	2	1	8	9	9
Total Analysis Volume [veh/h]	3	298	13	11	193	18	46	8	3	32	36	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	96	89	89	96	90	90	14	14	14
g / C, Green / Cycle	0.80	0.74	0.74	0.80	0.75	0.75	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.08	0.01	0.05	0.01	0.06	0.00	0.10
s, saturation flow rate [veh/h]	1193	1870	1843	1102	3560	1589	868	1589	1055
c, Capacity [veh/h]	1029	1392	1372	948	2683	1198	157	187	163
d1, Uniform Delay [s]	2.43	4.27	4.27	2.46	3.86	3.69	49.56	46.82	51.91
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.00	0.16	0.17	0.02	0.05	0.02	1.28	0.03	3.98
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	0.00	0.11	0.11	0.01	0.07	0.02	0.34	0.02	0.63
d, Delay for Lane Group [s/veh]	2.43	4.43	4.44	2.48	3.91	3.71	50.84	46.85	55.88
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.01	1.02	1.02	0.05	0.57	0.11	1.58	0.08	3.25
50th-Percentile Queue Length [ft/ln]	0.30	25.62	25.45	1.21	14.13	2.63	39.48	2.04	81.16
95th-Percentile Queue Length [veh/ln]	0.02	1.84	1.83	0.09	1.02	0.19	2.84	0.15	5.84
95th-Percentile Queue Length [ft/ln]	0.53	46.11	45.82	2.17	25.44	4.73	71.07	3.67	146.08

Movement, Approach, & Intersection Results

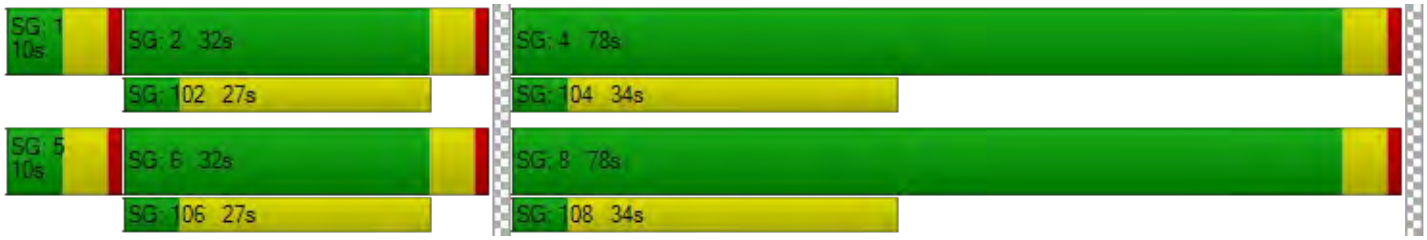
d_M, Delay for Movement [s/veh]	2.43	4.44	4.44	2.48	3.91	3.71	50.84	50.84	46.85	55.88	55.88	55.88
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	4.42			3.82			50.63			55.88		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	15.63											
Intersection LOS	B											
Intersection V/C	0.183											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.466	2.758	1.996	1.808
Crosswalk LOS	B	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.819	1.743	1.654	1.730
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	55	12	0	97	34	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	12	0	97	34	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	3	0	27	9	0
Total Analysis Volume [veh/h]	60	13	0	107	37	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

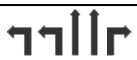
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.36	0.00	9.36	8.69
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	3.44	3.44
d_A, Approach Delay [s/veh]	0.00		0.00		9.34	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.63					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	28.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.582

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	3	3	4	22	2	0	0	26	2	4	30	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	479	391	232	242	101	185	812	34	320	621	170
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	123	101	60	62	26	48	209	9	82	160	44
Total Analysis Volume [veh/h]	110	494	403	239	249	104	191	837	35	330	640	175
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	21	55	0	16	50	0	19	49	0	20	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	77	77	77	77	77	77	77	77	77	77	77	77
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	23	23	8	26	26	6	16	16	10	20	20
g / C, Green / Cycle	0.06	0.29	0.29	0.10	0.34	0.34	0.08	0.21	0.21	0.13	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.25	0.07	0.05	0.07	0.06	0.16	0.02	0.10	0.18	0.11
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	204	1499	468	350	1713	534	294	1089	340	450	923	428
d1, Uniform Delay [s]	35.08	21.16	25.60	33.30	17.77	18.09	34.00	28.37	24.24	32.08	25.67	23.55
k, delay calibration	0.11	0.11	0.18	0.11	0.11	0.11	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]	2.20	0.13	7.62	2.37	0.04	0.18	2.43	1.17	0.13	2.32	0.95	0.63
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	0.33	0.86	0.68	0.15	0.19	0.65	0.77	0.10	0.73	0.69	0.41
d, Delay for Lane Group [s/veh]	37.28	21.29	33.22	35.67	17.81	18.26	36.43	29.54	24.37	34.41	26.61	24.17
Lane Group LOS	D	C	C	D	B	B	D	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.04	2.23	7.54	2.20	0.99	1.28	1.71	4.51	0.48	2.99	5.14	2.59
50th-Percentile Queue Length [ft/ln]	25.88	55.75	188.49	54.98	24.68	31.92	42.65	112.77	12.08	74.84	128.61	64.86
95th-Percentile Queue Length [veh/ln]	1.86	4.01	12.04	3.96	1.78	2.30	3.07	7.99	0.87	5.39	8.86	4.67
95th-Percentile Queue Length [ft/ln]	46.59	100.34	301.07	98.96	44.42	57.46	76.77	199.85	21.75	134.72	221.60	116.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.28	21.29	33.22	35.67	17.81	18.26	36.43	29.54	24.37	34.41	26.61	24.17
Movement LOS	D	C	C	D	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	27.81			25.10			30.61			28.49		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.37											
Intersection LOS	C											
Intersection V/C	0.582											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.81	29.81	29.81	29.81
l_p,int, Pedestrian LOS Score for Intersection	3.018	3.000	3.154	3.039
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1306	1175	1149	1175
d_b, Bicycle Delay [s]	4.61	6.51	6.92	6.51
l_b,int, Bicycle LOS Score for Intersection	2.113	1.885	2.144	2.504
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	21.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.415

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	51	0	0	59	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	11	138	102	10	18	43	1221	80	175	1027	168
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	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	3	35	26	3	5	11	311	20	45	262	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1246	82	179	1048	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	9	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.24	0.05	0.05	0.21	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	189	190	168	248	120	58	3271	1021	229	3441	1074
d1, Uniform Delay [s]	57.77	57.76	61.40	62.20	61.35	67.15	11.87	9.45	64.37	9.27	8.25
k, delay calibration	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
d2, Incremental Delay [s]	0.86	0.85	10.44	1.13	0.98	17.85	0.34	0.15	5.76	0.23	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.76	0.38	0.08	0.78	0.30	0.16
d, Delay for Lane Group [s/veh]	58.63	58.62	71.85	63.34	62.33	85.00	12.21	9.61	70.13	9.50	8.57
Lane Group LOS	E	E	E	E	E	F	B	A	E	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.42	1.82	0.98	1.86	6.16	1.00	3.34	4.34	1.95
50th-Percentile Queue Length [ft/ln]	47.05	47.38	135.55	45.51	24.47	46.40	153.93	24.89	83.48	108.54	48.86
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.24	3.28	1.76	3.34	10.23	1.79	6.01	7.76	3.52
95th-Percentile Queue Length [ft/ln]	84.69	85.29	231.03	81.92	44.05	83.51	255.67	44.81	150.26	193.96	87.94

Movement, Approach, & Intersection Results

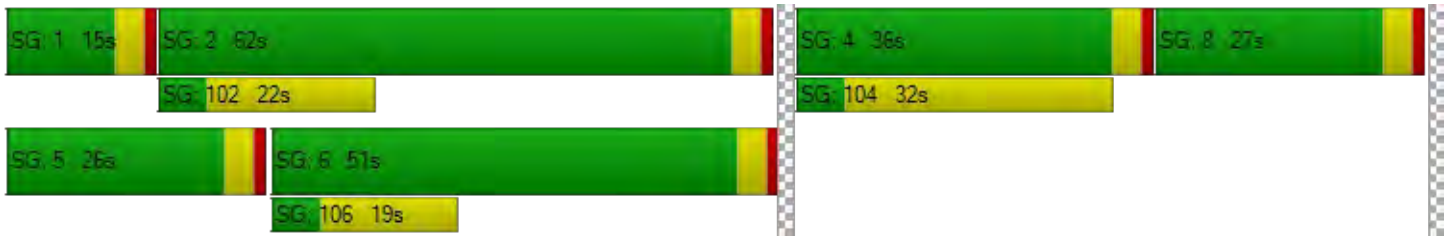
d_M, Delay for Movement [s/veh]	58.62	58.62	71.85	63.34	62.33	62.33	85.00	12.21	9.61	70.13	9.50	8.57
Movement LOS	E	E	E	E	E	E	F	B	A	E	A	A
d_A, Approach Delay [s/veh]	65.99			63.12			14.39			17.15		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	21.79											
Intersection LOS	C											
Intersection V/C	0.415											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.057	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.314	2.329
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	38	0	19	0	36	16	0	40	60
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	206	1	533	0	1026	524	0	819	778
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	53	0	137	0	264	135	0	211	201
Total Analysis Volume [veh/h]	0	0	0	212	1	549	0	1058	540	0	844	802
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		15	15	15	20	20	20	40
g / C, Green / Cycle		0.33	0.33	0.33	0.45	0.45	0.45	0.89
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.20	0.21	0.34	0.17	0.50
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		585	586	925	2281	712	2281	1412
d1, Uniform Delay [s]		10.73	10.73	12.53	8.61	10.33	8.18	0.56
k, delay calibration		0.11	0.11	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
d2, Incremental Delay [s]		0.15	0.15	0.61	0.15	1.69	0.10	0.84
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		0.18	0.18	0.59	0.46	0.76	0.37	0.57
d, Delay for Lane Group [s/veh]		10.87	10.87	13.14	8.76	12.02	8.28	1.41
Lane Group LOS		B	B	B	A	B	A	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.64	0.64	1.93	1.80	3.58	1.36	0.33
50th-Percentile Queue Length [ft/ln]		16.00	16.01	48.35	44.90	89.42	33.95	8.27
95th-Percentile Queue Length [veh/ln]		1.15	1.15	3.48	3.23	6.44	2.44	0.60
95th-Percentile Queue Length [ft/ln]		28.81	28.82	87.04	80.82	160.96	61.11	14.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	10.87	10.87	13.14	0.00	8.76	12.02	0.00	8.28	1.41
Movement LOS				B	B	B		A	B		A	A
d_A, Approach Delay [s/veh]	0.00			12.51			9.86			4.93		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	8.34											
Intersection LOS	A											
Intersection V/C	0.535											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.22	14.22	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.080	2.776	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	672	2017	2017
d_b, Bicycle Delay [s]	22.31	9.83	0.00	0.00
l_b,int, Bicycle LOS Score for Intersection	4.132	2.817	2.439	2.465
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	19	0	56	0	0	0	0	57	16	0	82	40
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	421	3	548	0	0	0	0	582	684	0	1176	425
Peak Hour Factor	0.9700	0.9700	0.9700	0.9500	0.9500	0.9500	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	1	141	0	0	0	0	150	176	0	303	110
Total Analysis Volume [veh/h]	434	3	565	0	0	0	0	600	705	0	1212	438
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	42	42	42		42	42	42	42
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	15	15	15		18	37	18	18
g / C, Green / Cycle	0.35	0.35	0.35		0.42	0.88	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.20		0.12	0.44	0.24	0.28
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	618	618	976		2126	1402	2126	663
d1, Uniform Delay [s]	10.31	10.31	11.32		8.16	0.53	9.44	9.94
k, delay calibration	0.11	0.11	0.11		0.11	0.16	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.34	0.55		0.07	0.42	0.24	1.13
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	0.35	0.35	0.58		0.28	0.50	0.57	0.66
d, Delay for Lane Group [s/veh]	10.66	10.66	11.87		8.23	0.95	9.69	11.07
Lane Group LOS	B	B	B		A	A	A	B
Critical Lane Group	No	No	No		No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.25	1.25	1.77		0.91	0.16	2.15	2.60
50th-Percentile Queue Length [ft/ln]	31.27	31.26	44.13		22.78	4.11	53.63	65.01
95th-Percentile Queue Length [veh/ln]	2.25	2.25	3.18		1.64	0.30	3.86	4.68
95th-Percentile Queue Length [ft/ln]	56.28	56.27	79.44		41.00	7.40	96.53	117.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.66	10.66	11.87	0.00	0.00	0.00	0.00	8.23	0.95	0.00	9.69	11.07
Movement LOS	B	B	B					A	A		A	B
d_A, Approach Delay [s/veh]	11.34			0.00			4.30			10.05		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	8.48											
Intersection LOS	A											
Intersection V/C	0.513											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	13.08	13.08	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.792	2.044	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	710	0	2131	2131
d_b, Bicycle Delay [s]	8.78	21.12	0.09	0.09
l_b,int, Bicycle LOS Score for Intersection	3.213	4.132	2.277	2.467
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.408

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	58	0	10	0	0	0	0	59	55	9	64	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	401	33	93	0	35	96	52	818	206	114	1102	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	9	24	0	9	25	14	215	54	30	290	0
Total Analysis Volume [veh/h]	422	35	98	0	37	101	55	861	217	120	1160	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	43	0	10	43	0	56	32	0	55	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	61	61	61	61	61	61	61	61	61	61	61	61
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	10	19	19	0	9	9	3	17	17	4	19	19
g / C, Green / Cycle	0.17	0.32	0.32	0.00	0.15	0.15	0.05	0.28	0.28	0.07	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.12	0.02	0.06	0.00	0.04	0.04	0.02	0.17	0.14	0.03	0.23	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1725	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	585	594	505	0	256	236	174	1445	451	247	1553	485
d1, Uniform Delay [s]	24.03	14.51	15.17	0.00	23.10	23.14	28.01	18.87	18.16	27.29	19.12	14.77
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.70	0.04	0.19	0.00	0.57	0.66	1.04	0.40	0.80	1.47	0.73	0.00
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	0.72	0.06	0.19	0.00	0.28	0.29	0.32	0.60	0.48	0.48	0.75	0.00
d, Delay for Lane Group [s/veh]	25.73	14.55	15.36	0.00	23.67	23.80	29.05	19.27	18.96	28.76	19.85	14.77
Lane Group LOS	C	B	B	A	C	C	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.83	0.32	0.93	0.00	0.89	0.86	0.39	3.25	2.43	0.85	4.56	0.01
50th-Percentile Queue Length [ft/ln]	70.70	7.91	23.31	0.00	22.21	21.42	9.85	81.25	60.65	21.21	113.95	0.23
95th-Percentile Queue Length [veh/ln]	5.09	0.57	1.68	0.00	1.60	1.54	0.71	5.85	4.37	1.53	8.06	0.02
95th-Percentile Queue Length [ft/ln]	127.25	14.23	41.95	0.00	39.97	38.55	17.73	146.25	109.18	38.18	201.48	0.41

Movement, Approach, & Intersection Results

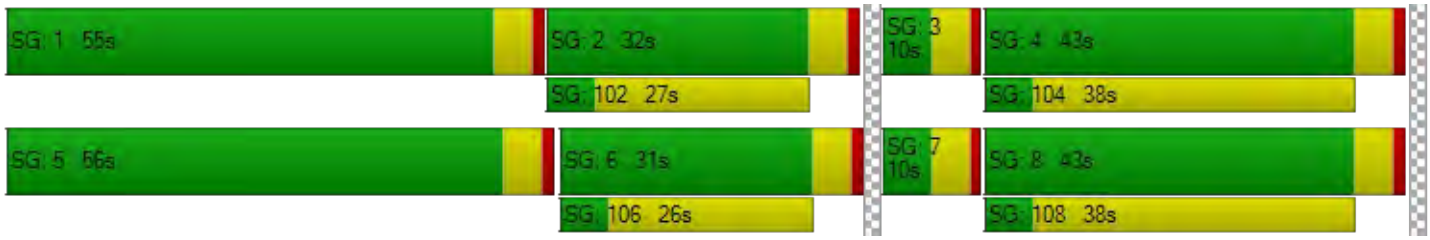
d_M, Delay for Movement [s/veh]	25.73	14.55	15.36	0.00	23.67	23.76	29.05	19.27	18.96	28.76	19.85	14.77
Movement LOS	C	B	B	A	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	23.19			23.74			19.69			20.68		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	20.90											
Intersection LOS	C											
Intersection V/C	0.408											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.15	22.15	22.15	22.15
l_p,int, Pedestrian LOS Score for Intersection	2.585	2.326	3.136	3.073
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1247	1247	886	853
d_b, Bicycle Delay [s]	4.32	4.32	9.46	10.03
l_b,int, Bicycle LOS Score for Intersection	2.475	1.787	2.183	2.264
Bicycle LOS	B	A	B	B

Sequence

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



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Report File: H:\...\2 P1 PM.pdf

Scenario 4 P1 no Project PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	WB Left	0.439	15.9	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Left	0.021	24.6	C
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.292	18.2	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.240	12.4	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.378	38.2	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.141	15.2	C
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.067	9.7	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.183	10.7	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.033	9.7	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.682	38.5	D
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.602	39.0	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.670	12.8	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.571	11.6	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	EB Left	0.530	25.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.439

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	9	14	6	0	11	11	14	17	6	5	20	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	611	6	0	660	434	386	17	113	5	20	0
Peak Hour Factor	0.9800	0.9800	0.9500	0.9500	0.9800	0.9800	0.9800	0.9500	0.9800	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	156	2	0	168	111	98	4	29	1	5	0
Total Analysis Volume [veh/h]	63	623	6	0	673	443	394	18	115	5	21	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	16	46	0	22	49	0	26	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	53	53	53	53	53	53	53	53	53	53	53	53
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	22	22	0	19	19	9	11	11	0	3	3
g / C, Green / Cycle	0.06	0.41	0.41	0.00	0.35	0.35	0.17	0.21	0.21	0.01	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.00	0.13	0.28	0.11	0.01	0.07	0.00	0.01	0.00
s, saturation flow rate [veh/h]	1781	3560	1861	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	102	1449	757	0	1781	556	576	749	334	24	95	81
d1, Uniform Delay [s]	24.51	10.58	10.59	0.00	12.97	15.60	20.87	16.68	17.89	26.29	24.25	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	5.91	0.11	0.20	0.00	0.13	2.67	1.45	0.01	0.61	4.40	1.16	0.00
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	0.62	0.28	0.29	0.00	0.38	0.80	0.68	0.02	0.34	0.21	0.22	0.00
d, Delay for Lane Group [s/veh]	30.43	10.69	10.79	0.00	13.10	18.27	22.32	16.69	18.50	30.68	25.42	0.00
Lane Group LOS	C	B	B	A	B	B	C	B	B	C	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.89	1.39	1.48	0.00	1.76	4.54	2.21	0.08	1.14	0.04	0.27	0.00
50th-Percentile Queue Length [ft/ln]	22.19	34.80	36.95	0.00	43.93	113.39	55.23	2.02	28.59	1.10	6.67	0.00
95th-Percentile Queue Length [veh/ln]	1.60	2.51	2.66	0.00	3.16	8.03	3.98	0.15	2.06	0.08	0.48	0.00
95th-Percentile Queue Length [ft/ln]	39.95	62.64	66.51	0.00	79.08	200.70	99.41	3.63	51.46	1.97	12.01	0.00

Movement, Approach, & Intersection Results

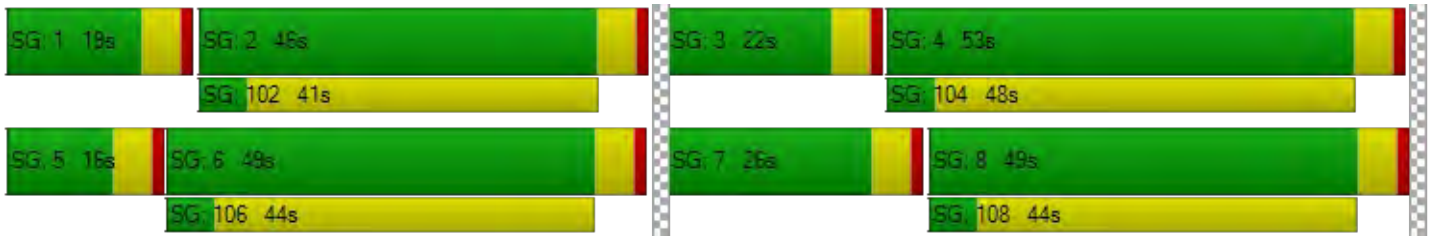
d_M, Delay for Movement [s/veh]	30.43	10.72	10.79	0.00	13.10	18.27	22.32	16.69	18.50	30.68	25.42	0.00
Movement LOS	C	B	B	A	B	B	C	B	B	C	C	A
d_A, Approach Delay [s/veh]	12.52			15.15			21.29			26.43		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.88											
Intersection LOS	B											
Intersection V/C	0.439											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	18.31	18.31	18.31	18.31
l_p,int, Pedestrian LOS Score for Intersection	2.775	2.959	2.715	2.435
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1657	1544	1657	1808
d_b, Bicycle Delay [s]	0.78	1.38	0.78	0.25
l_b,int, Bicycle LOS Score for Intersection	1.940	2.173	1.994	1.603
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	24.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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	22	0	0	25
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]	4	4	570	7	25	573
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	1	1	148	2	7	149
Total Analysis Volume [veh/h]	4	4	594	7	26	597
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

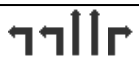
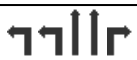
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	24.62	12.19	0.00	0.00	8.79	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.02	0.00	0.00	0.08	0.00
95th-Percentile Queue Length [ft/ln]	1.63	0.60	0.00	0.00	2.05	0.00
d_A, Approach Delay [s/veh]	18.40		0.00		0.37	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.30					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.292

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	6	0	6	5	10	11	11	0	0	14	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	92	88	117	117	243	88	48	415	119	195	418	53
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]	24	23	30	30	63	23	13	108	31	51	109	14
Total Analysis Volume [veh/h]	96	92	122	122	253	92	50	432	124	203	435	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	48	0	11	49	0	11	47	0	14	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	3	10	10	5	13	13
g / C, Green / Cycle	0.08	0.20	0.20	0.08	0.20	0.20	0.05	0.21	0.21	0.10	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.08	0.04	0.07	0.06	0.01	0.12	0.08	0.06	0.12	0.03
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	266	697	311	294	726	324	183	733	327	361	917	409
d1, Uniform Delay [s]	21.43	16.24	17.13	21.22	16.69	16.45	22.26	17.55	16.72	20.84	15.36	13.97
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	0.08	0.80	0.93	0.29	0.48	0.80	0.76	0.72	1.37	0.38	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.13	0.39	0.41	0.35	0.28	0.27	0.59	0.38	0.56	0.47	0.13
d, Delay for Lane Group [s/veh]	22.26	16.32	17.94	22.16	16.97	16.93	23.06	18.31	17.45	22.21	15.74	14.12
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.51	0.39	1.13	0.64	1.10	0.81	0.27	2.01	1.12	1.07	1.82	0.42
50th-Percentile Queue Length [ft/ln]	12.63	9.64	28.14	15.98	27.56	20.31	6.81	50.21	28.06	26.65	45.59	10.62
95th-Percentile Queue Length [veh/ln]	0.91	0.69	2.03	1.15	1.98	1.46	0.49	3.61	2.02	1.92	3.28	0.76
95th-Percentile Queue Length [ft/ln]	22.73	17.35	50.66	28.76	49.60	36.56	12.26	90.37	50.50	47.98	82.05	19.12

Movement, Approach, & Intersection Results

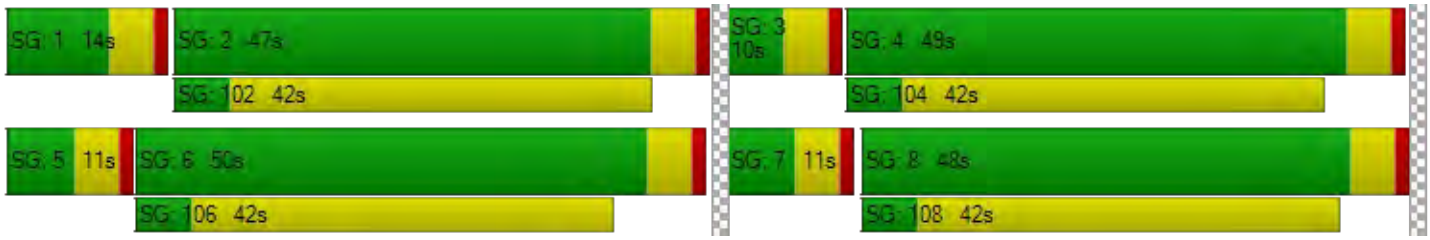
d_M, Delay for Movement [s/veh]	22.26	16.32	17.94	22.16	16.97	16.93	23.06	18.31	17.45	22.21	15.74	14.12
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.80			18.32			18.52			17.51		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.18											
Intersection LOS	B											
Intersection V/C	0.292											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.18	16.18	16.18	16.18
l_p,int, Pedestrian LOS Score for Intersection	2.687	2.655	2.734	2.754
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1766	1807	1725	1848
d_b, Bicycle Delay [s]	0.33	0.23	0.46	0.14
l_b,int, Bicycle LOS Score for Intersection	1.815	1.945	2.060	2.131
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.240

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	10	0	0	0	0	0	0	6	11	0	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	8	8	5	4	10	17	374	155	21	500	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	2	2	1	1	3	5	110	46	6	147	2
Total Analysis Volume [veh/h]	109	9	9	6	5	12	20	440	182	25	588	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	9	13	13	1	4	91	84	84	91	84	84
g / C, Green / Cycle	0.08	0.11	0.11	0.01	0.04	0.76	0.70	0.70	0.76	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.06	0.00	0.01	0.00	0.01	0.02	0.12	0.11	0.03	0.17	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	879	3560	1589	865	3560	1589
c, Capacity [veh/h]	137	197	167	14	61	705	2478	1106	710	2490	1112
d1, Uniform Delay [s]	54.49	48.28	48.32	59.26	56.29	3.71	6.33	6.26	3.60	6.50	5.45
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	10.05	0.09	0.13	18.30	2.47	0.07	0.16	0.32	0.02	0.22	0.01
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
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	0.80	0.05	0.05	0.42	0.28	0.03	0.18	0.16	0.04	0.24	0.01
d, Delay for Lane Group [s/veh]	64.54	48.37	48.45	77.56	58.76	3.79	6.48	6.58	3.62	6.72	5.47
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.62	0.25	0.25	0.25	0.54	0.12	1.87	1.58	0.13	2.58	0.06
50th-Percentile Queue Length [ft/ln]	90.53	6.22	6.25	6.36	13.60	2.92	46.72	39.61	3.30	64.62	1.52
95th-Percentile Queue Length [veh/ln]	6.52	0.45	0.45	0.46	0.98	0.21	3.36	2.85	0.24	4.65	0.11
95th-Percentile Queue Length [ft/ln]	162.95	11.20	11.25	11.46	24.48	5.25	84.10	71.30	5.94	116.32	2.74

Movement, Approach, & Intersection Results

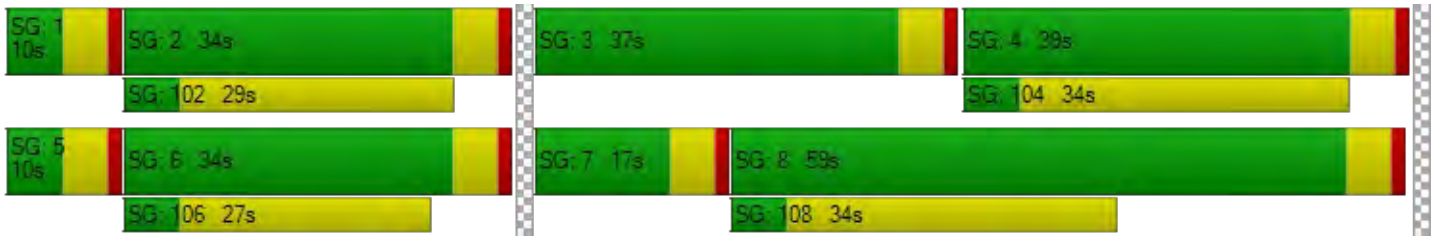
d_M, Delay for Movement [s/veh]	64.54	48.37	48.45	77.56	58.76	58.76	3.79	6.48	6.58	3.62	6.72	5.47
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	62.25			63.66			6.43			6.58		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	12.45											
Intersection LOS	B											
Intersection V/C	0.240											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.254	1.995	2.688	2.643
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.769	1.598	2.089	2.072
Bicycle LOS	A	A	B	B

Sequence

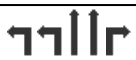
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.378

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	11	5	0	11	0	0	6	0	6	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	281	89	221	508	141	89	306	46	129	344	156
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	73	23	58	132	37	23	80	12	34	90	41
Total Analysis Volume [veh/h]	53	293	93	230	529	147	93	319	48	134	358	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	16	42	0	20	46	46	17	43	0	15	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	61	61	10	67	80	8	19	19	10	21	21
g / C, Green / Cycle	0.04	0.51	0.51	0.08	0.56	0.67	0.07	0.15	0.15	0.08	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.06	0.07	0.15	0.09	0.05	0.09	0.03	0.08	0.15	0.15
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1675
c, Capacity [veh/h]	70	1816	811	293	1979	1057	120	550	246	149	320	287
d1, Uniform Delay [s]	57.11	15.70	15.30	53.87	13.92	7.43	55.09	47.14	44.25	54.48	48.32	48.41
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]	15.24	0.19	0.29	4.60	0.33	0.28	10.11	0.97	0.38	16.61	6.50	7.68
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	0.76	0.16	0.11	0.78	0.27	0.14	0.77	0.58	0.20	0.90	0.85	0.86
d, Delay for Lane Group [s/veh]	72.36	15.89	15.59	58.46	14.25	7.71	65.21	48.11	44.64	71.09	54.83	56.09
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.19	1.39	3.59	3.79	1.42	3.11	4.51	1.28	4.70	8.51	7.81
50th-Percentile Queue Length [ft/ln]	47.23	54.77	34.77	89.81	94.71	35.53	77.67	112.73	31.98	117.48	212.64	195.19
95th-Percentile Queue Length [veh/ln]	3.40	3.94	2.50	6.47	6.82	2.56	5.59	7.99	2.30	8.25	13.29	12.39
95th-Percentile Queue Length [ft/ln]	85.02	98.59	62.58	161.66	170.47	63.95	139.80	199.79	57.56	206.36	332.21	309.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.36	15.89	15.59	58.46	14.25	7.71	65.21	48.11	44.64	71.09	55.13	56.09
Movement LOS	E	B	B	E	B	A	E	D	D	E	E	E
d_A, Approach Delay [s/veh]	22.64			24.41			51.20			58.63		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.22											
Intersection LOS	D											
Intersection V/C	0.378											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.655	2.812	2.634	2.568
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	616	683	633	600
d_b, Bicycle Delay [s]	28.72	26.02	28.03	29.42
l_b,int, Bicycle LOS Score for Intersection	1.922	2.307	1.939	2.100
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	68	0	0	50	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	68	0	0	50	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	0	0	15	0
Total Analysis Volume [veh/h]	0	81	0	0	60	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.31	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.31		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.141

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	6	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	255	450	45	53	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	70	124	12	15	0
Total Analysis Volume [veh/h]	0	280	495	49	58	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.14	0.00
d_M, Delay for Movement [s/veh]	8.53	0.00	0.00	0.00	15.20	11.22
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	12.19	12.19
d_A, Approach Delay [s/veh]	0.00		0.00		15.20	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	72	41	0	52	46	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	41	0	52	46	1
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	12	0	15	14	0
Total Analysis Volume [veh/h]	86	49	0	62	55	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.48	0.00	9.73	9.14
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.22	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	5.49	5.49
d_A, Approach Delay [s/veh]	0.00		0.00		9.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.15					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.183

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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	6	0	0	5	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	228	52	40	367	38	12	21	5	32	34	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	63	14	11	101	10	3	6	1	9	9	4
Total Analysis Volume [veh/h]	10	251	57	44	403	42	13	23	5	35	37	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	100	91	91	100	93	93	10	10	10
g / C, Green / Cycle	0.83	0.76	0.76	0.83	0.78	0.78	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.09	0.04	0.11	0.03	0.02	0.00	0.07
s, saturation flow rate [veh/h]	982	1870	1753	1120	3560	1589	1666	1589	1262
c, Capacity [veh/h]	880	1420	1331	997	2776	1239	180	133	147
d1, Uniform Delay [s]	1.73	3.79	3.80	1.75	3.29	2.99	51.40	50.56	54.63
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.16	0.17	0.08	0.11	0.05	0.54	0.12	3.73
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	0.01	0.11	0.11	0.04	0.15	0.03	0.20	0.04	0.59
d, Delay for Lane Group [s/veh]	1.74	3.95	3.98	1.83	3.40	3.04	51.94	50.68	58.37
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.03	0.94	0.92	0.14	1.06	0.21	1.04	0.14	2.75
50th-Percentile Queue Length [ft/ln]	0.71	23.60	22.94	3.62	26.52	5.27	26.04	3.57	68.75
95th-Percentile Queue Length [veh/ln]	0.05	1.70	1.65	0.26	1.91	0.38	1.88	0.26	4.95
95th-Percentile Queue Length [ft/ln]	1.28	42.49	41.29	6.51	47.73	9.49	46.88	6.43	123.75

Movement, Approach, & Intersection Results

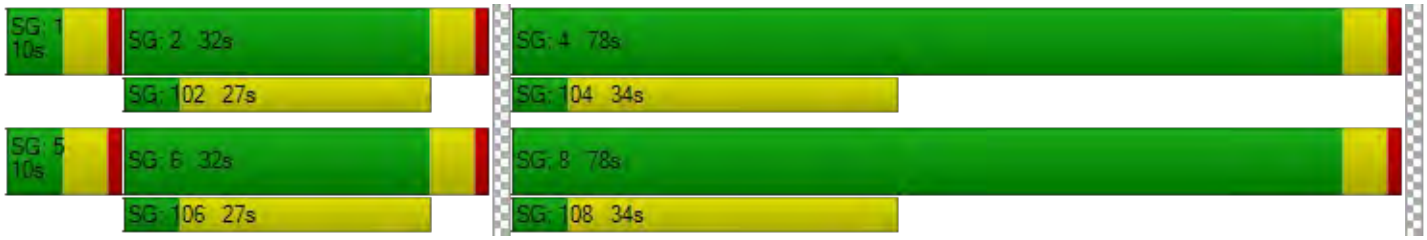
d_M, Delay for Movement [s/veh]	1.74	3.96	3.98	1.83	3.40	3.04	51.94	51.94	50.68	58.37	58.37	58.37
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	3.89			3.23			51.78			58.37		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	10.71											
Intersection LOS	B											
Intersection V/C	0.183											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	51.33	51.33	51.33
l_p,int, Pedestrian LOS Score for Intersection	2.513	2.735	2.009	1.881
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.03	36.03	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.822	1.963	1.627	1.703
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	104	32	0	94	24	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	32	0	94	24	0
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	9	0	25	6	0
Total Analysis Volume [veh/h]	112	34	0	101	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

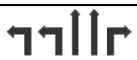
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.51	0.00	9.69	8.85
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	2.54	2.54
d_A, Approach Delay [s/veh]	0.00		0.00		9.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.92					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	38.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	5	5	6	47	5	0	0	53	5	5	49	44
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	260	423	321	342	501	231	274	850	69	577	871	309
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	114	86	92	135	62	74	228	19	155	234	83
Total Analysis Volume [veh/h]	280	455	345	368	539	248	295	914	74	620	937	332
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	50	0	16	50	0	24	49	0	25	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	101	101	101	101	101	101	101	101	101	101	101	101
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	11	25	25	14	28	28	11	22	22	21	32	32
g / C, Green / Cycle	0.11	0.24	0.24	0.13	0.27	0.27	0.11	0.22	0.22	0.21	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.22	0.11	0.11	0.16	0.09	0.18	0.05	0.18	0.26	0.20
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	367	1248	389	461	1385	432	383	1103	344	721	1120	520
d1, Uniform Delay [s]	44.18	31.82	37.01	42.74	30.13	31.92	43.96	38.02	32.72	38.80	32.42	29.89
k, delay calibration	0.11	0.11	0.24	0.11	0.11	0.11	0.11	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]	3.29	0.18	13.65	3.23	0.18	1.20	3.31	1.67	0.31	3.15	1.74	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	0.76	0.36	0.89	0.80	0.39	0.57	0.77	0.83	0.21	0.86	0.84	0.64
d, Delay for Lane Group [s/veh]	47.48	32.00	50.67	45.97	30.31	33.13	47.27	39.69	33.03	41.95	34.16	32.32
Lane Group LOS	D	C	D	D	C	C	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.57	3.08	9.58	4.64	3.57	5.33	3.64	7.04	1.47	7.65	10.72	7.18
50th-Percentile Queue Length [ft/ln]	89.14	77.11	239.57	116.07	89.16	133.17	91.07	176.12	36.66	191.29	268.08	179.49
95th-Percentile Queue Length [veh/ln]	6.42	5.55	14.66	8.18	6.42	9.11	6.56	11.40	2.64	12.19	16.09	11.57
95th-Percentile Queue Length [ft/ln]	160.46	138.80	366.49	204.42	160.49	227.80	163.93	284.94	66.00	304.70	402.34	289.35

Movement, Approach, & Intersection Results

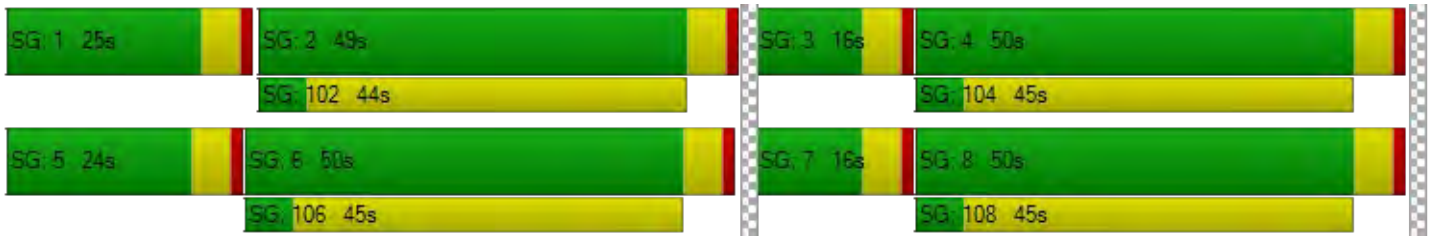
d_M, Delay for Movement [s/veh]	47.48	32.00	50.67	45.97	30.31	33.13	47.27	39.69	33.03	41.95	34.16	32.32
Movement LOS	D	C	D	D	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	41.98			35.90			41.05			36.39		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	38.51											
Intersection LOS	D											
Intersection V/C	0.682											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	42.12	42.12	42.12	42.12
l_p,int, Pedestrian LOS Score for Intersection	3.107	3.099	3.303	3.161
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	887	887	867	887
d_b, Bicycle Delay [s]	15.71	15.71	16.27	15.71
l_b,int, Bicycle LOS Score for Intersection	2.154	2.195	2.265	3.118
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.602

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	106	0	0	98	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	44	181	384	48	134	221	969	80	252	1224	265
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	11	46	98	12	34	56	247	20	64	312	68
Total Analysis Volume [veh/h]	142	45	185	392	49	137	226	989	82	257	1249	270
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	75	75	11	67	67
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.54	0.54	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.19	0.05	0.07	0.25	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	239	245	214	468	224	250	2734	853	274	2423	756
d1, Uniform Delay [s]	55.31	55.31	59.34	59.01	58.95	59.26	18.64	15.84	64.12	25.50	23.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.15	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]	1.02	0.99	10.06	4.04	7.70	15.30	0.37	0.22	14.40	0.79	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
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	0.39	0.87	0.84	0.83	0.91	0.36	0.10	0.94	0.52	0.36
d, Delay for Lane Group [s/veh]	56.33	56.30	69.40	63.05	66.65	74.57	19.01	16.06	78.52	26.28	24.50
Lane Group LOS	E	E	E	E	E	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.14	7.04	7.06	6.92	8.97	6.28	1.36	5.12	9.83	5.97
50th-Percentile Queue Length [ft/ln]	76.75	78.39	176.01	176.45	173.02	224.24	156.97	34.00	127.98	245.77	149.23
95th-Percentile Queue Length [veh/ln]	5.53	5.64	11.39	11.41	11.24	13.88	10.39	2.45	8.83	14.97	9.98
95th-Percentile Queue Length [ft/ln]	138.15	141.10	284.80	285.37	280.88	347.04	259.70	61.21	220.75	374.32	249.40

Movement, Approach, & Intersection Results

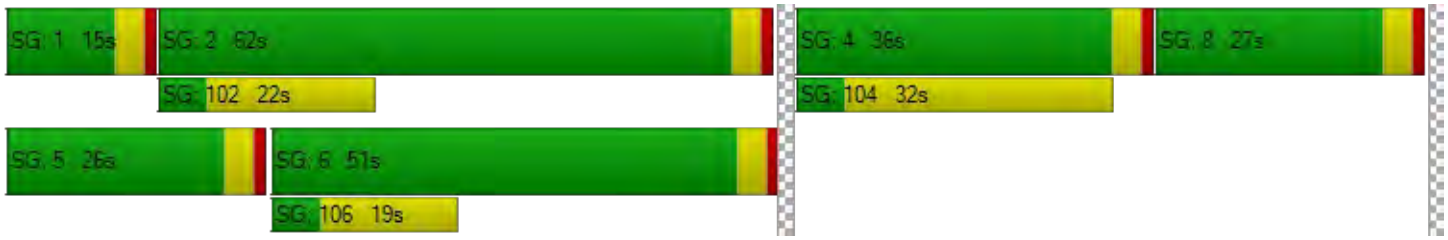
d_M, Delay for Movement [s/veh]	56.32	56.30	69.40	63.05	66.65	66.65	74.57	19.01	16.06	78.52	26.28	24.50
Movement LOS	E	E	E	E	E	E	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	62.82			64.21			28.51			33.57		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	39.05											
Intersection LOS	D											
Intersection V/C	0.602											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.599	2.540	3.092	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.173	2.513	2.273	2.536
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.670

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	55	0	34	0	69	36	0	64	76
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	443	1	835	0	1116	561	0	1292	586
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	114	0	215	0	288	145	0	333	151
Total Analysis Volume [veh/h]	0	0	0	457	1	861	0	1151	578	0	1332	604
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		59	59	59	59	59	59	59
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		23	23	23	26	26	26	54
g / C, Green / Cycle		0.40	0.40	0.40	0.43	0.43	0.43	0.91
(v / s)_i Volume / Saturation Flow Rate		0.13	0.13	0.31	0.23	0.36	0.26	0.38
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		705	705	1114	2213	691	2213	1455
d1, Uniform Delay [s]		12.35	12.35	15.51	12.19	14.82	12.77	0.34
k, delay calibration		0.11	0.11	0.11	0.11	0.23	0.11	0.25
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.26	0.26	1.17	0.19	5.61	0.27	0.44
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		0.32	0.32	0.77	0.52	0.84	0.60	0.42
d, Delay for Lane Group [s/veh]		12.61	12.61	16.68	12.38	20.43	13.04	0.78
Lane Group LOS		B	B	B	B	C	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.89	1.89	4.52	3.19	6.85	3.88	0.18
50th-Percentile Queue Length [ft/ln]		47.21	47.21	112.92	79.75	171.25	96.91	4.40
95th-Percentile Queue Length [veh/ln]		3.40	3.40	8.00	5.74	11.14	6.98	0.32
95th-Percentile Queue Length [ft/ln]		84.97	84.97	200.05	143.55	278.56	174.44	7.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	12.61	12.61	16.68	0.00	12.38	20.43	0.00	13.04	0.78
Movement LOS				B	B	B		B	C		B	A
d_A, Approach Delay [s/veh]	0.00			15.27			15.07			9.21		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	12.85											
Intersection LOS	B											
Intersection V/C	0.670											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.09	21.09	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.108	2.841	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	510	1530	1530
d_b, Bicycle Delay [s]	29.40	16.32	1.62	1.62
l_b,int, Bicycle LOS Score for Intersection	4.132	3.736	2.511	2.624
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	34	0	83	0	0	0	0	88	36	0	106	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	577	1	819	0	0	0	0	1101	473	0	1311	330
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	150	0	213	0	0	0	0	287	123	0	341	86
Total Analysis Volume [veh/h]	601	1	853	0	0	0	0	1147	493	0	1366	344
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
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	51	51	51		51	51	51	51
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	21	21	21		20	46	20	20
g / C, Green / Cycle	0.41	0.41	0.41		0.39	0.90	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.30		0.23	0.31	0.27	0.22
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	735	735	1161		2003	1435	2003	625
d1, Uniform Delay [s]	10.70	10.70	12.76		12.25	0.35	12.97	12.11
k, delay calibration	0.11	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
d2, Incremental Delay [s]	0.37	0.37	0.92		0.26	0.14	0.41	0.76
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		1.00	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	0.41	0.41	0.73		0.57	0.34	0.68	0.55
d, Delay for Lane Group [s/veh]	11.06	11.06	13.68		12.51	0.49	13.38	12.87
Lane Group LOS	B	B	B		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.07	2.07	3.52		2.90	0.06	3.67	2.67
50th-Percentile Queue Length [ft/ln]	51.70	51.70	87.91		72.49	1.41	91.81	66.72
95th-Percentile Queue Length [veh/ln]	3.72	3.72	6.33		5.22	0.10	6.61	4.80
95th-Percentile Queue Length [ft/ln]	93.06	93.05	158.23		130.49	2.54	165.26	120.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.06	11.06	13.68	0.00	0.00	0.00	0.00	12.51	0.49	0.00	13.38	12.87
Movement LOS	B	B	B					B	A		B	B
d_A, Approach Delay [s/veh]	12.60			0.00			8.89			13.28		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	11.58											
Intersection LOS	B											
Intersection V/C	0.571											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.48	17.48	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.837	2.024	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	584	0	1752	1752
d_b, Bicycle Delay [s]	12.88	25.69	0.40	0.40
l_b,int, Bicycle LOS Score for Intersection	3.960	4.132	2.462	2.500
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.530

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	73	0	13	0	0	0	0	91	80	14	84	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	455	40	162	0	44	76	118	1352	367	224	1105	1
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	121	11	43	0	12	20	31	360	98	60	294	0
Total Analysis Volume [veh/h]	484	43	172	0	47	81	126	1438	390	238	1176	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	43	0	10	43	0	56	32	0	55	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	78	78	78	78	78	78	78	78	78	78	78	78
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14	23	23	0	9	9	5	27	27	8	30	30
g / C, Green / Cycle	0.18	0.30	0.30	0.00	0.12	0.12	0.06	0.35	0.35	0.10	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.14	0.02	0.11	0.00	0.04	0.04	0.04	0.28	0.25	0.07	0.23	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1780	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	616	558	474	0	214	191	213	1758	549	348	1957	611
d1, Uniform Delay [s]	30.69	19.69	21.57	0.00	31.38	31.46	35.71	23.34	22.20	33.94	19.26	14.83
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.17	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]	2.27	0.06	0.47	0.00	0.80	0.98	2.62	0.98	2.71	2.39	0.30	0.00
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	0.79	0.08	0.36	0.00	0.31	0.33	0.59	0.82	0.71	0.68	0.60	0.00
d, Delay for Lane Group [s/veh]	32.96	19.75	22.04	0.00	32.18	32.43	38.33	24.33	24.91	36.34	19.56	14.83
Lane Group LOS	C	B	C	A	C	C	D	C	C	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.39	0.55	2.44	0.00	1.15	1.10	1.22	7.71	6.25	2.24	5.38	0.01
50th-Percentile Queue Length [ft/ln]	109.83	13.78	60.92	0.00	28.78	27.47	30.45	192.66	156.32	55.92	134.57	0.27
95th-Percentile Queue Length [veh/ln]	7.83	0.99	4.39	0.00	2.07	1.98	2.19	12.26	10.35	4.03	9.19	0.02
95th-Percentile Queue Length [ft/ln]	195.76	24.80	109.65	0.00	51.80	49.45	54.81	306.48	258.84	100.65	229.69	0.48

Movement, Approach, & Intersection Results

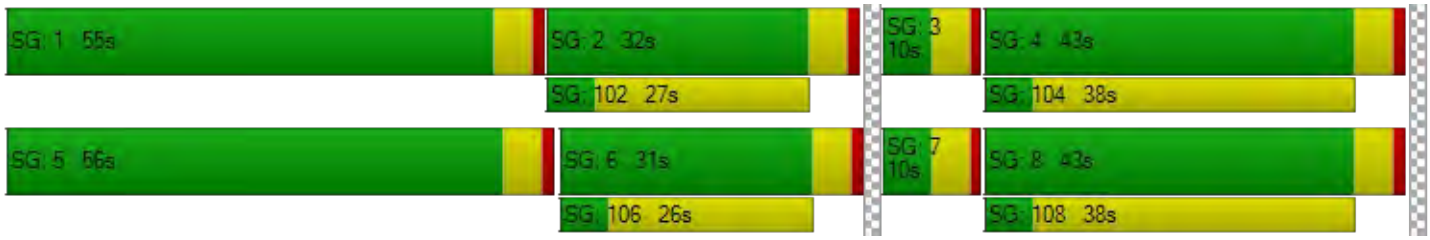
d_M, Delay for Movement [s/veh]	32.96	19.75	22.04	0.00	32.18	32.38	38.33	24.33	24.91	36.34	19.56	14.83
Movement LOS	C	B	C	A	C	C	D	C	C	D	B	B
d_A, Approach Delay [s/veh]	29.46			32.30			25.35			22.38		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.24											
Intersection LOS	C											
Intersection V/C	0.530											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	30.50	30.50	30.50	30.50
l_p,int, Pedestrian LOS Score for Intersection	2.670	2.352	3.244	3.171
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	975	975	693	667
d_b, Bicycle Delay [s]	10.24	10.24	16.65	17.31
l_b,int, Bicycle LOS Score for Intersection	2.713	1.771	2.634	2.338
Bicycle LOS	B	A	B	B

Sequence

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



Appendix D-3

Phase 1 with Project (2027)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\3 P1 + P AM.pdf

Scenario 5 P1 + Project AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.283	16.2	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.004	12.6	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.301	17.3	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.390	22.4	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.445	44.5	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.095	13.4	B
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	EB Right		4.1	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.373	22.5	C
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	SB Thru		4.2	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.592	29.1	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.417	21.7	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	SB Right	0.353	8.6	A
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.575	9.7	A
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.528	24.5	C
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.108	14.3	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.283

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	3	4	4	8	9	9	4	23	8	4	31	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	544	4	8	247	193	369	23	60	4	31	21
Peak Hour Factor	0.9600	0.9600	0.9500	0.9500	0.9600	0.9600	0.9600	0.9500	0.9600	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]	13	142	1	2	64	50	96	6	16	1	8	6
Total Analysis Volume [veh/h]	50	567	4	8	257	201	384	24	63	4	33	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	13	46	0	20	49	0	24	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	45	45	45	45	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	12	12	0	10	10	8	12	12	0	5	5
g / C, Green / Cycle	0.05	0.26	0.26	0.01	0.22	0.22	0.17	0.28	0.28	0.01	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.00	0.05	0.13	0.11	0.01	0.04	0.00	0.02	0.01
s, saturation flow rate [veh/h]	1781	3560	1863	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	93	935	489	19	1126	351	595	990	442	20	209	178
d1, Uniform Delay [s]	20.87	13.73	13.73	22.19	14.43	15.69	17.41	11.85	12.25	22.35	18.14	18.07
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	4.72	0.28	0.53	13.35	0.10	1.47	1.18	0.01	0.15	5.01	0.35	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	0.54	0.40	0.40	0.41	0.23	0.57	0.65	0.02	0.14	0.20	0.16	0.12
d, Delay for Lane Group [s/veh]	25.58	14.01	14.26	35.55	14.53	17.16	18.59	11.86	12.40	27.36	18.49	18.38
Lane Group LOS	C	B	B	D	B	B	B	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.58	1.37	1.47	0.15	0.63	1.72	1.71	0.08	0.42	0.03	0.30	0.20
50th-Percentile Queue Length [ft/ln]	14.61	34.13	36.63	3.71	15.75	43.07	42.87	1.90	10.56	0.82	7.43	4.98
95th-Percentile Queue Length [veh/ln]	1.05	2.46	2.64	0.27	1.13	3.10	3.09	0.14	0.76	0.06	0.53	0.36
95th-Percentile Queue Length [ft/ln]	26.30	61.43	65.93	6.68	28.35	77.53	77.16	3.41	19.00	1.48	13.37	8.96

Movement, Approach, & Intersection Results

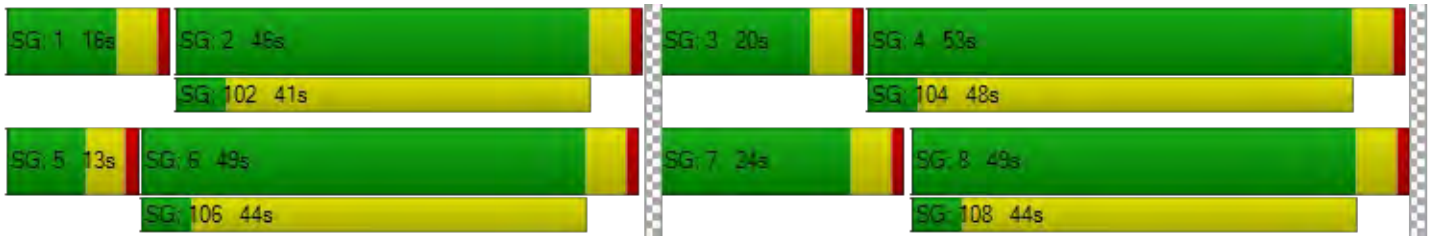
d_M, Delay for Movement [s/veh]	25.58	14.09	14.26	35.55	14.53	17.16	18.59	11.86	12.40	27.36	18.49	18.38
Movement LOS	C	B	B	D	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	15.02			16.02			17.42			19.05		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.16											
Intersection LOS	B											
Intersection V/C	0.283											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.43	14.43	14.43	14.43
l_p,int, Pedestrian LOS Score for Intersection	2.690	2.865	2.663	2.433
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1952	1819	1952	2130
d_b, Bicycle Delay [s]	0.01	0.18	0.01	0.10
l_b,int, Bicycle LOS Score for Intersection	1.901	1.816	1.948	1.657
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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	35	0	0	56
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	540	0	3	524
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	159	0	1	154
Total Analysis Volume [veh/h]	0	2	635	0	4	616
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

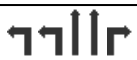
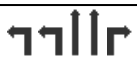
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	24.19	12.56	0.00	0.00	8.81	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.31	0.00	0.00	0.32	0.00
d_A, Approach Delay [s/veh]	12.56		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.301

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	41	24	49	4	12	8	8	12	15	18	7	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	95	237	170	38	62	45	68	395	70	145	378	111
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	66	47	11	17	13	19	110	19	40	105	31
Total Analysis Volume [veh/h]	106	263	189	42	69	50	76	439	78	161	420	123
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	48	0	12	47	0	13	47	0	13	47	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	47	47	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	2	8	8	3	10	10	4	11	11
g / C, Green / Cycle	0.08	0.21	0.21	0.05	0.18	0.18	0.07	0.21	0.21	0.10	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.03	0.07	0.12	0.01	0.02	0.03	0.02	0.12	0.05	0.05	0.12	0.08
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	285	764	341	165	640	286	241	765	342	332	859	383
d1, Uniform Delay [s]	20.35	15.60	16.40	21.51	16.07	16.27	20.73	16.47	15.18	20.08	15.29	14.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.80	0.27	1.41	0.81	0.07	0.29	0.74	0.68	0.34	1.10	0.43	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	0.37	0.34	0.55	0.26	0.11	0.17	0.31	0.57	0.23	0.48	0.49	0.32
d, Delay for Lane Group [s/veh]	21.15	15.87	17.81	22.32	16.15	16.56	21.47	17.15	15.52	21.17	15.73	15.10
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.52	1.06	1.70	0.22	0.28	0.42	0.38	1.90	0.63	0.80	1.71	0.98
50th-Percentile Queue Length [ft/ln]	13.12	26.60	42.44	5.50	6.98	10.57	9.54	47.43	15.75	19.92	42.63	24.42
95th-Percentile Queue Length [veh/ln]	0.94	1.91	3.06	0.40	0.50	0.76	0.69	3.42	1.13	1.43	3.07	1.76
95th-Percentile Queue Length [ft/ln]	23.62	47.87	76.39	9.89	12.56	19.03	17.17	85.38	28.34	35.86	76.73	43.96

Movement, Approach, & Intersection Results

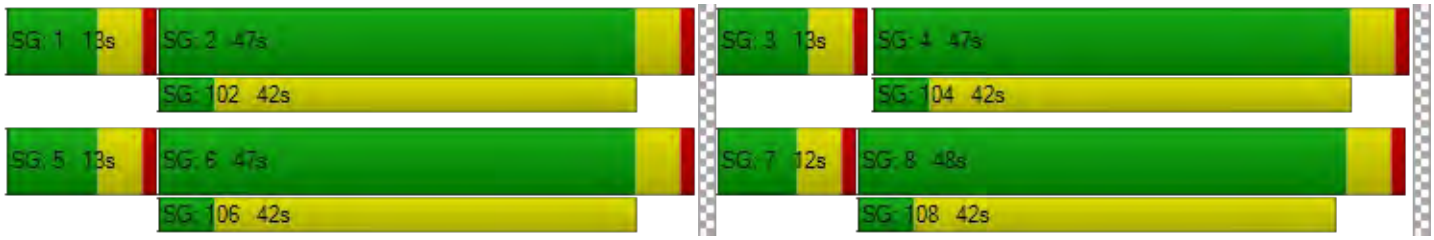
d_M, Delay for Movement [s/veh]	21.15	15.87	17.81	22.32	16.15	16.56	21.47	17.15	15.52	21.17	15.73	15.10
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.53			17.89			17.49			16.86		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.31											
Intersection LOS	B											
Intersection V/C	0.301											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.19	15.19	15.19	15.19
l_p,int, Pedestrian LOS Score for Intersection	2.681	2.647	2.723	2.752
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1843	1801	1801	1801
d_b, Bicycle Delay [s]	0.14	0.23	0.23	0.23
l_b,int, Bicycle LOS Score for Intersection	2.020	1.692	2.049	2.140
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.390

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	11	0	0	0	0	0	0	49	16	0	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	126	23	35	41	16	98	156	426	71	52	482	60
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	7	11	13	5	31	49	133	22	16	151	19
Total Analysis Volume [veh/h]	158	29	44	51	20	123	195	533	89	65	603	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	22	39	0	37	54	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	13	21	21	5	13	80	70	70	80	70	70
g / C, Green / Cycle	0.10	0.17	0.17	0.04	0.11	0.66	0.59	0.59	0.66	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.09	0.02	0.03	0.03	0.09	0.23	0.15	0.06	0.07	0.17	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	865	3560	1589	894	3560	1589
c, Capacity [veh/h]	187	323	274	68	172	593	2083	930	619	2066	922
d1, Uniform Delay [s]	52.78	41.76	42.29	57.18	52.65	8.30	12.16	10.95	7.44	12.73	11.10
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.97	0.12	0.27	15.11	9.97	1.48	0.30	0.20	0.07	0.36	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.85	0.09	0.16	0.75	0.83	0.33	0.26	0.10	0.10	0.29	0.08
d, Delay for Lane Group [s/veh]	62.75	41.88	42.56	72.29	62.62	9.78	12.46	11.16	7.52	13.09	11.27
Lane Group LOS	E	D	D	E	E	A	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.19	0.74	1.14	1.82	4.70	2.06	3.51	1.08	0.57	4.12	0.92
50th-Percentile Queue Length [ft/ln]	129.84	18.47	28.47	45.46	117.51	51.47	87.73	27.07	14.30	103.12	22.91
95th-Percentile Queue Length [veh/ln]	8.93	1.33	2.05	3.27	8.26	3.71	6.32	1.95	1.03	7.42	1.65
95th-Percentile Queue Length [ft/ln]	223.28	33.24	51.25	81.84	206.40	92.65	157.92	48.72	25.74	185.62	41.24

Movement, Approach, & Intersection Results

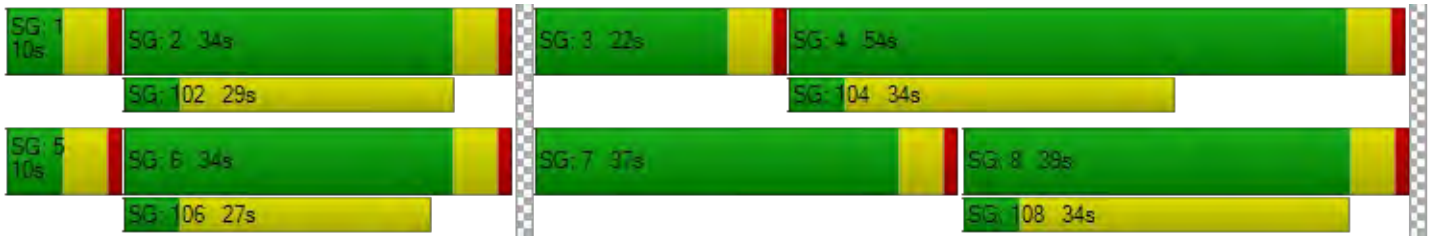
d_M, Delay for Movement [s/veh]	62.75	41.88	42.56	72.29	62.62	62.62	9.78	12.46	11.16	7.52	13.09	11.27
Movement LOS	E	D	D	E	E	E	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	56.29			65.16			11.67			12.42		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.37											
Intersection LOS	C											
Intersection V/C	0.390											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.301	2.282	2.745	2.691
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	816	483	483
d_b, Bicycle Delay [s]	30.83	21.02	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	1.941	1.880	2.234	2.173
Bicycle LOS	A	A	B	B

Sequence

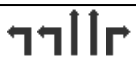
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.445

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	8	4	0	8	8	21	29	0	4	10	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	325	179	135	207	67	101	252	38	205	245	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	107	59	44	68	22	33	83	13	67	81	47
Total Analysis Volume [veh/h]	100	428	236	178	272	88	133	332	50	270	322	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	18	43	0	27	52	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	65	65	9	65	81	12	15	15	21	25	25
g / C, Green / Cycle	0.07	0.50	0.50	0.07	0.50	0.63	0.09	0.11	0.11	0.17	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.15	0.05	0.08	0.06	0.07	0.09	0.03	0.15	0.14	0.15
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1642
c, Capacity [veh/h]	124	1781	795	234	1775	995	159	403	180	294	354	310
d1, Uniform Delay [s]	59.66	18.46	19.08	59.57	17.70	9.62	58.29	56.40	52.80	53.41	50.00	50.04
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.18	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]	11.75	0.32	0.95	5.02	0.18	0.18	10.94	4.30	0.83	17.20	3.49	4.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.24	0.30	0.76	0.15	0.09	0.84	0.82	0.28	0.92	0.77	0.77
d, Delay for Lane Group [s/veh]	71.41	18.78	20.03	64.59	17.89	9.79	69.22	60.71	53.64	70.61	53.50	54.08
Lane Group LOS	E	B	C	E	B	A	E	E	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	3.76	4.41	3.05	2.28	1.04	4.80	5.58	1.55	10.08	8.71	7.74
50th-Percentile Queue Length [ft/ln]	91.50	94.10	110.23	76.32	57.12	25.91	119.93	139.44	38.66	252.10	217.74	193.41
95th-Percentile Queue Length [veh/ln]	6.59	6.78	7.85	5.49	4.11	1.87	8.39	9.45	2.78	15.29	13.55	12.30
95th-Percentile Queue Length [ft/ln]	164.69	169.38	196.32	137.37	102.81	46.64	209.73	236.27	69.59	382.30	338.74	307.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.41	18.78	20.03	64.59	17.89	9.79	69.22	60.71	53.64	70.61	53.59	54.08
Movement LOS	E	B	C	E	B	A	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	26.06			32.01			62.22			59.60		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	44.54											
Intersection LOS	D											
Intersection V/C	0.445											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.692	2.792	2.638	2.616
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	723
d_b, Bicycle Delay [s]	33.27	30.47	32.56	26.50
l_b,int, Bicycle LOS Score for Intersection	2.190	2.003	1.984	2.203
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	0	0	18	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	41	0	0	18	0
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	0	0	5	0
Total Analysis Volume [veh/h]	0	50	0	0	22	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.11	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.11		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	13.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.095

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	115	45	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	451	246	19	40	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	128	70	5	11	0
Total Analysis Volume [veh/h]	0	513	280	22	45	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.09	0.00
d_M, Delay for Movement [s/veh]	7.87	0.00	0.00	0.00	13.39	9.87
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.31	0.31
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	7.82	7.82
d_A, Approach Delay [s/veh]	0.00		0.00		13.39	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.70					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	31	24	0	36	0	0	0	0	60	0	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]	49	0	68	0	0	0	0	43	120	23	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	49	31	92	0	36	0	0	43	120	83	18	1
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	9	26	0	10	0	0	12	34	24	5	0
Total Analysis Volume [veh/h]	56	35	105	0	41	0	0	49	136	94	20	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	50			173			138			93		
Exiting Flow Rate [veh/h]	276			37			78			157		
Demand Flow Rate [veh/h]	49	31	92	0	36	0	0	43	120	83	18	1
Adjusted Demand Flow Rate [veh/h]	56	35	105	0	41	0	0	49	136	94	20	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	200	42	189	118
Capacity of Entry and Bypass Lanes [veh/h]	1312	1157	1200	1256
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1286	1134	1176	1231
X, volume / capacity	0.15	0.04	0.16	0.09

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.54	0.11	0.56	0.31
95th-Percentile Queue Length [ft]	13.44	2.81	13.94	7.71
Approach Delay [s/veh]	4.07	3.48	4.42	3.69
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.06			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.373

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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	4	0	0	4	41	111	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	271	12	10	176	57	153	7	3	29	33	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	74	3	3	48	16	42	2	1	8	9	9
Total Analysis Volume [veh/h]	3	298	13	11	193	63	168	8	3	32	36	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	72	65	65	72	66	66	38	38	38
g / C, Green / Cycle	0.60	0.54	0.54	0.60	0.55	0.55	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.08	0.01	0.05	0.04	0.29	0.00	0.27
s, saturation flow rate [veh/h]	1155	1870	1843	1113	3560	1589	614	1589	377
c, Capacity [veh/h]	747	1012	997	706	1958	874	256	510	160
d1, Uniform Delay [s]	9.88	13.79	13.80	9.99	12.85	12.66	38.65	27.70	36.01
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.00	0.32	0.33	0.04	0.10	0.16	3.27	0.00	4.24
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	0.00	0.15	0.16	0.02	0.10	0.07	0.69	0.01	0.64
d, Delay for Lane Group [s/veh]	9.88	14.11	14.13	10.03	12.95	12.82	41.92	27.71	40.24
Lane Group LOS	A	B	B	B	B	B	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.03	2.20	2.19	0.13	1.26	0.83	5.10	0.06	2.35
50th-Percentile Queue Length [ft/ln]	0.81	55.09	54.72	3.13	31.57	20.83	127.57	1.50	58.75
95th-Percentile Queue Length [veh/ln]	0.06	3.97	3.94	0.23	2.27	1.50	8.81	0.11	4.23
95th-Percentile Queue Length [ft/ln]	1.45	99.16	98.50	5.63	56.82	37.49	220.19	2.70	105.75

Movement, Approach, & Intersection Results

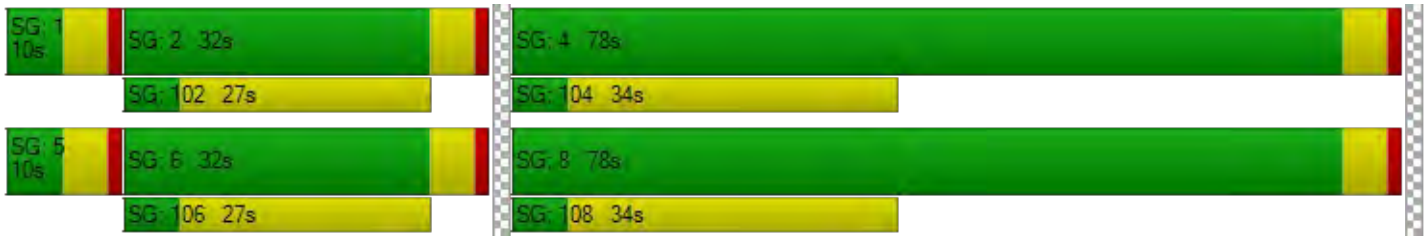
d_M, Delay for Movement [s/veh]	9.88	14.12	14.13	10.03	12.95	12.82	41.92	41.92	27.71	40.24	40.24	40.24
Movement LOS	A	B	B	B	B	B	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	14.08			12.80			41.69			40.24		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.53											
Intersection LOS	C											
Intersection V/C	0.373											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.466	2.955	2.049	1.805
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.819	1.780	1.855	1.730
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	55	12	0	97	0	0	0	0	34	0	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]	19	98	0	0	135	8	18	0	47	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	19	153	12	0	232	8	18	0	47	34	0	1
Peak Hour Factor	0.9500	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9500	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	42	3	0	64	2	5	0	12	9	0	0
Total Analysis Volume [veh/h]	20	168	13	0	255	9	20	0	49	37	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	20			58			298			212		
Exiting Flow Rate [veh/h]	348			193			30			0		
Demand Flow Rate [veh/h]	19	153	12	0	232	8	18	0	47	34	0	1
Adjusted Demand Flow Rate [veh/h]	20	168	13	0	255	9	20	0	49	37	0	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	192	0	270	71	39
Capacity of Entry and Bypass Lanes [veh/h]	1352	1380	1301	1019	1112
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1326	1353	1276	999	1090
X, volume / capacity	0.14	0.01	0.21	0.07	0.03

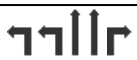
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.49	0.03	0.78	0.22	0.11
95th-Percentile Queue Length [ft]	12.36	0.73	19.46	5.56	2.71
Approach Delay [s/veh]	3.80		4.59	4.22	3.60
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	4.20				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	3	3	10	22	2	0	0	32	2	20	46	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	479	397	232	242	101	185	818	34	336	637	170
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	123	102	60	62	26	48	211	9	87	164	44
Total Analysis Volume [veh/h]	110	494	409	239	249	104	191	843	35	346	657	175
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	54	0	16	50	0	20	49	0	21	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	78	78	78	78	78	78	78	78	78	78	78	78
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	23	23	8	26	26	7	17	17	11	21	21
g / C, Green / Cycle	0.06	0.30	0.30	0.10	0.34	0.34	0.08	0.21	0.21	0.13	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.26	0.07	0.05	0.07	0.06	0.17	0.02	0.10	0.18	0.11
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	201	1509	471	347	1725	538	292	1090	340	465	940	437
d1, Uniform Delay [s]	35.96	21.52	26.16	34.11	18.04	18.36	34.82	29.05	24.79	32.66	26.06	23.76
k, delay calibration	0.11	0.11	0.20	0.11	0.11	0.11	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]	2.32	0.13	8.62	2.43	0.04	0.17	2.49	1.20	0.13	2.38	0.95	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	0.55	0.33	0.87	0.69	0.14	0.19	0.65	0.77	0.10	0.74	0.70	0.40
d, Delay for Lane Group [s/veh]	38.28	21.64	34.78	36.54	18.08	18.54	37.31	30.25	24.92	35.04	27.01	24.36
Lane Group LOS	D	C	C	D	B	B	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.06	2.28	7.97	2.26	1.01	1.31	1.75	4.68	0.50	3.22	5.41	2.64
50th-Percentile Queue Length [ft/ln]	26.62	57.09	199.29	56.48	25.26	32.67	43.85	116.99	12.42	80.48	135.31	66.03
95th-Percentile Queue Length [veh/ln]	1.92	4.11	12.60	4.07	1.82	2.35	3.16	8.23	0.89	5.79	9.23	4.75
95th-Percentile Queue Length [ft/ln]	47.91	102.76	315.05	101.67	45.47	58.80	78.93	205.68	22.36	144.86	230.70	118.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.28	21.64	34.78	36.54	18.08	18.54	37.31	30.25	24.92	35.04	27.01	24.36
Movement LOS	D	C	C	D	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	28.75			25.61			31.34			28.97		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.06											
Intersection LOS	C											
Intersection V/C	0.592											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	30.67	30.67	30.67	30.67
l_p,int, Pedestrian LOS Score for Intersection	3.022	3.001	3.159	3.045
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1251	1149	1124	1149
d_b, Bicycle Delay [s]	5.48	7.08	7.52	7.08
l_b,int, Bicycle LOS Score for Intersection	2.117	1.885	2.148	2.531
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	63	0	0	92	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	11	138	102	10	18	43	1233	80	175	1060	168
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	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	3	35	26	3	5	11	315	20	45	270	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1258	82	179	1082	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	9	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.25	0.05	0.05	0.21	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	189	190	168	248	120	58	3271	1021	229	3441	1074
d1, Uniform Delay [s]	57.77	57.76	61.40	62.20	61.35	67.15	11.91	9.45	64.37	9.35	8.25
k, delay calibration	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
d2, Incremental Delay [s]	0.86	0.85	10.44	1.13	0.98	17.85	0.34	0.15	5.76	0.24	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.76	0.38	0.08	0.78	0.31	0.16
d, Delay for Lane Group [s/veh]	58.63	58.62	71.85	63.34	62.33	85.00	12.25	9.61	70.13	9.59	8.57
Lane Group LOS	E	E	E	E	E	F	B	A	E	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.42	1.82	0.98	1.86	6.24	1.00	3.34	4.52	1.95
50th-Percentile Queue Length [ft/ln]	47.05	47.38	135.55	45.51	24.47	46.40	155.91	24.89	83.48	113.02	48.86
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.24	3.28	1.76	3.34	10.33	1.79	6.01	8.01	3.52
95th-Percentile Queue Length [ft/ln]	84.69	85.29	231.03	81.92	44.05	83.51	258.30	44.81	150.26	200.19	87.94

Movement, Approach, & Intersection Results

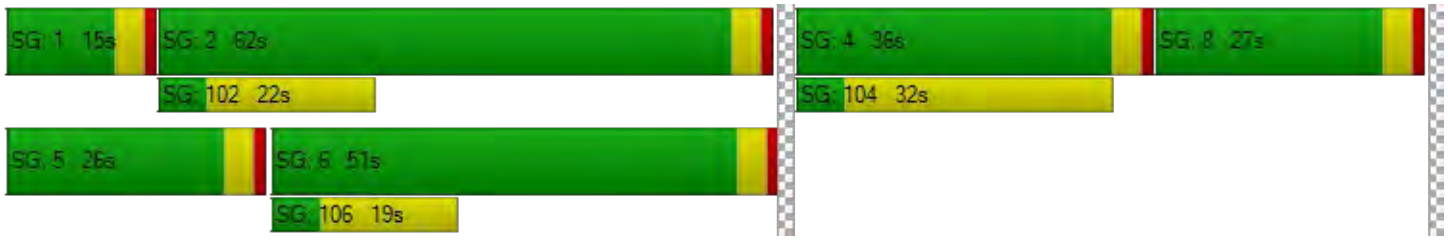
d_M, Delay for Movement [s/veh]	58.62	58.62	71.85	63.34	62.33	62.33	85.00	12.25	9.61	70.13	9.59	8.57
Movement LOS	E	E	E	E	E	E	F	B	A	E	A	A
d_A, Approach Delay [s/veh]	65.99			63.12			14.41			17.04		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	21.67											
Intersection LOS	C											
Intersection V/C	0.417											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.063	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.321	2.347
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.353

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	83	0	19	0	48	16	0	73	163
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	251	1	533	0	1038	524	0	852	881
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	65	0	137	0	268	135	0	220	227
Total Analysis Volume [veh/h]	0	0	0	259	1	549	0	1070	540	0	878	908
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		16	16	16	20	20	20	41
g / C, Green / Cycle		0.34	0.34	0.34	0.44	0.44	0.44	0.89
(v / s)_i Volume / Saturation Flow Rate		0.07	0.07	0.20	0.21	0.34	0.17	0.57
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		603	604	953	2264	706	2264	1417
d1, Uniform Delay [s]		10.88	10.88	12.53	9.01	10.79	8.60	0.63
k, delay calibration		0.11	0.11	0.11	0.11	0.11	0.11	0.34
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.18	0.18	0.55	0.15	1.76	0.11	1.54
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		0.22	0.22	0.58	0.47	0.76	0.39	0.64
d, Delay for Lane Group [s/veh]		11.05	11.05	13.08	9.17	12.54	8.71	2.17
Lane Group LOS		B	B	B	A	B	A	A
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		0.81	0.81	1.97	1.94	3.80	1.52	0.60
50th-Percentile Queue Length [ft/ln]		20.26	20.27	49.31	48.47	94.95	37.90	15.11
95th-Percentile Queue Length [veh/ln]		1.46	1.46	3.55	3.49	6.84	2.73	1.09
95th-Percentile Queue Length [ft/ln]		36.48	36.48	88.77	87.24	170.92	68.22	27.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	11.05	11.05	13.08	0.00	9.17	12.54	0.00	8.71	2.17
Movement LOS				B	B	B		A	B		A	A
d_A, Approach Delay [s/veh]	0.00			12.43			10.30			5.39		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	8.62											
Intersection LOS	A											
Intersection V/C	0.353											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.89	14.89	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.082	2.799	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	652	1956	1956
d_b, Bicycle Delay [s]	23.01	10.45	0.01	0.01
l_b,int, Bicycle LOS Score for Intersection	4.132	2.894	2.445	2.542
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.575

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	19	0	94	0	0	0	0	115	16	0	218	164
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	421	3	586	0	0	0	0	640	684	0	1312	549
Peak Hour Factor	0.9700	0.9700	0.9700	0.9500	0.9500	0.9500	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	1	151	0	0	0	0	165	176	0	338	141
Total Analysis Volume [veh/h]	434	3	604	0	0	0	0	660	705	0	1353	566
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	50	50	50		50	50	50	50
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	17	17	17		24	45	24	24
g / C, Green / Cycle	0.33	0.33	0.33		0.47	0.90	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.21		0.13	0.44	0.27	0.36
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	597	597	942		2379	1432	2379	742
d1, Uniform Delay [s]	12.74	12.73	14.23		8.24	0.44	9.77	11.14
k, delay calibration	0.11	0.11	0.11		0.11	0.25	0.11	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	0.38	0.73		0.06	0.60	0.22	2.19
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	0.37	0.37	0.64		0.28	0.49	0.57	0.76
d, Delay for Lane Group [s/veh]	13.11	13.11	14.96		8.30	1.05	9.98	13.33
Lane Group LOS	B	B	B		A	A	A	B
Critical Lane Group	No	No	No		No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.66	1.66	2.57		1.17	0.24	2.86	4.47
50th-Percentile Queue Length [ft/ln]	41.57	41.57	64.18		29.26	6.01	71.44	111.83
95th-Percentile Queue Length [veh/ln]	2.99	2.99	4.62		2.11	0.43	5.14	7.94
95th-Percentile Queue Length [ft/ln]	74.83	74.82	115.53		52.67	10.81	128.59	198.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.11	13.11	14.96	0.00	0.00	0.00	0.00	8.30	1.05	0.00	9.98	13.33
Movement LOS	B	B	B					A	A		A	B
d_A, Approach Delay [s/veh]	14.18			0.00			4.56			10.97		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	9.72											
Intersection LOS	A											
Intersection V/C	0.575											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.99	16.99	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.808	2.096	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	596	0	1787	1787
d_b, Bicycle Delay [s]	12.42	25.19	0.29	0.29
l_b,int, Bicycle LOS Score for Intersection	3.277	4.132	2.310	2.615
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	58	8	10	21	21	260	95	59	55	9	64	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	401	41	93	21	56	356	147	818	206	114	1102	9
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]	106	11	24	6	15	94	39	215	54	30	290	2
Total Analysis Volume [veh/h]	422	43	98	22	59	375	155	861	217	120	1160	9
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	68	0	17	55	0	23	43	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	68	68	68	68	68	68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	11	21	21	2	12	12	5	21	21	4	20	20
g / C, Green / Cycle	0.16	0.31	0.31	0.03	0.17	0.17	0.07	0.30	0.30	0.07	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.12	0.02	0.06	0.01	0.13	0.13	0.04	0.17	0.14	0.03	0.23	0.01
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1656	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	567	585	497	45	288	277	259	1549	483	228	1503	469
d1, Uniform Delay [s]	27.27	16.55	17.23	32.95	26.96	26.96	30.68	19.96	19.21	30.97	22.04	17.12
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.96	0.05	0.19	8.01	4.28	4.45	2.21	0.31	0.65	1.89	0.87	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	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.07	0.20	0.49	0.77	0.77	0.60	0.56	0.45	0.53	0.77	0.02
d, Delay for Lane Group [s/veh]	29.23	16.60	17.42	40.96	31.24	31.42	32.89	20.27	19.86	32.86	22.91	17.14
Lane Group LOS	C	B	B	D	C	C	C	C	B	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.28	0.46	1.09	0.45	3.61	3.48	1.27	3.61	2.68	0.98	5.38	0.10
50th-Percentile Queue Length [ft/ln]	81.88	11.39	27.19	11.20	90.30	87.03	31.75	90.30	67.08	24.56	134.42	2.43
95th-Percentile Queue Length [veh/ln]	5.90	0.82	1.96	0.81	6.50	6.27	2.29	6.50	4.83	1.77	9.18	0.17
95th-Percentile Queue Length [ft/ln]	147.38	20.51	48.95	20.15	162.53	156.66	57.14	162.54	120.75	44.20	229.50	4.37

Movement, Approach, & Intersection Results

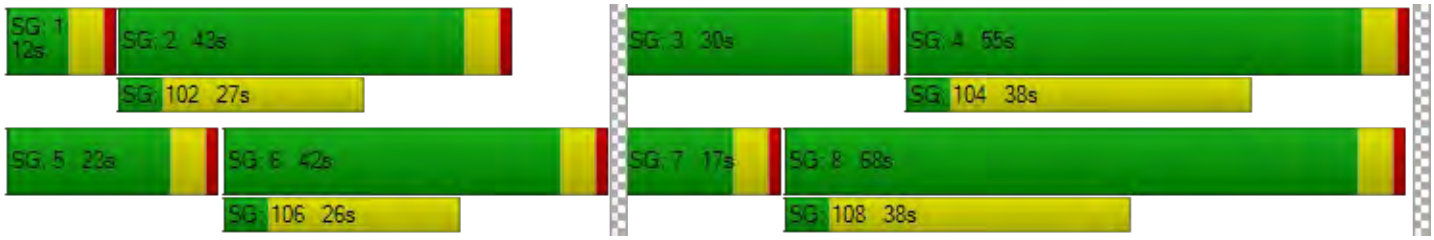
d_M, Delay for Movement [s/veh]	29.23	16.60	17.42	40.96	31.24	31.34	32.89	20.27	19.86	32.86	22.91	17.14
Movement LOS	C	B	B	D	C	C	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	26.21			31.79			21.79			23.80		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.51											
Intersection LOS	C											
Intersection V/C	0.528											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.75	25.75	25.75	25.75
l_p,int, Pedestrian LOS Score for Intersection	2.596	2.417	3.182	3.083
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1845	1464	1113	1083
d_b, Bicycle Delay [s]	0.21	2.45	6.72	7.18
l_b,int, Bicycle LOS Score for Intersection	2.489	2.312	2.238	2.269
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.108

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	86	131	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	42	68	166	16	50	134
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]	42	154	297	16	50	134
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	41	78	4	13	35
Total Analysis Volume [veh/h]	44	162	313	17	53	141
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.11	0.17
d_M, Delay for Movement [s/veh]	8.05	0.00	0.00	0.00	14.28	11.14
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	1.11	1.11
95th-Percentile Queue Length [ft/ln]	2.79	0.00	0.00	0.00	27.85	27.85
d_A, Approach Delay [s/veh]	1.72		0.00		12.00	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.67					
Intersection LOS	B					

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Scenario 6 P1 + Project PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.447	18.1	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Left	0.024	26.8	D
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.329	19.0	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.261	12.8	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.392	38.4	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.181	18.7	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	WB Left		4.9	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.265	14.9	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		4.6	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.700	40.4	D
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.606	38.9	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.670	13.0	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.630	13.4	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.592	29.1	C
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.108	18.5	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	9	14	6	22	11	11	14	38	6	5	33	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	611	6	22	660	434	386	38	113	5	33	14
Peak Hour Factor	0.9800	0.9800	0.9500	0.9500	0.9800	0.9800	0.9800	0.9500	0.9800	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	156	2	6	168	111	98	10	29	1	9	4
Total Analysis Volume [veh/h]	63	623	6	23	673	443	394	40	115	5	35	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	17	46	0	21	49	0	25	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	58	58	58	58	58	58	58	58	58	58	58	58
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	22	22	2	20	20	9	15	15	0	6	6
g / C, Green / Cycle	0.06	0.37	0.37	0.03	0.34	0.34	0.16	0.25	0.25	0.01	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.01	0.13	0.28	0.11	0.01	0.07	0.00	0.02	0.01
s, saturation flow rate [veh/h]	1781	3560	1861	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	99	1322	691	48	1747	545	562	897	400	24	180	153
d1, Uniform Delay [s]	26.97	13.04	13.04	27.96	14.50	17.45	23.09	16.51	17.60	28.80	24.27	24.04
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	6.68	0.13	0.26	7.13	0.14	2.99	1.61	0.02	0.39	4.35	0.52	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	0.64	0.31	0.31	0.48	0.39	0.81	0.70	0.04	0.29	0.21	0.19	0.10
d, Delay for Lane Group [s/veh]	33.65	13.17	13.30	35.09	14.64	20.44	24.69	16.53	17.99	33.15	24.79	24.32
Lane Group LOS	C	B	B	D	B	C	C	B	B	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.99	1.72	1.83	0.39	2.02	5.20	2.49	0.19	1.18	0.05	0.44	0.19
50th-Percentile Queue Length [ft/ln]	24.78	43.09	45.69	9.86	50.53	130.03	62.30	4.72	29.61	1.18	11.09	4.73
95th-Percentile Queue Length [veh/ln]	1.78	3.10	3.29	0.71	3.64	8.94	4.49	0.34	2.13	0.09	0.80	0.34
95th-Percentile Queue Length [ft/ln]	44.60	77.55	82.25	17.75	90.95	223.54	112.15	8.49	53.30	2.13	19.97	8.51

Movement, Approach, & Intersection Results

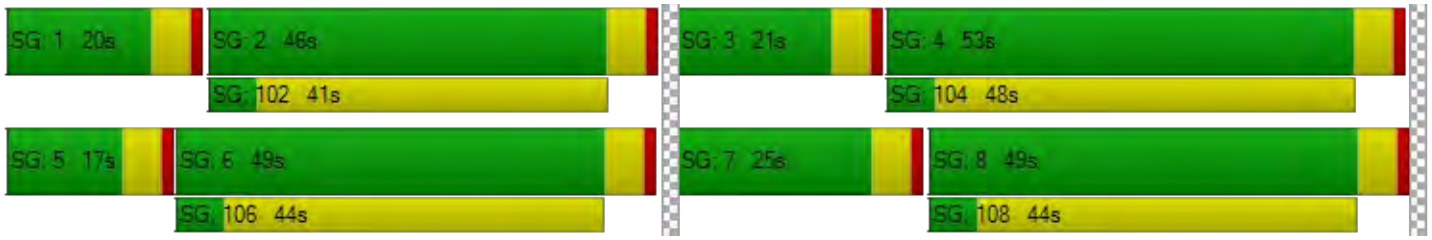
d_M, Delay for Movement [s/veh]	33.65	13.21	13.30	35.09	14.64	20.44	24.69	16.53	17.99	33.15	24.79	24.32
Movement LOS	C	B	B	D	B	C	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.07			17.31			22.69			25.42		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.07											
Intersection LOS	B											
Intersection V/C	0.447											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.76	20.76	20.76	20.76
l_p,int, Pedestrian LOS Score for Intersection	2.780	2.969	2.725	2.452
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1514	1411	1514	1652
d_b, Bicycle Delay [s]	1.72	2.52	1.72	0.88
l_b,int, Bicycle LOS Score for Intersection	1.940	2.186	2.013	1.650
Bicycle LOS	A	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	26.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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	66	0	0	52
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]	4	4	614	7	25	600
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	1	1	160	2	7	156
Total Analysis Volume [veh/h]	4	4	640	7	26	625
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

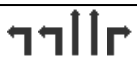
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	26.83	12.64	0.00	0.00	8.94	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.03	0.00	0.00	0.09	0.00
95th-Percentile Queue Length [ft/ln]	1.81	0.64	0.00	0.00	2.14	0.00
d_A, Approach Delay [s/veh]	19.73		0.00		0.36	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.30					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.329

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	28	19	33	6	27	10	11	11	43	52	14	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	101	150	117	265	88	48	415	162	247	418	53
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]	31	26	39	30	69	23	13	108	42	64	109	14
Total Analysis Volume [veh/h]	125	105	156	122	276	92	50	432	169	257	435	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	11	47	0	15	51	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	50	50	50	50	50	50	50	50	50	50	50	50
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	3	10	10	6	14	14
g / C, Green / Cycle	0.08	0.20	0.20	0.08	0.20	0.20	0.05	0.20	0.20	0.12	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.03	0.10	0.04	0.08	0.06	0.01	0.12	0.11	0.07	0.12	0.03
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	290	706	315	288	703	314	181	710	317	429	965	431
d1, Uniform Delay [s]	22.03	16.76	18.03	22.05	17.66	17.29	23.06	18.46	18.15	20.98	15.32	13.93
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.01	0.10	1.20	0.99	0.36	0.51	0.82	0.85	1.39	1.35	0.33	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.15	0.49	0.42	0.39	0.29	0.28	0.61	0.53	0.60	0.45	0.13
d, Delay for Lane Group [s/veh]	23.04	16.85	19.24	23.04	18.02	17.81	23.88	19.31	19.54	22.32	15.65	14.06
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.69	0.46	1.55	0.67	1.28	0.86	0.28	2.13	1.70	1.38	1.86	0.43
50th-Percentile Queue Length [ft/ln]	17.14	11.50	38.67	16.73	32.07	21.48	7.11	53.24	42.41	34.61	46.47	10.83
95th-Percentile Queue Length [veh/ln]	1.23	0.83	2.78	1.20	2.31	1.55	0.51	3.83	3.05	2.49	3.35	0.78
95th-Percentile Queue Length [ft/ln]	30.86	20.71	69.60	30.12	57.73	38.67	12.79	95.83	76.35	62.30	83.65	19.49

Movement, Approach, & Intersection Results

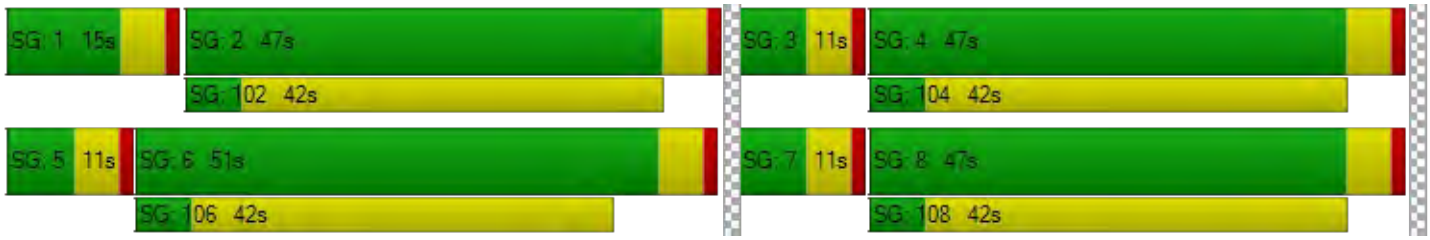
d_M, Delay for Movement [s/veh]	23.04	16.85	19.24	23.04	18.02	17.81	23.88	19.31	19.54	22.32	15.65	14.06
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.82			19.23			19.72			17.83		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	19.01											
Intersection LOS	B											
Intersection V/C	0.329											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.00	17.00	17.00	17.00
l_p,int, Pedestrian LOS Score for Intersection	2.716	2.662	2.746	2.768
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1667	1667	1667	1826
d_b, Bicycle Delay [s]	0.70	0.70	0.70	0.19
l_b,int, Bicycle LOS Score for Intersection	1.878	1.964	2.097	2.176
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.261

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	19	0	0	0	0	0	0	33	17	0	53	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	102	8	8	5	4	10	17	401	161	21	544	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	2	2	1	1	3	5	118	47	6	160	2
Total Analysis Volume [veh/h]	120	9	9	6	5	12	20	472	189	25	640	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	10	13	13	1	4	91	83	83	91	83	83
g / C, Green / Cycle	0.08	0.11	0.11	0.01	0.04	0.76	0.69	0.69	0.76	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.07	0.00	0.01	0.00	0.01	0.02	0.13	0.12	0.03	0.18	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	843	3560	1589	839	3560	1589
c, Capacity [veh/h]	149	209	178	14	61	669	2454	1096	682	2466	1101
d1, Uniform Delay [s]	54.05	47.55	47.60	59.26	56.29	3.98	6.68	6.58	3.83	6.92	5.70
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.80	0.08	0.12	18.30	2.47	0.08	0.17	0.34	0.02	0.26	0.01
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
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	0.81	0.04	0.05	0.42	0.28	0.03	0.19	0.17	0.04	0.26	0.01
d, Delay for Lane Group [s/veh]	63.85	47.64	47.71	77.56	58.76	4.06	6.85	6.92	3.85	7.17	5.71
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.97	0.25	0.25	0.25	0.54	0.12	2.09	1.70	0.14	2.95	0.06
50th-Percentile Queue Length [ft/ln]	99.14	6.16	6.19	6.36	13.60	3.05	52.19	42.58	3.44	73.83	1.57
95th-Percentile Queue Length [veh/ln]	7.14	0.44	0.45	0.46	0.98	0.22	3.76	3.07	0.25	5.32	0.11
95th-Percentile Queue Length [ft/ln]	178.46	11.09	11.14	11.46	24.48	5.49	93.95	76.65	6.20	132.89	2.82

Movement, Approach, & Intersection Results

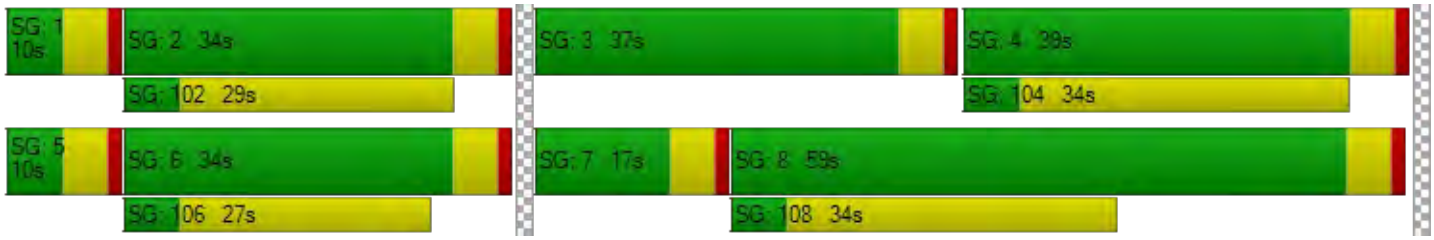
d_M, Delay for Movement [s/veh]	63.85	47.64	47.71	77.56	58.76	58.76	4.06	6.85	6.92	3.85	7.17	5.71
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	61.74			63.66			6.79			7.03		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	12.77											
Intersection LOS	B											
Intersection V/C	0.261											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.258	1.995	2.704	2.657
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.787	1.598	2.121	2.115
Bicycle LOS	A	A	B	B

Sequence

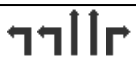
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.392

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	11	5	0	11	22	14	19	0	6	31	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	281	89	221	508	163	103	319	46	129	366	156
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	73	23	58	132	42	27	83	12	34	95	41
Total Analysis Volume [veh/h]	53	293	93	230	529	170	107	332	48	134	381	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	16	46	0	16	46	46	17	43	0	15	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	60	60	10	65	79	9	20	20	10	21	21
g / C, Green / Cycle	0.04	0.50	0.50	0.08	0.54	0.66	0.08	0.17	0.17	0.08	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.06	0.07	0.15	0.11	0.06	0.09	0.03	0.08	0.15	0.15
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1683
c, Capacity [veh/h]	70	1770	790	288	1926	1047	135	603	269	149	331	298
d1, Uniform Delay [s]	57.11	16.55	16.13	54.06	14.86	7.84	54.54	45.70	42.73	54.48	47.96	48.04
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]	15.24	0.20	0.30	5.09	0.35	0.33	9.82	0.79	0.31	16.61	6.55	7.62
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	0.76	0.17	0.12	0.80	0.27	0.16	0.79	0.55	0.18	0.90	0.86	0.87
d, Delay for Lane Group [s/veh]	72.36	16.75	16.44	59.14	15.21	8.17	64.36	46.49	43.04	71.09	54.51	55.66
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.26	1.44	3.62	3.94	1.71	3.55	4.61	1.25	4.70	8.86	8.15
50th-Percentile Queue Length [ft/ln]	47.23	56.56	35.90	90.38	98.61	42.78	88.74	115.26	31.30	117.48	221.56	203.66
95th-Percentile Queue Length [veh/ln]	3.40	4.07	2.58	6.51	7.10	3.08	6.39	8.13	2.25	8.25	13.74	12.83
95th-Percentile Queue Length [ft/ln]	85.02	101.81	64.62	162.68	177.50	77.01	159.74	203.30	56.34	206.36	343.61	320.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.36	16.75	16.44	59.14	15.21	8.17	64.36	46.49	43.04	71.09	54.80	55.66
Movement LOS	E	B	B	E	B	A	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	23.40			24.80			50.07			58.23		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.36											
Intersection LOS	D											
Intersection V/C	0.392											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.655	2.817	2.645	2.575
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	683	683	633	600
d_b, Bicycle Delay [s]	26.02	26.02	28.03	29.42
l_b,int, Bicycle LOS Score for Intersection	1.922	2.326	1.961	2.119
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	68	0	0	50	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	68	0	0	50	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	0	0	15	0
Total Analysis Volume [veh/h]	0	81	0	0	60	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.31	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.31		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	18.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.181

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	80	122	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	329	567	45	53	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	90	156	12	15	0
Total Analysis Volume [veh/h]	0	362	623	49	58	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.18	0.00
d_M, Delay for Movement [s/veh]	8.94	0.00	0.00	0.00	18.69	12.73
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.65	0.65
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	16.25	16.25
d_A, Approach Delay [s/veh]	0.00		0.00		18.69	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.99					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	72	41	0	52	0	0	0	0	46	0	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]	125	0	44	0	0	0	0	31	84	72	45	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	125	72	85	0	52	0	0	31	84	118	45	1
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	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	21	25	0	15	0	0	9	25	35	13	0
Total Analysis Volume [veh/h]	149	86	101	0	62	0	0	37	100	140	54	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	38			350			206			240		
Exiting Flow Rate [veh/h]	308			89			207			141		
Demand Flow Rate [veh/h]	125	72	85	0	52	0	0	31	84	118	45	1
Adjusted Demand Flow Rate [veh/h]	149	86	101	0	62	0	0	37	100	140	54	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	343	64	140	199
Capacity of Entry and Bypass Lanes [veh/h]	1328	966	1119	1081
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1302	947	1097	1060
X, volume / capacity	0.26	0.07	0.12	0.18

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.03	0.21	0.43	0.67
95th-Percentile Queue Length [ft]	25.87	5.24	10.67	16.81
Approach Delay [s/veh]	5.02	4.40	4.38	5.08
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.86			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.265

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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	6	0	0	5	117	75	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	228	52	40	367	155	87	21	5	32	34	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	63	14	11	101	43	24	6	1	9	9	4
Total Analysis Volume [veh/h]	10	251	57	44	403	170	96	23	5	35	37	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	89	80	80	89	82	82	21	21	21
g / C, Green / Cycle	0.74	0.67	0.67	0.74	0.69	0.69	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.09	0.04	0.11	0.11	0.13	0.00	0.15
s, saturation flow rate [veh/h]	886	1870	1753	1126	3560	1589	914	1589	578
c, Capacity [veh/h]	714	1244	1166	892	2440	1089	217	283	145
d1, Uniform Delay [s]	4.20	7.35	7.37	4.25	6.70	6.66	46.31	40.68	48.44
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.21	0.23	0.10	0.15	0.31	2.16	0.02	3.95
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	0.01	0.13	0.13	0.05	0.17	0.16	0.55	0.02	0.60
d, Delay for Lane Group [s/veh]	4.21	7.56	7.60	4.35	6.85	6.96	48.47	40.70	52.39
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.06	1.49	1.44	0.29	1.78	1.54	3.48	0.12	2.76
50th-Percentile Queue Length [ft/ln]	1.50	37.19	36.10	7.21	44.40	38.47	86.96	3.12	69.10
95th-Percentile Queue Length [veh/ln]	0.11	2.68	2.60	0.52	3.20	2.77	6.26	0.22	4.98
95th-Percentile Queue Length [ft/ln]	2.70	66.94	64.97	12.97	79.91	69.24	156.53	5.62	124.38

Movement, Approach, & Intersection Results

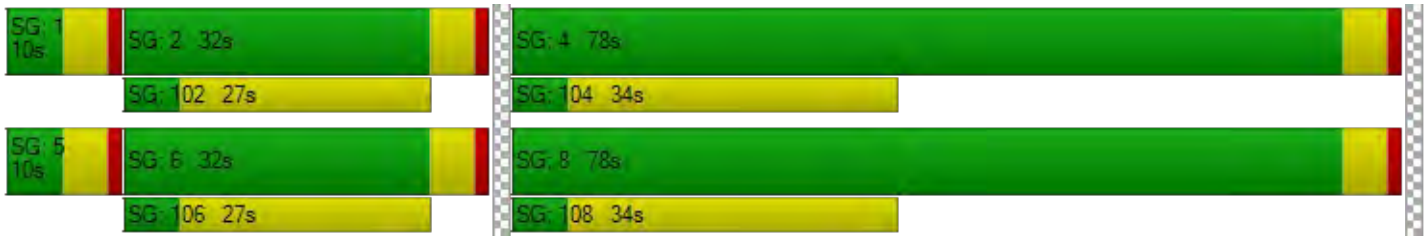
d_M, Delay for Movement [s/veh]	4.21	7.57	7.60	4.35	6.85	6.96	48.47	48.47	40.70	52.39	52.39	52.39
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.47			6.70			48.16			52.39		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	14.87											
Intersection LOS	B											
Intersection V/C	0.265											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.513	2.882	2.076	1.876
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.822	2.069	1.764	1.703
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	104	32	0	94	0	0	0	0	24	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	50	156	0	0	137	19	13	0	34	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	260	32	0	231	19	13	0	34	24	0	0
Peak Hour Factor	0.9500	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9500	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	70	9	0	62	5	3	0	9	6	0	0
Total Analysis Volume [veh/h]	53	280	34	0	248	20	14	0	36	26	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	14			81			279			354		
Exiting Flow Rate [veh/h]	316			300			74			0		
Demand Flow Rate [veh/h]	50	260	32	0	231	19	13	0	34	24	0	0
Adjusted Demand Flow Rate [veh/h]	53	280	34	0	248	20	14	0	36	26	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	340	0	274	52	27
Capacity of Entry and Bypass Lanes [veh/h]	1361	1380	1272	1038	962
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1334	1353	1247	1018	943
X, volume / capacity	0.25	0.03	0.22	0.05	0.03

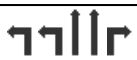
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.99	0.08	0.82	0.15	0.09
95th-Percentile Queue Length [ft]	24.77	1.93	20.41	3.87	2.13
Approach Delay [s/veh]	4.66		4.75	3.97	4.06
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	4.63				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	40.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	5	5	23	47	5	0	0	70	5	16	60	44
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	260	423	338	342	501	231	274	867	69	588	882	309
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	114	91	92	135	62	74	233	19	158	237	83
Total Analysis Volume [veh/h]	280	455	363	368	539	248	295	932	74	632	948	332
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	50	0	16	50	0	23	49	0	25	51	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	106	106	106	106	106	106	106	106	106	106	106	106
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	11	27	27	14	30	30	12	23	23	22	34	34
g / C, Green / Cycle	0.11	0.25	0.25	0.13	0.28	0.28	0.11	0.22	0.22	0.21	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.23	0.11	0.11	0.16	0.09	0.18	0.05	0.18	0.27	0.20
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	363	1285	401	457	1423	444	379	1109	346	727	1134	526
d1, Uniform Delay [s]	46.41	32.69	38.58	44.91	30.94	32.78	46.17	39.89	34.19	40.65	33.72	30.96
k, delay calibration	0.11	0.11	0.29	0.11	0.11	0.11	0.11	0.11	0.11	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]	3.48	0.17	17.76	3.41	0.17	1.13	3.50	1.80	0.31	3.37	1.71	2.58
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	0.77	0.35	0.91	0.81	0.38	0.56	0.78	0.84	0.21	0.87	0.84	0.63
d, Delay for Lane Group [s/veh]	49.89	32.86	56.34	48.32	31.11	33.91	49.67	41.70	34.49	44.02	35.43	33.54
Lane Group LOS	D	C	E	D	C	C	D	D	C	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.76	3.22	11.01	4.90	3.72	5.55	3.85	7.61	1.55	8.24	11.41	7.54
50th-Percentile Queue Length [ft/ln]	94.04	80.41	275.21	122.50	92.98	138.66	96.23	190.33	38.64	206.07	285.24	188.53
95th-Percentile Queue Length [veh/ln]	6.77	5.79	16.45	8.53	6.69	9.41	6.93	12.14	2.78	12.95	16.95	12.04
95th-Percentile Queue Length [ft/ln]	169.27	144.74	411.24	213.26	167.36	235.22	173.22	303.46	69.55	323.78	423.73	301.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.89	32.86	56.34	48.32	31.11	33.91	49.67	41.70	34.49	44.02	35.43	33.54
Movement LOS	D	C	E	D	C	C	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	44.97			37.19			43.10			37.94		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	40.42											
Intersection LOS	D											
Intersection V/C	0.700											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	44.53	44.53	44.53	44.53
l_p,int, Pedestrian LOS Score for Intersection	3.113	3.101	3.310	3.171
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	847	847	828	866
d_b, Bicycle Delay [s]	17.67	17.67	18.25	17.10
l_b,int, Bicycle LOS Score for Intersection	2.164	2.195	2.275	3.137
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	38.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	141	0	0	121	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	44	181	384	48	134	221	1004	80	252	1247	265
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	11	46	98	12	34	56	256	20	64	318	68
Total Analysis Volume [veh/h]	142	45	185	392	49	137	226	1024	82	257	1272	270
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	75	75	11	67	67
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.54	0.54	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.20	0.05	0.07	0.25	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	239	245	214	468	224	250	2734	853	274	2423	756
d1, Uniform Delay [s]	55.31	55.31	59.34	59.01	58.95	59.26	18.80	15.84	64.12	25.65	23.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.15	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]	1.02	0.99	10.06	4.04	7.70	15.30	0.39	0.22	14.40	0.82	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
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	0.39	0.87	0.84	0.83	0.91	0.37	0.10	0.94	0.53	0.36
d, Delay for Lane Group [s/veh]	56.33	56.30	69.40	63.05	66.65	74.57	19.19	16.06	78.52	26.47	24.50
Lane Group LOS	E	E	E	E	E	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.14	7.04	7.06	6.92	8.97	6.56	1.36	5.12	10.07	5.97
50th-Percentile Queue Length [ft/ln]	76.75	78.39	176.01	176.45	173.02	224.24	163.95	34.00	127.98	251.86	149.23
95th-Percentile Queue Length [veh/ln]	5.53	5.64	11.39	11.41	11.24	13.88	10.76	2.45	8.83	15.28	9.98
95th-Percentile Queue Length [ft/ln]	138.15	141.10	284.80	285.37	280.88	347.04	268.94	61.21	220.75	382.00	249.40

Movement, Approach, & Intersection Results

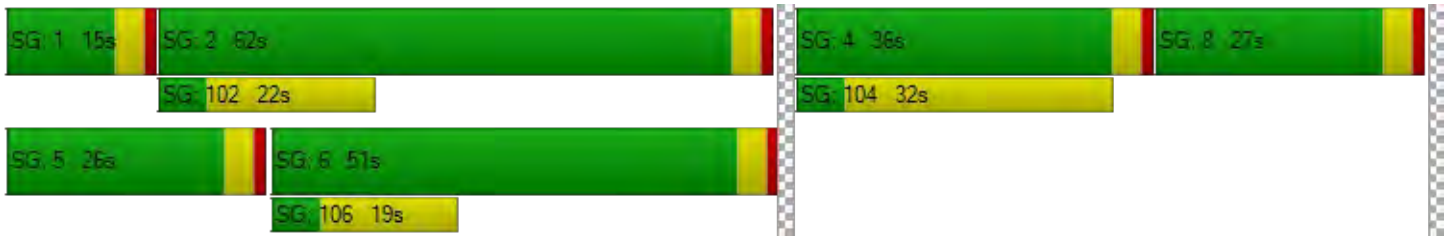
d_M, Delay for Movement [s/veh]	56.32	56.30	69.40	63.05	66.65	66.65	74.57	19.19	16.06	78.52	26.47	24.50
Movement LOS	E	E	E	E	E	E	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	62.82			64.21			28.40			33.61		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.90											
Intersection LOS	D											
Intersection V/C	0.606											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.599	2.540	3.099	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.173	2.513	2.292	2.549
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.670

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	185	0	34	0	104	36	0	87	145
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	573	1	835	0	1151	561	0	1315	655
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	148	0	215	0	297	145	0	339	169
Total Analysis Volume [veh/h]	0	0	0	591	1	861	0	1187	578	0	1356	675
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		24	24	24	26	26	26	55
g / C, Green / Cycle		0.40	0.40	0.40	0.43	0.43	0.43	0.92
(v / s)_i Volume / Saturation Flow Rate		0.17	0.17	0.31	0.23	0.36	0.27	0.42
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		713	713	1126	2206	688	2206	1457
d1, Uniform Delay [s]		12.94	12.94	15.54	12.57	15.15	13.14	0.36
k, delay calibration		0.11	0.11	0.11	0.11	0.23	0.11	0.32
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.39	0.39	1.11	0.21	5.93	0.28	0.68
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		0.42	0.42	0.76	0.54	0.84	0.61	0.46
d, Delay for Lane Group [s/veh]		13.32	13.32	16.65	12.78	21.08	13.42	1.05
Lane Group LOS		B	B	B	B	C	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.59	2.59	4.57	3.42	7.08	4.09	0.28
50th-Percentile Queue Length [ft/ln]		64.82	64.82	114.26	85.42	176.91	102.18	6.91
95th-Percentile Queue Length [veh/ln]		4.67	4.67	8.08	6.15	11.44	7.36	0.50
95th-Percentile Queue Length [ft/ln]		116.67	116.67	201.91	153.76	285.98	183.92	12.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	13.32	13.32	16.65	0.00	12.78	21.08	0.00	13.42	1.05
Movement LOS				B	B	B		B	C		B	A
d_A, Approach Delay [s/veh]	0.00			15.30			15.50			9.31		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	13.05											
Intersection LOS	B											
Intersection V/C	0.670											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.59	21.59	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.109	2.871	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	501	1504	1504
d_b, Bicycle Delay [s]	29.92	16.80	1.84	1.84
l_b,int, Bicycle LOS Score for Intersection	4.132	3.957	2.530	2.677
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	34	0	191	0	0	0	0	253	36	0	197	133
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	577	1	927	0	0	0	0	1266	473	0	1402	412
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	150	0	241	0	0	0	0	330	123	0	365	107
Total Analysis Volume [veh/h]	601	1	966	0	0	0	0	1319	493	0	1460	429
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
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	58	58	58		58	58	58	58
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	25	25	25		23	53	23	23
g / C, Green / Cycle	0.43	0.43	0.43		0.40	0.91	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.34		0.26	0.31	0.29	0.27
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	764	764	1207		2036	1453	2036	635
d1, Uniform Delay [s]	11.45	11.45	14.49		14.19	0.31	14.74	14.41
k, delay calibration	0.11	0.11	0.11		0.11	0.15	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	0.33	1.27		0.35	0.19	0.48	1.26
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	0.39	0.39	0.80		0.65	0.34	0.72	0.68
d, Delay for Lane Group [s/veh]	11.78	11.78	15.76		14.54	0.50	15.23	15.67
Lane Group LOS	B	B	B		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.37	2.37	4.89		4.12	0.07	4.75	4.23
50th-Percentile Queue Length [ft/ln]	59.27	59.27	122.14		102.90	1.87	118.70	105.85
95th-Percentile Queue Length [veh/ln]	4.27	4.27	8.51		7.41	0.13	8.32	7.61
95th-Percentile Queue Length [ft/ln]	106.69	106.69	212.77		185.22	3.37	208.03	190.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.78	11.78	15.76	0.00	0.00	0.00	0.00	14.54	0.50	0.00	15.23	15.67
Movement LOS	B	B	B					B	A		B	B
d_A, Approach Delay [s/veh]	14.23			0.00			10.72			15.33		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	13.42											
Intersection LOS	B											
Intersection V/C	0.630											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.80	20.80	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.860	2.059	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	515	0	1546	1546
d_b, Bicycle Delay [s]	16.04	29.10	1.50	1.50
l_b,int, Bicycle LOS Score for Intersection	4.147	4.132	2.556	2.599
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	73	22	13	14	14	174	273	91	80	14	84	22
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	455	62	162	14	58	250	391	1352	367	224	1105	23
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	121	16	43	4	15	66	104	360	98	60	294	6
Total Analysis Volume [veh/h]	484	66	172	15	62	266	416	1438	390	238	1176	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	25	57	0	11	43	0	33	56	0	16	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14	23	23	1	11	11	12	27	27	8	23	23
g / C, Green / Cycle	0.18	0.29	0.29	0.02	0.13	0.13	0.16	0.34	0.34	0.10	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.14	0.04	0.11	0.01	0.10	0.10	0.12	0.28	0.25	0.07	0.23	0.02
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1682	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	612	545	464	32	223	211	539	1740	543	344	1454	454
d1, Uniform Delay [s]	31.62	20.87	22.58	39.04	33.54	33.56	32.51	24.24	23.05	34.94	26.64	20.81
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.18	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]	2.35	0.10	0.49	10.40	5.10	5.47	2.39	1.05	3.03	2.48	1.12	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.12	0.37	0.47	0.75	0.76	0.77	0.83	0.72	0.69	0.81	0.05
d, Delay for Lane Group [s/veh]	33.97	20.97	23.07	49.43	38.64	39.03	34.90	25.28	26.08	37.42	27.76	20.85
Lane Group LOS	C	C	C	D	D	D	C	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.54	0.90	2.55	0.38	3.38	3.23	3.94	8.02	6.53	2.31	6.78	0.32
50th-Percentile Queue Length [ft/ln]	113.48	22.39	63.66	9.47	84.60	80.82	98.40	200.57	163.37	57.72	169.49	8.07
95th-Percentile Queue Length [veh/ln]	8.03	1.61	4.58	0.68	6.09	5.82	7.08	12.67	10.73	4.16	11.05	0.58
95th-Percentile Queue Length [ft/ln]	200.83	40.30	114.58	17.04	152.27	145.48	177.11	316.70	268.18	103.90	276.25	14.53

Movement, Approach, & Intersection Results

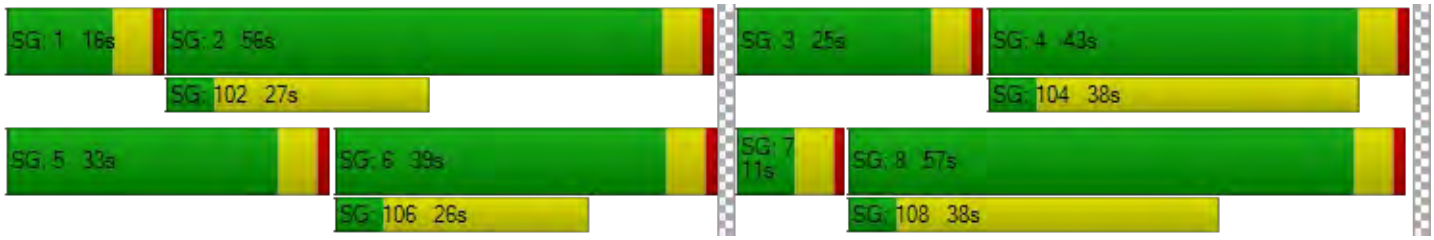
d_M, Delay for Movement [s/veh]	33.97	20.97	23.07	49.43	38.64	38.88	34.90	25.28	26.08	37.42	27.76	20.85
Movement LOS	C	C	C	D	D	D	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	30.18			39.30			27.21			29.24		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	29.15											
Intersection LOS	C											
Intersection V/C	0.592											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.53	31.53	31.53	31.53
l_p,int, Pedestrian LOS Score for Intersection	2.678	2.461	3.297	3.177
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1299	949	1274	850
d_b, Bicycle Delay [s]	4.91	11.04	5.27	13.24
l_b,int, Bicycle LOS Score for Intersection	2.751	2.126	2.794	2.351
Bicycle LOS	C	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.108

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	159	120	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	142	174	118	52	31	83
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]	142	333	238	52	31	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	88	63	14	8	22
Total Analysis Volume [veh/h]	149	351	251	55	33	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.00	0.00	0.00	0.11	0.10
d_M, Delay for Movement [s/veh]	8.26	0.00	0.00	0.00	18.45	10.80
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.40	0.00	0.00	0.00	0.78	0.78
95th-Percentile Queue Length [ft/ln]	10.11	0.00	0.00	0.00	19.52	19.52
d_A, Approach Delay [s/veh]	2.46		0.00		12.91	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.00					
Intersection LOS	C					

Appendix D-4

Phase 1 with Project plus

Other Cumulative Projects (2027)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\4 P1 + OCP AM.pdf

Scenario 7 P1 w Other Cumulative AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.357	17.5	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.005	13.6	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.325	17.6	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.405	22.6	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.475	44.7	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.095	13.4	B
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	EB Right		4.1	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.374	22.5	C
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	SB Thru		4.2	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.632	32.6	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.449	21.0	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.612	10.2	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.612	10.7	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.553	25.7	C
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.108	14.3	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	29	31	6	8	84	84	31	102	82	7	63	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	571	6	8	322	268	396	102	134	7	63	21
Peak Hour Factor	0.9600	0.9600	0.9500	0.9500	0.9600	0.9600	0.9600	0.9500	0.9600	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	149	2	2	84	70	103	27	35	2	17	6
Total Analysis Volume [veh/h]	77	595	6	8	335	279	413	107	140	7	66	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	50	0	20	55	0	12	51	0	14	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	50	50	50	50	50	50	50	50	50	50	50
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	15	15	1	12	12	9	14	14	0	6
g / C, Green / Cycle	0.07	0.29	0.29	0.01	0.24	0.24	0.18	0.29	0.29	0.01	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.11	0.11	0.00	0.07	0.18	0.12	0.03	0.09	0.00	0.02
s, saturation flow rate [veh/h]	1781	3560	1860	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	118	1045	546	19	1211	378	611	1027	459	33	433
d1, Uniform Delay [s]	22.91	14.13	14.13	24.72	15.64	17.72	19.36	13.13	13.96	24.72	19.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream 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]	5.89	0.23	0.43	13.39	0.12	2.83	1.32	0.04	0.37	3.09	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
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	0.65	0.38	0.38	0.41	0.28	0.74	0.68	0.10	0.31	0.21	0.15
d, Delay for Lane Group [s/veh]	28.80	14.35	14.56	38.11	15.77	20.56	20.68	13.17	14.33	27.81	19.94
Lane Group LOS	C	B	B	D	B	C	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.01	1.58	1.68	0.16	0.94	2.91	2.12	0.39	1.13	0.05	0.32
50th-Percentile Queue Length [ft/ln]	25.18	39.41	42.04	3.99	23.45	72.84	53.09	9.85	28.15	1.31	8.10
95th-Percentile Queue Length [veh/ln]	1.81	2.84	3.03	0.29	1.69	5.24	3.82	0.71	2.03	0.09	0.58
95th-Percentile Queue Length [ft/ln]	45.33	70.94	75.67	7.18	42.20	131.11	95.56	17.72	50.67	2.36	14.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.80	14.42	14.56	38.11	15.77	20.56	20.68	13.17	14.33	27.81	19.94	0.00
Movement LOS	C	B	B	D	B	C	C	B	B	C	B	
d_A, Approach Delay [s/veh]	16.06			18.20			18.12			20.70		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.55											
Intersection LOS	B											
Intersection V/C	0.357											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.86	16.86	16.86	16.86
l_p,int, Pedestrian LOS Score for Intersection	2.726	2.895	2.715	2.455
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1797	1996	1836	1916
d_b, Bicycle Delay [s]	0.26	0.00	0.17	0.04
l_b,int, Bicycle LOS Score for Intersection	1.933	1.902	2.104	1.620
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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	116	0	0	90
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	621	0	3	558
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	183	0	1	164
Total Analysis Volume [veh/h]	0	2	731	0	4	656
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

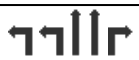
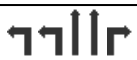
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	28.22	13.58	0.00	0.00	9.14	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.36	0.00	0.00	0.35	0.00
d_A, Approach Delay [s/veh]	13.58		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.325

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	41	27	49	6	14	13	13	89	15	18	35	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	95	240	170	40	64	50	73	472	70	145	406	114
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	67	47	11	18	14	20	131	19	40	113	32
Total Analysis Volume [veh/h]	106	267	189	44	71	56	81	524	78	161	451	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	47	0	13	47	0	12	47	0	13	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	47	47	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	2	8	8	3	10	10	4	11	11
g / C, Green / Cycle	0.08	0.21	0.21	0.05	0.18	0.18	0.07	0.22	0.22	0.09	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.03	0.07	0.12	0.01	0.02	0.04	0.02	0.15	0.05	0.05	0.13	0.08
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	282	762	340	167	643	287	247	768	343	329	853	381
d1, Uniform Delay [s]	20.38	15.64	16.42	21.49	16.04	16.30	20.68	16.90	15.15	20.11	15.51	14.72
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.83	0.28	1.42	0.83	0.07	0.33	0.77	1.08	0.33	1.13	0.51	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	0.38	0.35	0.56	0.26	0.11	0.19	0.33	0.68	0.23	0.49	0.53	0.33
d, Delay for Lane Group [s/veh]	21.21	15.92	17.84	22.32	16.12	16.62	21.45	17.98	15.49	21.24	16.02	15.24
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.53	1.08	1.70	0.23	0.29	0.48	0.41	2.36	0.63	0.80	1.86	1.02
50th-Percentile Queue Length [ft/ln]	13.16	27.09	42.54	5.76	7.18	11.89	10.16	58.90	15.75	19.98	46.58	25.44
95th-Percentile Queue Length [veh/ln]	0.95	1.95	3.06	0.41	0.52	0.86	0.73	4.24	1.13	1.44	3.35	1.83
95th-Percentile Queue Length [ft/ln]	23.69	48.77	76.57	10.36	12.92	21.40	18.30	106.02	28.35	35.97	83.85	45.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.21	15.92	17.84	22.32	16.12	16.62	21.45	17.98	15.49	21.24	16.02	15.24
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.56			17.88			18.10			17.02		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.58											
Intersection LOS	B											
Intersection V/C	0.325											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.21	15.21	15.21	15.21
l_p,int, Pedestrian LOS Score for Intersection	2.682	2.650	2.741	2.769
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1799	1799	1799	1842
d_b, Bicycle Delay [s]	0.24	0.24	0.24	0.15
l_b,int, Bicycle LOS Score for Intersection	2.023	1.701	2.123	2.169
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	16	0	0	0	0	0	0	123	21	0	44	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	23	35	41	16	98	156	500	76	52	508	60
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	7	11	13	5	31	49	156	24	16	159	19
Total Analysis Volume [veh/h]	164	29	44	51	20	123	195	625	95	65	635	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	39	0	37	57	0	12	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	13	21	21	5	13	79	70	70	79	67	67
g / C, Green / Cycle	0.11	0.18	0.18	0.04	0.11	0.66	0.58	0.58	0.66	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.09	0.02	0.03	0.03	0.09	0.22	0.18	0.06	0.08	0.18	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	871	3560	1589	832	3560	1589
c, Capacity [veh/h]	192	328	278	68	172	590	2073	926	569	1997	892
d1, Uniform Delay [s]	52.66	41.49	42.01	57.18	52.65	8.58	12.71	11.14	7.75	14.08	12.14
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	10.36	0.12	0.26	15.11	9.97	1.50	0.37	0.22	0.09	0.42	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
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	0.86	0.09	0.16	0.75	0.83	0.33	0.30	0.10	0.11	0.32	0.08
d, Delay for Lane Group [s/veh]	63.02	41.60	42.27	72.29	62.62	10.08	13.08	11.36	7.84	14.50	12.33
Lane Group LOS	E	D	D	E	E	B	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.41	0.74	1.13	1.82	4.70	2.08	4.28	1.17	0.58	4.65	0.97
50th-Percentile Queue Length [ft/ln]	135.18	18.39	28.36	45.46	117.51	52.02	107.06	29.25	14.48	116.17	24.22
95th-Percentile Queue Length [veh/ln]	9.22	1.32	2.04	3.27	8.26	3.75	7.68	2.11	1.04	8.18	1.74
95th-Percentile Queue Length [ft/ln]	230.51	33.11	51.05	81.84	206.40	93.63	191.90	52.65	26.07	204.55	43.59

Movement, Approach, & Intersection Results

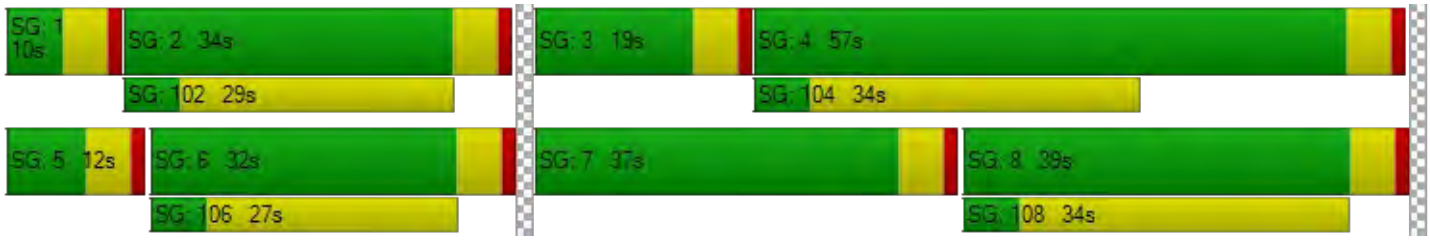
d_M, Delay for Movement [s/veh]	63.02	41.60	42.27	72.29	62.62	62.62	10.08	13.08	11.36	7.84	14.50	12.33
Movement LOS	E	D	D	E	E	E	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	56.55			65.16			12.26			13.73		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.59											
Intersection LOS	C											
Intersection V/C	0.405											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.303	2.276	2.767	2.711
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	866	483	450
d_b, Bicycle Delay [s]	30.83	19.28	34.52	36.06
l_b,int, Bicycle LOS Score for Intersection	1.951	1.880	2.314	2.199
Bicycle LOS	A	A	B	B

Sequence

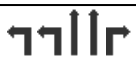
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	44.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	13	7	0	13	8	21	103	0	6	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	330	182	135	212	67	101	326	38	207	271	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	109	60	44	70	22	33	107	13	68	89	47
Total Analysis Volume [veh/h]	100	434	239	178	279	88	133	429	50	272	357	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	29	43	0	27	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	61	61	9	61	78	12	18	18	22	28	28
g / C, Green / Cycle	0.07	0.47	0.47	0.07	0.47	0.60	0.09	0.14	0.14	0.17	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.15	0.05	0.08	0.06	0.07	0.12	0.03	0.15	0.15	0.15
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1656
c, Capacity [veh/h]	124	1677	749	234	1671	953	163	503	224	296	404	358
d1, Uniform Delay [s]	59.66	20.72	21.41	59.57	19.86	11.05	58.00	54.52	49.51	53.35	47.27	47.29
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.19	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]	11.75	0.37	1.12	5.02	0.22	0.19	9.51	4.22	0.50	17.49	2.37	2.70
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	0.81	0.26	0.32	0.76	0.17	0.09	0.82	0.85	0.22	0.92	0.71	0.72
d, Delay for Lane Group [s/veh]	71.41	21.09	22.54	64.59	20.08	11.24	67.50	58.74	50.00	70.84	49.64	49.99
Lane Group LOS	E	C	C	E	C	B	E	E	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	4.09	4.79	3.05	2.51	1.13	4.73	7.16	1.48	10.18	8.95	7.98
50th-Percentile Queue Length [ft/ln]	91.50	102.29	119.80	76.32	62.79	28.23	118.33	178.92	37.08	254.52	223.70	199.55
95th-Percentile Queue Length [veh/ln]	6.59	7.36	8.38	5.49	4.52	2.03	8.30	11.54	2.67	15.41	13.85	12.62
95th-Percentile Queue Length [ft/ln]	164.69	184.12	209.54	137.37	113.03	50.82	207.52	288.61	66.75	385.34	346.34	315.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.41	21.09	22.54	64.59	20.08	11.24	67.50	58.74	50.00	70.84	49.70	49.99
Movement LOS	E	C	C	E	C	B	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	28.05			33.19			59.93			56.80		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	44.73											
Intersection LOS	D											
Intersection V/C	0.475											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.695	2.794	2.660	2.643
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	554
d_b, Bicycle Delay [s]	33.27	30.47	32.56	33.99
l_b,int, Bicycle LOS Score for Intersection	2.197	2.009	2.065	2.234
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	0	0	18	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	41	0	0	18	0
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	0	0	5	0
Total Analysis Volume [veh/h]	0	50	0	0	22	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.11	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.11		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	13.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.095

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	118	47	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	454	248	19	40	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	129	70	5	11	0
Total Analysis Volume [veh/h]	0	516	282	22	45	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.10	0.00
d_M, Delay for Movement [s/veh]	7.87	0.00	0.00	0.00	13.43	9.89
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.31	0.31
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	7.86	7.86
d_A, Approach Delay [s/veh]	0.00		0.00		13.43	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.70					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	31	24	0	36	0	0	0	0	60	0	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]	49	0	68	0	0	0	0	43	120	23	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	49	31	92	0	36	0	0	43	120	83	18	1
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	9	26	0	10	0	0	12	34	24	5	0
Total Analysis Volume [veh/h]	56	35	105	0	41	0	0	49	136	94	20	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	50			173			138			93		
Exiting Flow Rate [veh/h]	276			37			78			157		
Demand Flow Rate [veh/h]	49	31	92	0	36	0	0	43	120	83	18	1
Adjusted Demand Flow Rate [veh/h]	56	35	105	0	41	0	0	49	136	94	20	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	200	42	189	118
Capacity of Entry and Bypass Lanes [veh/h]	1312	1157	1200	1256
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1286	1134	1176	1231
X, volume / capacity	0.15	0.04	0.16	0.09

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.54	0.11	0.56	0.31
95th-Percentile Queue Length [ft]	13.44	2.81	13.94	7.71
Approach Delay [s/veh]	4.07	3.48	4.42	3.69
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.06			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.374

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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	6	0	0	7	41	111	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	273	12	10	179	57	153	7	3	29	33	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	75	3	3	49	16	42	2	1	8	9	9
Total Analysis Volume [veh/h]	3	300	13	11	197	63	168	8	3	32	36	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	72	65	65	72	66	66	38	38	38
g / C, Green / Cycle	0.60	0.54	0.54	0.60	0.55	0.55	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.08	0.01	0.06	0.04	0.29	0.00	0.27
s, saturation flow rate [veh/h]	1151	1870	1843	1112	3560	1589	614	1589	377
c, Capacity [veh/h]	744	1012	997	704	1958	874	256	510	160
d1, Uniform Delay [s]	9.88	13.80	13.80	10.00	12.87	12.66	38.65	27.70	36.01
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.00	0.33	0.33	0.04	0.10	0.16	3.27	0.00	4.24
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	0.00	0.16	0.16	0.02	0.10	0.07	0.69	0.01	0.64
d, Delay for Lane Group [s/veh]	9.88	14.12	14.14	10.04	12.97	12.82	41.92	27.71	40.24
Lane Group LOS	A	B	B	B	B	B	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.03	2.22	2.20	0.13	1.29	0.83	5.10	0.06	2.35
50th-Percentile Queue Length [ft/ln]	0.81	55.48	55.11	3.13	32.26	20.83	127.57	1.50	58.75
95th-Percentile Queue Length [veh/ln]	0.06	3.99	3.97	0.23	2.32	1.50	8.81	0.11	4.23
95th-Percentile Queue Length [ft/ln]	1.45	99.86	99.19	5.63	58.07	37.49	220.19	2.70	105.75

Movement, Approach, & Intersection Results

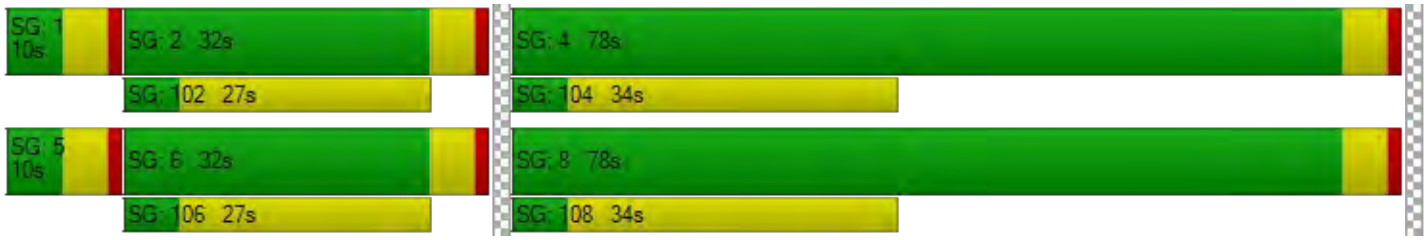
d_M, Delay for Movement [s/veh]	9.88	14.13	14.14	10.04	12.97	12.82	41.92	41.92	27.71	40.24	40.24	40.24
Movement LOS	A	B	B	B	B	B	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	14.09			12.82			41.69			40.24		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.48											
Intersection LOS	C											
Intersection V/C	0.374											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.467	2.956	2.049	1.805
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.820	1.783	1.855	1.730
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	55	12	0	97	0	0	0	0	34	0	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]	19	98	0	0	135	8	18	0	47	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	19	153	12	0	232	8	18	0	47	34	0	1
Peak Hour Factor	0.9500	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9500	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	42	3	0	64	2	5	0	12	9	0	0
Total Analysis Volume [veh/h]	20	168	13	0	255	9	20	0	49	37	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	20			58			298			212		
Exiting Flow Rate [veh/h]	348			193			30			0		
Demand Flow Rate [veh/h]	19	153	12	0	232	8	18	0	47	34	0	1
Adjusted Demand Flow Rate [veh/h]	20	168	13	0	255	9	20	0	49	37	0	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	192	0	270	71	39
Capacity of Entry and Bypass Lanes [veh/h]	1352	1380	1301	1019	1112
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1326	1353	1276	999	1090
X, volume / capacity	0.14	0.01	0.21	0.07	0.03

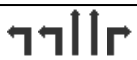
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.49	0.03	0.78	0.22	0.11
95th-Percentile Queue Length [ft]	12.36	0.73	19.46	5.56	2.71
Approach Delay [s/veh]	3.80		4.59	4.22	3.60
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	4.20				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	32.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	14	14	12	97	12	0	0	109	12	23	138	115
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	118	490	399	307	252	101	185	895	44	339	729	259
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	126	103	79	65	26	48	231	11	87	188	67
Total Analysis Volume [veh/h]	122	505	411	316	260	104	191	923	45	349	752	267
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	70	0	10	50	0	10	50	0	10	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	87	87	87	87	87	87	87	87	87	87	87	87
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	25	25	11	31	31	7	20	20	11	24	24
g / C, Green / Cycle	0.06	0.29	0.29	0.12	0.35	0.35	0.08	0.23	0.23	0.13	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.04	0.10	0.26	0.09	0.05	0.07	0.06	0.18	0.03	0.10	0.21	0.16
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	200	1483	463	421	1808	564	283	1151	359	456	983	456
d1, Uniform Delay [s]	40.11	24.32	29.55	37.02	19.12	19.42	38.91	31.91	26.89	36.55	28.97	27.25
k, delay calibration	0.11	0.11	0.25	0.11	0.11	0.11	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]	2.97	0.14	12.46	2.72	0.04	0.16	2.81	1.35	0.16	2.70	1.27	1.19
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	0.61	0.34	0.89	0.75	0.14	0.18	0.68	0.80	0.13	0.76	0.77	0.59
d, Delay for Lane Group [s/veh]	43.08	24.45	42.00	39.75	19.16	19.57	41.72	33.26	27.04	39.25	30.24	28.45
Lane Group LOS	D	C	D	D	B	B	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.34	2.68	9.50	3.35	1.17	1.44	1.99	5.84	0.72	3.69	7.14	4.81
50th-Percentile Queue Length [ft/ln]	33.51	67.06	237.59	83.76	29.19	35.99	49.85	145.92	17.93	92.13	178.57	120.17
95th-Percentile Queue Length [veh/ln]	2.41	4.83	14.56	6.03	2.10	2.59	3.59	9.80	1.29	6.63	11.53	8.40
95th-Percentile Queue Length [ft/ln]	60.31	120.70	363.98	150.76	52.53	64.78	89.73	244.97	32.27	165.83	288.15	210.06

Movement, Approach, & Intersection Results

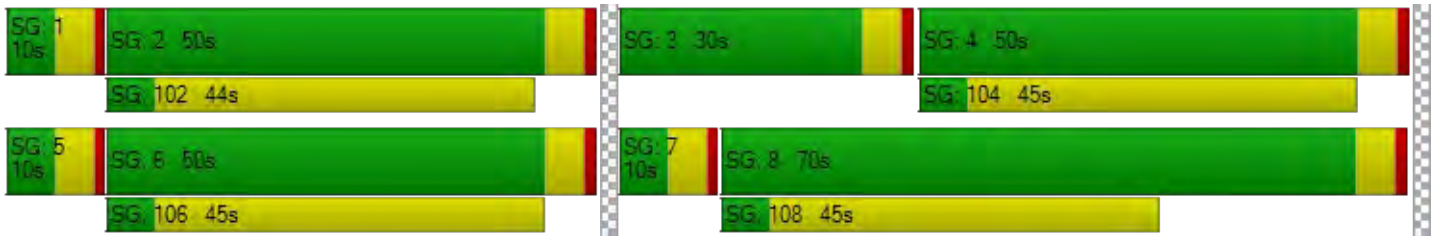
d_M, Delay for Movement [s/veh]	43.08	24.45	42.00	39.75	19.16	19.57	41.72	33.26	27.04	39.25	30.24	28.45
Movement LOS	D	C	D	D	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	33.59			28.79			34.41			32.19		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	32.59											
Intersection LOS	C											
Intersection V/C	0.632											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.98	34.98	34.98	34.98
l_p,int, Pedestrian LOS Score for Intersection	3.032	3.027	3.196	3.093
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1494	1034	1034	1034
d_b, Bicycle Delay [s]	2.79	10.15	10.15	10.15
l_b,int, Bicycle LOS Score for Intersection	2.131	1.934	2.197	2.688
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	219	0	0	276	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	11	138	102	10	18	43	1389	80	175	1244	168
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	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	3	35	26	3	5	11	354	20	45	317	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1417	82	179	1269	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	9	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.28	0.05	0.05	0.25	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	189	190	168	248	120	58	3271	1021	229	3441	1074
d1, Uniform Delay [s]	57.77	57.76	61.40	62.20	61.35	67.15	12.42	9.45	64.37	9.81	8.25
k, delay calibration	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
d2, Incremental Delay [s]	0.86	0.85	10.44	1.13	0.98	17.85	0.42	0.15	5.76	0.31	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.76	0.43	0.08	0.78	0.37	0.16
d, Delay for Lane Group [s/veh]	58.63	58.62	71.85	63.34	62.33	85.00	12.84	9.61	70.13	10.12	8.57
Lane Group LOS	E	E	E	E	E	F	B	A	E	B	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.42	1.82	0.98	1.86	7.33	1.00	3.34	5.56	1.95
50th-Percentile Queue Length [ft/ln]	47.05	47.38	135.55	45.51	24.47	46.40	183.33	24.89	83.48	139.11	48.86
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.24	3.28	1.76	3.34	11.77	1.79	6.01	9.43	3.52
95th-Percentile Queue Length [ft/ln]	84.69	85.29	231.03	81.92	44.05	83.51	294.36	44.81	150.26	235.83	87.94

Movement, Approach, & Intersection Results

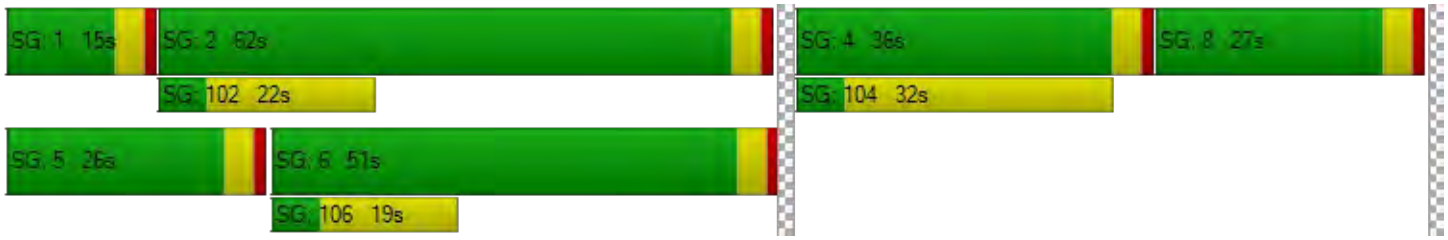
d_M, Delay for Movement [s/veh]	58.62	58.62	71.85	63.34	62.33	62.33	85.00	12.84	9.61	70.13	10.12	8.57
Movement LOS	E	E	E	E	E	E	F	B	A	E	B	A
d_A, Approach Delay [s/veh]	65.99			63.12			14.73			16.59		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	21.03											
Intersection LOS	C											
Intersection V/C	0.449											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.105	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.408	2.450
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.612

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	108	0	94	0	140	79	0	182	203
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	276	1	608	0	1130	587	0	961	921
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	71	0	157	0	291	151	0	248	237
Total Analysis Volume [veh/h]	0	0	0	285	1	627	0	1165	605	0	991	949
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		53	53	53	53	53	53	53
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		19	19	19	25	25	25	48
g / C, Green / Cycle		0.35	0.35	0.35	0.46	0.46	0.46	0.91
(v / s)_i Volume / Saturation Flow Rate		0.08	0.08	0.22	0.23	0.38	0.19	0.60
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		623	623	984	2358	736	2358	1441
d1, Uniform Delay [s]		12.27	12.27	14.52	9.98	12.43	9.56	0.58
k, delay calibration		0.11	0.11	0.11	0.11	0.20	0.11	0.47
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.19	0.19	0.69	0.16	4.27	0.12	2.25
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	1.00	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		0.23	0.23	0.64	0.49	0.82	0.42	0.66
d, Delay for Lane Group [s/veh]		12.46	12.46	15.21	10.14	16.69	9.68	2.83
Lane Group LOS		B	B	B	B	B	A	A
Critical Lane Group		No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]		1.08	1.08	2.81	2.58	5.82	2.10	0.90
50th-Percentile Queue Length [ft/ln]		26.98	26.98	70.29	64.59	145.41	52.55	22.50
95th-Percentile Queue Length [veh/ln]		1.94	1.94	5.06	4.65	9.77	3.78	1.62
95th-Percentile Queue Length [ft/ln]		48.57	48.57	126.51	116.26	244.29	94.59	40.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	12.46	12.46	15.21	0.00	10.14	16.69	0.00	9.68	2.83
Movement LOS				B	B	B		B	B		A	A
d_A, Approach Delay [s/veh]	0.00			14.35			12.38			6.33		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	10.23											
Intersection LOS	B											
Intersection V/C	0.612											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	18.38	18.38	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.111	2.827	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	564	1691	1691
d_b, Bicycle Delay [s]	26.62	13.73	0.64	0.64
l_b,int, Bicycle LOS Score for Intersection	4.132	3.066	2.533	2.627
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.612

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	94	0	132	0	0	0	0	169	79	0	291	190
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	496	3	624	0	0	0	0	694	747	0	1385	575
Peak Hour Factor	0.9700	0.9700	0.9700	0.9500	0.9500	0.9500	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	128	1	161	0	0	0	0	179	193	0	357	148
Total Analysis Volume [veh/h]	511	3	643	0	0	0	0	715	770	0	1428	593
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	54	54	54		54	54	54	54
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	19	19	19		26	49	26	26
g / C, Green / Cycle	0.35	0.35	0.35		0.47	0.91	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.23		0.14	0.48	0.28	0.37
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	618	618	976		2395	1444	2395	747
d1, Uniform Delay [s]	13.62	13.62	15.11		8.93	0.44	10.66	12.24
k, delay calibration	0.11	0.11	0.11		0.11	0.35	0.11	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	0.45	0.77		0.07	0.98	0.24	3.58
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	0.42	0.42	0.66		0.30	0.53	0.60	0.79
d, Delay for Lane Group [s/veh]	14.07	14.07	15.87		9.00	1.42	10.90	15.82
Lane Group LOS	B	B	B		A	A	B	B
Critical Lane Group	No	No	No		No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	2.18	2.18	3.02		1.44	0.39	3.45	5.60
50th-Percentile Queue Length [ft/ln]	54.53	54.52	75.59		36.01	9.81	86.32	140.10
95th-Percentile Queue Length [veh/ln]	3.93	3.93	5.44		2.59	0.71	6.22	9.49
95th-Percentile Queue Length [ft/ln]	98.15	98.14	136.06		64.82	17.65	155.38	237.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.07	14.07	15.87	0.00	0.00	0.00	0.00	9.00	1.42	0.00	10.90	15.82
Movement LOS	B	B	B					A	A		B	B
d_A, Approach Delay [s/veh]	15.07			0.00			5.07			12.34		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	10.70											
Intersection LOS	B											
Intersection V/C	0.612											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	18.99	18.99	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.838	2.109	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	551	0	1652	1652
d_b, Bicycle Delay [s]	14.31	27.25	0.83	0.83
l_b,int, Bicycle LOS Score for Intersection	3.469	4.132	2.376	2.671
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 6th Edition	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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	97	8	17	21	21	260	95	115	91	16	125	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	440	41	100	21	56	356	147	874	242	121	1163	9
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]	116	11	26	6	15	94	39	230	64	32	306	2
Total Analysis Volume [veh/h]	463	43	105	22	59	375	155	920	255	127	1224	9
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	59	0	17	48	0	14	52	0	12	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	72	72	72	72	72	72	72	72	72	72	72	72
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	13	23	23	2	12	12	5	23	23	5	22	22
g / C, Green / Cycle	0.17	0.32	0.32	0.02	0.17	0.17	0.07	0.31	0.31	0.06	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.07	0.01	0.13	0.13	0.04	0.18	0.16	0.04	0.24	0.01
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1656	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	603	601	511	44	285	273	255	1599	499	221	1549	483
d1, Uniform Delay [s]	28.53	17.09	17.88	34.89	28.70	28.70	32.56	20.82	20.32	32.98	23.10	17.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	2.09	0.05	0.20	8.30	4.58	4.76	2.34	0.33	0.81	2.35	0.94	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	0.00	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	0.07	0.21	0.50	0.78	0.78	0.61	0.58	0.51	0.58	0.79	0.02
d, Delay for Lane Group [s/veh]	30.62	17.14	18.07	43.19	33.27	33.46	34.90	21.15	21.13	35.33	24.04	17.67
Lane Group LOS	C	B	B	D	C	C	C	C	C	D	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.84	0.48	1.24	0.47	3.88	3.74	1.36	4.13	3.42	1.12	6.09	0.10
50th-Percentile Queue Length [ft/ln]	95.94	12.04	30.93	11.86	96.93	93.42	33.96	103.21	85.58	28.04	152.33	2.56
95th-Percentile Queue Length [veh/ln]	6.91	0.87	2.23	0.85	6.98	6.73	2.45	7.43	6.16	2.02	10.14	0.18
95th-Percentile Queue Length [ft/ln]	172.68	21.67	55.67	21.35	174.47	168.16	61.13	185.78	154.05	50.47	253.54	4.61

Movement, Approach, & Intersection Results

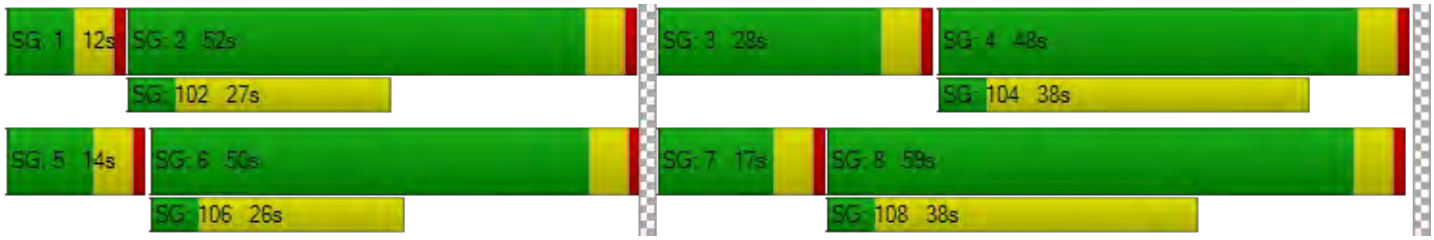
d_M, Delay for Movement [s/veh]	30.62	17.14	18.07	43.19	33.27	33.38	34.90	21.15	21.13	35.33	24.04	17.67
Movement LOS	C	B	B	D	C	C	C	C	C	D	C	B
d_A, Approach Delay [s/veh]	27.51			33.84			22.75			25.05		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.70											
Intersection LOS	C											
Intersection V/C	0.553											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	27.71	27.71	27.71	27.71
l_p,int, Pedestrian LOS Score for Intersection	2.614	2.420	3.207	3.100
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1494	1189	1300	1245
d_b, Bicycle Delay [s]	2.32	5.94	4.43	5.16
l_b,int, Bicycle LOS Score for Intersection	2.568	2.312	2.291	2.308
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.108

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	86	131	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	42	68	166	16	50	134
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]	42	154	297	16	50	134
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	41	78	4	13	35
Total Analysis Volume [veh/h]	44	162	313	17	53	141
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.11	0.17
d_M, Delay for Movement [s/veh]	8.05	0.00	0.00	0.00	14.28	11.14
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.11	0.00	0.00	0.00	1.11	1.11
95th-Percentile Queue Length [ft/ln]	2.79	0.00	0.00	0.00	27.85	27.85
d_A, Approach Delay [s/veh]	1.72		0.00		12.00	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.67					
Intersection LOS	B					

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Report File: H:\...\4 P1 + OCP PM.pdf

Scenario 8 P1 w Other Cumulative PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.575	26.4	C
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Left	0.030	32.7	D
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.346	19.2	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.293	12.8	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.418	38.7	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.182	18.8	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	WB Left		4.9	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.267	14.8	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		4.6	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.795	54.4	D
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.672	38.2	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.814	20.1	C
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.672	14.5	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.630	31.9	C
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.108	18.5	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.575

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	94	102	9	22	65	65	102	97	57	8	125	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	699	9	22	714	488	474	97	164	8	125	14
Peak Hour Factor	0.9800	0.9800	0.9500	0.9500	0.9800	0.9800	0.9800	0.9500	0.9800	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]	38	178	2	6	182	124	121	26	42	2	33	4
Total Analysis Volume [veh/h]	150	713	9	23	729	498	484	102	167	8	132	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	21	49	0	27	55	0	10	54	0	10	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	34	34	2	28	28	14	23	23	1	9
g / C, Green / Cycle	0.11	0.43	0.43	0.03	0.35	0.35	0.18	0.29	0.29	0.01	0.12
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.13	0.01	0.14	0.31	0.14	0.03	0.11	0.00	0.04
s, saturation flow rate [veh/h]	1781	3560	1858	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	192	1528	797	45	1766	551	612	1015	453	36	422
d1, Uniform Delay [s]	34.77	15.03	15.04	38.49	19.91	24.85	31.50	21.04	22.83	39.25	32.26
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.31	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
d2, Incremental Delay [s]	6.81	0.11	0.22	8.67	0.15	14.32	2.35	0.04	0.50	3.09	0.42
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	0.78	0.31	0.31	0.51	0.41	0.90	0.79	0.10	0.37	0.22	0.31
d, Delay for Lane Group [s/veh]	41.57	15.15	15.25	47.16	20.07	39.17	33.85	21.08	23.33	42.34	32.68
Lane Group LOS	D	B	B	D	C	D	C	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.13	2.70	2.84	0.54	3.32	10.61	4.52	0.69	2.48	0.09	1.17
50th-Percentile Queue Length [ft/ln]	78.28	67.48	71.10	13.62	82.89	265.18	113.11	17.17	62.06	2.29	29.15
95th-Percentile Queue Length [veh/ln]	5.64	4.86	5.12	0.98	5.97	15.95	8.01	1.24	4.47	0.17	2.10
95th-Percentile Queue Length [ft/ln]	140.90	121.47	127.98	24.52	149.20	398.71	200.32	30.90	111.70	4.13	52.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.57	15.18	15.25	47.16	20.07	39.17	33.85	21.08	23.33	42.34	32.68	0.00
Movement LOS	D	B	B	D	C	D	C	C	C	D	C	
d_A, Approach Delay [s/veh]	19.72			28.18			29.79			33.23		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	26.37											
Intersection LOS	C											
Intersection V/C	0.575											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.41	31.41	31.41	31.41
l_p,int, Pedestrian LOS Score for Intersection	2.837	3.019	2.803	2.493
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1103	1253	1228	1228
d_b, Bicycle Delay [s]	8.03	5.57	5.95	5.95
l_b,int, Bicycle LOS Score for Intersection	2.039	2.247	2.181	1.675
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	32.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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	128	0	0	147
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]	4	4	676	7	25	695
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	1	1	176	2	7	181
Total Analysis Volume [veh/h]	4	4	704	7	26	724
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

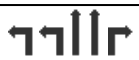
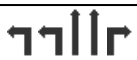
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	32.65	13.31	0.00	0.00	9.17	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.09	0.03	0.00	0.00	0.09	0.00
95th-Percentile Queue Length [ft/ln]	2.29	0.69	0.00	0.00	2.26	0.00
d_A, Approach Delay [s/veh]	22.98		0.00		0.32	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.29					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.346

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	28	23	33	9	30	17	18	66	43	52	103	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	105	150	120	268	95	55	470	162	247	507	56
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]	31	27	39	31	70	25	14	122	42	64	132	15
Total Analysis Volume [veh/h]	125	109	156	125	279	99	57	490	169	257	528	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	11	47	0	15	51	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	50	50	50	50	50	50	50	50	50	50	50	50
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	3	10	10	6	13	13
g / C, Green / Cycle	0.08	0.20	0.20	0.08	0.20	0.20	0.06	0.20	0.20	0.12	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.03	0.10	0.04	0.08	0.06	0.02	0.14	0.11	0.07	0.15	0.04
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	286	704	314	286	704	314	192	713	318	423	950	424
d1, Uniform Delay [s]	21.98	16.72	17.97	21.98	17.59	17.29	22.85	18.69	18.03	20.97	15.90	14.05
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.05	0.10	1.21	1.05	0.36	0.57	0.85	1.19	1.38	1.41	0.51	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.15	0.50	0.44	0.40	0.31	0.30	0.69	0.53	0.61	0.56	0.14
d, Delay for Lane Group [s/veh]	23.03	16.82	19.18	23.03	17.95	17.85	23.70	19.88	19.41	22.38	16.41	14.20
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.69	0.48	1.54	0.69	1.29	0.93	0.32	2.47	1.69	1.39	2.35	0.46
50th-Percentile Queue Length [ft/ln]	17.13	11.93	38.60	17.13	32.34	23.18	8.04	61.83	42.23	34.63	58.72	11.50
95th-Percentile Queue Length [veh/ln]	1.23	0.86	2.78	1.23	2.33	1.67	0.58	4.45	3.04	2.49	4.23	0.83
95th-Percentile Queue Length [ft/ln]	30.84	21.48	69.47	30.84	58.22	41.73	14.47	111.29	76.02	62.33	105.70	20.71

Movement, Approach, & Intersection Results

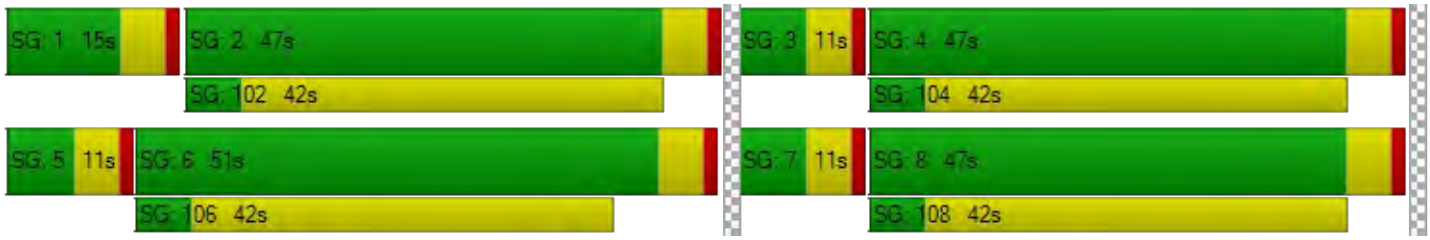
d_M, Delay for Movement [s/veh]	23.03	16.82	19.18	23.03	17.95	17.85	23.70	19.88	19.41	22.38	16.41	14.20
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.76			19.19			20.07			18.07		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	19.16											
Intersection LOS	B											
Intersection V/C	0.346											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.94	16.94	16.94	16.94
l_p,int, Pedestrian LOS Score for Intersection	2.717	2.666	2.769	2.789
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1671	1671	1671	1830
d_b, Bicycle Delay [s]	0.68	0.68	0.68	0.18
l_b,int, Bicycle LOS Score for Intersection	1.881	1.975	2.150	2.255
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.293

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	26	0	0	0	0	0	0	84	24	0	137	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	8	8	5	4	10	17	452	168	21	628	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	2	2	1	1	3	5	133	49	6	185	2
Total Analysis Volume [veh/h]	128	9	9	6	5	12	20	532	198	25	739	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	11	14	14	1	4	90	82	82	90	83	83
g / C, Green / Cycle	0.09	0.12	0.12	0.01	0.04	0.75	0.69	0.69	0.75	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.07	0.00	0.01	0.00	0.01	0.03	0.15	0.12	0.03	0.21	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	779	3560	1589	794	3560	1589
c, Capacity [veh/h]	157	218	186	14	61	611	2437	1088	641	2449	1093
d1, Uniform Delay [s]	53.74	47.04	47.08	59.26	56.29	4.27	7.02	6.83	4.03	7.38	5.88
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.67	0.08	0.11	18.30	2.47	0.10	0.21	0.37	0.02	0.32	0.01
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
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	0.81	0.04	0.05	0.42	0.28	0.03	0.22	0.18	0.04	0.30	0.01
d, Delay for Lane Group [s/veh]	63.41	47.12	47.19	77.56	58.76	4.37	7.23	7.19	4.06	7.70	5.89
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.22	0.24	0.25	0.25	0.54	0.13	2.45	1.83	0.14	3.61	0.06
50th-Percentile Queue Length [ft/ln]	105.42	6.12	6.15	6.36	13.60	3.17	61.28	45.84	3.55	90.20	1.60
95th-Percentile Queue Length [veh/ln]	7.58	0.44	0.44	0.46	0.98	0.23	4.41	3.30	0.26	6.49	0.12
95th-Percentile Queue Length [ft/ln]	189.62	11.02	11.07	11.46	24.48	5.71	110.31	82.51	6.40	162.36	2.88

Movement, Approach, & Intersection Results

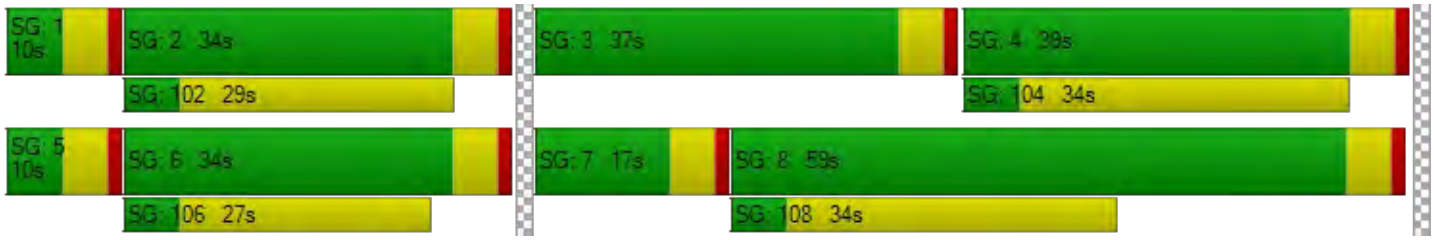
d_M, Delay for Movement [s/veh]	63.41	47.12	47.19	77.56	58.76	58.76	4.37	7.23	7.19	4.06	7.70	5.89
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	61.41			63.66			7.14			7.56		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	12.79											
Intersection LOS	B											
Intersection V/C	0.293											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.262	1.995	2.733	2.682
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.801	1.598	2.178	2.197
Bicycle LOS	A	A	B	B

Sequence

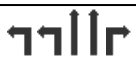
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	18	8	0	18	22	14	70	0	9	116	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	288	92	221	515	163	103	370	46	132	451	156
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	75	24	58	134	42	27	96	12	34	117	41
Total Analysis Volume [veh/h]	53	300	96	230	536	170	107	385	48	138	470	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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	42	0	19	46	46	18	43	0	16	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	57	57	10	62	76	9	22	22	11	24	24
g / C, Green / Cycle	0.04	0.47	0.47	0.08	0.52	0.64	0.08	0.19	0.19	0.09	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.06	0.07	0.15	0.11	0.06	0.11	0.03	0.08	0.18	0.18
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1708
c, Capacity [veh/h]	70	1678	749	292	1839	1009	136	661	295	164	376	344
d1, Uniform Delay [s]	57.12	18.33	17.87	53.91	16.53	8.98	54.49	44.66	41.07	53.63	46.51	46.55
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]	15.29	0.23	0.35	4.69	0.40	0.36	9.55	0.82	0.26	10.82	6.60	7.34
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	0.76	0.18	0.13	0.79	0.29	0.17	0.79	0.58	0.16	0.84	0.88	0.88
d, Delay for Lane Group [s/veh]	72.41	18.57	18.22	58.60	16.93	9.34	64.04	45.48	41.32	64.45	53.11	53.89
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.47	1.58	3.60	4.27	1.87	3.54	5.32	1.22	4.59	10.22	9.44
50th-Percentile Queue Length [ft/ln]	47.25	61.65	39.44	89.93	106.77	46.72	88.50	132.90	30.57	114.79	255.42	236.02
95th-Percentile Queue Length [veh/ln]	3.40	4.44	2.84	6.47	7.66	3.36	6.37	9.10	2.20	8.11	15.46	14.48
95th-Percentile Queue Length [ft/ln]	85.05	110.98	71.00	161.87	191.51	84.10	159.30	227.43	55.02	202.65	386.47	362.00

Movement, Approach, & Intersection Results

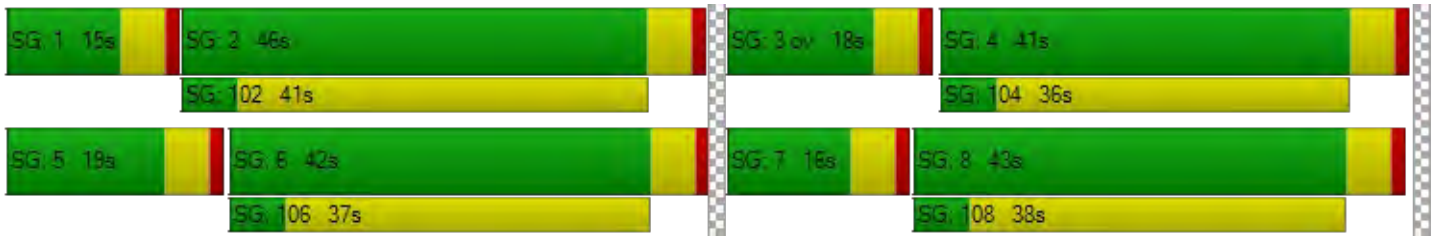
d_M, Delay for Movement [s/veh]	72.41	18.57	18.22	58.60	16.93	9.34	64.04	45.48	41.32	64.45	53.34	53.89
Movement LOS	E	B	B	E	B	A	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	24.85			25.79			48.79			55.44		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.72											
Intersection LOS	D											
Intersection V/C	0.418											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.658	2.819	2.668	2.604
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	616	683	633	600
d_b, Bicycle Delay [s]	28.72	26.02	28.03	29.42
l_b,int, Bicycle LOS Score for Intersection	1.930	2.332	2.005	2.196
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	68	0	0	50	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	68	0	0	50	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	0	0	15	0
Total Analysis Volume [veh/h]	0	81	0	0	60	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.31	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.31		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.182

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	84	125	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	333	570	45	53	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	91	157	12	15	0
Total Analysis Volume [veh/h]	0	366	626	49	58	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.18	0.00
d_M, Delay for Movement [s/veh]	8.95	0.00	0.00	0.00	18.82	12.78
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.66	0.66
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	16.39	16.39
d_A, Approach Delay [s/veh]	0.00		0.00		18.82	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.99					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	72	41	0	52	0	0	0	0	46	0	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]	125	0	44	0	0	0	0	31	84	72	45	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	125	72	85	0	52	0	0	31	84	118	45	1
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	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	21	25	0	15	0	0	9	25	35	13	0
Total Analysis Volume [veh/h]	149	86	101	0	62	0	0	37	100	140	54	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	38			350			206			240		
Exiting Flow Rate [veh/h]	308			89			207			141		
Demand Flow Rate [veh/h]	125	72	85	0	52	0	0	31	84	118	45	1
Adjusted Demand Flow Rate [veh/h]	149	86	101	0	62	0	0	37	100	140	54	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	343	64	140	199
Capacity of Entry and Bypass Lanes [veh/h]	1328	966	1119	1081
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1302	947	1097	1060
X, volume / capacity	0.26	0.07	0.12	0.18

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.03	0.21	0.43	0.67
95th-Percentile Queue Length [ft]	25.87	5.24	10.67	16.81
Approach Delay [s/veh]	5.02	4.40	4.38	5.08
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.86			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.267

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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	9	0	0	8	117	75	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	231	52	40	370	155	87	21	5	32	34	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	63	14	11	102	43	24	6	1	9	9	4
Total Analysis Volume [veh/h]	10	254	57	44	407	170	96	23	5	35	37	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	89	80	80	89	82	82	21	21	21
g / C, Green / Cycle	0.74	0.67	0.67	0.74	0.69	0.69	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.09	0.04	0.11	0.11	0.13	0.00	0.15
s, saturation flow rate [veh/h]	883	1870	1754	1123	3560	1589	914	1589	578
c, Capacity [veh/h]	712	1244	1167	889	2440	1089	217	283	145
d1, Uniform Delay [s]	4.20	7.36	7.37	4.25	6.71	6.66	46.31	40.68	48.44
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.21	0.23	0.11	0.15	0.31	2.16	0.02	3.95
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	0.01	0.13	0.13	0.05	0.17	0.16	0.55	0.02	0.60
d, Delay for Lane Group [s/veh]	4.21	7.57	7.61	4.35	6.86	6.96	48.47	40.70	52.39
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.06	1.50	1.46	0.29	1.80	1.54	3.48	0.12	2.76
50th-Percentile Queue Length [ft/ln]	1.50	37.58	36.48	7.21	44.89	38.47	86.96	3.12	69.10
95th-Percentile Queue Length [veh/ln]	0.11	2.71	2.63	0.52	3.23	2.77	6.26	0.22	4.98
95th-Percentile Queue Length [ft/ln]	2.70	67.65	65.66	12.98	80.81	69.24	156.53	5.62	124.38

Movement, Approach, & Intersection Results

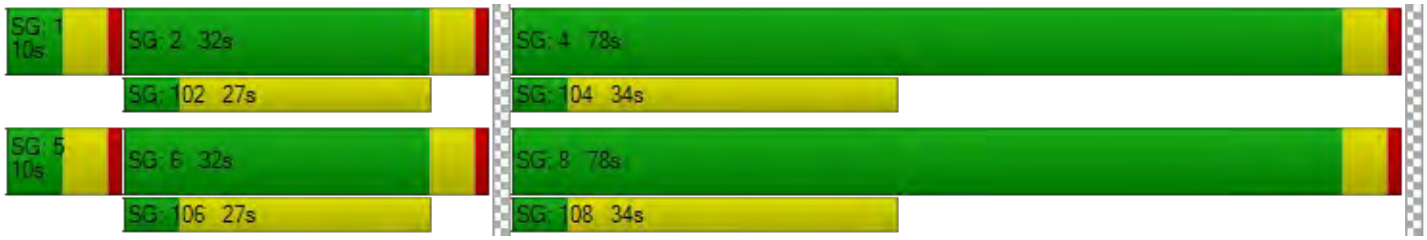
d_M, Delay for Movement [s/veh]	4.21	7.58	7.61	4.35	6.86	6.96	48.47	48.47	40.70	52.39	52.39	52.39
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.48			6.71			48.16			52.39		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	14.83											
Intersection LOS	B											
Intersection V/C	0.267											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.515	2.883	2.076	1.876
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.824	2.072	1.764	1.703
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	104	32	0	94	0	0	0	0	24	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	50	156	0	0	137	19	13	0	34	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	260	32	0	231	19	13	0	34	24	0	0
Peak Hour Factor	0.9500	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9500	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	70	9	0	62	5	3	0	9	6	0	0
Total Analysis Volume [veh/h]	53	280	34	0	248	20	14	0	36	26	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	14			81			279			354		
Exiting Flow Rate [veh/h]	316			300			74			0		
Demand Flow Rate [veh/h]	50	260	32	0	231	19	13	0	34	24	0	0
Adjusted Demand Flow Rate [veh/h]	53	280	34	0	248	20	14	0	36	26	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	340	0	274	52	27
Capacity of Entry and Bypass Lanes [veh/h]	1361	1380	1272	1038	962
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1334	1353	1247	1018	943
X, volume / capacity	0.25	0.03	0.22	0.05	0.03

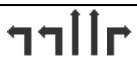
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.99	0.08	0.82	0.15	0.09
95th-Percentile Queue Length [ft]	24.77	1.93	20.41	3.87	2.13
Approach Delay [s/veh]	4.66		4.75	3.97	4.06
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	4.63				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	54.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	26	26	27	218	27	0	0	245	27	19	224	204
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	444	342	513	523	231	274	1042	91	591	1046	469
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	119	92	138	141	62	74	280	24	159	281	126
Total Analysis Volume [veh/h]	302	477	368	552	562	248	295	1120	98	635	1125	504
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	70	0	10	62	0	10	49	0	11	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	129	129	129	129	129	129	129	129	129	129	129	129
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14	30	30	23	39	39	13	30	30	26	43	43
g / C, Green / Cycle	0.11	0.23	0.23	0.18	0.31	0.31	0.10	0.23	0.23	0.20	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.23	0.16	0.11	0.16	0.09	0.22	0.06	0.18	0.32	0.30
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	368	1184	370	620	1555	485	360	1180	368	697	1171	544
d1, Uniform Delay [s]	56.41	41.90	49.42	51.69	34.98	36.87	56.57	48.81	40.58	50.34	42.44	41.76
k, delay calibration	0.11	0.11	0.43	0.11	0.11	0.19	0.11	0.11	0.11	0.11	0.20	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]	4.56	0.22	42.12	4.67	0.14	1.49	4.62	5.07	0.38	5.05	9.66	24.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.40	1.00	0.89	0.36	0.51	0.82	0.95	0.27	0.91	0.96	0.93
d, Delay for Lane Group [s/veh]	60.97	42.12	91.54	56.36	35.12	38.37	61.19	53.88	40.96	55.39	52.10	65.91
Lane Group LOS	E	D	F	E	D	D	E	D	D	E	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.06	4.35	16.14	9.12	4.66	6.68	4.84	12.04	2.55	10.50	18.99	19.01
50th-Percentile Queue Length [ft/ln]	126.50	108.78	403.38	228.09	116.57	167.01	120.97	301.04	63.66	262.59	474.78	475.18
95th-Percentile Queue Length [veh/ln]	8.75	7.77	22.72	14.08	8.20	10.92	8.45	17.73	4.58	15.82	26.14	26.16
95th-Percentile Queue Length [ft/ln]	218.72	194.30	568.07	351.93	205.11	272.98	211.15	443.32	114.58	395.47	653.45	653.93

Movement, Approach, & Intersection Results

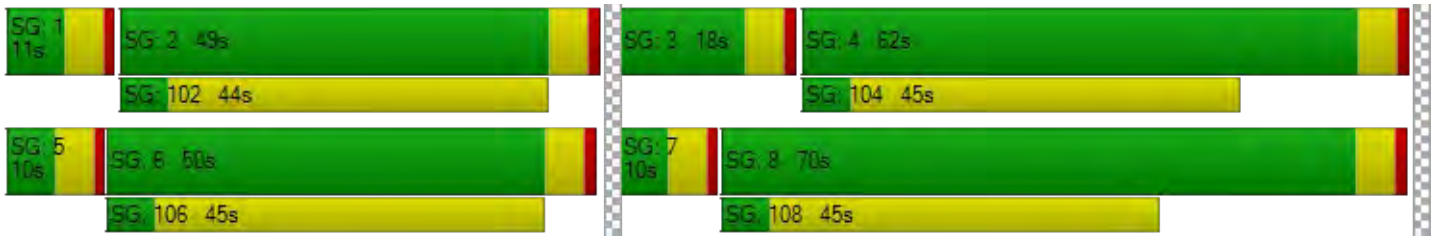
d_M, Delay for Movement [s/veh]	60.97	42.12	91.54	56.36	35.12	38.37	61.19	53.88	40.96	55.39	52.10	65.91
Movement LOS	E	D	F	E	D	D	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	62.94			44.32			54.47			56.10		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	54.40											
Intersection LOS	D											
Intersection V/C	0.795											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	55.90	55.90	55.90	55.90
l_p,int, Pedestrian LOS Score for Intersection	3.132	3.154	3.386	3.269
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1006	883	681	697
d_b, Bicycle Delay [s]	15.94	20.16	28.08	27.42
l_b,int, Bicycle LOS Score for Intersection	2.190	2.309	2.392	3.427
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	489	0	0	448	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	44	181	384	48	134	221	1352	80	252	1574	265
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	11	46	98	12	34	56	345	20	64	402	68
Total Analysis Volume [veh/h]	142	45	185	392	49	137	226	1380	82	257	1606	270
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	75	75	11	67	67
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.54	0.54	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.27	0.05	0.07	0.32	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	239	245	214	468	224	250	2734	853	274	2423	756
d1, Uniform Delay [s]	55.31	55.31	59.34	59.01	58.95	59.26	20.60	15.84	64.12	28.11	23.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.15	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]	1.02	0.99	10.06	4.04	7.70	15.30	0.67	0.22	14.40	1.45	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
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	0.39	0.87	0.84	0.83	0.91	0.50	0.10	0.94	0.66	0.36
d, Delay for Lane Group [s/veh]	56.33	56.30	69.40	63.05	66.65	74.57	21.27	16.06	78.52	29.55	24.50
Lane Group LOS	E	E	E	E	E	E	C	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.14	7.04	7.06	6.92	8.97	9.71	1.36	5.12	14.01	5.97
50th-Percentile Queue Length [ft/ln]	76.75	78.39	176.01	176.45	173.02	224.24	242.68	34.00	127.98	350.21	149.23
95th-Percentile Queue Length [veh/ln]	5.53	5.64	11.39	11.41	11.24	13.88	14.82	2.45	8.83	20.15	9.98
95th-Percentile Queue Length [ft/ln]	138.15	141.10	284.80	285.37	280.88	347.04	370.42	61.21	220.75	503.67	249.40

Movement, Approach, & Intersection Results

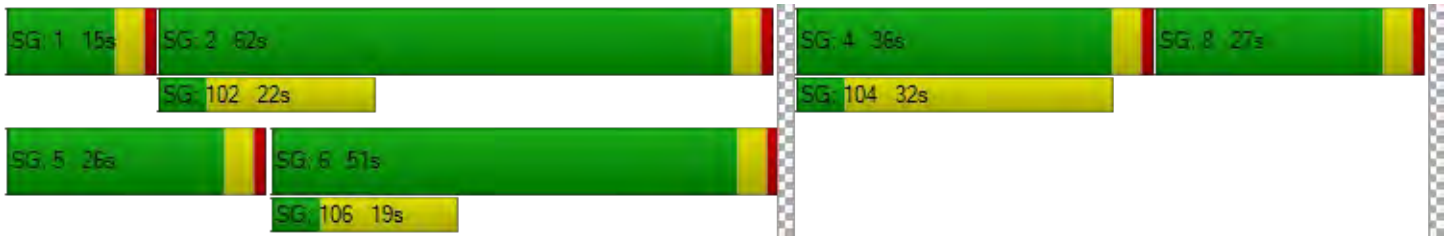
d_M, Delay for Movement [s/veh]	56.32	56.30	69.40	63.05	66.65	66.65	74.57	21.27	16.06	78.52	29.55	24.50
Movement LOS	E	E	E	E	E	E	E	C	B	E	C	C
d_A, Approach Delay [s/veh]	62.82			64.21			28.15			34.81		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.20											
Intersection LOS	D											
Intersection V/C	0.672											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.599	2.540	3.183	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.173	2.513	2.488	2.733
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.814

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	222	0	170	0	308	182	0	277	196
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	610	1	971	0	1355	707	0	1505	706
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	157	0	250	0	349	182	0	388	182
Total Analysis Volume [veh/h]	0	0	0	629	1	1001	0	1397	729	0	1552	728
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		28	28	28	30	30	30	63
g / C, Green / Cycle		0.41	0.41	0.41	0.44	0.44	0.44	0.93
(v / s)_i Volume / Saturation Flow Rate		0.18	0.18	0.36	0.27	0.46	0.30	0.46
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		735	735	1161	2243	700	2243	1473
d1, Uniform Delay [s]		14.25	14.25	18.20	14.67	19.03	15.32	0.34
k, delay calibration		0.11	0.11	0.11	0.11	0.46	0.11	0.46
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.40	0.40	2.03	0.29	43.87	0.39	1.08
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		0.43	0.43	0.86	0.62	1.04	0.69	0.49
d, Delay for Lane Group [s/veh]		14.64	14.64	20.24	14.96	62.90	15.70	1.42
Lane Group LOS		B	B	C	B	F	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		3.23	3.23	6.71	5.00	18.16	5.81	0.44
50th-Percentile Queue Length [ft/ln]		80.64	80.64	167.80	125.04	453.97	145.29	11.09
95th-Percentile Queue Length [veh/ln]		5.81	5.81	10.96	8.67	25.90	9.76	0.80
95th-Percentile Queue Length [ft/ln]		145.15	145.15	274.02	216.73	647.41	244.12	19.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.64	14.64	20.24	0.00	14.96	62.90	0.00	15.70	1.42
Movement LOS				B	B	C		B	F		B	A
d_A, Approach Delay [s/veh]	0.00			18.08			31.40			11.14		
Approach LOS	A			B			C			B		
d_I, Intersection Delay [s/veh]	20.15											
Intersection LOS	C											
Intersection V/C	0.814											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.63	25.63	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.165	2.910	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	441	1322	1322
d_b, Bicycle Delay [s]	34.04	20.69	3.91	3.91
l_b,int, Bicycle LOS Score for Intersection	4.132	4.251	2.729	2.814
Bicycle LOS	D	E	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	14.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	170	0	247	0	0	0	0	348	182	0	303	167
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	713	1	983	0	0	0	0	1361	619	0	1508	446
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	186	0	256	0	0	0	0	354	161	0	393	116
Total Analysis Volume [veh/h]	743	1	1024	0	0	0	0	1418	645	0	1571	465
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	63	63	63		63	63	63	63
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	27	27	27		26	58	26	26
g / C, Green / Cycle	0.43	0.43	0.43		0.41	0.92	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.21	0.21	0.36		0.28	0.41	0.31	0.29
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	770	770	1216		2087	1464	2087	651
d1, Uniform Delay [s]	12.89	12.89	16.03		15.29	0.33	15.95	15.59
k, delay calibration	0.11	0.11	0.11		0.11	0.33	0.11	0.16
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	0.47	1.66		0.39	0.63	0.56	2.12
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	0.48	0.48	0.84		0.68	0.44	0.75	0.71
d, Delay for Lane Group [s/veh]	13.36	13.36	17.70		15.68	0.96	16.51	17.71
Lane Group LOS	B	B	B		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.43	3.43	5.97		5.00	0.26	5.80	5.32
50th-Percentile Queue Length [ft/ln]	85.66	85.66	149.36		125.00	6.41	145.03	133.11
95th-Percentile Queue Length [veh/ln]	6.17	6.17	9.98		8.67	0.46	9.75	9.11
95th-Percentile Queue Length [ft/ln]	154.19	154.19	249.57		216.68	11.54	243.79	227.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.36	13.36	17.70	0.00	0.00	0.00	0.00	15.68	0.96	0.00	16.51	17.71
Movement LOS	B	B	B					B	A		B	B
d_A, Approach Delay [s/veh]	15.87			0.00			11.08			16.79		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	14.50											
Intersection LOS	B											
Intersection V/C	0.672											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.29	23.29	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.914	2.075	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	474	0	1422	1422
d_b, Bicycle Delay [s]	18.42	31.65	2.64	2.64
l_b,int, Bicycle LOS Score for Intersection	4.477	4.132	2.694	2.679
Bicycle LOS	E	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 6th Edition	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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	122	22	21	14	14	174	273	188	134	23	174	22
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	504	62	170	14	58	250	391	1449	421	233	1195	23
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	134	16	45	4	15	66	104	385	112	62	318	6
Total Analysis Volume [veh/h]	536	66	181	15	62	266	416	1541	448	248	1271	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	25	57	0	11	43	0	30	56	0	16	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	86	86	86	86	86	86	86	86	86	86	86	86
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	16	26	26	2	11	11	13	30	30	9	26	26
g / C, Green / Cycle	0.19	0.30	0.30	0.02	0.13	0.13	0.15	0.35	0.35	0.10	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.15	0.04	0.11	0.01	0.10	0.10	0.12	0.30	0.28	0.07	0.25	0.02
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1682	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	656	565	480	31	219	207	529	1778	555	348	1511	471
d1, Uniform Delay [s]	33.68	21.88	23.82	42.18	36.44	36.46	35.35	26.34	25.58	37.78	28.58	21.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.30	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]	2.57	0.09	0.49	10.83	5.60	6.01	2.64	1.39	7.44	2.73	1.34	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.12	0.38	0.48	0.77	0.77	0.79	0.87	0.81	0.71	0.84	0.05
d, Delay for Lane Group [s/veh]	36.25	21.97	24.31	53.01	42.03	42.46	37.99	27.73	33.02	40.51	29.92	21.82
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	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.50	0.96	2.90	0.41	3.71	3.54	4.32	9.63	9.11	2.63	8.10	0.35
50th-Percentile Queue Length [ft/ln]	137.39	24.11	72.55	10.20	92.75	88.60	108.12	240.67	227.66	65.84	202.53	8.68
95th-Percentile Queue Length [veh/ln]	9.34	1.74	5.22	0.73	6.68	6.38	7.74	14.72	14.06	4.74	12.77	0.63
95th-Percentile Queue Length [ft/ln]	233.51	43.40	130.59	18.35	166.94	159.49	193.38	367.88	351.39	118.51	319.23	15.63

Movement, Approach, & Intersection Results

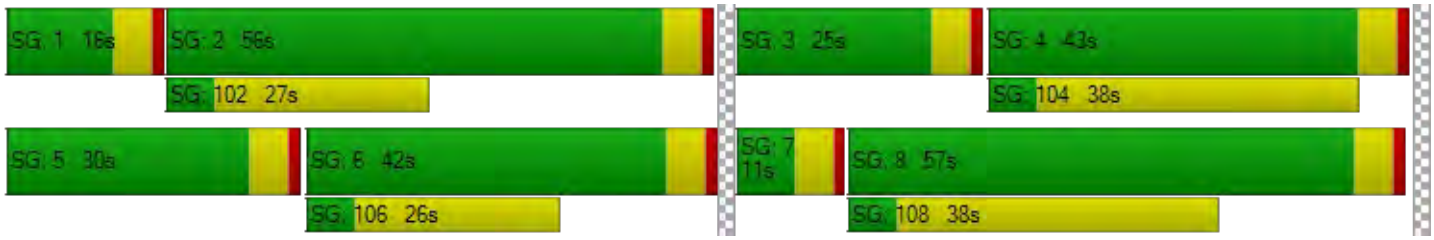
d_M, Delay for Movement [s/veh]	36.25	21.97	24.31	53.01	42.03	42.29	37.99	27.73	33.02	40.51	29.92	21.82
Movement LOS	D	C	C	D	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	32.29			42.71			30.49			31.49		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	31.90											
Intersection LOS	C											
Intersection V/C	0.630											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.72	34.72	34.72	34.72
l_p,int, Pedestrian LOS Score for Intersection	2.703	2.465	3.334	3.204
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1202	879	1179	856
d_b, Bicycle Delay [s]	6.88	13.59	7.28	14.16
l_b,int, Bicycle LOS Score for Intersection	2.852	2.126	2.882	2.408
Bicycle LOS	C	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.108

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	159	120	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	142	174	118	52	31	83
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]	142	333	238	52	31	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	88	63	14	8	22
Total Analysis Volume [veh/h]	149	351	251	55	33	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.00	0.00	0.00	0.11	0.10
d_M, Delay for Movement [s/veh]	8.26	0.00	0.00	0.00	18.45	10.80
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.40	0.00	0.00	0.00	0.78	0.78
95th-Percentile Queue Length [ft/ln]	10.11	0.00	0.00	0.00	19.52	19.52
d_A, Approach Delay [s/veh]	2.46		0.00		12.91	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.00					
Intersection LOS	C					

Appendix D-5

Phase 1+2 without Project (2029)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\5 P2 AM.pdf

Scenario 9 P2 no Project AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	WB Left	0.278	14.1	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.004	12.5	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.262	17.0	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.385	22.6	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.440	43.7	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.081	12.1	B
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.075	9.3	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.183	15.6	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.043	9.4	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.588	28.8	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.420	21.7	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	SB Right	0.543	8.5	A
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.523	8.8	A
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	EB Left	0.418	21.3	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.278

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	4	6	5	0	14	14	6	22	12	5	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	546	5	0	252	198	371	22	64	5	15	0
Peak Hour Factor	0.9600	0.9600	0.9500	0.9500	0.9600	0.9600	0.9600	0.9500	0.9600	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]	13	142	1	0	66	52	97	6	17	1	4	0
Total Analysis Volume [veh/h]	51	569	5	0	263	206	386	23	67	5	16	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	12	46	0	21	49	0	25	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	41	41	41	41	41	41	41	41	41	41	41	41
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	12	12	0	10	10	7	9	9	0	2	2
g / C, Green / Cycle	0.05	0.30	0.30	0.00	0.24	0.24	0.18	0.21	0.21	0.01	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.00	0.05	0.13	0.11	0.01	0.04	0.00	0.01	0.00
s, saturation flow rate [veh/h]	1781	3560	1862	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	98	1053	551	1	1229	383	618	759	339	25	78	67
d1, Uniform Delay [s]	19.03	11.48	11.48	0.00	12.56	13.69	15.71	12.89	13.37	20.42	19.16	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	4.24	0.21	0.39	0.00	0.09	1.17	1.04	0.02	0.28	3.78	1.27	0.00
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	0.52	0.36	0.36	0.00	0.21	0.54	0.62	0.03	0.20	0.20	0.20	0.00
d, Delay for Lane Group [s/veh]	23.27	11.68	11.87	0.00	12.65	14.86	16.76	12.91	13.65	24.21	20.42	0.00
Lane Group LOS	C	B	B	A	B	B	B	B	B	C	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.53	1.12	1.20	0.00	0.55	1.50	1.51	0.07	0.46	0.03	0.16	0.00
50th-Percentile Queue Length [ft/ln]	13.32	28.06	30.11	0.00	13.67	37.48	37.75	1.82	11.41	0.86	3.96	0.00
95th-Percentile Queue Length [veh/ln]	0.96	2.02	2.17	0.00	0.98	2.70	2.72	0.13	0.82	0.06	0.29	0.00
95th-Percentile Queue Length [ft/ln]	23.98	50.52	54.21	0.00	24.60	67.47	67.95	3.28	20.54	1.55	7.13	0.00

Movement, Approach, & Intersection Results

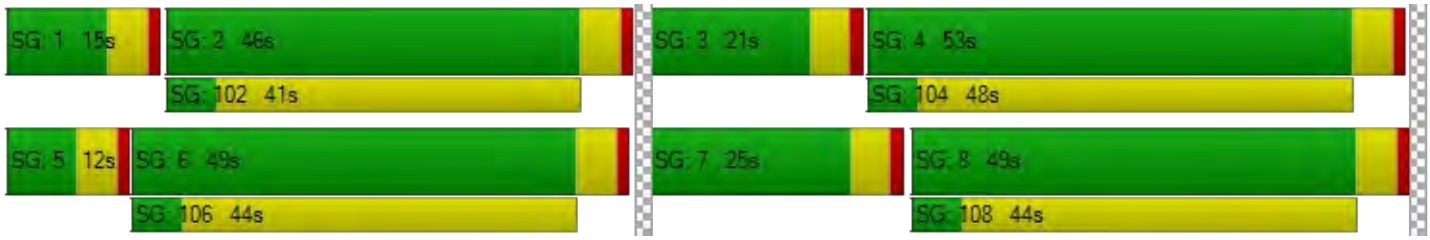
d_M, Delay for Movement [s/veh]	23.27	11.75	11.87	0.00	12.65	14.86	16.76	12.91	13.65	24.21	20.42	0.00
Movement LOS	C	B	B	A	B	B	B	B	B	C	C	A
d_A, Approach Delay [s/veh]	12.69			13.62			16.13			21.32		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	14.11											
Intersection LOS	B											
Intersection V/C	0.278											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	12.61	12.61	12.61	12.61
l_p,int, Pedestrian LOS Score for Intersection	2.687	2.858	2.657	2.420
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2133	1987	2133	2327
d_b, Bicycle Delay [s]	0.09	0.00	0.09	0.55
l_b,int, Bicycle LOS Score for Intersection	1.903	1.818	1.952	1.594
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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	27	0	0	20
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	532	0	3	488
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	156	0	1	144
Total Analysis Volume [veh/h]	0	2	626	0	4	574
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

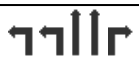
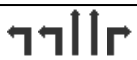
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	22.88	12.47	0.00	0.00	8.78	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.31	0.00	0.00	0.32	0.00
d_A, Approach Delay [s/veh]	12.47		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.262

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	5	0	5	5	11	10	17	0	0	10	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	218	121	39	55	48	70	400	55	127	381	112
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	61	34	11	15	13	19	111	15	35	106	31
Total Analysis Volume [veh/h]	60	242	134	43	61	53	78	444	61	141	423	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	47	0	10	47	0	13	47	0	16	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	46	46	46	46	46	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	3	10	10	4	11	11
g / C, Green / Cycle	0.06	0.21	0.21	0.05	0.20	0.20	0.07	0.22	0.22	0.09	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.08	0.01	0.02	0.03	0.02	0.12	0.04	0.04	0.12	0.08
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	209	762	340	167	719	321	245	769	343	319	846	377
d1, Uniform Delay [s]	20.92	15.43	15.71	21.36	15.10	15.35	20.58	16.36	14.89	20.01	15.37	14.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.74	0.24	0.74	0.81	0.05	0.24	0.74	0.69	0.24	0.96	0.46	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	0.29	0.32	0.39	0.26	0.08	0.17	0.32	0.58	0.18	0.44	0.50	0.33
d, Delay for Lane Group [s/veh]	21.66	15.67	16.45	22.17	15.15	15.59	21.32	17.05	15.13	20.97	15.83	15.19
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	0.97	1.13	0.22	0.23	0.43	0.39	1.91	0.48	0.69	1.72	0.99
50th-Percentile Queue Length [ft/ln]	7.59	24.14	28.25	5.58	5.87	10.68	9.72	47.64	12.04	17.28	43.01	24.66
95th-Percentile Queue Length [veh/ln]	0.55	1.74	2.03	0.40	0.42	0.77	0.70	3.43	0.87	1.24	3.10	1.78
95th-Percentile Queue Length [ft/ln]	13.67	43.45	50.85	10.05	10.56	19.22	17.49	85.75	21.67	31.11	77.41	44.39

Movement, Approach, & Intersection Results

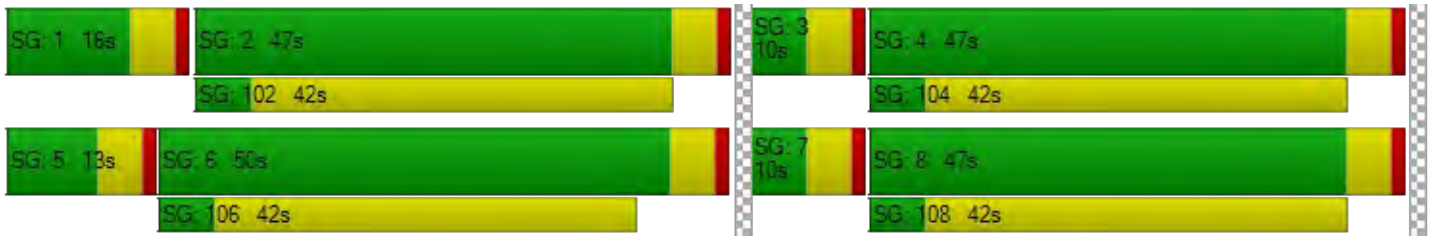
d_M, Delay for Movement [s/veh]	21.66	15.67	16.45	22.17	15.15	15.59	21.32	17.05	15.13	20.97	15.83	15.19
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.74			17.22			17.42			16.77		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.00											
Intersection LOS	B											
Intersection V/C	0.262											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.08	15.08	15.08	15.08
l_p,int, Pedestrian LOS Score for Intersection	2.657	2.644	2.716	2.742
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1810	1810	1810	1939
d_b, Bicycle Delay [s]	0.21	0.21	0.21	0.02
l_b,int, Bicycle LOS Score for Intersection	1.919	1.689	2.041	2.127
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	11	0	0	0	0	0	0	12	10	0	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	126	23	35	41	16	98	156	389	65	52	468	60
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	7	11	13	5	31	49	122	20	16	146	19
Total Analysis Volume [veh/h]	158	29	44	51	20	123	195	486	81	65	585	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	39	0	37	52	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	13	21	21	5	13	80	70	70	80	70	70
g / C, Green / Cycle	0.10	0.17	0.17	0.04	0.11	0.66	0.59	0.59	0.66	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.09	0.02	0.03	0.03	0.09	0.22	0.14	0.05	0.07	0.16	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	876	3560	1589	932	3560	1589
c, Capacity [veh/h]	187	323	275	68	172	602	2082	929	647	2065	922
d1, Uniform Delay [s]	52.75	41.73	42.25	57.18	52.65	8.26	11.99	10.91	7.38	12.67	11.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.80	0.12	0.27	15.11	9.97	1.43	0.26	0.18	0.07	0.34	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.84	0.09	0.16	0.75	0.83	0.32	0.23	0.09	0.10	0.28	0.08
d, Delay for Lane Group [s/veh]	62.55	41.85	42.52	72.29	62.62	9.69	12.25	11.09	7.44	13.02	11.29
Lane Group LOS	E	D	D	E	E	A	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.18	0.74	1.14	1.82	4.70	2.06	3.15	0.98	0.57	3.98	0.92
50th-Percentile Queue Length [ft/ln]	129.61	18.46	28.46	45.46	117.51	51.40	78.82	24.52	14.30	99.52	22.93
95th-Percentile Queue Length [veh/ln]	8.92	1.33	2.05	3.27	8.26	3.70	5.68	1.77	1.03	7.17	1.65
95th-Percentile Queue Length [ft/ln]	222.97	33.22	51.23	81.84	206.40	92.52	141.88	44.14	25.74	179.13	41.28

Movement, Approach, & Intersection Results

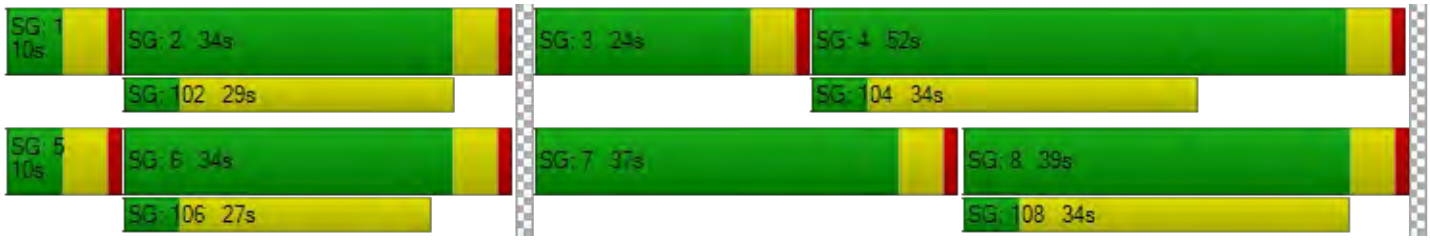
d_M, Delay for Movement [s/veh]	62.55	41.85	42.52	72.29	62.62	62.62	9.69	12.25	11.09	7.44	13.02	11.29
Movement LOS	E	D	D	E	E	E	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	56.13			65.16			11.47			12.34		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.64											
Intersection LOS	C											
Intersection V/C	0.385											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.299	2.281	2.733	2.680
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	783	483	483
d_b, Bicycle Delay [s]	30.83	22.22	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	1.941	1.880	2.188	2.158
Bicycle LOS	A	A	B	B

Sequence

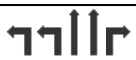
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	43.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	10	5	0	10	0	0	12	0	5	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	327	180	135	209	59	80	235	38	206	239	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	108	59	44	69	19	26	77	13	68	79	47
Total Analysis Volume [veh/h]	100	430	237	178	275	78	105	309	50	271	314	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	21	43	0	27	49	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	66	66	9	66	80	10	14	14	22	26	26
g / C, Green / Cycle	0.07	0.51	0.51	0.07	0.51	0.62	0.07	0.11	0.11	0.17	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.15	0.05	0.08	0.05	0.06	0.09	0.03	0.15	0.14	0.14
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1639
c, Capacity [veh/h]	124	1803	805	234	1797	981	132	379	169	295	371	325
d1, Uniform Delay [s]	59.66	18.02	18.62	59.57	17.29	10.03	59.26	56.85	53.60	53.38	48.75	48.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.19	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]	11.75	0.31	0.93	5.02	0.18	0.16	10.48	4.31	0.96	17.34	2.64	3.06
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	0.81	0.24	0.29	0.76	0.15	0.08	0.80	0.82	0.30	0.92	0.72	0.72
d, Delay for Lane Group [s/veh]	71.41	18.34	19.55	64.59	17.47	10.19	69.74	61.16	54.56	70.72	51.39	51.85
Lane Group LOS	E	B	B	E	B	B	E	E	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	3.73	4.37	3.05	2.28	0.94	3.79	5.20	1.56	10.13	8.39	7.43
50th-Percentile Queue Length [ft/ln]	91.50	93.21	109.14	76.32	56.95	23.51	94.86	130.00	39.07	253.31	209.72	185.82
95th-Percentile Queue Length [veh/ln]	6.59	6.71	7.79	5.49	4.10	1.69	6.83	8.94	2.81	15.35	13.14	11.90
95th-Percentile Queue Length [ft/ln]	164.69	167.78	194.81	137.37	102.52	42.32	170.74	223.49	70.32	383.82	328.47	297.60

Movement, Approach, & Intersection Results

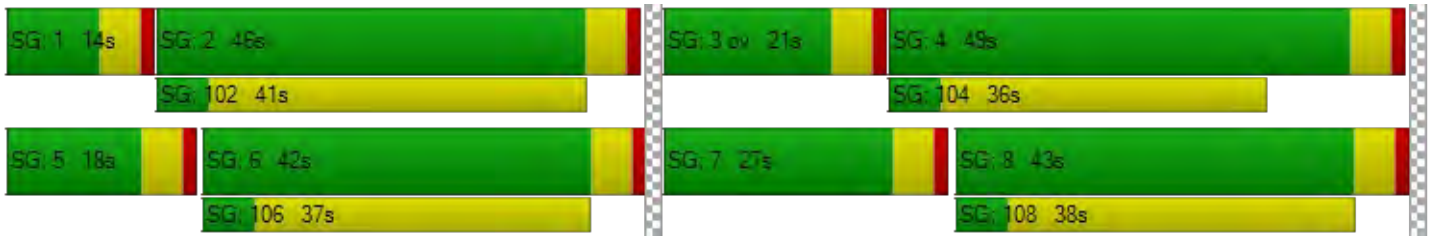
d_M, Delay for Movement [s/veh]	71.41	18.34	19.55	64.59	17.47	10.19	69.74	61.16	54.56	70.72	51.46	51.85
Movement LOS	E	B	B	E	B	B	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	25.63			32.19			62.39			58.31		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	43.70											
Intersection LOS	D											
Intersection V/C	0.440											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.693	2.788	2.627	2.611
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	677
d_b, Bicycle Delay [s]	33.27	30.47	32.56	28.45
l_b,int, Bicycle LOS Score for Intersection	2.192	1.998	1.942	2.197
Bicycle LOS	B	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	0	0	18	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	41	0	0	18	0
Peak Hour Factor	1.0000	0.8200	0.9500	0.8200	0.8200	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	0	0	5	0
Total Analysis Volume [veh/h]	0	50	0	0	22	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.11	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.11		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.081

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	5	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	341	206	19	40	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	97	59	5	11	0
Total Analysis Volume [veh/h]	0	388	234	22	45	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.08	0.00
d_M, Delay for Movement [s/veh]	7.76	0.00	0.00	0.00	12.06	9.51
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.26	0.26
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.59	6.59
d_A, Approach Delay [s/veh]	0.00		0.00		12.06	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	31	24	0	36	60	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	24	0	36	60	1
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	7	0	10	17	0
Total Analysis Volume [veh/h]	35	27	0	41	68	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.27	8.85
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.24	0.24
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.12	6.12
d_A, Approach Delay [s/veh]	0.00		0.00		9.27	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.183

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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	5	0	0	5	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	272	12	10	177	16	42	7	3	29	33	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	75	3	3	49	4	12	2	1	8	9	9
Total Analysis Volume [veh/h]	3	299	13	11	195	18	46	8	3	32	36	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	96	89	89	96	90	90	14	14	14
g / C, Green / Cycle	0.80	0.74	0.74	0.80	0.75	0.75	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.08	0.01	0.05	0.01	0.06	0.00	0.10
s, saturation flow rate [veh/h]	1191	1870	1843	1101	3560	1589	868	1589	1055
c, Capacity [veh/h]	1028	1392	1372	948	2683	1198	157	187	163
d1, Uniform Delay [s]	2.43	4.27	4.27	2.46	3.86	3.69	49.56	46.82	51.91
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.00	0.16	0.17	0.02	0.05	0.02	1.28	0.03	3.98
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	0.00	0.11	0.11	0.01	0.07	0.02	0.34	0.02	0.63
d, Delay for Lane Group [s/veh]	2.43	4.43	4.44	2.48	3.91	3.71	50.84	46.85	55.88
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.01	1.03	1.02	0.05	0.57	0.11	1.58	0.08	3.25
50th-Percentile Queue Length [ft/ln]	0.30	25.71	25.54	1.21	14.29	2.63	39.48	2.04	81.16
95th-Percentile Queue Length [veh/ln]	0.02	1.85	1.84	0.09	1.03	0.19	2.84	0.15	5.84
95th-Percentile Queue Length [ft/ln]	0.53	46.27	45.98	2.17	25.72	4.73	71.07	3.67	146.08

Movement, Approach, & Intersection Results

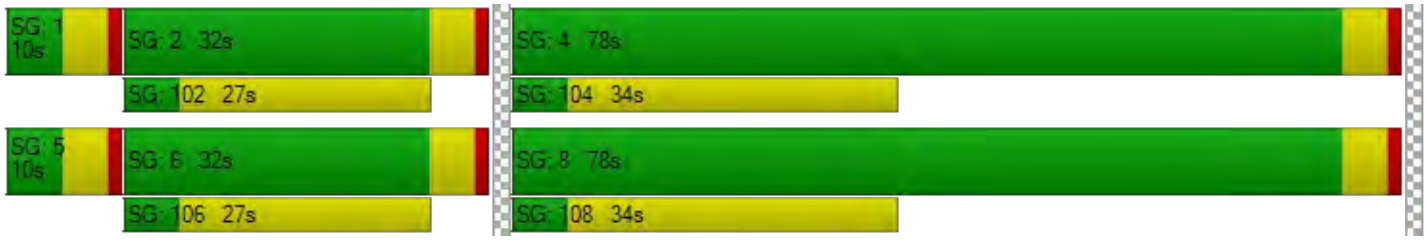
d_M, Delay for Movement [s/veh]	2.43	4.44	4.44	2.48	3.91	3.71	50.84	50.84	46.85	55.88	55.88	55.88
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	4.42			3.82			50.63			55.88		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	15.58											
Intersection LOS	B											
Intersection V/C	0.183											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.467	2.759	1.996	1.808
Crosswalk LOS	B	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.819	1.744	1.654	1.730
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	55	12	0	97	34	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	12	0	97	34	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	3	0	27	9	0
Total Analysis Volume [veh/h]	60	13	0	107	37	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

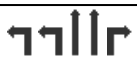
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.36	0.00	9.36	8.69
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	3.44	3.44
d_A, Approach Delay [s/veh]	0.00		0.00		9.34	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.63					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	4	4	5	32	4	0	0	37	4	5	43	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	480	392	242	244	101	185	823	36	321	634	182
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	124	101	62	63	26	48	212	9	83	163	47
Total Analysis Volume [veh/h]	111	495	404	249	252	104	191	848	37	331	654	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	21	54	0	17	50	0	19	49	0	20	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	78	78	78	78	78	78	78	78	78	78	78	78
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	23	23	8	26	26	7	17	17	10	20	20
g / C, Green / Cycle	0.06	0.29	0.29	0.10	0.34	0.34	0.08	0.22	0.22	0.13	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.25	0.07	0.05	0.07	0.06	0.17	0.02	0.10	0.18	0.11
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	202	1497	467	359	1728	539	292	1098	343	450	929	431
d1, Uniform Delay [s]	35.67	21.51	26.04	33.71	17.89	18.20	34.56	28.76	24.54	32.60	26.06	24.00
k, delay calibration	0.11	0.11	0.19	0.11	0.11	0.11	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]	2.31	0.13	8.11	2.40	0.04	0.17	2.47	1.19	0.14	2.37	0.99	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	0.55	0.33	0.86	0.69	0.15	0.19	0.65	0.77	0.11	0.74	0.70	0.44
d, Delay for Lane Group [s/veh]	37.98	21.64	34.15	36.11	17.93	18.37	37.03	29.95	24.68	34.97	27.04	24.69
Lane Group LOS	D	C	C	D	B	B	D	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.07	2.28	7.75	2.33	1.01	1.29	1.74	4.66	0.52	3.06	5.37	2.86
50th-Percentile Queue Length [ft/ln]	26.63	56.96	193.82	58.24	25.32	32.34	43.46	116.45	13.00	76.47	134.15	71.43
95th-Percentile Queue Length [veh/ln]	1.92	4.10	12.32	4.19	1.82	2.33	3.13	8.20	0.94	5.51	9.17	5.14
95th-Percentile Queue Length [ft/ln]	47.94	102.52	307.98	104.83	45.58	58.21	78.23	204.93	23.40	137.64	229.13	128.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.98	21.64	34.15	36.11	17.93	18.37	37.03	29.95	24.68	34.97	27.04	24.69
Movement LOS	D	C	C	D	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	28.44			25.49			31.02			28.90		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.84											
Intersection LOS	C											
Intersection V/C	0.588											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	30.39	30.39	30.39	30.39
l_p,int, Pedestrian LOS Score for Intersection	3.020	3.004	3.159	3.046
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1261	1158	1132	1158
d_b, Bicycle Delay [s]	5.31	6.89	7.32	6.89
l_b,int, Bicycle LOS Score for Intersection	2.115	1.892	2.151	2.527
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.420

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	75	0	0	86	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	11	138	102	10	18	43	1245	80	175	1054	168
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	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	3	35	26	3	5	11	318	20	45	269	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1270	82	179	1076	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	9	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.25	0.05	0.05	0.21	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	189	190	168	248	120	58	3271	1021	229	3441	1074
d1, Uniform Delay [s]	57.77	57.76	61.40	62.20	61.35	67.15	11.95	9.45	64.37	9.34	8.25
k, delay calibration	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
d2, Incremental Delay [s]	0.86	0.85	10.44	1.13	0.98	17.85	0.35	0.15	5.76	0.24	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.76	0.39	0.08	0.78	0.31	0.16
d, Delay for Lane Group [s/veh]	58.63	58.62	71.85	63.34	62.33	85.00	12.29	9.61	70.13	9.58	8.57
Lane Group LOS	E	E	E	E	E	F	B	A	E	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.42	1.82	0.98	1.86	6.32	1.00	3.34	4.49	1.95
50th-Percentile Queue Length [ft/ln]	47.05	47.38	135.55	45.51	24.47	46.40	157.90	24.89	83.48	112.22	48.86
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.24	3.28	1.76	3.34	10.44	1.79	6.01	7.96	3.52
95th-Percentile Queue Length [ft/ln]	84.69	85.29	231.03	81.92	44.05	83.51	260.94	44.81	150.26	199.09	87.94

Movement, Approach, & Intersection Results

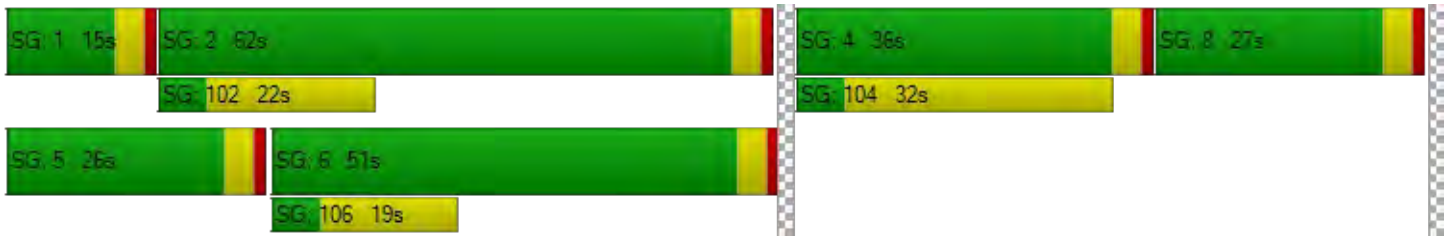
d_M, Delay for Movement [s/veh]	58.62	58.62	71.85	63.34	62.33	62.33	85.00	12.29	9.61	70.13	9.58	8.57
Movement LOS	E	E	E	E	E	E	F	B	A	E	A	A
d_A, Approach Delay [s/veh]	65.99			63.12			14.43			17.06		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	21.67											
Intersection LOS	C											
Intersection V/C	0.420											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.064	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.327	2.344
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	50	0	28	0	51	24	0	58	80
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	218	1	542	0	1041	532	0	837	798
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	56	0	140	0	268	137	0	216	206
Total Analysis Volume [veh/h]	0	0	0	225	1	559	0	1073	548	0	863	823
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		15	15	15	21	21	21	41
g / C, Green / Cycle		0.33	0.33	0.33	0.45	0.45	0.45	0.89
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.20	0.21	0.34	0.17	0.52
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		591	591	934	2292	715	2292	1416
d1, Uniform Delay [s]		10.92	10.92	12.77	8.78	10.58	8.35	0.57
k, delay calibration		0.11	0.11	0.11	0.11	0.11	0.11	0.28
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.16	0.16	0.62	0.15	1.75	0.10	0.98
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		0.19	0.19	0.60	0.47	0.77	0.38	0.58
d, Delay for Lane Group [s/veh]		11.08	11.08	13.39	8.93	12.34	8.45	1.55
Lane Group LOS		B	B	B	A	B	A	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.70	0.70	2.03	1.89	3.78	1.44	0.39
50th-Percentile Queue Length [ft/ln]		17.53	17.54	50.86	47.29	94.52	36.08	9.66
95th-Percentile Queue Length [veh/ln]		1.26	1.26	3.66	3.40	6.81	2.60	0.70
95th-Percentile Queue Length [ft/ln]		31.56	31.57	91.54	85.11	170.14	64.95	17.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	11.08	11.08	13.39	0.00	8.93	12.34	0.00	8.45	1.55
Movement LOS				B	B	B		A	B		A	A
d_A, Approach Delay [s/veh]	0.00			12.72			10.08			5.08		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	8.53											
Intersection LOS	A											
Intersection V/C	0.543											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.74	14.74	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.084	2.783	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	656	1969	1969
d_b, Bicycle Delay [s]	22.85	10.32	0.01	0.01
l_b,int, Bicycle LOS Score for Intersection	4.132	2.855	2.451	2.487
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	28	0	75	0	0	0	0	77	24	0	110	53
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	430	3	567	0	0	0	0	602	692	0	1204	438
Peak Hour Factor	0.9700	0.9700	0.9700	0.9500	0.9500	0.9500	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	111	1	146	0	0	0	0	155	178	0	310	113
Total Analysis Volume [veh/h]	443	3	585	0	0	0	0	621	713	0	1241	452
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	44	44	44		44	44	44	44
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	15	15	15		18	39	18	18
g / C, Green / Cycle	0.35	0.35	0.35		0.42	0.89	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.21		0.12	0.45	0.24	0.28
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	623	624	985		2152	1409	2152	672
d1, Uniform Delay [s]	10.62	10.62	11.73		8.35	0.52	9.69	10.24
k, delay calibration	0.11	0.11	0.11		0.11	0.18	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	0.35	0.58		0.07	0.48	0.25	1.18
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	0.36	0.36	0.59		0.29	0.51	0.58	0.67
d, Delay for Lane Group [s/veh]	10.96	10.96	12.30		8.42	1.00	9.93	11.42
Lane Group LOS	B	B	B		A	A	A	B
Critical Lane Group	No	No	No		No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.34	1.34	1.94		0.99	0.19	2.32	2.84
50th-Percentile Queue Length [ft/ln]	33.54	33.53	48.38		24.79	4.72	57.88	70.95
95th-Percentile Queue Length [veh/ln]	2.41	2.41	3.48		1.78	0.34	4.17	5.11
95th-Percentile Queue Length [ft/ln]	60.37	60.36	87.08		44.62	8.49	104.19	127.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.96	10.96	12.30	0.00	0.00	0.00	0.00	8.42	1.00	0.00	9.93	11.42
Movement LOS	B	B	B					A	A		A	B
d_A, Approach Delay [s/veh]	11.72			0.00			4.45			10.33		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	8.75											
Intersection LOS	A											
Intersection V/C	0.523											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	13.82	13.82	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.799	2.051	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	685	0	2056	2056
d_b, Bicycle Delay [s]	9.46	21.89	0.02	0.02
l_b,int, Bicycle LOS Score for Intersection	3.261	4.132	2.293	2.491
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	77	0	13	0	0	0	0	80	73	13	86	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	420	33	96	0	35	96	52	839	224	118	1124	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	111	9	25	0	9	25	14	221	59	31	296	0
Total Analysis Volume [veh/h]	442	35	101	0	37	101	55	883	236	124	1183	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	43	0	10	43	0	56	63	0	24	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	62	62	62	62	62	62	62	62	62	62	62	62
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	11	20	20	0	9	9	3	18	18	4	19	19
g / C, Green / Cycle	0.17	0.32	0.32	0.00	0.15	0.15	0.05	0.29	0.29	0.07	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.06	0.00	0.04	0.04	0.02	0.17	0.15	0.04	0.23	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1725	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	604	600	510	0	252	232	172	1463	456	246	1572	491
d1, Uniform Delay [s]	24.35	14.66	15.36	0.00	23.69	23.73	28.60	19.16	18.60	27.89	19.41	14.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.74	0.04	0.19	0.00	0.60	0.68	1.06	0.40	0.91	1.59	0.75	0.00
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	0.73	0.06	0.20	0.00	0.28	0.29	0.32	0.60	0.52	0.50	0.75	0.00
d, Delay for Lane Group [s/veh]	26.09	14.70	15.55	0.00	24.29	24.41	29.66	19.57	19.51	29.48	20.16	14.91
Lane Group LOS	C	B	B	A	C	C	C	B	B	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.03	0.32	0.98	0.00	0.91	0.88	0.40	3.42	2.73	0.90	4.77	0.01
50th-Percentile Queue Length [ft/ln]	75.74	8.06	24.54	0.00	22.83	22.02	10.09	85.39	68.28	22.52	119.14	0.23
95th-Percentile Queue Length [veh/ln]	5.45	0.58	1.77	0.00	1.64	1.59	0.73	6.15	4.92	1.62	8.35	0.02
95th-Percentile Queue Length [ft/ln]	136.32	14.51	44.18	0.00	41.10	39.64	18.16	153.70	122.91	40.53	208.65	0.42

Movement, Approach, & Intersection Results

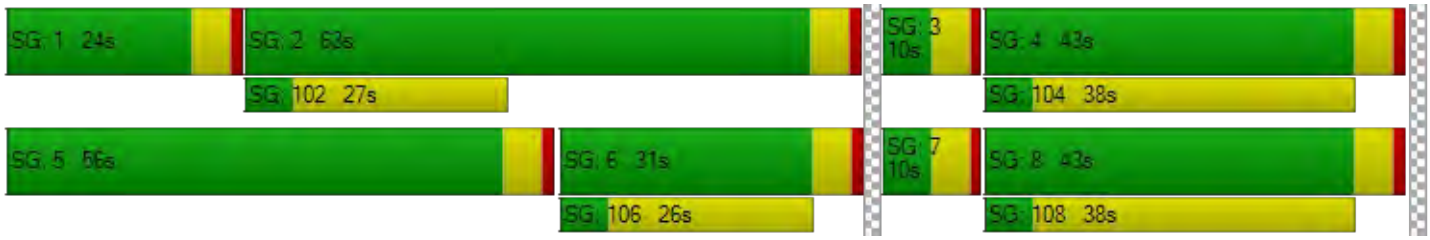
d_M, Delay for Movement [s/veh]	26.09	14.70	15.55	0.00	24.29	24.37	29.66	19.57	19.51	29.48	20.16	14.91
Movement LOS	C	B	B	A	C	C	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	23.56			24.35			20.03			21.04		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.26											
Intersection LOS	C											
Intersection V/C	0.418											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.75	22.75	22.75	22.75
l_p,int, Pedestrian LOS Score for Intersection	2.594	2.327	3.146	3.080
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1222	1222	1865	836
d_b, Bicycle Delay [s]	4.71	4.71	0.14	10.53
l_b,int, Bicycle LOS Score for Intersection	2.513	1.787	2.205	2.279
Bicycle LOS	B	A	B	B

Sequence

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



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Report File: H:\...\5 P2 PM.pdf

Scenario 10 P2 no Project PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.451	16.6	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Left	0.022	25.1	D
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.294	18.2	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.244	12.7	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.381	38.3	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.142	15.2	C
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.067	9.7	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.184	10.7	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.033	9.7	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.696	40.2	D
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.611	38.8	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.688	13.4	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.589	12.0	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	EB Left	0.547	26.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.451

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	14	20	7	0	15	15	20	23	8	7	28	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	617	7	0	664	438	392	23	115	7	28	0
Peak Hour Factor	0.9800	0.9800	0.9500	0.9500	0.9800	0.9800	0.9800	0.9500	0.9800	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	157	2	0	169	112	100	6	29	2	7	0
Total Analysis Volume [veh/h]	68	630	7	0	678	447	400	24	117	7	29	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	16	46	0	22	49	0	26	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	55	55	55	55	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	23	23	0	19	19	9	12	12	1	4	4
g / C, Green / Cycle	0.06	0.41	0.41	0.00	0.35	0.35	0.17	0.22	0.22	0.01	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.00	0.13	0.28	0.12	0.01	0.07	0.00	0.02	0.00
s, saturation flow rate [veh/h]	1781	3560	1859	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	105	1452	758	0	1777	554	575	793	354	32	123	104
d1, Uniform Delay [s]	25.56	11.03	11.03	0.00	13.58	16.37	21.82	16.89	18.11	27.30	24.62	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	6.54	0.11	0.21	0.00	0.13	2.83	1.53	0.02	0.54	3.29	0.98	0.00
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	0.65	0.29	0.29	0.00	0.38	0.81	0.70	0.03	0.33	0.22	0.24	0.00
d, Delay for Lane Group [s/veh]	32.10	11.14	11.24	0.00	13.71	19.20	23.34	16.91	18.65	30.58	25.59	0.00
Lane Group LOS	C	B	B	A	B	B	C	B	B	C	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.01	1.50	1.59	0.00	1.88	4.87	2.37	0.11	1.20	0.06	0.37	0.00
50th-Percentile Queue Length [ft/ln]	25.26	37.47	39.73	0.00	47.08	121.87	59.28	2.79	30.01	1.45	9.30	0.00
95th-Percentile Queue Length [veh/ln]	1.82	2.70	2.86	0.00	3.39	8.50	4.27	0.20	2.16	0.10	0.67	0.00
95th-Percentile Queue Length [ft/ln]	45.48	67.45	71.52	0.00	84.75	212.40	106.70	5.01	54.01	2.61	16.74	0.00

Movement, Approach, & Intersection Results

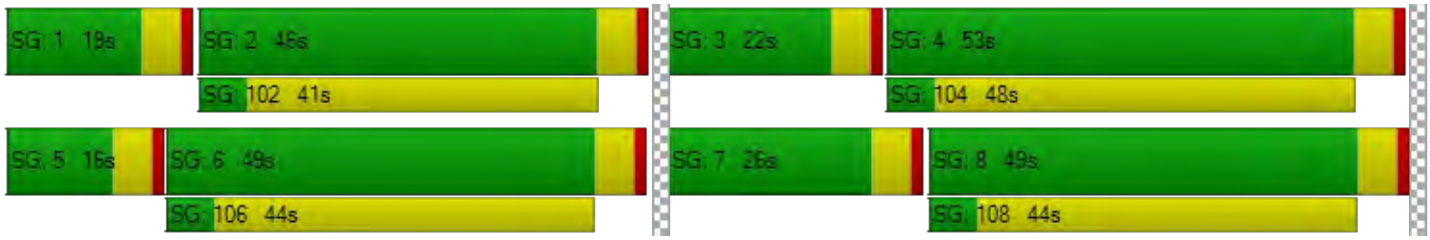
d_M, Delay for Movement [s/veh]	32.10	11.17	11.24	0.00	13.71	19.20	23.34	16.91	18.65	30.58	25.59	0.00
Movement LOS	C	B	B	A	B	B	C	B	B	C	C	A
d_A, Approach Delay [s/veh]	13.19			15.89			22.04			26.56		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.64											
Intersection LOS	B											
Intersection V/C	0.451											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.42	19.42	19.42	19.42
l_p,int, Pedestrian LOS Score for Intersection	2.780	2.964	2.721	2.440
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1589	1481	1589	1733
d_b, Bicycle Delay [s]	1.17	1.87	1.17	0.49
l_b,int, Bicycle LOS Score for Intersection	1.947	2.178	2.006	1.619
Bicycle LOS	A	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	25.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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	31	0	0	34
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]	4	4	579	7	25	582
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	1	1	151	2	7	152
Total Analysis Volume [veh/h]	4	4	603	7	26	606
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

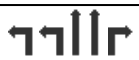
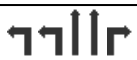
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	25.13	12.27	0.00	0.00	8.82	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.02	0.00	0.00	0.08	0.00
95th-Percentile Queue Length [ft/ln]	1.67	0.61	0.00	0.00	2.07	0.00
d_A, Approach Delay [s/veh]	18.70		0.00		0.36	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.30					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.294

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	7	0	7	7	14	15	16	0	0	21	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	92	89	117	118	245	92	52	420	119	195	425	55
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]	24	23	30	31	64	24	14	109	31	51	111	14
Total Analysis Volume [veh/h]	96	93	122	123	255	96	54	438	124	203	443	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	48	0	11	49	0	11	47	0	14	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	3	10	10	5	12	12
g / C, Green / Cycle	0.08	0.20	0.20	0.08	0.20	0.20	0.05	0.21	0.21	0.10	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.08	0.04	0.07	0.06	0.02	0.12	0.08	0.06	0.12	0.04
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	266	696	311	295	726	324	193	733	327	361	907	405
d1, Uniform Delay [s]	21.44	16.25	17.15	21.23	16.70	16.50	22.16	17.59	16.73	20.85	15.52	14.10
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	0.09	0.81	0.94	0.29	0.50	0.79	0.78	0.72	1.37	0.41	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	0.36	0.13	0.39	0.42	0.35	0.30	0.28	0.60	0.38	0.56	0.49	0.14
d, Delay for Lane Group [s/veh]	22.27	16.34	17.95	22.17	16.99	17.00	22.95	18.37	17.45	22.22	15.93	14.25
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.51	0.39	1.13	0.64	1.11	0.85	0.29	2.04	1.12	1.07	1.87	0.44
50th-Percentile Queue Length [ft/ln]	12.63	9.76	28.16	16.11	27.80	21.27	7.32	51.06	28.07	26.66	46.84	11.09
95th-Percentile Queue Length [veh/ln]	0.91	0.70	2.03	1.16	2.00	1.53	0.53	3.68	2.02	1.92	3.37	0.80
95th-Percentile Queue Length [ft/ln]	22.74	17.56	50.69	29.00	50.04	38.29	13.17	91.91	50.52	47.99	84.32	19.96

Movement, Approach, & Intersection Results

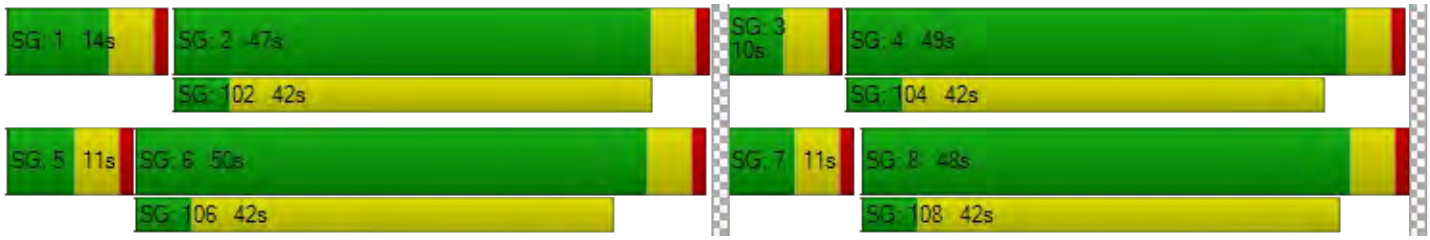
d_M, Delay for Movement [s/veh]	22.27	16.34	17.95	22.17	16.99	17.00	22.95	18.37	17.45	22.22	15.93	14.25
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.80			18.34			18.59			17.61		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.24											
Intersection LOS	B											
Intersection V/C	0.294											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.19	16.19	16.19	16.19
l_p,int, Pedestrian LOS Score for Intersection	2.687	2.657	2.737	2.756
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1765	1807	1724	1848
d_b, Bicycle Delay [s]	0.33	0.23	0.46	0.14
l_b,int, Bicycle LOS Score for Intersection	1.816	1.951	2.068	2.140
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.244

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	14	0	0	0	0	0	0	8	15	0	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	8	8	5	4	10	17	376	159	21	505	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	2	2	1	1	3	5	111	47	6	149	2
Total Analysis Volume [veh/h]	114	9	9	6	5	12	20	442	187	25	594	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	52	0	17	39	0	10	41	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	10	13	13	1	4	91	83	83	91	84	84
g / C, Green / Cycle	0.08	0.11	0.11	0.01	0.04	0.76	0.69	0.69	0.76	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.06	0.00	0.01	0.00	0.01	0.02	0.12	0.12	0.03	0.17	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	875	3560	1589	860	3560	1589
c, Capacity [veh/h]	142	202	172	14	61	699	2468	1102	704	2480	1107
d1, Uniform Delay [s]	54.32	47.97	48.01	59.26	56.29	3.80	6.45	6.40	3.69	6.64	5.56
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	10.08	0.09	0.13	18.30	2.47	0.08	0.16	0.33	0.02	0.23	0.01
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
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	0.80	0.04	0.05	0.42	0.28	0.03	0.18	0.17	0.04	0.24	0.01
d, Delay for Lane Group [s/veh]	64.40	48.06	48.14	77.56	58.76	3.88	6.61	6.74	3.71	6.87	5.57
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.78	0.25	0.25	0.25	0.54	0.12	1.90	1.65	0.13	2.65	0.06
50th-Percentile Queue Length [ft/ln]	94.59	6.20	6.23	6.36	13.60	2.97	47.57	41.36	3.36	66.27	1.54
95th-Percentile Queue Length [veh/ln]	6.81	0.45	0.45	0.46	0.98	0.21	3.42	2.98	0.24	4.77	0.11
95th-Percentile Queue Length [ft/ln]	170.27	11.16	11.21	11.46	24.48	5.34	85.62	74.45	6.05	119.28	2.77

Movement, Approach, & Intersection Results

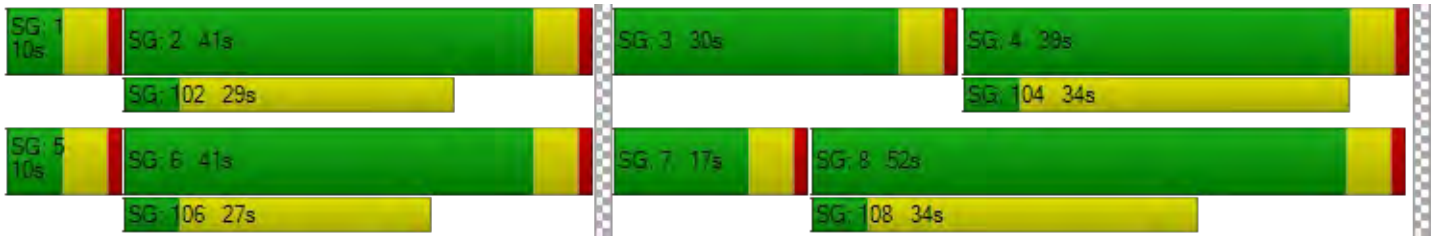
d_M, Delay for Movement [s/veh]	64.40	48.06	48.14	77.56	58.76	58.76	3.88	6.61	6.74	3.71	6.87	5.57
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	62.18			63.66			6.56			6.72		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	12.68											
Intersection LOS	B											
Intersection V/C	0.244											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.257	1.995	2.691	2.644
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	783	567	600	600
d_b, Bicycle Delay [s]	22.21	30.83	29.41	29.41
l_b,int, Bicycle LOS Score for Intersection	1.777	1.598	2.095	2.077
Bicycle LOS	A	A	B	B

Sequence

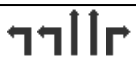
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	14	7	0	14	0	0	8	0	7	14	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	284	91	221	511	141	89	308	46	130	349	156
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	74	24	58	133	37	23	80	12	34	91	41
Total Analysis Volume [veh/h]	53	296	95	230	532	147	93	321	48	135	364	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	16	42	0	20	46	46	17	43	0	15	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	61	61	10	67	80	8	19	19	10	21	21
g / C, Green / Cycle	0.04	0.51	0.51	0.08	0.55	0.66	0.07	0.16	0.16	0.08	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.06	0.07	0.15	0.09	0.05	0.09	0.03	0.08	0.15	0.15
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1677
c, Capacity [veh/h]	70	1811	808	293	1973	1054	120	556	248	149	323	290
d1, Uniform Delay [s]	57.11	15.82	15.42	53.87	14.04	7.51	55.09	46.99	44.08	54.52	48.23	48.31
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.24	0.19	0.30	4.60	0.34	0.28	10.11	0.95	0.38	17.36	6.51	7.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.16	0.12	0.78	0.27	0.14	0.77	0.58	0.19	0.90	0.86	0.87
d, Delay for Lane Group [s/veh]	72.36	16.01	15.72	58.46	14.37	7.78	65.21	47.94	44.46	71.87	54.74	55.97
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.22	1.43	3.59	3.83	1.43	3.11	4.53	1.28	4.76	8.60	7.90
50th-Percentile Queue Length [ft/ln]	47.23	55.61	35.71	89.81	95.77	35.75	77.67	113.24	31.90	119.07	214.97	197.38
95th-Percentile Queue Length [veh/ln]	3.40	4.00	2.57	6.47	6.90	2.57	5.59	8.02	2.30	8.34	13.41	12.50
95th-Percentile Queue Length [ft/ln]	85.02	100.10	64.27	161.66	172.39	64.36	139.80	200.50	57.43	208.54	335.20	312.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.36	16.01	15.72	58.46	14.37	7.78	65.21	47.94	44.46	71.87	55.04	55.97
Movement LOS	E	B	B	E	B	A	E	D	D	E	E	E
d_A, Approach Delay [s/veh]	22.67			24.46			51.05			58.70		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.25											
Intersection LOS	D											
Intersection V/C	0.381											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.656	2.813	2.635	2.570
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	616	683	633	600
d_b, Bicycle Delay [s]	28.72	26.02	28.03	29.42
l_b,int, Bicycle LOS Score for Intersection	1.926	2.310	1.941	2.106
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	68	0	0	50	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	68	0	0	50	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	0	0	15	0
Total Analysis Volume [veh/h]	0	81	0	0	60	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.31	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.31		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.142

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	7	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	256	452	45	53	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	70	124	12	15	0
Total Analysis Volume [veh/h]	0	281	497	49	58	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.14	0.00
d_M, Delay for Movement [s/veh]	8.53	0.00	0.00	0.00	15.24	11.24
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	12.25	12.25
d_A, Approach Delay [s/veh]	0.00		0.00		15.24	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	72	41	0	52	46	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	41	0	52	46	1
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	12	0	15	14	0
Total Analysis Volume [veh/h]	86	49	0	62	55	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.48	0.00	9.73	9.14
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.22	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	5.49	5.49
d_A, Approach Delay [s/veh]	0.00		0.00		9.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.15					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.184

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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	7	0	0	7	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	229	52	40	369	38	12	21	5	32	34	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	63	14	11	101	10	3	6	1	9	9	4
Total Analysis Volume [veh/h]	10	252	57	44	405	42	13	23	5	35	37	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	100	91	91	100	93	93	10	10	10
g / C, Green / Cycle	0.83	0.76	0.76	0.83	0.78	0.78	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.09	0.04	0.11	0.03	0.02	0.00	0.07
s, saturation flow rate [veh/h]	980	1870	1754	1119	3560	1589	1666	1589	1262
c, Capacity [veh/h]	878	1420	1332	996	2776	1239	180	133	147
d1, Uniform Delay [s]	1.73	3.79	3.80	1.75	3.29	2.99	51.40	50.56	54.63
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.16	0.17	0.08	0.11	0.05	0.54	0.12	3.73
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	0.01	0.11	0.11	0.04	0.15	0.03	0.20	0.04	0.59
d, Delay for Lane Group [s/veh]	1.74	3.95	3.98	1.83	3.40	3.04	51.94	50.68	58.37
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.03	0.95	0.92	0.14	1.07	0.21	1.04	0.14	2.75
50th-Percentile Queue Length [ft/ln]	0.71	23.69	23.02	3.62	26.67	5.27	26.04	3.57	68.75
95th-Percentile Queue Length [veh/ln]	0.05	1.71	1.66	0.26	1.92	0.38	1.88	0.26	4.95
95th-Percentile Queue Length [ft/ln]	1.28	42.64	41.43	6.51	48.00	9.49	46.88	6.43	123.75

Movement, Approach, & Intersection Results

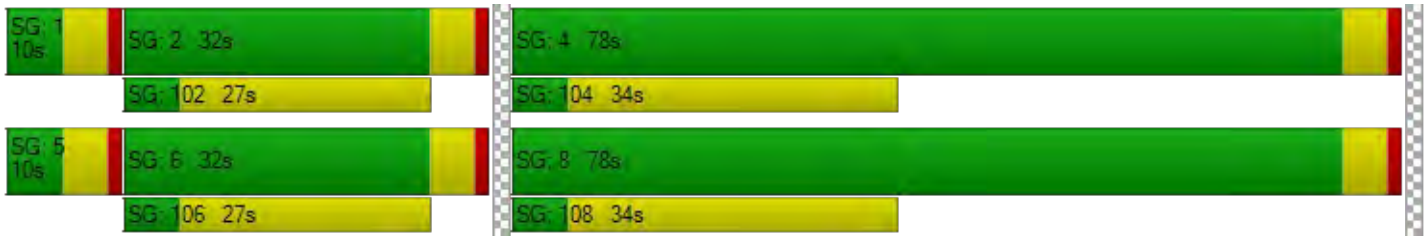
d_M, Delay for Movement [s/veh]	1.74	3.96	3.98	1.83	3.40	3.04	51.94	51.94	50.68	58.37	58.37	58.37
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	3.89			3.23			51.78			58.37		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	10.69											
Intersection LOS	B											
Intersection V/C	0.184											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	51.33	51.33	51.33
l_p,int, Pedestrian LOS Score for Intersection	2.514	2.735	2.009	1.881
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.03	36.03	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.823	1.965	1.627	1.703
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	104	32	0	94	24	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	32	0	94	24	0
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	9	0	25	6	0
Total Analysis Volume [veh/h]	112	34	0	101	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

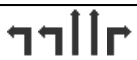
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.51	0.00	9.69	8.85
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	2.54	2.54
d_A, Approach Delay [s/veh]	0.00		0.00		9.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.92					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	40.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	8	8	7	70	8	0	0	77	8	7	72	66
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	426	322	365	504	231	274	874	72	579	894	331
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	115	87	98	135	62	74	235	19	156	240	89
Total Analysis Volume [veh/h]	283	458	346	392	542	248	295	940	77	623	961	356
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	50	0	16	50	0	23	49	0	25	51	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	106	106	106	106	106	106	106	106	106	106	106	106
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	11	26	26	15	29	29	12	23	23	22	34	34
g / C, Green / Cycle	0.11	0.24	0.24	0.14	0.28	0.28	0.11	0.22	0.22	0.21	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.22	0.11	0.11	0.16	0.09	0.18	0.05	0.18	0.27	0.22
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	367	1241	387	483	1411	440	379	1119	349	719	1132	526
d1, Uniform Delay [s]	46.00	33.24	38.67	44.15	30.94	32.75	45.82	39.47	33.83	40.46	33.68	31.34
k, delay calibration	0.11	0.11	0.26	0.11	0.11	0.11	0.11	0.11	0.11	0.11	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]	3.44	0.18	15.49	3.36	0.17	1.13	3.46	1.78	0.31	3.32	1.87	3.60
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	0.77	0.37	0.89	0.81	0.38	0.56	0.78	0.84	0.22	0.87	0.85	0.68
d, Delay for Lane Group [s/veh]	49.44	33.42	54.16	47.51	31.11	33.89	49.28	41.25	34.14	43.77	35.56	34.94
Lane Group LOS	D	C	D	D	C	C	D	D	C	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.77	3.26	10.20	5.16	3.72	5.52	3.82	7.60	1.59	8.06	11.55	8.29
50th-Percentile Queue Length [ft/ln]	94.21	81.41	254.92	129.07	93.12	137.98	95.39	190.05	39.82	201.41	288.85	207.20
95th-Percentile Queue Length [veh/ln]	6.78	5.86	15.43	8.89	6.70	9.37	6.87	12.12	2.87	12.71	17.13	13.01
95th-Percentile Queue Length [ft/ln]	169.57	146.54	385.84	222.23	167.61	234.31	171.70	303.09	71.67	317.78	428.21	325.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.44	33.42	54.16	47.51	31.11	33.89	49.28	41.25	34.14	43.77	35.56	34.94
Movement LOS	D	C	D	D	C	C	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	44.19			37.13			42.64			38.08		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	40.17											
Intersection LOS	D											
Intersection V/C	0.696											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	44.14	44.14	44.14	44.14
l_p,int, Pedestrian LOS Score for Intersection	3.111	3.107	3.314	3.176
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	853	853	834	872
d_b, Bicycle Delay [s]	17.35	17.35	17.93	16.78
l_b,int, Bicycle LOS Score for Intersection	2.157	2.210	2.281	3.160
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	38.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.611

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	155	0	0	145	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	44	181	384	48	134	221	1018	80	252	1271	265
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	11	46	98	12	34	56	260	20	64	324	68
Total Analysis Volume [veh/h]	142	45	185	392	49	137	226	1039	82	257	1297	270
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	75	75	11	67	67
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.54	0.54	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.20	0.05	0.07	0.25	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	239	245	214	468	224	250	2734	853	274	2423	756
d1, Uniform Delay [s]	55.31	55.31	59.34	59.01	58.95	59.26	18.87	15.84	64.12	25.82	23.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.15	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]	1.02	0.99	10.06	4.04	7.70	15.30	0.40	0.22	14.40	0.85	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
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	0.39	0.87	0.84	0.83	0.91	0.38	0.10	0.94	0.54	0.36
d, Delay for Lane Group [s/veh]	56.33	56.30	69.40	63.05	66.65	74.57	19.27	16.06	78.52	26.67	24.50
Lane Group LOS	E	E	E	E	E	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.14	7.04	7.06	6.92	8.97	6.68	1.36	5.12	10.34	5.97
50th-Percentile Queue Length [ft/ln]	76.75	78.39	176.01	176.45	173.02	224.24	166.98	34.00	127.98	258.57	149.23
95th-Percentile Queue Length [veh/ln]	5.53	5.64	11.39	11.41	11.24	13.88	10.92	2.45	8.83	15.62	9.98
95th-Percentile Queue Length [ft/ln]	138.15	141.10	284.80	285.37	280.88	347.04	272.94	61.21	220.75	390.43	249.40

Movement, Approach, & Intersection Results

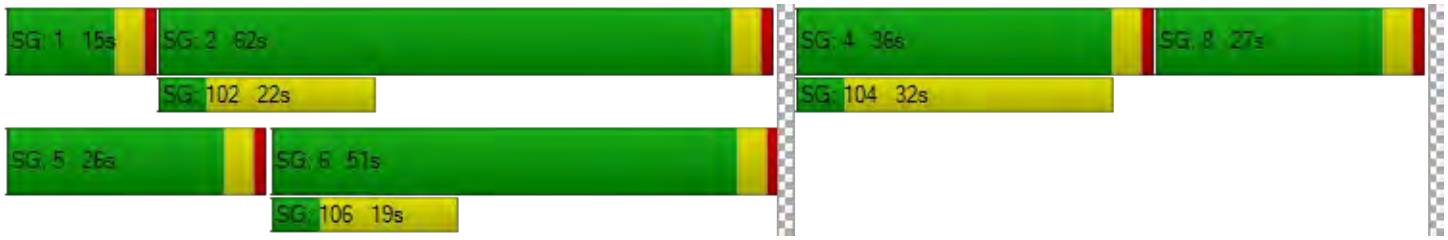
d_M, Delay for Movement [s/veh]	56.32	56.30	69.40	63.05	66.65	66.65	74.57	19.27	16.06	78.52	26.67	24.50
Movement LOS	E	E	E	E	E	E	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	62.82			64.21			28.35			33.66		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.84											
Intersection LOS	D											
Intersection V/C	0.611											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.599	2.540	3.104	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.173	2.513	2.300	2.563
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.688

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	74	0	51	0	100	54	0	94	101
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	462	1	852	0	1147	579	0	1322	611
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	119	0	220	0	296	149	0	341	157
Total Analysis Volume [veh/h]	0	0	0	476	1	878	0	1182	597	0	1363	630
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		61	61	61	61	61	61	61
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		24	24	24	27	27	27	56
g / C, Green / Cycle		0.40	0.40	0.40	0.44	0.44	0.44	0.92
(v / s)_i Volume / Saturation Flow Rate		0.13	0.13	0.31	0.23	0.38	0.27	0.40
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		708	708	1119	2233	697	2233	1459
d1, Uniform Delay [s]		12.78	12.78	16.09	12.53	15.41	13.14	0.34
k, delay calibration		0.11	0.11	0.11	0.11	0.26	0.11	0.29
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.28	0.28	1.25	0.20	7.24	0.27	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		0.34	0.34	0.78	0.53	0.86	0.61	0.43
d, Delay for Lane Group [s/veh]		13.06	13.06	17.34	12.73	22.65	13.41	0.88
Lane Group LOS		B	B	B	B	C	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.07	2.07	4.86	3.43	7.72	4.16	0.22
50th-Percentile Queue Length [ft/ln]		51.67	51.67	121.42	85.82	193.07	103.95	5.51
95th-Percentile Queue Length [veh/ln]		3.72	3.72	8.47	6.18	12.28	7.48	0.40
95th-Percentile Queue Length [ft/ln]		93.01	93.00	211.78	154.48	307.01	187.11	9.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	13.06	13.06	17.34	0.00	12.73	22.65	0.00	13.41	0.88
Movement LOS				B	B	B		B	C		B	A
d_A, Approach Delay [s/veh]	0.00			15.83			16.06			9.45		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	13.43											
Intersection LOS	B											
Intersection V/C	0.688											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.10	22.10	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.116	2.852	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	493	1478	1478
d_b, Bicycle Delay [s]	30.44	17.28	2.07	2.07
l_b,int, Bicycle LOS Score for Intersection	4.132	3.795	2.538	2.656
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.589

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	51	0	111	0	0	0	0	120	54	0	144	68
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	594	1	847	0	0	0	0	1133	491	0	1349	347
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	155	0	221	0	0	0	0	295	128	0	351	90
Total Analysis Volume [veh/h]	619	1	882	0	0	0	0	1180	511	0	1405	361
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
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	54	54	54		54	54	54	54
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	22	22	22		21	49	21	21
g / C, Green / Cycle	0.42	0.42	0.42		0.40	0.91	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.31		0.23	0.32	0.28	0.23
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	743	743	1173		2022	1442	2022	631
d1, Uniform Delay [s]	11.06	11.06	13.31		12.73	0.34	13.50	12.65
k, delay calibration	0.11	0.11	0.11		0.11	0.13	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	0.37	0.99		0.27	0.17	0.44	0.82
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	0.42	0.42	0.75		0.58	0.35	0.69	0.57
d, Delay for Lane Group [s/veh]	11.43	11.43	14.30		13.00	0.52	13.94	13.47
Lane Group LOS	B	B	B		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.26	2.26	3.89		3.17	0.07	4.03	2.99
50th-Percentile Queue Length [ft/ln]	56.39	56.39	97.25		79.37	1.74	100.72	74.86
95th-Percentile Queue Length [veh/ln]	4.06	4.06	7.00		5.71	0.13	7.25	5.39
95th-Percentile Queue Length [ft/ln]	101.50	101.49	175.06		142.86	3.13	181.29	134.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.43	11.43	14.30	0.00	0.00	0.00	0.00	13.00	0.52	0.00	13.94	13.47
Movement LOS	B	B	B					B	A		B	B
d_A, Approach Delay [s/veh]	13.12			0.00			9.22			13.84		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	12.05											
Intersection LOS	B											
Intersection V/C	0.589											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	18.57	18.57	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.849	2.032	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	559	0	1678	1678
d_b, Bicycle Delay [s]	13.91	26.81	0.69	0.69
l_b,int, Bicycle LOS Score for Intersection	4.038	4.132	2.490	2.531
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	98	0	17	0	0	0	0	124	107	19	113	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	480	40	166	0	44	76	118	1385	394	229	1134	1
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	128	11	44	0	12	20	31	368	105	61	302	0
Total Analysis Volume [veh/h]	511	43	177	0	47	81	126	1473	419	244	1206	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	43	0	10	43	0	56	32	0	55	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	15	24	24	0	9	9	5	28	28	8	31	31
g / C, Green / Cycle	0.19	0.30	0.30	0.00	0.12	0.12	0.06	0.35	0.35	0.10	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.15	0.02	0.11	0.00	0.04	0.04	0.04	0.29	0.26	0.07	0.24	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1780	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	642	567	482	1	210	187	212	1763	550	352	1970	615
d1, Uniform Delay [s]	31.31	20.01	21.99	0.00	32.51	32.59	36.79	24.19	23.35	34.91	19.82	15.13
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	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]	2.31	0.06	0.47	0.00	0.85	1.03	2.65	1.10	4.41	2.44	0.31	0.00
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	0.80	0.08	0.37	0.00	0.31	0.33	0.59	0.84	0.76	0.69	0.61	0.00
d, Delay for Lane Group [s/veh]	33.61	20.06	22.46	0.00	33.36	33.62	39.44	25.29	27.76	37.35	20.13	15.14
Lane Group LOS	C	C	C	A	C	C	D	C	C	D	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.78	0.57	2.58	0.00	1.19	1.14	1.26	8.25	7.32	2.37	5.73	0.01
50th-Percentile Queue Length [ft/ln]	119.61	14.14	64.57	0.00	29.86	28.51	31.44	206.29	183.07	59.21	143.37	0.27
95th-Percentile Queue Length [veh/ln]	8.37	1.02	4.65	0.00	2.15	2.05	2.26	12.96	11.76	4.26	9.66	0.02
95th-Percentile Queue Length [ft/ln]	209.29	25.46	116.22	0.00	53.75	51.31	56.59	324.06	294.02	106.59	241.56	0.49

Movement, Approach, & Intersection Results

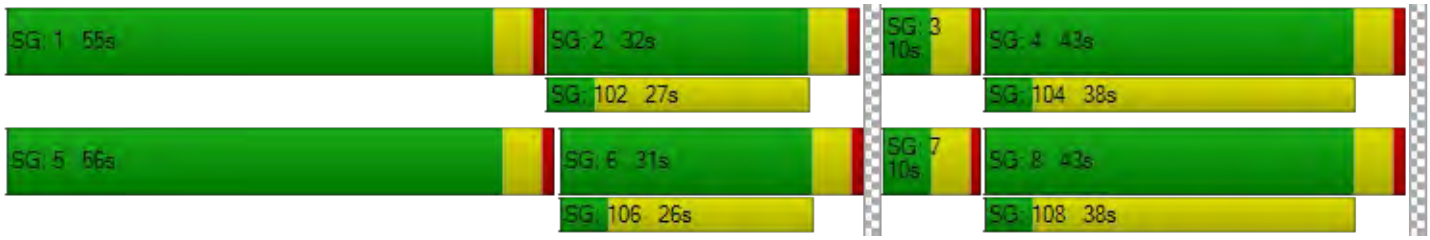
d_M, Delay for Movement [s/veh]	33.61	20.06	22.46	0.00	33.36	33.56	39.44	25.29	27.76	37.35	20.13	15.14
Movement LOS	C	C	C	A	C	C	D	C	C	D	C	B
d_A, Approach Delay [s/veh]	30.12			33.49			26.69			23.02		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.24											
Intersection LOS	C											
Intersection V/C	0.547											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.61	31.61	31.61	31.61
l_p,int, Pedestrian LOS Score for Intersection	2.683	2.354	3.258	3.181
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	947	947	673	648
d_b, Bicycle Delay [s]	11.11	11.11	17.65	18.32
l_b,int, Bicycle LOS Score for Intersection	2.766	1.771	2.670	2.358
Bicycle LOS	C	A	B	B

Sequence

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



Appendix D-6

Phase 1+2 with Project (2029)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\6 P2 + P AM.pdf

Scenario 11 P2 + Project AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.283	15.2	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.003	10.3	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.319	17.4	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.396	22.4	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.450	44.8	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	EB Right		3.1	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.125	13.6	B
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	EB Right		4.5	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.357	22.0	C
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	SB Thru		4.9	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.603	29.9	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.423	21.5	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	SB Right	0.374	9.0	A
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.623	10.9	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.586	28.3	C
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.135	16.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	15.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.283

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	4	6	5	3	14	14	6	25	12	5	24	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	546	5	3	252	198	371	25	64	5	24	9
Peak Hour Factor	0.9600	0.9600	0.9500	0.9500	0.9600	0.9600	0.9600	0.9500	0.9600	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]	13	142	1	1	66	52	97	7	17	1	6	2
Total Analysis Volume [veh/h]	51	569	5	3	263	206	386	26	67	5	25	9
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	12	46	0	21	49	0	25	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	43	43	43	43	43	43	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	12	12	0	10	10	8	11	11	0	3	3
g / C, Green / Cycle	0.05	0.28	0.28	0.00	0.23	0.23	0.18	0.25	0.25	0.01	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.00	0.05	0.13	0.11	0.01	0.04	0.00	0.01	0.01
s, saturation flow rate [veh/h]	1781	3560	1862	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	97	996	521	8	1172	366	609	884	394	25	149	126
d1, Uniform Delay [s]	20.01	12.60	12.61	21.56	13.58	14.80	16.61	12.37	12.82	21.44	18.66	18.51
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	4.41	0.24	0.45	25.93	0.10	1.36	1.10	0.01	0.20	3.81	0.53	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	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	0.53	0.38	0.38	0.37	0.22	0.56	0.63	0.03	0.17	0.20	0.17	0.07
d, Delay for Lane Group [s/veh]	24.41	12.84	13.06	47.50	13.68	16.16	17.71	12.38	13.02	25.25	19.19	18.75
Lane Group LOS	C	B	B	D	B	B	B	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.56	1.25	1.34	0.09	0.60	1.65	1.62	0.08	0.45	0.04	0.23	0.08
50th-Percentile Queue Length [ft/ln]	14.11	31.25	33.51	2.14	14.99	41.16	40.55	2.06	11.35	0.90	5.74	2.06
95th-Percentile Queue Length [veh/ln]	1.02	2.25	2.41	0.15	1.08	2.96	2.92	0.15	0.82	0.06	0.41	0.15
95th-Percentile Queue Length [ft/ln]	25.40	56.25	60.33	3.85	26.98	74.09	72.99	3.71	20.43	1.62	10.33	3.71

Movement, Approach, & Intersection Results

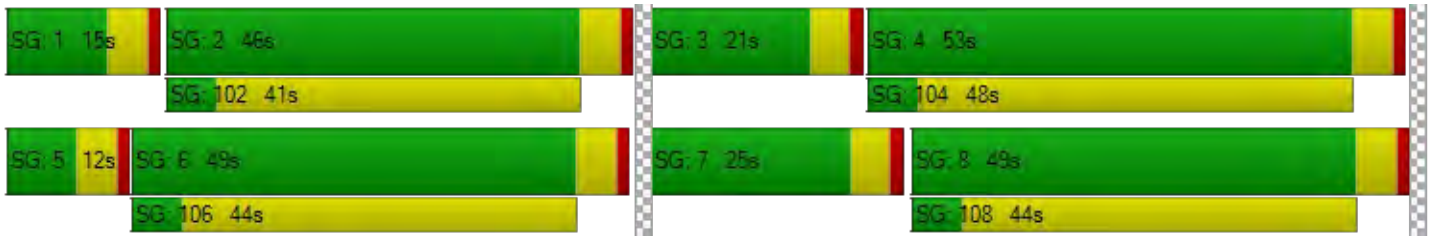
d_M, Delay for Movement [s/veh]	24.41	12.92	13.06	47.50	13.68	16.16	17.71	12.38	13.02	25.25	19.19	18.75
Movement LOS	C	B	B	D	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.86			14.98			16.76			19.86		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.19											
Intersection LOS	B											
Intersection V/C	0.283											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	13.59	13.59	13.59	13.59
l_p,int, Pedestrian LOS Score for Intersection	2.690	2.862	2.662	2.427
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2032	1894	2032	2217
d_b, Bicycle Delay [s]	0.01	0.06	0.01	0.25
l_b,int, Bicycle LOS Score for Intersection	1.903	1.819	1.955	1.624
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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	33	0	0	39
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	538	0	3	507
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	158	0	1	149
Total Analysis Volume [veh/h]	0	2	633	0	4	596
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

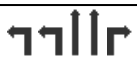
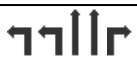
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	18.77	10.32	0.00	0.00	8.82	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.22	0.00	0.00	0.32	0.00
d_A, Approach Delay [s/veh]	10.32		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.319

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	18	34	69	5	16	11	10	17	6	26	10	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	247	190	39	66	48	70	400	61	153	381	112
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	69	53	11	18	13	19	111	17	43	106	31
Total Analysis Volume [veh/h]	80	274	211	43	73	53	78	444	68	170	423	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	50	0	10	47	0	13	47	0	13	47	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	47	47	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	3	10	10	5	11	11
g / C, Green / Cycle	0.07	0.21	0.21	0.05	0.19	0.19	0.07	0.21	0.21	0.10	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.08	0.13	0.01	0.02	0.03	0.02	0.12	0.04	0.05	0.12	0.08
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	248	764	341	168	681	304	245	763	341	337	858	383
d1, Uniform Delay [s]	20.74	15.72	16.73	21.56	15.70	15.91	20.77	16.58	15.16	20.14	15.37	14.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.74	0.28	1.83	0.80	0.07	0.27	0.74	0.71	0.28	1.17	0.44	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.36	0.62	0.26	0.11	0.17	0.32	0.58	0.20	0.50	0.49	0.32
d, Delay for Lane Group [s/veh]	21.48	16.00	18.56	22.35	15.77	16.18	21.51	17.29	15.45	21.31	15.81	15.18
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.40	1.12	1.96	0.23	0.29	0.44	0.39	1.93	0.55	0.85	1.73	0.99
50th-Percentile Queue Length [ft/ln]	10.05	27.95	48.91	5.64	7.27	11.03	9.82	48.34	13.69	21.17	43.19	24.76
95th-Percentile Queue Length [veh/ln]	0.72	2.01	3.52	0.41	0.52	0.79	0.71	3.48	0.99	1.52	3.11	1.78
95th-Percentile Queue Length [ft/ln]	18.10	50.30	88.04	10.14	13.09	19.86	17.67	87.02	24.64	38.10	77.75	44.57

Movement, Approach, & Intersection Results

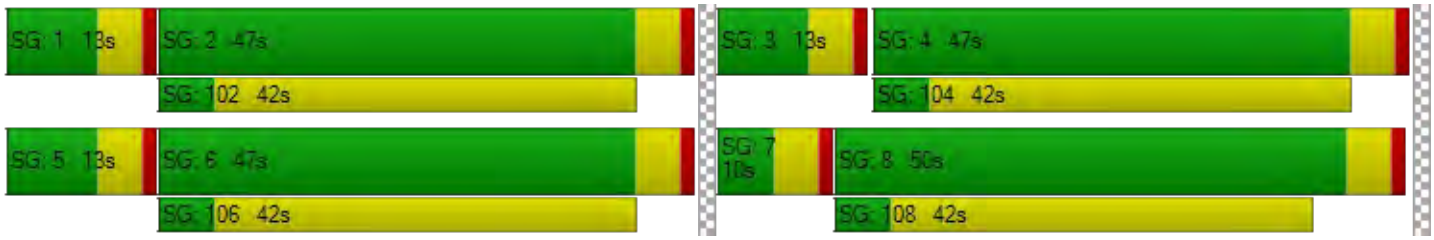
d_M, Delay for Movement [s/veh]	21.48	16.00	18.56	22.35	15.77	16.18	21.51	17.29	15.45	21.31	15.81	15.18
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.73			17.57			17.64			17.01		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.44											
Intersection LOS	B											
Intersection V/C	0.319											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.26	15.26	15.26	15.26
l_p,int, Pedestrian LOS Score for Intersection	2.683	2.650	2.720	2.758
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1923	1795	1795	1795
d_b, Bicycle Delay [s]	0.03	0.25	0.25	0.25
l_b,int, Bicycle LOS Score for Intersection	2.026	1.699	2.046	2.151
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.396

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	15	0	0	0	0	0	0	70	22	0	26	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	23	35	41	16	98	156	447	77	52	490	60
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	7	11	13	5	31	49	140	24	16	153	19
Total Analysis Volume [veh/h]	163	29	44	51	20	123	195	559	96	65	613	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	22	39	0	37	54	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	13	21	21	5	13	79	70	70	79	69	69
g / C, Green / Cycle	0.11	0.18	0.18	0.04	0.11	0.66	0.58	0.58	0.66	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.09	0.02	0.03	0.03	0.09	0.23	0.16	0.06	0.07	0.17	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	859	3560	1589	873	3560	1589
c, Capacity [veh/h]	192	328	279	68	172	586	2073	925	601	2056	918
d1, Uniform Delay [s]	52.62	41.48	42.00	57.18	52.65	8.46	12.43	11.15	7.62	12.94	11.25
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.98	0.12	0.26	15.11	9.97	1.53	0.32	0.22	0.08	0.37	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.85	0.09	0.16	0.75	0.83	0.33	0.27	0.10	0.11	0.30	0.08
d, Delay for Lane Group [s/veh]	62.60	41.60	42.26	72.29	62.62	9.99	12.75	11.38	7.69	13.32	11.42
Lane Group LOS	E	D	D	E	E	A	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.35	0.74	1.13	1.82	4.70	2.08	3.74	1.18	0.58	4.24	0.92
50th-Percentile Queue Length [ft/ln]	133.86	18.39	28.36	45.46	117.51	52.10	93.62	29.58	14.47	106.08	23.10
95th-Percentile Queue Length [veh/ln]	9.15	1.32	2.04	3.27	8.26	3.75	6.74	2.13	1.04	7.62	1.66
95th-Percentile Queue Length [ft/ln]	228.73	33.11	51.05	81.84	206.40	93.78	168.51	53.25	26.04	190.54	41.58

Movement, Approach, & Intersection Results

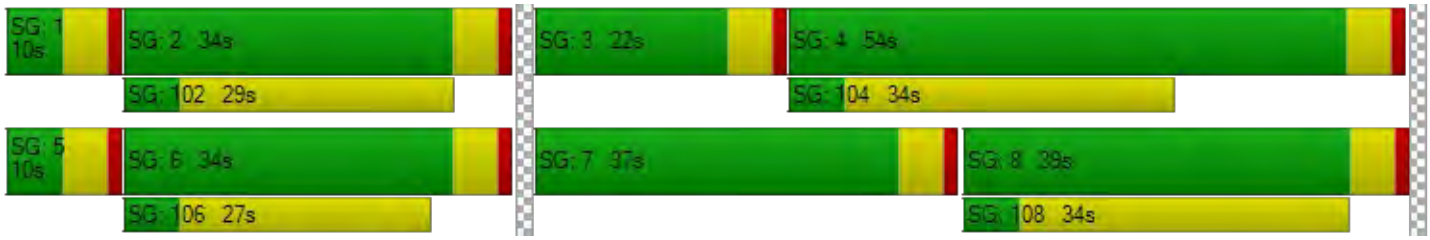
d_M, Delay for Movement [s/veh]	62.60	41.60	42.26	72.29	62.62	62.62	9.99	12.75	11.38	7.69	13.32	11.42
Movement LOS	E	D	D	E	E	E	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	56.23			65.16			11.96			12.64		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.43											
Intersection LOS	C											
Intersection V/C	0.396											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.303	2.281	2.752	2.697
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	816	483	483
d_b, Bicycle Delay [s]	30.83	21.02	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	1.949	1.880	2.261	2.181
Bicycle LOS	A	A	B	B

Sequence

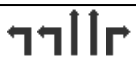
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	44.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.450

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	10	5	0	10	11	29	41	0	5	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	327	180	135	209	70	109	264	38	206	250	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	108	59	44	69	23	36	87	13	68	82	47
Total Analysis Volume [veh/h]	100	430	237	178	275	92	143	347	50	271	329	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	18	43	0	27	52	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	64	64	9	64	82	12	15	15	22	24	24
g / C, Green / Cycle	0.07	0.50	0.50	0.07	0.49	0.63	0.09	0.12	0.12	0.17	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.15	0.05	0.08	0.06	0.08	0.10	0.03	0.15	0.15	0.15
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1645
c, Capacity [veh/h]	124	1764	787	234	1758	996	169	418	187	295	352	310
d1, Uniform Delay [s]	59.66	18.84	19.46	59.57	18.06	9.61	57.94	56.11	52.29	53.38	50.19	50.22
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.19	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]	11.75	0.33	0.98	5.02	0.19	0.18	11.09	4.29	0.76	17.34	3.74	4.31
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	0.81	0.24	0.30	0.76	0.16	0.09	0.85	0.83	0.27	0.92	0.78	0.78
d, Delay for Lane Group [s/veh]	71.41	19.17	20.45	64.59	18.25	9.80	69.03	60.41	53.05	70.72	53.93	54.54
Lane Group LOS	E	B	C	E	B	A	E	E	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	3.83	4.48	3.05	2.34	1.08	5.16	5.82	1.54	10.13	8.87	7.89
50th-Percentile Queue Length [ft/ln]	91.50	95.70	112.08	76.32	58.47	27.11	128.90	145.59	38.41	253.31	221.71	197.22
95th-Percentile Queue Length [veh/ln]	6.59	6.89	7.96	5.49	4.21	1.95	8.88	9.78	2.77	15.35	13.75	12.49
95th-Percentile Queue Length [ft/ln]	164.69	172.27	198.90	137.37	105.24	48.80	221.99	244.53	69.13	383.82	343.81	312.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.41	19.17	20.45	64.59	18.25	9.80	69.03	60.41	53.05	70.72	54.03	54.54
Movement LOS	E	B	C	E	B	A	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	26.37			31.96			62.01			59.89		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	44.82											
Intersection LOS	D											
Intersection V/C	0.450											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.693	2.795	2.644	2.621
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	723
d_b, Bicycle Delay [s]	33.27	30.47	32.56	26.50
l_b,int, Bicycle LOS Score for Intersection	2.192	2.009	2.005	2.210
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	3.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	41	0	0	0	0	0	0	18	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	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]	23	0	0	0	0	0	0	13	57	0	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	23	0	41	0	0	0	0	13	57	18	5	0
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	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	0	13	0	0	0	0	4	17	5	2	0
Total Analysis Volume [veh/h]	28	0	50	0	0	0	0	16	70	22	6	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	16			56			22			28		
Exiting Flow Rate [veh/h]	92			0			34			66		
Demand Flow Rate [veh/h]	23	0	41	0	0	0	0	13	57	18	5	0
Adjusted Demand Flow Rate [veh/h]	28	0	50	0	0	0	0	16	70	22	6	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	1.00	1.00	1.00
Entry Flow Rate [veh/h]	78	0	87	29
Capacity of Entry and Bypass Lanes [veh/h]	1358	1304	1350	1342
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1358	1304	1345	1336
X, volume / capacity	0.06	0.00	0.06	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.18	0.00	0.20	0.06
95th-Percentile Queue Length [ft]	4.57	0.00	5.12	1.61
Approach Delay [s/veh]	3.10	2.76	3.18	2.86
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	3.10			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.125

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	108	42	5	13	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	444	243	24	53	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	126	69	7	15	0
Total Analysis Volume [veh/h]	0	505	276	27	60	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.13	0.00
d_M, Delay for Movement [s/veh]	7.87	0.00	0.00	0.00	13.57	10.14
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.43	0.43
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	10.63	10.63
d_A, Approach Delay [s/veh]	0.00		0.00		13.57	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.94					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	31	24	0	36	0	0	0	0	60	0	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]	69	23	63	0	57	0	0	40	170	21	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	69	54	87	0	93	0	0	40	170	81	16	1
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	15	25	0	26	0	0	11	48	23	5	0
Total Analysis Volume [veh/h]	78	61	99	0	106	0	0	45	193	92	18	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	46			192			202			142		
Exiting Flow Rate [veh/h]	399			63			98			147		
Demand Flow Rate [veh/h]	69	54	87	0	93	0	0	40	170	81	16	1
Adjusted Demand Flow Rate [veh/h]	78	61	99	0	106	0	0	45	193	92	18	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	243	109	243	114
Capacity of Entry and Bypass Lanes [veh/h]	1317	1135	1124	1195
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1292	1113	1102	1171
X, volume / capacity	0.18	0.10	0.22	0.09

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.67	0.32	0.82	0.31
95th-Percentile Queue Length [ft]	16.86	7.88	20.53	7.84
Approach Delay [s/veh]	4.34	4.05	5.25	3.87
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.53			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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	5	0	0	5	37	103	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	272	12	10	177	53	145	7	3	29	33	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	75	3	3	49	15	40	2	1	8	9	9
Total Analysis Volume [veh/h]	3	299	13	11	195	58	159	8	3	32	36	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	73	67	67	73	68	68	37	37	37
g / C, Green / Cycle	0.61	0.56	0.56	0.61	0.57	0.57	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.08	0.01	0.05	0.04	0.27	0.00	0.26
s, saturation flow rate [veh/h]	1157	1870	1843	1111	3560	1589	618	1589	398
c, Capacity [veh/h]	766	1040	1025	723	2011	898	248	487	161
d1, Uniform Delay [s]	9.16	12.91	12.92	9.27	12.02	11.79	39.47	28.94	37.12
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.00	0.31	0.31	0.04	0.10	0.14	3.18	0.00	4.15
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	0.00	0.15	0.15	0.02	0.10	0.06	0.67	0.01	0.64
d, Delay for Lane Group [s/veh]	9.16	13.21	13.23	9.31	12.12	11.93	42.64	28.94	41.28
Lane Group LOS	A	B	B	A	B	B	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.03	2.12	2.11	0.12	1.22	0.73	4.85	0.06	3.26
50th-Percentile Queue Length [ft/ln]	0.77	53.06	52.70	2.98	30.59	18.33	121.29	1.54	81.51
95th-Percentile Queue Length [veh/ln]	0.06	3.82	3.79	0.21	2.20	1.32	8.46	0.11	5.87
95th-Percentile Queue Length [ft/ln]	1.38	95.51	94.87	5.37	55.07	32.99	211.60	2.77	146.72

Movement, Approach, & Intersection Results

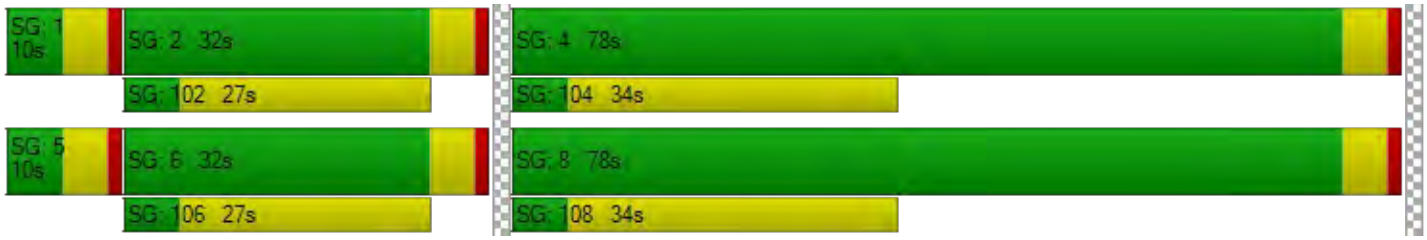
d_M, Delay for Movement [s/veh]	9.16	13.22	13.23	9.31	12.12	11.93	42.64	42.64	28.94	41.28	41.28	41.28
Movement LOS	A	B	B	A	B	B	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	13.18			11.96			42.40			41.28		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.03											
Intersection LOS	C											
Intersection V/C	0.357											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.467	2.941	2.045	1.805
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.819	1.777	1.840	1.730
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	55	12	0	97	0	0	0	0	34	0	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]	23	141	0	0	243	5	13	0	57	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	23	196	12	0	340	5	13	0	57	34	0	1
Peak Hour Factor	0.9500	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9500	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	54	3	0	93	1	4	0	15	9	0	0
Total Analysis Volume [veh/h]	24	215	13	0	374	5	14	0	60	37	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	14			62			419			258		
Exiting Flow Rate [veh/h]	480			235			30			0		
Demand Flow Rate [veh/h]	23	196	12	0	340	5	13	0	57	34	0	1
Adjusted Demand Flow Rate [veh/h]	24	215	13	0	374	5	14	0	60	37	0	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	244	0	387	76	39
Capacity of Entry and Bypass Lanes [veh/h]	1361	1380	1296	900	1061
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1334	1353	1270	883	1040
X, volume / capacity	0.18	0.01	0.30	0.08	0.04

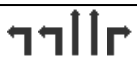
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.65	0.03	1.26	0.27	0.11
95th-Percentile Queue Length [ft]	16.30	0.73	31.55	6.85	2.84
Approach Delay [s/veh]	4.11		5.53	4.87	3.78
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	4.89				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	4	4	14	32	4	0	0	46	4	28	66	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	480	401	242	244	101	185	832	36	344	657	182
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	124	103	62	63	26	48	214	9	89	169	47
Total Analysis Volume [veh/h]	111	495	413	249	252	104	191	858	37	355	677	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	53	0	12	50	0	10	49	0	16	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	24	24	8	28	28	7	17	17	11	22	22
g / C, Green / Cycle	0.06	0.30	0.30	0.10	0.34	0.34	0.08	0.22	0.22	0.14	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.26	0.07	0.05	0.07	0.06	0.17	0.02	0.10	0.19	0.11
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	197	1512	472	356	1746	545	289	1099	343	471	956	444
d1, Uniform Delay [s]	37.02	22.06	26.91	34.95	18.31	18.63	35.82	29.80	25.37	33.50	26.62	24.33
k, delay calibration	0.11	0.11	0.21	0.11	0.11	0.11	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]	2.51	0.13	9.73	2.51	0.04	0.17	2.57	1.24	0.14	2.46	0.98	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	0.56	0.33	0.88	0.70	0.14	0.19	0.66	0.78	0.11	0.75	0.71	0.42
d, Delay for Lane Group [s/veh]	39.54	22.19	36.65	37.46	18.35	18.80	38.39	31.04	25.51	35.96	27.60	24.97
Lane Group LOS	D	C	D	D	B	B	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.11	2.36	8.43	2.43	1.05	1.34	1.81	4.93	0.54	3.41	5.76	2.94
50th-Percentile Queue Length [ft/ln]	27.79	59.06	210.87	60.67	26.24	33.49	45.32	123.19	13.55	85.21	143.95	73.38
95th-Percentile Queue Length [veh/ln]	2.00	4.25	13.20	4.37	1.89	2.41	3.26	8.57	0.98	6.13	9.69	5.28
95th-Percentile Queue Length [ft/ln]	50.02	106.31	329.95	109.20	47.23	60.28	81.58	214.21	24.38	153.37	242.33	132.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.54	22.19	36.65	37.46	18.35	18.80	38.39	31.04	25.51	35.96	27.60	24.97
Movement LOS	D	C	D	D	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	29.94			26.29			32.15			29.63		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.89											
Intersection LOS	C											
Intersection V/C	0.603											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.72	31.72	31.72	31.72
l_p,int, Pedestrian LOS Score for Intersection	3.025	3.005	3.167	3.055
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1193	1119	1094	1243
d_b, Bicycle Delay [s]	6.54	7.81	8.25	5.76
l_b,int, Bicycle LOS Score for Intersection	2.120	1.892	2.157	2.566
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.423

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	92	0	0	132	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	11	138	102	10	18	43	1262	80	175	1100	168
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	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	3	35	26	3	5	11	322	20	45	281	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1288	82	179	1122	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	9	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.25	0.05	0.05	0.22	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	189	190	168	248	120	58	3271	1021	229	3441	1074
d1, Uniform Delay [s]	57.77	57.76	61.40	62.20	61.35	67.15	12.00	9.45	64.37	9.45	8.25
k, delay calibration	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
d2, Incremental Delay [s]	0.86	0.85	10.44	1.13	0.98	17.85	0.36	0.15	5.76	0.25	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.76	0.39	0.08	0.78	0.33	0.16
d, Delay for Lane Group [s/veh]	58.63	58.62	71.85	63.34	62.33	85.00	12.36	9.61	70.13	9.70	8.57
Lane Group LOS	E	E	E	E	E	F	B	A	E	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.42	1.82	0.98	1.86	6.44	1.00	3.34	4.74	1.95
50th-Percentile Queue Length [ft/ln]	47.05	47.38	135.55	45.51	24.47	46.40	160.90	24.89	83.48	118.39	48.86
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.24	3.28	1.76	3.34	10.60	1.79	6.01	8.30	3.52
95th-Percentile Queue Length [ft/ln]	84.69	85.29	231.03	81.92	44.05	83.51	264.92	44.81	150.26	207.61	87.94

Movement, Approach, & Intersection Results

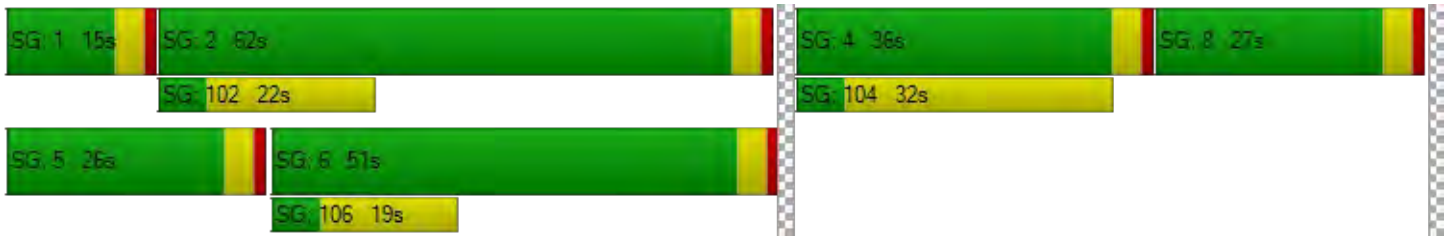
d_M, Delay for Movement [s/veh]	58.62	58.62	71.85	63.34	62.33	62.33	85.00	12.36	9.61	70.13	9.70	8.57
Movement LOS	E	E	E	E	E	E	F	B	A	E	A	A
d_A, Approach Delay [s/veh]	65.99			63.12			14.46			16.92		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	21.52											
Intersection LOS	C											
Intersection V/C	0.423											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.071	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.337	2.369
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.374

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	114	0	28	0	68	24	0	104	223
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	282	1	542	0	1058	532	0	883	941
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	73	0	140	0	273	137	0	228	243
Total Analysis Volume [veh/h]	0	0	0	291	1	559	0	1091	548	0	910	970
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	70	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		17	17	17	21	21	21	43
g / C, Green / Cycle		0.35	0.35	0.35	0.44	0.44	0.44	0.90
(v / s)_i Volume / Saturation Flow Rate		0.08	0.08	0.20	0.21	0.34	0.18	0.61
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		616	617	974	2268	708	2268	1424
d1, Uniform Delay [s]		11.16	11.16	12.79	9.38	11.25	8.98	0.67
k, delay calibration		0.11	0.11	0.11	0.11	0.11	0.11	0.41
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.20	0.20	0.54	0.16	1.86	0.11	2.19
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		0.24	0.24	0.57	0.48	0.77	0.40	0.68
d, Delay for Lane Group [s/veh]		11.36	11.36	13.33	9.54	13.11	9.09	2.86
Lane Group LOS		B	B	B	A	B	A	A
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		0.96	0.96	2.10	2.11	4.12	1.68	0.87
50th-Percentile Queue Length [ft/ln]		23.89	23.90	52.39	52.72	102.92	42.01	21.64
95th-Percentile Queue Length [veh/ln]		1.72	1.72	3.77	3.80	7.41	3.02	1.56
95th-Percentile Queue Length [ft/ln]		43.01	43.02	94.30	94.90	185.25	75.62	38.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	11.36	11.36	13.33	0.00	9.54	13.11	0.00	9.09	2.86
Movement LOS				B	B	B		A	B		A	A
d_A, Approach Delay [s/veh]	0.00			12.65			10.74			5.88		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	9.02											
Intersection LOS	A											
Intersection V/C	0.374											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.74	15.74	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.086	2.815	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	2720	1883	1883
d_b, Bicycle Delay [s]	23.89	3.10	0.08	0.08
l_b,int, Bicycle LOS Score for Intersection	4.132	2.964	2.461	2.594
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.623

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	28	0	129	0	0	0	0	159	24	0	299	225
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	430	3	621	0	0	0	0	684	692	0	1393	610
Peak Hour Factor	0.9700	0.9700	0.9700	0.9500	0.9500	0.9500	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	111	1	160	0	0	0	0	176	178	0	359	157
Total Analysis Volume [veh/h]	443	3	640	0	0	0	0	705	713	0	1436	629
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
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	70	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	55	55	55		55	55	55	55
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	19	19	19		27	50	27	27
g / C, Green / Cycle	0.34	0.34	0.34		0.48	0.91	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.23		0.14	0.45	0.28	0.40
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	599	600	947		2457	1446	2457	767
d1, Uniform Delay [s]	13.90	13.90	15.74		8.59	0.41	10.31	12.25
k, delay calibration	0.11	0.11	0.11		0.11	0.30	0.11	0.24
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	0.38	0.85		0.06	0.74	0.22	4.77
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	0.37	0.37	0.68		0.29	0.49	0.58	0.82
d, Delay for Lane Group [s/veh]	14.28	14.28	16.59		8.65	1.15	10.53	17.01
Lane Group LOS	B	B	B		A	A	B	B
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.92	1.92	3.13		1.39	0.30	3.41	6.26
50th-Percentile Queue Length [ft/ln]	47.98	47.97	78.17		34.75	7.39	85.30	156.61
95th-Percentile Queue Length [veh/ln]	3.45	3.45	5.63		2.50	0.53	6.14	10.37
95th-Percentile Queue Length [ft/ln]	86.37	86.35	140.70		62.55	13.31	153.54	259.23

Movement, Approach, & Intersection Results

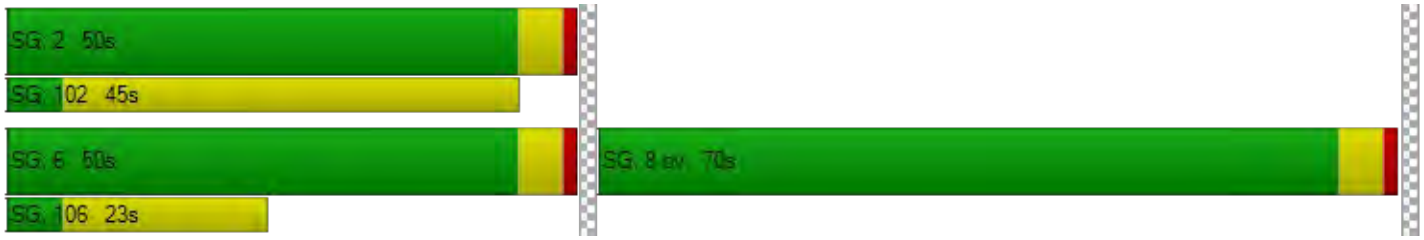
d_M, Delay for Movement [s/veh]	14.28	14.28	16.59	0.00	0.00	0.00	0.00	8.65	1.15	0.00	10.53	17.01
Movement LOS	B	B	B					A	A		B	B
d_A, Approach Delay [s/veh]	15.64			0.00			4.88			12.50		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	10.88											
Intersection LOS	B											
Intersection V/C	0.623											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.30	19.30	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.820	2.122	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2358	0	1633	1633
d_b, Bicycle Delay [s]	0.89	27.56	0.93	0.93
l_b,int, Bicycle LOS Score for Intersection	3.352	4.132	2.340	2.695
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	77	11	13	29	29	361	135	80	73	13	86	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	420	44	96	29	64	457	187	839	224	118	1124	12
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]	111	12	25	8	17	120	49	221	59	31	296	3
Total Analysis Volume [veh/h]	442	46	101	31	67	481	197	883	236	124	1183	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	43	0	55	88	0	10	32	0	10	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	78	78	78	78	78	78	78	78	78	78	78	78
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	13	27	27	2	16	16	7	25	25	5	23	23
g / C, Green / Cycle	0.16	0.34	0.34	0.03	0.21	0.21	0.09	0.31	0.31	0.06	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.06	0.02	0.17	0.17	0.06	0.17	0.15	0.04	0.23	0.01
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1649	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	569	634	539	56	340	328	299	1601	500	209	1468	458
d1, Uniform Delay [s]	31.41	17.58	18.31	37.47	29.78	29.78	34.73	22.32	21.67	35.94	25.90	20.05
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	2.33	0.05	0.17	8.22	4.94	5.14	2.46	0.30	0.69	2.68	1.09	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	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.07	0.19	0.55	0.82	0.82	0.66	0.55	0.47	0.59	0.81	0.03
d, Delay for Lane Group [s/veh]	33.74	17.63	18.48	45.69	34.72	34.93	37.19	22.62	22.36	38.62	26.99	20.08
Lane Group LOS	C	B	B	D	C	C	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.06	0.55	1.27	0.70	5.30	5.13	1.88	4.33	3.43	1.21	6.62	0.17
50th-Percentile Queue Length [ft/ln]	101.51	13.78	31.64	17.55	132.44	128.30	46.93	108.26	85.82	30.18	165.57	4.21
95th-Percentile Queue Length [veh/ln]	7.31	0.99	2.28	1.26	9.07	8.85	3.38	7.74	6.18	2.17	10.84	0.30
95th-Percentile Queue Length [ft/ln]	182.72	24.80	56.96	31.59	226.81	221.18	84.48	193.58	154.47	54.32	271.08	7.58

Movement, Approach, & Intersection Results

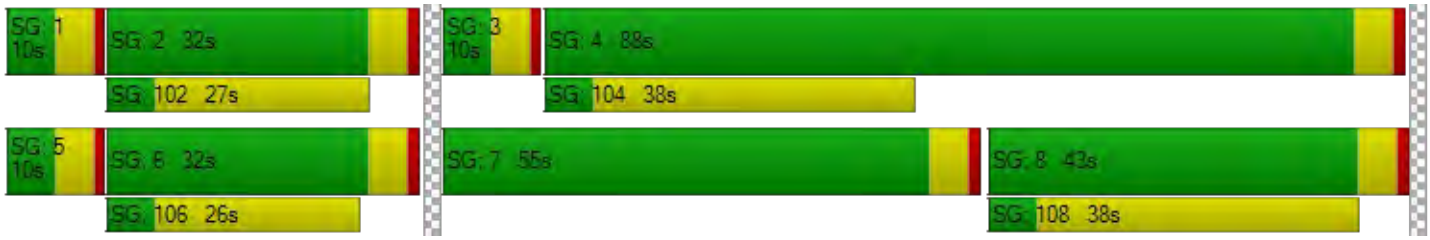
d_M, Delay for Movement [s/veh]	33.74	17.63	18.48	45.69	34.72	34.83	37.19	22.62	22.36	38.62	26.99	20.08
Movement LOS	C	B	B	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	29.87			35.40			24.76			28.01		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	28.30											
Intersection LOS	C											
Intersection V/C	0.586											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	30.68	30.68	30.68	30.68
l_p,int, Pedestrian LOS Score for Intersection	2.613	2.457	3.215	3.097
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	970	2119	689	689
d_b, Bicycle Delay [s]	10.38	0.14	16.82	16.82
l_b,int, Bicycle LOS Score for Intersection	2.531	2.515	2.283	2.286
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.135

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	86	131	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	42	114	284	16	50	134
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]	42	200	415	16	50	134
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	53	109	4	13	35
Total Analysis Volume [veh/h]	44	211	437	17	53	141
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.14	0.18
d_M, Delay for Movement [s/veh]	8.40	0.00	0.00	0.00	16.88	12.34
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	1.36	1.36
95th-Percentile Queue Length [ft/ln]	3.11	0.00	0.00	0.00	33.91	33.91
d_A, Approach Delay [s/veh]	1.45		0.00		13.58	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.33					
Intersection LOS	C					

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Report File: H:\...\6 P2 + P PM.pdf

Scenario 12 P2 + Project PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.461	19.4	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Left	0.018	21.8	C
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.347	19.3	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.272	13.1	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.401	38.5	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Right		3.4	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.248	20.8	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	WB Left		6.1	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.295	15.7	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		5.5	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.723	43.1	D
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.618	38.7	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.688	13.7	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.674	14.9	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.664	34.8	C
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.137	22.3	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	14	20	7	30	15	15	20	54	8	7	47	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	617	7	30	664	438	392	54	115	7	47	20
Peak Hour Factor	0.9800	0.9800	0.9500	0.9500	0.9800	0.9800	0.9800	0.9500	0.9800	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	157	2	8	169	112	100	14	29	2	12	5
Total Analysis Volume [veh/h]	68	630	7	32	678	447	400	57	117	7	49	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	17	51	0	21	49	0	25	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	61	61	61	61	61	61	61	61	61	61	61	61
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	22	22	2	21	21	10	16	16	1	7	7
g / C, Green / Cycle	0.06	0.36	0.36	0.03	0.34	0.34	0.16	0.27	0.27	0.01	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.02	0.13	0.28	0.12	0.02	0.07	0.00	0.03	0.01
s, saturation flow rate [veh/h]	1781	3560	1859	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	100	1292	675	62	1739	542	560	950	424	32	214	182
d1, Uniform Delay [s]	28.40	14.10	14.11	29.11	15.35	18.52	24.37	16.75	17.79	30.17	24.70	24.38
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.13	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.70	0.14	0.28	6.56	0.14	3.74	1.72	0.03	0.35	3.29	0.54	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	0.68	0.32	0.32	0.52	0.39	0.82	0.71	0.06	0.28	0.22	0.23	0.12
d, Delay for Lane Group [s/veh]	36.10	14.25	14.38	35.67	15.50	22.25	26.08	16.78	18.14	33.46	25.24	24.66
Lane Group LOS	D	B	B	D	B	C	C	B	B	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.14	1.91	2.02	0.55	2.19	5.74	2.70	0.28	1.25	0.06	0.64	0.27
50th-Percentile Queue Length [ft/ln]	28.62	47.73	50.55	13.83	54.78	143.38	67.59	7.02	31.27	1.59	16.11	6.83
95th-Percentile Queue Length [veh/ln]	2.06	3.44	3.64	1.00	3.94	9.66	4.87	0.51	2.25	0.11	1.16	0.49
95th-Percentile Queue Length [ft/ln]	51.51	85.91	91.00	24.90	98.61	241.57	121.66	12.64	56.29	2.87	28.99	12.29

Movement, Approach, & Intersection Results

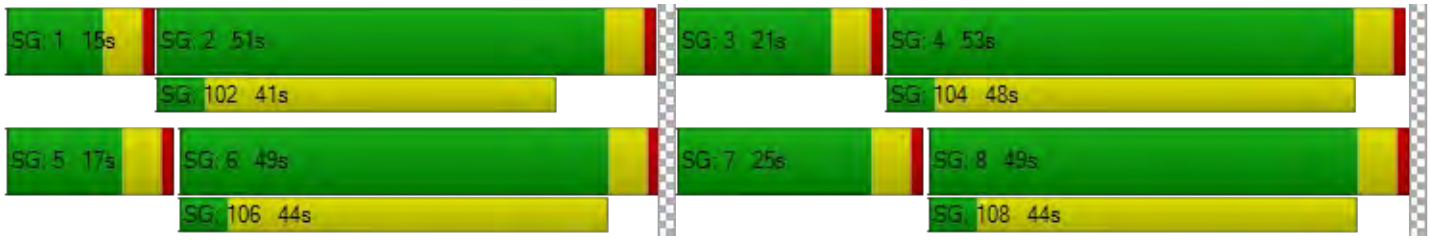
d_M, Delay for Movement [s/veh]	36.10	14.29	14.38	35.67	15.50	22.25	26.08	16.78	18.14	33.46	25.24	24.66
Movement LOS	D	B	B	D	B	C	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	16.40			18.67			23.54			25.83		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.36											
Intersection LOS	B											
Intersection V/C	0.461											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.25	22.25	22.25	22.25
l_p,int, Pedestrian LOS Score for Intersection	2.786	2.976	2.734	2.463
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1438	1504	1438	1569
d_b, Bicycle Delay [s]	2.41	1.88	2.41	1.42
l_b,int, Bicycle LOS Score for Intersection	1.947	2.196	2.033	1.687
Bicycle LOS	A	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	21.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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	91	0	0	73
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]	4	4	639	7	25	621
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	1	1	166	2	7	162
Total Analysis Volume [veh/h]	4	4	666	7	26	647
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

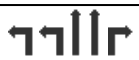
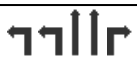
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	21.84	10.49	0.00	0.00	9.06	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.02	0.00	0.00	0.09	0.00
95th-Percentile Queue Length [ft/ln]	1.40	0.46	0.00	0.00	2.19	0.00
d_A, Approach Delay [s/veh]	16.17		0.00		0.35	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.27					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.347

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	39	27	47	7	37	14	15	16	61	73	21	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	109	164	118	275	92	52	420	180	268	425	55
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]	34	28	43	31	72	24	14	109	47	70	111	14
Total Analysis Volume [veh/h]	136	114	171	123	286	96	54	438	188	279	443	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	47	0	14	47	0	11	47	0	17	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	51	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	3	10	10	7	14	14
g / C, Green / Cycle	0.08	0.20	0.20	0.08	0.20	0.20	0.05	0.20	0.20	0.13	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.03	0.11	0.04	0.08	0.06	0.02	0.12	0.12	0.08	0.12	0.04
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	294	707	316	284	697	311	186	702	313	451	974	435
d1, Uniform Delay [s]	22.24	16.93	18.36	22.29	17.94	17.56	23.20	18.76	18.66	20.99	15.38	13.97
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.14	0.11	1.45	1.04	0.39	0.56	0.85	0.92	1.85	1.39	0.33	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.16	0.54	0.43	0.41	0.31	0.29	0.62	0.60	0.62	0.45	0.13
d, Delay for Lane Group [s/veh]	23.37	17.03	19.81	23.33	18.33	18.12	24.05	19.67	20.50	22.38	15.71	14.10
Lane Group LOS	C	B	B	C	B	B	C	B	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.76	0.51	1.74	0.69	1.36	0.91	0.31	2.20	1.97	1.52	1.91	0.45
50th-Percentile Queue Length [ft/ln]	18.95	12.69	43.61	17.13	33.91	22.87	7.75	55.10	49.15	37.92	47.86	11.33
95th-Percentile Queue Length [veh/ln]	1.36	0.91	3.14	1.23	2.44	1.65	0.56	3.97	3.54	2.73	3.45	0.82
95th-Percentile Queue Length [ft/ln]	34.12	22.84	78.50	30.83	61.04	41.17	13.95	99.17	88.47	68.25	86.15	20.39

Movement, Approach, & Intersection Results

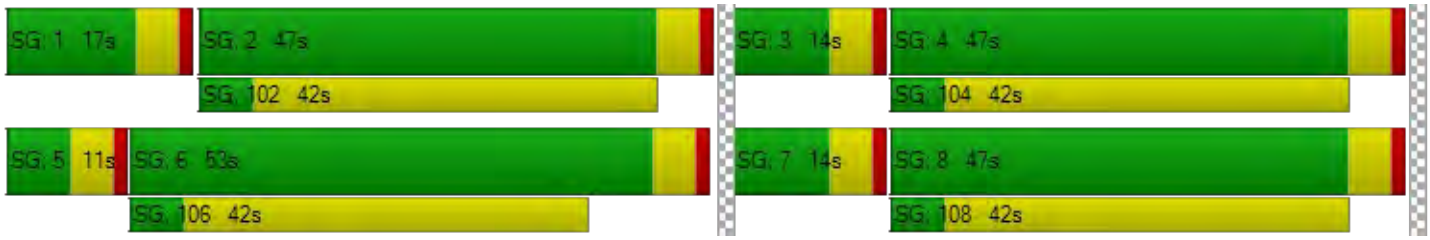
d_M, Delay for Movement [s/veh]	23.37	17.03	19.81	23.33	18.33	18.12	24.05	19.67	20.50	22.38	15.71	14.10
Movement LOS	C	B	B	C	B	B	C	B	C	C	B	B
d_A, Approach Delay [s/veh]	20.21			19.51			20.25			17.98		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	19.34											
Intersection LOS	B											
Intersection V/C	0.347											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.24	17.24	17.24	17.24
l_p,int, Pedestrian LOS Score for Intersection	2.729	2.667	2.754	2.776
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1651	1651	1651	1886
d_b, Bicycle Delay [s]	0.78	0.78	0.78	0.08
l_b,int, Bicycle LOS Score for Intersection	1.907	1.976	2.121	2.202
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.272

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	26	0	0	0	0	0	0	47	23	0	75	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	8	8	5	4	10	17	415	167	21	566	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	2	2	1	1	3	5	122	49	6	166	2
Total Analysis Volume [veh/h]	128	9	9	6	5	12	20	488	196	25	666	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	11	14	14	1	4	90	82	82	90	83	83
g / C, Green / Cycle	0.09	0.12	0.12	0.01	0.04	0.75	0.69	0.69	0.75	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.07	0.00	0.01	0.00	0.01	0.02	0.14	0.12	0.03	0.19	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	826	3560	1589	824	3560	1589
c, Capacity [veh/h]	157	218	186	14	61	650	2437	1088	666	2449	1093
d1, Uniform Delay [s]	53.74	47.04	47.08	59.26	56.29	4.17	6.92	6.82	3.99	7.20	5.88
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.67	0.08	0.11	18.30	2.47	0.09	0.18	0.36	0.02	0.27	0.01
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
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	0.81	0.04	0.05	0.42	0.28	0.03	0.20	0.18	0.04	0.27	0.01
d, Delay for Lane Group [s/veh]	63.41	47.12	47.19	77.56	58.76	4.25	7.11	7.18	4.01	7.47	5.89
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.22	0.24	0.25	0.25	0.54	0.13	2.22	1.81	0.14	3.17	0.06
50th-Percentile Queue Length [ft/ln]	105.42	6.12	6.15	6.36	13.60	3.14	55.40	45.31	3.55	79.20	1.60
95th-Percentile Queue Length [veh/ln]	7.58	0.44	0.44	0.46	0.98	0.23	3.99	3.26	0.26	5.70	0.12
95th-Percentile Queue Length [ft/ln]	189.62	11.02	11.07	11.46	24.48	5.66	99.71	81.56	6.39	142.56	2.88

Movement, Approach, & Intersection Results

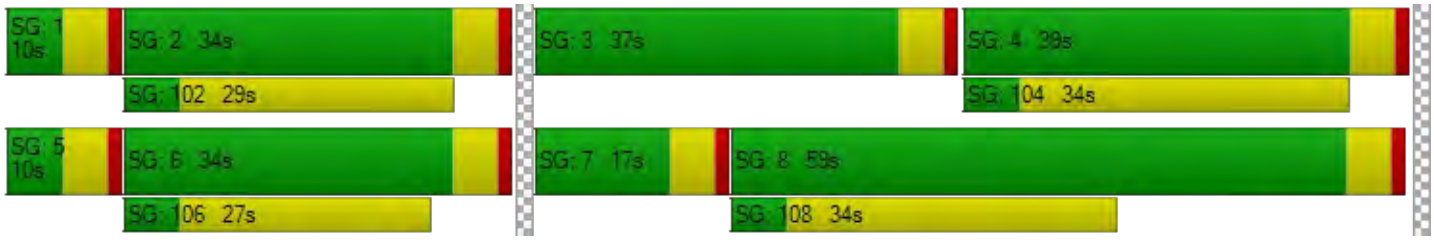
d_M, Delay for Movement [s/veh]	63.41	47.12	47.19	77.56	58.76	58.76	4.25	7.11	7.18	4.01	7.47	5.89
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	61.41			63.66			7.05			7.33		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	13.05											
Intersection LOS	B											
Intersection V/C	0.272											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.262	1.995	2.713	2.663
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.801	1.598	2.140	2.136
Bicycle LOS	A	A	B	B

Sequence

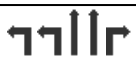
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.401

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	14	7	0	14	30	20	28	0	7	44	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	284	91	221	511	171	109	328	46	130	379	156
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	74	24	58	133	45	28	85	12	34	99	41
Total Analysis Volume [veh/h]	53	296	95	230	532	178	114	342	48	135	395	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	16	46	0	16	46	46	17	43	0	15	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	59	59	10	64	79	10	21	21	10	22	22
g / C, Green / Cycle	0.04	0.49	0.49	0.08	0.53	0.66	0.08	0.18	0.18	0.08	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.06	0.07	0.15	0.11	0.06	0.10	0.03	0.08	0.16	0.16
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1687
c, Capacity [veh/h]	70	1742	778	288	1898	1041	143	630	281	149	338	305
d1, Uniform Delay [s]	57.11	17.08	16.66	54.06	15.38	8.05	54.28	44.98	41.93	54.52	47.74	47.81
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]	15.24	0.21	0.32	5.09	0.37	0.36	9.80	0.73	0.28	17.36	6.58	7.59
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	0.76	0.17	0.12	0.80	0.28	0.17	0.80	0.54	0.17	0.90	0.86	0.87
d, Delay for Lane Group [s/veh]	72.36	17.30	16.98	59.14	15.75	8.41	64.09	45.71	42.21	71.87	54.32	55.40
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.33	1.50	3.62	4.05	1.83	3.77	4.71	1.24	4.76	9.08	8.35
50th-Percentile Queue Length [ft/ln]	47.23	58.27	37.41	90.38	101.36	45.70	94.36	117.76	30.95	119.07	226.98	208.81
95th-Percentile Queue Length [veh/ln]	3.40	4.20	2.69	6.51	7.30	3.29	6.79	8.27	2.23	8.34	14.02	13.09
95th-Percentile Queue Length [ft/ln]	85.02	104.89	67.34	162.68	182.45	82.26	169.84	206.74	55.71	208.54	350.52	327.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.36	17.30	16.98	59.14	15.75	8.41	64.09	45.71	42.21	71.87	54.60	55.40
Movement LOS	E	B	B	E	B	A	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	23.80			24.98			49.53			58.15		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.48											
Intersection LOS	D											
Intersection V/C	0.401											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.656	2.820	2.652	2.580
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	683	683	633	600
d_b, Bicycle Delay [s]	26.02	26.02	28.03	29.42
l_b,int, Bicycle LOS Score for Intersection	1.926	2.335	1.975	2.131
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	3.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	68	0	0	0	0	0	0	50	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	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]	60	0	0	0	0	0	0	15	40	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	0	68	0	0	0	0	15	40	50	22	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	20	0	0	0	0	4	12	15	7	0
Total Analysis Volume [veh/h]	71	0	81	0	0	0	0	18	48	60	26	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	18			158			60			71		
Exiting Flow Rate [veh/h]	108			0			98			99		
Demand Flow Rate [veh/h]	60	0	68	0	0	0	0	15	40	50	22	0
Adjusted Demand Flow Rate [veh/h]	71	0	81	0	0	0	0	18	48	60	26	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	1.00	0.99	0.99
Entry Flow Rate [veh/h]	152	0	67	87
Capacity of Entry and Bypass Lanes [veh/h]	1355	1176	1299	1284
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1355	1176	1292	1276
X, volume / capacity	0.11	0.00	0.05	0.07

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.38	0.00	0.16	0.22
95th-Percentile Queue Length [ft]	9.46	0.00	4.04	5.41
Approach Delay [s/veh]	3.55	3.06	3.19	3.36
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	3.42			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	20.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.248

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	98	148	22	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	347	593	67	68	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	95	163	18	19	0
Total Analysis Volume [veh/h]	0	381	652	74	75	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.25	0.00
d_M, Delay for Movement [s/veh]	9.12	0.00	0.00	0.00	20.76	14.24
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.96	0.96
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	23.89	23.89
d_A, Approach Delay [s/veh]	0.00		0.00		20.76	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.32					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	6.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	72	41	0	52	0	0	0	0	46	0	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]	184	60	46	0	40	0	0	45	123	75	67	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	184	132	87	0	92	0	0	45	123	121	67	1
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	39	26	0	27	0	0	13	37	36	20	0
Total Analysis Volume [veh/h]	219	157	104	0	110	0	0	54	146	144	80	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	55			452			259			384		
Exiting Flow Rate [veh/h]	408			161			305			161		
Demand Flow Rate [veh/h]	184	132	87	0	92	0	0	45	123	121	67	1
Adjusted Demand Flow Rate [veh/h]	219	157	104	0	110	0	0	54	146	144	80	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	490	113	205	230
Capacity of Entry and Bypass Lanes [veh/h]	1305	871	1060	934
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1280	854	1039	915
X, volume / capacity	0.38	0.13	0.19	0.25

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.77	0.44	0.71	0.97
95th-Percentile Queue Length [ft]	44.27	11.05	17.76	24.19
Approach Delay [s/veh]	6.37	5.49	5.25	6.44
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.07			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.295

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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	7	0	0	7	141	90	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	229	52	40	369	179	102	21	5	32	34	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	63	14	11	101	49	28	6	1	9	9	4
Total Analysis Volume [veh/h]	10	252	57	44	405	197	112	23	5	35	37	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	51	0	10	51	0	0	59	0	0	59	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	86	77	77	86	80	80	24	24	24
g / C, Green / Cycle	0.72	0.64	0.64	0.72	0.67	0.67	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.09	0.04	0.11	0.12	0.15	0.00	0.17
s, saturation flow rate [veh/h]	866	1870	1754	1127	3560	1589	883	1589	513
c, Capacity [veh/h]	679	1205	1130	866	2366	1056	230	316	144
d1, Uniform Delay [s]	4.90	8.29	8.31	4.95	7.62	7.71	45.21	38.65	47.17
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.22	0.25	0.11	0.16	0.39	2.36	0.02	4.03
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	0.01	0.13	0.13	0.05	0.17	0.19	0.59	0.02	0.60
d, Delay for Lane Group [s/veh]	4.90	8.51	8.56	5.06	7.78	8.10	47.57	38.67	51.20
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	1.61	1.56	0.32	1.94	1.98	3.94	0.12	2.77
50th-Percentile Queue Length [ft/ln]	1.67	40.30	39.12	8.00	48.58	49.40	98.61	3.03	69.22
95th-Percentile Queue Length [veh/ln]	0.12	2.90	2.82	0.58	3.50	3.56	7.10	0.22	4.98
95th-Percentile Queue Length [ft/ln]	3.01	72.55	70.41	14.39	87.44	88.92	177.49	5.46	124.60

Movement, Approach, & Intersection Results

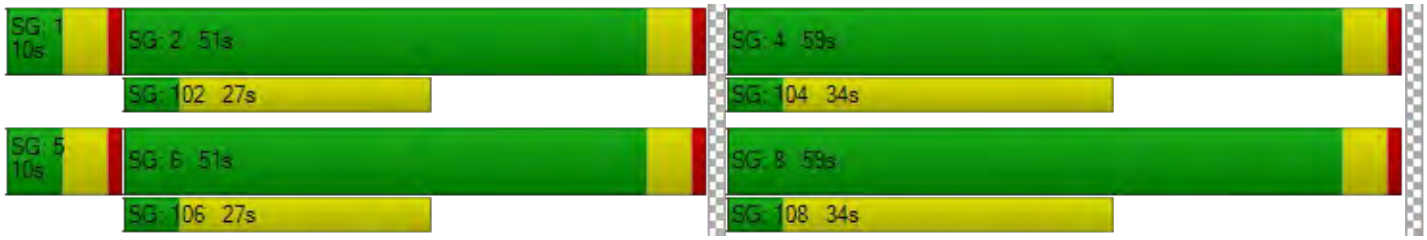
d_M, Delay for Movement [s/veh]	4.90	8.53	8.56	5.06	7.78	8.10	47.57	47.57	38.67	51.20	51.20	51.20
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.42			7.69			47.25			51.20		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	15.71											
Intersection LOS	B											
Intersection V/C	0.295											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.514	2.911	2.090	1.874
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	767	767	900	900
d_b, Bicycle Delay [s]	22.82	22.82	18.15	18.15
l_b,int, Bicycle LOS Score for Intersection	1.823	2.093	1.791	1.703
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	104	32	0	94	0	0	0	0	24	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	57	274	0	0	216	22	15	0	38	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	57	378	32	0	310	22	15	0	38	24	0	0
Peak Hour Factor	0.9500	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9500	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	102	9	0	83	6	4	0	10	6	0	0
Total Analysis Volume [veh/h]	60	406	34	0	333	24	16	0	40	26	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	16			88			366			492		
Exiting Flow Rate [veh/h]	407			430			86			0		
Demand Flow Rate [veh/h]	57	378	32	0	310	22	15	0	38	24	0	0
Adjusted Demand Flow Rate [veh/h]	60	406	34	0	333	24	16	0	40	26	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	476	0	365	58	27
Capacity of Entry and Bypass Lanes [veh/h]	1358	1380	1262	950	836
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1331	1353	1238	932	820
X, volume / capacity	0.35	0.03	0.29	0.06	0.03

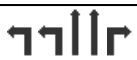
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	1.59	0.08	1.20	0.19	0.10
95th-Percentile Queue Length [ft]	39.84	1.93	30.09	4.79	2.46
Approach Delay [s/veh]	5.70		5.53	4.41	4.70
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	5.53				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	43.1
Analysis Method:	HCM 6th Edition	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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	8	8	32	70	8	0	0	102	8	22	88	66
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	426	347	365	504	231	274	899	72	594	910	331
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	115	93	98	135	62	74	242	19	160	245	89
Total Analysis Volume [veh/h]	283	458	373	392	542	248	295	967	77	639	978	356
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	53	0	14	51	0	13	49	0	24	60	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	113	113	113	113	113	113	113	113	113	113	113	113
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	12	29	29	15	32	32	12	25	25	24	36	36
g / C, Green / Cycle	0.10	0.25	0.25	0.14	0.29	0.29	0.11	0.22	0.22	0.21	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.23	0.11	0.11	0.16	0.09	0.19	0.05	0.18	0.27	0.22
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	362	1293	403	476	1462	456	374	1127	352	726	1150	534
d1, Uniform Delay [s]	49.24	34.50	41.03	47.29	32.09	33.98	49.04	42.23	35.95	43.18	35.64	32.95
k, delay calibration	0.11	0.11	0.34	0.11	0.11	0.13	0.11	0.11	0.11	0.11	0.11	0.29
I, Upstream Filtering Factor	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]	3.71	0.16	22.63	3.62	0.16	1.25	3.74	2.03	0.31	3.68	1.87	3.86
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	0.78	0.35	0.92	0.82	0.37	0.54	0.79	0.86	0.22	0.88	0.85	0.67
d, Delay for Lane Group [s/veh]	52.95	34.67	63.66	50.91	32.25	35.23	52.78	44.25	36.26	46.86	37.51	36.80
Lane Group LOS	D	C	E	D	C	D	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.06	3.45	12.50	5.56	3.95	5.86	4.12	8.48	1.71	8.92	12.63	8.87
50th-Percentile Queue Length [ft/ln]	101.42	86.25	312.55	139.07	98.66	146.60	102.91	212.07	42.81	223.09	315.72	221.74
95th-Percentile Queue Length [veh/ln]	7.30	6.21	18.30	9.43	7.10	9.84	7.41	13.26	3.08	13.82	18.46	13.75
95th-Percentile Queue Length [ft/ln]	182.56	155.25	457.52	235.77	177.59	245.88	185.24	331.49	77.07	345.57	461.43	343.85

Movement, Approach, & Intersection Results

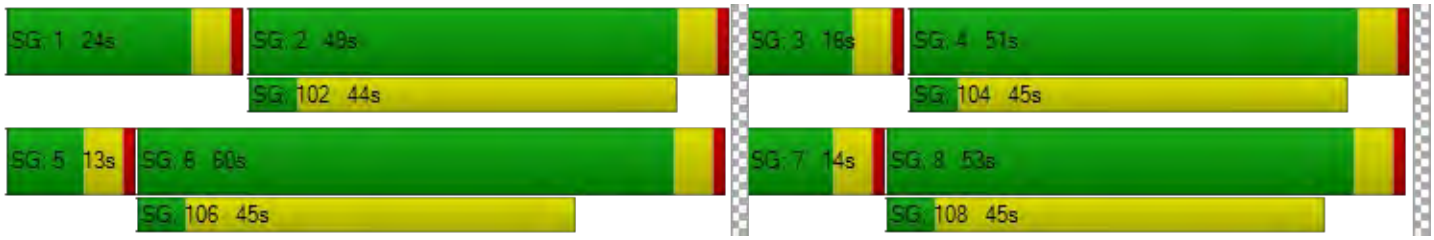
d_M, Delay for Movement [s/veh]	52.95	34.67	63.66	50.91	32.25	35.23	52.78	44.25	36.26	46.86	37.51	36.80
Movement LOS	D	C	E	D	C	D	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	49.02			39.07			45.67			40.41		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	43.09											
Intersection LOS	D											
Intersection V/C	0.723											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.64	47.64	47.64	47.64
l_p,int, Pedestrian LOS Score for Intersection	3.118	3.110	3.324	3.189
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	853	817	782	977
d_b, Bicycle Delay [s]	18.52	19.68	20.88	14.72
l_b,int, Bicycle LOS Score for Intersection	2.172	2.210	2.296	3.187
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	38.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	203	0	0	176	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	44	181	384	48	134	221	1066	80	252	1302	265
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	11	46	98	12	34	56	272	20	64	332	68
Total Analysis Volume [veh/h]	142	45	185	392	49	137	226	1088	82	257	1329	270
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	75	75	11	67	67
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.54	0.54	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.21	0.05	0.07	0.26	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	239	245	214	468	224	250	2734	853	274	2423	756
d1, Uniform Delay [s]	55.31	55.31	59.34	59.01	58.95	59.26	19.10	15.84	64.12	26.04	23.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.15	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]	1.02	0.99	10.06	4.04	7.70	15.30	0.43	0.22	14.40	0.90	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
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	0.39	0.87	0.84	0.83	0.91	0.40	0.10	0.94	0.55	0.36
d, Delay for Lane Group [s/veh]	56.33	56.30	69.40	63.05	66.65	74.57	19.54	16.06	78.52	26.94	24.50
Lane Group LOS	E	E	E	E	E	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.14	7.04	7.06	6.92	8.97	7.08	1.36	5.12	10.69	5.97
50th-Percentile Queue Length [ft/ln]	76.75	78.39	176.01	176.45	173.02	224.24	177.04	34.00	127.98	267.31	149.23
95th-Percentile Queue Length [veh/ln]	5.53	5.64	11.39	11.41	11.24	13.88	11.45	2.45	8.83	16.05	9.98
95th-Percentile Queue Length [ft/ln]	138.15	141.10	284.80	285.37	280.88	347.04	286.14	61.21	220.75	401.37	249.40

Movement, Approach, & Intersection Results

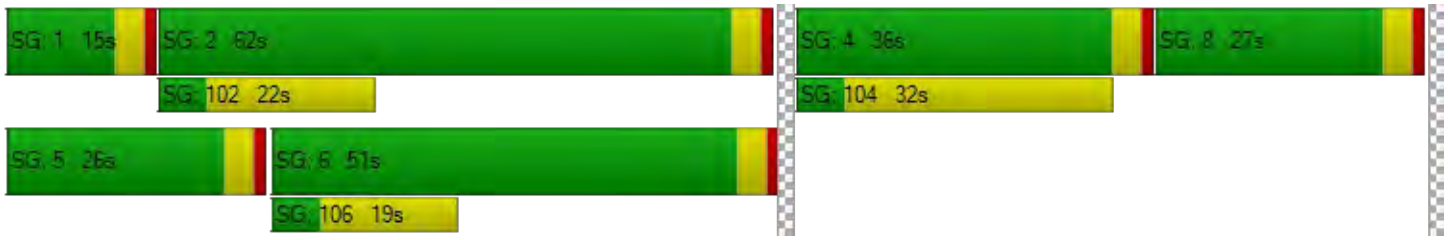
d_M, Delay for Movement [s/veh]	56.32	56.30	69.40	63.05	66.65	66.65	74.57	19.54	16.06	78.52	26.94	24.50
Movement LOS	E	E	E	E	E	E	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	62.82			64.21			28.24			33.73		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.67											
Intersection LOS	D											
Intersection V/C	0.618											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.599	2.540	3.114	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.173	2.513	2.327	2.580
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.688

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	255	0	51	0	149	54	0	125	199
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	643	1	852	0	1196	579	0	1353	709
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	166	0	220	0	308	149	0	349	183
Total Analysis Volume [veh/h]	0	0	0	663	1	878	0	1233	597	0	1395	731
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	29	0	0	91	0	0	91	91
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		62	62	62	62	62	62	62
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		25	25	25	27	27	27	57
g / C, Green / Cycle		0.40	0.40	0.40	0.44	0.44	0.44	0.92
(v / s)_i Volume / Saturation Flow Rate		0.19	0.19	0.31	0.24	0.38	0.27	0.46
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		718	718	1134	2224	694	2224	1462
d1, Uniform Delay [s]		13.67	13.67	16.16	13.07	15.86	13.64	0.37
k, delay calibration		0.11	0.11	0.11	0.11	0.27	0.11	0.40
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.47	0.46	1.16	0.22	7.76	0.29	0.98
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		0.46	0.46	0.77	0.55	0.86	0.63	0.50
d, Delay for Lane Group [s/veh]		14.13	14.13	17.32	13.29	23.62	13.93	1.35
Lane Group LOS		B	B	B	B	C	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		3.13	3.13	4.93	3.77	8.06	4.45	0.40
50th-Percentile Queue Length [ft/ln]		78.24	78.24	123.30	94.14	201.40	111.36	9.91
95th-Percentile Queue Length [veh/ln]		5.63	5.63	8.57	6.78	12.71	7.92	0.71
95th-Percentile Queue Length [ft/ln]		140.83	140.82	214.35	169.45	317.77	197.90	17.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.13	14.13	17.32	0.00	13.29	23.62	0.00	13.93	1.35
Movement LOS				B	B	B		B	C		B	A
d_A, Approach Delay [s/veh]	0.00			15.95			16.66			9.61		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	13.73											
Intersection LOS	B											
Intersection V/C	0.688											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.78	22.78	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.117	2.893	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	771	514	514
d_b, Bicycle Delay [s]	31.13	11.76	17.19	17.19
l_b,int, Bicycle LOS Score for Intersection	4.132	4.104	2.566	2.729
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	51	0	262	0	0	0	0	350	54	0	273	185
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	594	1	998	0	0	0	0	1363	491	0	1478	464
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	155	0	260	0	0	0	0	355	128	0	385	121
Total Analysis Volume [veh/h]	619	1	1040	0	0	0	0	1420	511	0	1540	483
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	66	0	0	0	0	0	54	54	0	54	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	63	63	63		63	63	63	63
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	27	27	27		26	58	26	26
g / C, Green / Cycle	0.44	0.44	0.44		0.41	0.92	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.37		0.28	0.32	0.30	0.30
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	776	777	1227		2066	1464	2066	645
d1, Uniform Delay [s]	12.15	12.15	15.92		15.46	0.29	15.98	16.02
k, delay calibration	0.11	0.11	0.11		0.11	0.20	0.11	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	0.33	1.72		0.41	0.26	0.55	2.80
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	0.40	0.40	0.85		0.69	0.35	0.75	0.75
d, Delay for Lane Group [s/veh]	12.49	12.49	17.65		15.87	0.55	16.53	18.81
Lane Group LOS	B	B	B		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.69	2.69	6.05		5.01	0.11	5.63	5.71
50th-Percentile Queue Length [ft/ln]	67.28	67.27	151.27		125.21	2.65	140.79	142.80
95th-Percentile Queue Length [veh/ln]	4.84	4.84	10.08		8.68	0.19	9.52	9.63
95th-Percentile Queue Length [ft/ln]	121.10	121.09	252.12		216.96	4.78	238.08	240.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.49	12.49	17.65	0.00	0.00	0.00	0.00	15.87	0.55	0.00	16.53	18.81
Movement LOS	B	B	B					B	A		B	B
d_A, Approach Delay [s/veh]	15.72			0.00			11.82			17.08		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	14.87											
Intersection LOS	B											
Intersection V/C	0.674											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.11	23.11	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.880	2.081	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1939	0	1557	1557
d_b, Bicycle Delay [s]	0.03	31.46	1.54	1.54
l_b,int, Bicycle LOS Score for Intersection	4.299	4.132	2.622	2.672
Bicycle LOS	E	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	98	30	17	20	20	246	381	124	107	19	113	30
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	480	70	166	20	64	322	499	1385	394	229	1134	31
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	128	19	44	5	17	86	133	368	105	61	302	8
Total Analysis Volume [veh/h]	511	74	177	21	68	343	531	1473	419	244	1206	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	43	0	55	80	0	10	32	0	10	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	96	96	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	17	30	30	2	15	15	18	35	35	9	26	26
g / C, Green / Cycle	0.18	0.31	0.31	0.02	0.15	0.15	0.18	0.36	0.36	0.10	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.15	0.04	0.11	0.01	0.13	0.13	0.15	0.29	0.26	0.07	0.24	0.02
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1670	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	617	580	493	40	257	245	638	1849	577	334	1402	437
d1, Uniform Delay [s]	38.09	23.84	25.77	46.50	39.37	39.38	37.79	27.45	26.49	42.24	33.10	25.80
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.32	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]	2.93	0.10	0.44	10.16	6.30	6.62	2.92	0.82	5.06	3.09	1.67	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.13	0.36	0.52	0.82	0.82	0.83	0.80	0.73	0.73	0.86	0.08
d, Delay for Lane Group [s/veh]	41.02	23.94	26.21	56.65	45.67	45.99	40.72	28.26	31.55	45.33	34.77	25.87
Lane Group LOS	D	C	C	E	D	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.95	1.21	3.15	0.61	5.19	4.96	6.17	9.88	8.83	2.93	8.87	0.56
50th-Percentile Queue Length [ft/ln]	148.84	30.28	78.77	15.14	129.72	124.04	154.37	246.94	220.80	73.16	221.86	14.07
95th-Percentile Queue Length [veh/ln]	9.96	2.18	5.67	1.09	8.92	8.61	10.25	15.03	13.71	5.27	13.76	1.01
95th-Percentile Queue Length [ft/ln]	248.88	54.51	141.79	27.26	223.11	215.37	256.25	375.79	342.64	131.68	344.00	25.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.02	23.94	26.21	56.65	45.67	45.86	40.72	28.26	31.55	45.33	34.77	25.87
Movement LOS	D	C	C	E	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	35.92			46.35			31.56			36.31		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	34.84											
Intersection LOS	C											
Intersection V/C	0.664											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	39.40	39.40	39.40	39.40
l_p,int, Pedestrian LOS Score for Intersection	2.700	2.513	3.340	3.196
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	792	1563	563	563
d_b, Bicycle Delay [s]	17.51	2.29	24.78	24.78
l_b,int, Bicycle LOS Score for Intersection	2.817	2.272	2.892	2.375
Bicycle LOS	C	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	22.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.137

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	159	120	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	142	300	201	52	31	83
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]	142	459	321	52	31	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	121	84	14	8	22
Total Analysis Volume [veh/h]	149	483	338	55	33	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.00	0.00	0.00	0.14	0.11
d_M, Delay for Movement [s/veh]	8.55	0.00	0.00	0.00	22.31	11.79
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.44	0.00	0.00	0.00	0.95	0.95
95th-Percentile Queue Length [ft/ln]	10.99	0.00	0.00	0.00	23.76	23.76
d_A, Approach Delay [s/veh]	2.02		0.00		14.68	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.65					
Intersection LOS	C					

Appendix D-7

Phase 1+2 with Project plus

Other Cumulative Projects (2029)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\7 P2 + OCP AM.pdf

Scenario 13 P2 w Other Cumulative AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.359	17.9	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.003	10.7	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.342	17.8	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.408	22.6	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.478	45.0	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	EB Right		3.1	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.151	14.3	B
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	EB Right		4.8	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.419	24.0	C
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	SB Thru		4.9	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.637	33.0	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.450	21.0	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.624	10.4	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.639	11.6	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.600	29.2	C
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.135	16.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.359

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	29	31	6	11	84	84	31	106	82	7	71	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	571	6	11	322	268	396	106	134	7	71	29
Peak Hour Factor	0.9600	0.9600	0.9500	0.9500	0.9600	0.9600	0.9600	0.9500	0.9600	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	149	2	3	84	70	103	28	35	2	19	8
Total Analysis Volume [veh/h]	77	595	6	12	335	279	413	112	140	7	75	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	51	0	19	55	0	12	51	0	14	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	15	15	1	12	12	9	15	15	0	7
g / C, Green / Cycle	0.07	0.29	0.29	0.02	0.24	0.24	0.18	0.30	0.30	0.01	0.13
(v / s)_i Volume / Saturation Flow Rate	0.04	0.11	0.11	0.01	0.07	0.18	0.12	0.03	0.09	0.00	0.02
s, saturation flow rate [veh/h]	1781	3560	1860	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	118	1022	534	28	1206	376	608	1054	471	33	462
d1, Uniform Delay [s]	23.29	14.60	14.60	24.91	15.92	18.04	19.70	13.07	13.88	25.10	19.75
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream 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]	6.05	0.24	0.46	9.92	0.12	2.89	1.34	0.04	0.35	3.10	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
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	0.66	0.39	0.39	0.43	0.28	0.74	0.68	0.11	0.30	0.21	0.16
d, Delay for Lane Group [s/veh]	29.34	14.84	15.06	34.83	16.05	20.93	21.04	13.11	14.23	28.21	19.91
Lane Group LOS	C	B	B	C	B	C	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.03	1.63	1.74	0.21	0.96	2.98	2.17	0.42	1.13	0.05	0.37
50th-Percentile Queue Length [ft/ln]	25.70	40.79	43.51	5.27	23.98	74.47	54.25	10.38	28.28	1.33	9.28
95th-Percentile Queue Length [veh/ln]	1.85	2.94	3.13	0.38	1.73	5.36	3.91	0.75	2.04	0.10	0.67
95th-Percentile Queue Length [ft/ln]	46.25	73.41	78.31	9.48	43.17	134.04	97.64	18.69	50.91	2.40	16.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.34	14.92	15.06	34.83	16.05	20.93	21.04	13.11	14.23	28.21	19.91	0.00
Movement LOS	C	B	B	C	B	C	C	B	B	C	B	
d_A, Approach Delay [s/veh]	16.56			18.59			18.27			20.62		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.89											
Intersection LOS	B											
Intersection V/C	0.359											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.23	17.23	17.23	17.23
l_p,int, Pedestrian LOS Score for Intersection	2.727	2.896	2.718	2.459
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1808	1966	1808	1887
d_b, Bicycle Delay [s]	0.23	0.01	0.23	0.08
l_b,int, Bicycle LOS Score for Intersection	1.933	1.904	2.108	1.627
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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	122	0	0	106
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	627	0	3	574
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	184	0	1	169
Total Analysis Volume [veh/h]	0	2	738	0	4	675
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

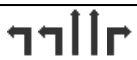
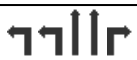
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	22.09	10.75	0.00	0.00	9.19	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.24	0.00	0.00	0.35	0.00
d_A, Approach Delay [s/veh]	10.75		0.00		0.05	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	57	35	69	6	17	13	13	89	21	26	35	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	248	190	40	67	50	73	472	76	153	406	114
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	69	53	11	19	14	20	131	21	43	113	32
Total Analysis Volume [veh/h]	123	276	211	44	74	56	81	524	84	170	451	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	47	0	12	47	0	13	47	0	14	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	47	47	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	2	8	8	3	10	10	4	11	11
g / C, Green / Cycle	0.09	0.21	0.21	0.05	0.18	0.18	0.07	0.21	0.21	0.10	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.13	0.01	0.02	0.04	0.02	0.15	0.05	0.05	0.13	0.08
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	300	766	342	167	629	281	247	766	342	334	855	382
d1, Uniform Delay [s]	20.35	15.72	16.72	21.59	16.29	16.53	20.78	17.00	15.31	20.21	15.56	14.77
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.90	0.29	1.81	0.83	0.08	0.34	0.77	1.09	0.37	1.20	0.51	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	0.41	0.36	0.62	0.26	0.12	0.20	0.33	0.68	0.25	0.51	0.53	0.33
d, Delay for Lane Group [s/veh]	21.25	16.00	18.53	22.41	16.37	16.88	21.55	18.09	15.68	21.41	16.06	15.27
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	1.13	1.96	0.23	0.30	0.48	0.41	2.37	0.69	0.85	1.87	1.02
50th-Percentile Queue Length [ft/ln]	15.29	28.20	48.93	5.78	7.58	12.05	10.21	59.24	17.14	21.24	46.72	25.52
95th-Percentile Queue Length [veh/ln]	1.10	2.03	3.52	0.42	0.55	0.87	0.73	4.27	1.23	1.53	3.36	1.84
95th-Percentile Queue Length [ft/ln]	27.53	50.75	88.07	10.40	13.65	21.68	18.37	106.63	30.85	38.23	84.10	45.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.25	16.00	18.53	22.41	16.37	16.88	21.55	18.09	15.68	21.41	16.06	15.27
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.93			18.06			18.21			17.15		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.76											
Intersection LOS	B											
Intersection V/C	0.342											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.29	15.29	15.29	15.29
l_p,int, Pedestrian LOS Score for Intersection	2.691	2.652	2.744	2.773
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1793	1793	1793	1836
d_b, Bicycle Delay [s]	0.25	0.25	0.25	0.16
l_b,int, Bicycle LOS Score for Intersection	2.063	1.703	2.128	2.177
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.408

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	18	0	0	0	0	0	0	140	24	0	50	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	133	23	35	41	16	98	156	517	79	52	514	60
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	7	11	13	5	31	49	162	25	16	161	19
Total Analysis Volume [veh/h]	166	29	44	51	20	123	195	646	99	65	643	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	39	0	37	57	0	12	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	13	21	21	5	13	79	70	70	79	67	67
g / C, Green / Cycle	0.11	0.18	0.18	0.04	0.11	0.66	0.58	0.58	0.66	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.09	0.02	0.03	0.03	0.09	0.22	0.18	0.06	0.08	0.18	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	867	3560	1589	817	3560	1589
c, Capacity [veh/h]	194	330	280	68	172	585	2069	924	557	1994	890
d1, Uniform Delay [s]	52.59	41.38	41.90	57.18	52.65	8.67	12.86	11.23	7.85	14.19	12.20
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	10.38	0.11	0.26	15.11	9.97	1.53	0.39	0.23	0.09	0.43	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
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	0.86	0.09	0.16	0.75	0.83	0.33	0.31	0.11	0.12	0.32	0.08
d, Delay for Lane Group [s/veh]	62.97	41.49	42.15	72.29	62.62	10.19	13.26	11.46	7.95	14.62	12.39
Lane Group LOS	E	D	D	E	E	B	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.47	0.73	1.13	1.82	4.70	2.09	4.47	1.23	0.58	4.73	0.97
50th-Percentile Queue Length [ft/ln]	136.81	18.37	28.32	45.46	117.51	52.29	111.84	30.67	14.55	118.35	24.30
95th-Percentile Queue Length [veh/ln]	9.31	1.32	2.04	3.27	8.26	3.76	7.94	2.21	1.05	8.30	1.75
95th-Percentile Queue Length [ft/ln]	232.72	33.06	50.97	81.84	206.40	94.12	198.56	55.20	26.19	207.56	43.73

Movement, Approach, & Intersection Results

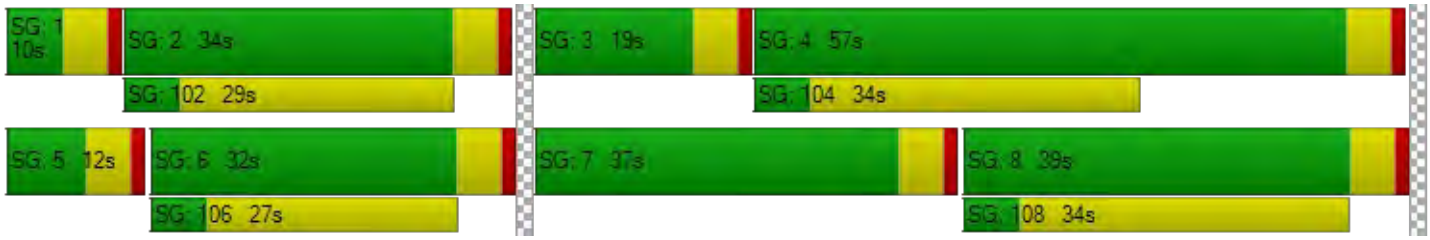
d_M, Delay for Movement [s/veh]	62.97	41.49	42.15	72.29	62.62	62.62	10.19	13.26	11.46	7.95	14.62	12.39
Movement LOS	E	D	D	E	E	E	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	56.53			65.16			12.43			13.85		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.58											
Intersection LOS	C											
Intersection V/C	0.408											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.305	2.276	2.772	2.716
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	866	483	450
d_b, Bicycle Delay [s]	30.83	19.28	34.52	36.06
l_b,int, Bicycle LOS Score for Intersection	1.954	1.880	2.335	2.206
Bicycle LOS	A	A	B	B

Sequence

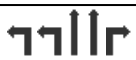
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	45.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	13	7	0	13	11	29	111	0	6	39	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	330	182	135	212	70	109	334	38	207	274	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	109	60	44	70	23	36	110	13	68	90	47
Total Analysis Volume [veh/h]	100	434	239	178	279	92	143	439	50	272	361	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	29	43	0	27	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	61	61	9	61	78	13	19	19	22	28	28
g / C, Green / Cycle	0.07	0.47	0.47	0.07	0.47	0.60	0.10	0.14	0.14	0.17	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.15	0.05	0.08	0.06	0.08	0.12	0.03	0.15	0.16	0.16
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1657
c, Capacity [veh/h]	124	1667	744	234	1661	957	173	513	229	296	398	353
d1, Uniform Delay [s]	59.66	20.95	21.65	59.57	20.08	10.92	57.61	54.33	49.17	53.35	47.68	47.70
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.19	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]	11.75	0.38	1.14	5.02	0.22	0.20	9.45	4.21	0.47	17.49	2.58	2.93
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	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.26	0.32	0.76	0.17	0.10	0.83	0.86	0.22	0.92	0.73	0.73
d, Delay for Lane Group [s/veh]	71.41	21.33	22.79	64.59	20.30	11.12	67.06	58.54	49.65	70.84	50.26	50.64
Lane Group LOS	E	C	C	E	C	B	E	E	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	4.12	4.82	3.05	2.53	1.17	5.08	7.32	1.48	10.18	9.08	8.10
50th-Percentile Queue Length [ft/ln]	91.50	102.96	120.59	76.32	63.20	29.33	126.92	182.96	36.93	254.52	226.90	202.58
95th-Percentile Queue Length [veh/ln]	6.59	7.41	8.43	5.49	4.55	2.11	8.77	11.76	2.66	15.41	14.02	12.77
95th-Percentile Queue Length [ft/ln]	164.69	185.32	210.63	137.37	113.76	52.80	219.30	293.88	66.47	385.34	350.41	319.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.41	21.33	22.79	64.59	20.30	11.12	67.06	58.54	49.65	70.84	50.33	50.64
Movement LOS	E	C	C	E	C	B	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	28.26			33.12			59.76			57.19		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	44.96											
Intersection LOS	D											
Intersection V/C	0.478											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.695	2.796	2.664	2.646
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	554
d_b, Bicycle Delay [s]	33.27	30.47	32.56	33.99
l_b,int, Bicycle LOS Score for Intersection	2.197	2.013	2.081	2.237
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	3.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	41	0	0	0	0	0	0	18	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	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]	23	0	0	0	0	0	0	21	57	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	23	0	41	0	0	0	0	21	57	18	8	0
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	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	0	13	0	0	0	0	6	17	5	2	0
Total Analysis Volume [veh/h]	28	0	50	0	0	0	0	26	70	22	10	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	27			60			22			28		
Exiting Flow Rate [veh/h]	92			0			38			77		
Demand Flow Rate [veh/h]	23	0	41	0	0	0	0	21	57	18	8	0
Adjusted Demand Flow Rate [veh/h]	28	0	50	0	0	0	0	26	70	22	10	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	1.00	0.99	0.99
Entry Flow Rate [veh/h]	78	0	97	33
Capacity of Entry and Bypass Lanes [veh/h]	1344	1298	1350	1342
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1344	1298	1343	1334
X, volume / capacity	0.06	0.00	0.07	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.18	0.00	0.23	0.07
95th-Percentile Queue Length [ft]	4.62	0.00	5.77	1.84
Approach Delay [s/veh]	3.14	2.77	3.25	2.89
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	3.15			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.151

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	140	56	8	21	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	476	257	27	61	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	135	73	8	17	0
Total Analysis Volume [veh/h]	0	541	292	31	69	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.15	0.00
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	0.00	14.28	10.51
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.53	0.53
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	13.21	13.21
d_A, Approach Delay [s/veh]	0.00		0.00		14.28	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.06					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	31	24	0	36	0	0	0	0	60	0	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]	70	23	71	0	57	0	0	63	173	24	25	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	54	95	0	93	0	0	63	173	84	25	1
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	15	27	0	26	0	0	18	49	24	7	0
Total Analysis Volume [veh/h]	80	61	108	0	106	0	0	72	197	95	28	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	73			207			205			144		
Exiting Flow Rate [veh/h]	406			63			110			184		
Demand Flow Rate [veh/h]	70	54	95	0	93	0	0	63	173	84	25	1
Adjusted Demand Flow Rate [veh/h]	80	61	108	0	106	0	0	72	197	95	28	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	254	109	275	127
Capacity of Entry and Bypass Lanes [veh/h]	1281	1118	1120	1192
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1256	1096	1098	1169
X, volume / capacity	0.20	0.10	0.25	0.11

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.74	0.32	0.96	0.36
95th-Percentile Queue Length [ft]	18.45	8.01	24.12	8.88
Approach Delay [s/veh]	4.57	4.12	5.57	3.98
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.77			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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	6	0	0	7	49	134	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	273	12	10	179	65	176	7	3	29	33	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	75	3	3	49	18	48	2	1	8	9	9
Total Analysis Volume [veh/h]	3	300	13	11	197	71	193	8	3	32	36	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	65	59	59	65	60	60	45	45	45
g / C, Green / Cycle	0.55	0.49	0.49	0.55	0.50	0.50	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.08	0.01	0.06	0.04	0.33	0.00	0.32
s, saturation flow rate [veh/h]	1147	1870	1843	1116	3560	1589	606	1589	323
c, Capacity [veh/h]	689	917	904	655	1778	794	284	591	159
d1, Uniform Delay [s]	12.47	17.00	17.01	12.59	15.91	15.74	35.37	23.74	32.19
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.13	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]	0.00	0.41	0.41	0.05	0.13	0.22	3.79	0.00	4.45
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	0.00	0.17	0.17	0.02	0.11	0.09	0.71	0.01	0.65
d, Delay for Lane Group [s/veh]	12.47	17.40	17.42	12.64	16.04	15.96	39.16	23.74	36.65
Lane Group LOS	B	B	B	B	B	B	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.04	2.52	2.50	0.14	1.47	1.07	5.73	0.05	2.17
50th-Percentile Queue Length [ft/ln]	0.93	62.95	62.53	3.61	36.71	26.84	143.36	1.37	54.37
95th-Percentile Queue Length [veh/ln]	0.07	4.53	4.50	0.26	2.64	1.93	9.66	0.10	3.91
95th-Percentile Queue Length [ft/ln]	1.68	113.31	112.55	6.49	66.07	48.30	241.54	2.47	97.87

Movement, Approach, & Intersection Results

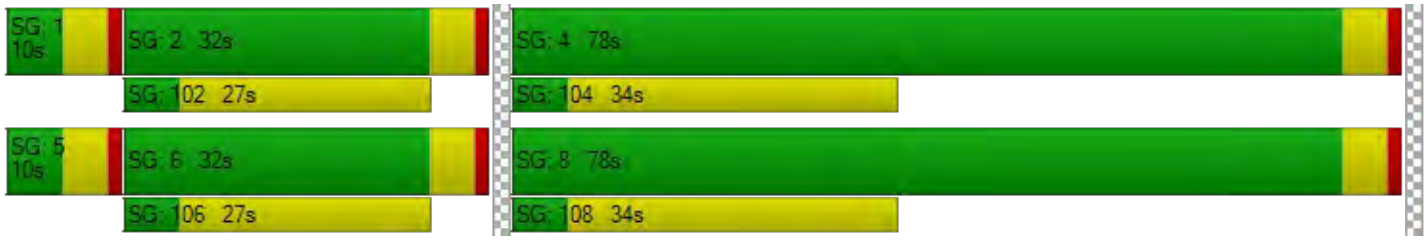
d_M, Delay for Movement [s/veh]	12.47	17.41	17.42	12.64	16.04	15.96	39.16	39.16	23.74	36.65	36.65	36.65
Movement LOS	B	B	B	B	B	B	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	17.36			15.89			38.93			36.65		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	23.99											
Intersection LOS	C											
Intersection V/C	0.419											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.467	2.996	2.060	1.804
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.820	1.790	1.896	1.730
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	55	12	0	97	0	0	0	0	34	0	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]	21	142	0	0	246	8	21	0	54	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	21	197	12	0	343	8	21	0	54	34	0	1
Peak Hour Factor	0.9500	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9500	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	54	3	0	94	2	6	0	14	9	0	0
Total Analysis Volume [veh/h]	22	216	13	0	377	9	23	0	57	37	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	23			60			422			266		
Exiting Flow Rate [veh/h]	480			245			32			0		
Demand Flow Rate [veh/h]	21	197	12	0	343	8	21	0	54	34	0	1
Adjusted Demand Flow Rate [veh/h]	22	216	13	0	377	9	23	0	57	37	0	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	243	0	394	82	39
Capacity of Entry and Bypass Lanes [veh/h]	1348	1380	1298	898	1052
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1321	1353	1273	880	1032
X, volume / capacity	0.18	0.01	0.30	0.09	0.04

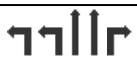
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.66	0.03	1.29	0.30	0.11
95th-Percentile Queue Length [ft]	16.40	0.73	32.28	7.48	2.87
Approach Delay [s/veh]	4.15		5.57	4.96	3.81
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	4.95				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	14	14	15	97	12	0	0	112	12	30	144	115
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	118	490	402	307	252	101	185	898	44	346	735	259
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	126	104	79	65	26	48	231	11	89	189	67
Total Analysis Volume [veh/h]	122	505	414	316	260	104	191	926	45	357	758	267
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	70	0	10	50	0	10	49	0	11	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	88	88	88	88	88	88	88	88	88	88	88	88
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	26	26	11	31	31	7	20	20	12	24	24
g / C, Green / Cycle	0.06	0.29	0.29	0.12	0.36	0.36	0.08	0.23	0.23	0.13	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.04	0.10	0.26	0.09	0.05	0.07	0.06	0.18	0.03	0.10	0.21	0.16
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	200	1488	464	419	1811	565	282	1151	359	464	991	460
d1, Uniform Delay [s]	40.59	24.54	29.89	37.48	19.30	19.60	39.38	32.30	27.20	36.88	29.17	27.38
k, delay calibration	0.11	0.11	0.26	0.11	0.11	0.11	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]	3.00	0.13	13.18	2.76	0.04	0.16	2.85	1.37	0.16	2.74	1.26	1.16
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	0.61	0.34	0.89	0.75	0.14	0.18	0.68	0.80	0.13	0.77	0.76	0.58
d, Delay for Lane Group [s/veh]	43.59	24.67	43.07	40.24	19.34	19.75	42.23	33.67	27.35	39.62	30.43	28.54
Lane Group LOS	D	C	D	D	B	B	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.36	2.72	9.78	3.40	1.18	1.46	2.02	5.94	0.73	3.82	7.28	4.85
50th-Percentile Queue Length [ft/ln]	33.95	67.88	244.46	84.90	29.56	36.44	50.54	148.58	18.18	95.44	182.06	121.24
95th-Percentile Queue Length [veh/ln]	2.44	4.89	14.91	6.11	2.13	2.62	3.64	9.94	1.31	6.87	11.71	8.46
95th-Percentile Queue Length [ft/ln]	61.10	122.18	372.66	152.83	53.20	65.59	90.97	248.53	32.72	171.79	292.70	211.53

Movement, Approach, & Intersection Results

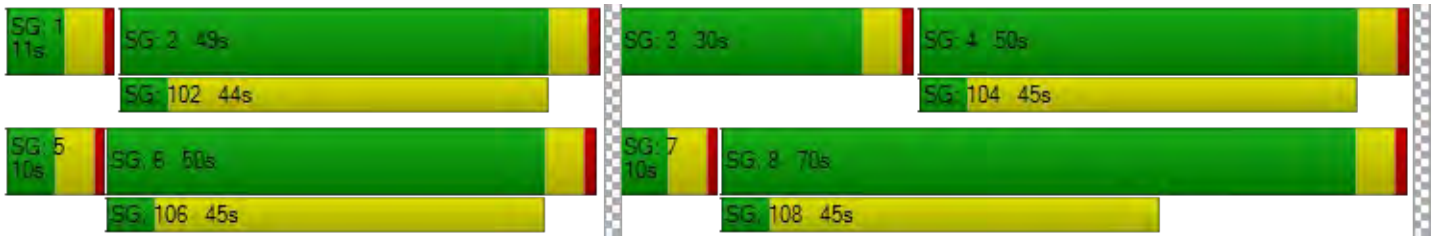
d_M, Delay for Movement [s/veh]	43.59	24.67	43.07	40.24	19.34	19.75	42.23	33.67	27.35	39.62	30.43	28.54
Movement LOS	D	C	D	D	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	34.21			29.11			34.83			32.44		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	32.99											
Intersection LOS	C											
Intersection V/C	0.637											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	35.48	35.48	35.48	35.48
l_p,int, Pedestrian LOS Score for Intersection	3.034	3.028	3.198	3.096
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1477	1022	1000	1022
d_b, Bicycle Delay [s]	3.01	10.52	11.01	10.52
l_b,int, Bicycle LOS Score for Intersection	2.132	1.934	2.199	2.700
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.450

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	224	0	0	289	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	11	138	102	10	18	43	1394	80	175	1257	168
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	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	3	35	26	3	5	11	356	20	45	321	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1422	82	179	1283	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	9	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.28	0.05	0.05	0.25	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	189	190	168	248	120	58	3271	1021	229	3441	1074
d1, Uniform Delay [s]	57.77	57.76	61.40	62.20	61.35	67.15	12.44	9.45	64.37	9.85	8.25
k, delay calibration	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
d2, Incremental Delay [s]	0.86	0.85	10.44	1.13	0.98	17.85	0.42	0.15	5.76	0.31	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.76	0.43	0.08	0.78	0.37	0.16
d, Delay for Lane Group [s/veh]	58.63	58.62	71.85	63.34	62.33	85.00	12.86	9.61	70.13	10.16	8.57
Lane Group LOS	E	E	E	E	E	F	B	A	E	B	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.42	1.82	0.98	1.86	7.37	1.00	3.34	5.65	1.95
50th-Percentile Queue Length [ft/ln]	47.05	47.38	135.55	45.51	24.47	46.40	184.23	24.89	83.48	141.17	48.86
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.24	3.28	1.76	3.34	11.82	1.79	6.01	9.54	3.52
95th-Percentile Queue Length [ft/ln]	84.69	85.29	231.03	81.92	44.05	83.51	295.53	44.81	150.26	238.60	87.94

Movement, Approach, & Intersection Results

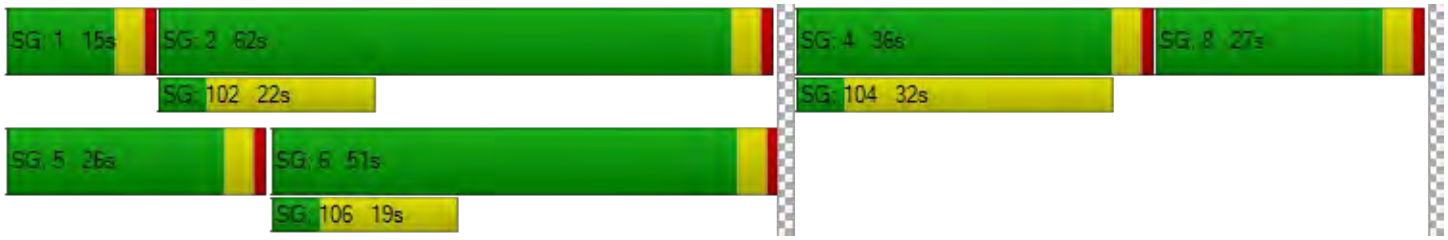
d_M, Delay for Movement [s/veh]	58.62	58.62	71.85	63.34	62.33	62.33	85.00	12.86	9.61	70.13	10.16	8.57
Movement LOS	E	E	E	E	E	E	F	B	A	E	B	A
d_A, Approach Delay [s/veh]	65.99			63.12			14.74			16.56		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	21.00											
Intersection LOS	C											
Intersection V/C	0.450											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.107	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.411	2.458
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.624

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	127	0	94	0	145	79	0	195	243
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	295	1	608	0	1135	587	0	974	961
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	76	0	157	0	293	151	0	251	248
Total Analysis Volume [veh/h]	0	0	0	304	1	627	0	1170	605	0	1004	991
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	70	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		19	19	19	25	25	25	49
g / C, Green / Cycle		0.35	0.35	0.35	0.46	0.46	0.46	0.91
(v / s)_i Volume / Saturation Flow Rate		0.09	0.09	0.22	0.23	0.38	0.20	0.62
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		629	629	994	2352	734	2352	1442
d1, Uniform Delay [s]		12.36	12.36	14.54	10.17	12.64	9.75	0.61
k, delay calibration		0.11	0.11	0.11	0.11	0.20	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]		0.20	0.20	0.67	0.16	4.47	0.12	2.69
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		0.24	0.24	0.63	0.50	0.82	0.43	0.69
d, Delay for Lane Group [s/veh]		12.56	12.56	15.21	10.33	17.11	9.88	3.30
Lane Group LOS		B	B	B	B	B	A	A
Critical Lane Group		No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]		1.17	1.17	2.83	2.66	5.97	2.19	1.08
50th-Percentile Queue Length [ft/ln]		29.21	29.21	70.87	66.43	149.21	54.63	26.93
95th-Percentile Queue Length [veh/ln]		2.10	2.10	5.10	4.78	9.97	3.93	1.94
95th-Percentile Queue Length [ft/ln]		52.58	52.58	127.56	119.58	249.37	98.34	48.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	12.56	12.56	15.21	0.00	10.33	17.11	0.00	9.88	3.30
Movement LOS				B	B	B		B	B		A	A
d_A, Approach Delay [s/veh]	0.00			14.34			12.64			6.61		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	10.42											
Intersection LOS	B											
Intersection V/C	0.624											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	18.69	18.69	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.112	2.836	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	2413	1670	1670
d_b, Bicycle Delay [s]	26.94	1.15	0.73	0.73
l_b,int, Bicycle LOS Score for Intersection	4.132	3.097	2.536	2.657
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	94	0	148	0	0	0	0	193	79	0	344	239
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	496	3	640	0	0	0	0	718	747	0	1438	624
Peak Hour Factor	0.9700	0.9700	0.9700	0.9500	0.9500	0.9500	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	128	1	165	0	0	0	0	185	193	0	371	161
Total Analysis Volume [veh/h]	511	3	660	0	0	0	0	740	770	0	1482	643
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
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	65	0	0	0	0	0	55	55	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	57	57	57		57	57	57	57
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	20	20	20		28	52	28	28
g / C, Green / Cycle	0.34	0.34	0.34		0.48	0.91	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.23		0.15	0.48	0.29	0.40
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	615	615	972		2450	1452	2450	765
d1, Uniform Delay [s]	14.42	14.42	16.12		9.08	0.42	10.94	13.03
k, delay calibration	0.11	0.11	0.11		0.11	0.38	0.11	0.27
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	0.45	0.84		0.07	1.06	0.24	6.18
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	0.42	0.42	0.68		0.30	0.53	0.60	0.84
d, Delay for Lane Group [s/veh]	14.88	14.87	16.97		9.15	1.48	11.18	19.21
Lane Group LOS	B	B	B		A	A	B	B
Critical Lane Group	No	No	No		No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	2.35	2.35	3.38		1.57	0.43	3.82	7.14
50th-Percentile Queue Length [ft/ln]	58.75	58.74	84.40		39.33	10.65	95.40	178.54
95th-Percentile Queue Length [veh/ln]	4.23	4.23	6.08		2.83	0.77	6.87	11.52
95th-Percentile Queue Length [ft/ln]	105.75	105.74	151.92		70.80	19.17	171.71	288.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.88	14.87	16.97	0.00	0.00	0.00	0.00	9.15	1.48	0.00	11.18	19.21
Movement LOS	B	B	B					A	A		B	B
d_A, Approach Delay [s/veh]	16.05			0.00			5.24			13.61		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	11.58											
Intersection LOS	B											
Intersection V/C	0.639											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.42	20.42	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.843	2.128	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2089	0	1741	1741
d_b, Bicycle Delay [s]	0.06	28.72	0.48	0.48
l_b,int, Bicycle LOS Score for Intersection	3.497	4.132	2.390	2.728
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	29.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.600

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	97	11	17	29	29	361	135	115	91	16	125	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	440	44	100	29	64	457	187	874	242	121	1163	12
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]	116	12	26	8	17	120	49	230	64	32	306	3
Total Analysis Volume [veh/h]	463	46	105	31	67	481	197	920	255	127	1224	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	43	0	35	68	0	10	32	0	10	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	81	81	81	81	81	81	81	81	81	81	81	81
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14	28	28	3	17	17	7	26	26	5	24	24
g / C, Green / Cycle	0.17	0.34	0.34	0.03	0.20	0.20	0.09	0.32	0.32	0.06	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.07	0.02	0.17	0.17	0.06	0.18	0.16	0.04	0.24	0.01
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1649	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	587	642	546	56	338	325	296	1621	506	211	1495	467
d1, Uniform Delay [s]	32.31	17.95	18.75	38.77	30.90	30.91	35.98	23.02	22.47	37.15	26.66	20.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	2.42	0.05	0.17	8.49	5.14	5.35	2.56	0.31	0.78	2.75	1.16	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	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.07	0.19	0.56	0.83	0.83	0.66	0.57	0.50	0.60	0.82	0.03
d, Delay for Lane Group [s/veh]	34.73	18.00	18.92	47.27	36.04	36.26	38.55	23.34	23.25	39.90	27.82	20.45
Lane Group LOS	C	B	B	D	D	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.42	0.57	1.36	0.73	5.52	5.35	1.95	4.71	3.89	1.28	7.15	0.17
50th-Percentile Queue Length [ft/ln]	110.53	14.24	34.10	18.20	138.05	133.73	48.84	117.77	97.35	32.09	178.75	4.34
95th-Percentile Queue Length [veh/ln]	7.87	1.03	2.46	1.31	9.38	9.14	3.52	8.27	7.01	2.31	11.54	0.31
95th-Percentile Queue Length [ft/ln]	196.74	25.64	61.38	32.75	234.40	228.55	87.91	206.75	175.23	57.76	288.39	7.82

Movement, Approach, & Intersection Results

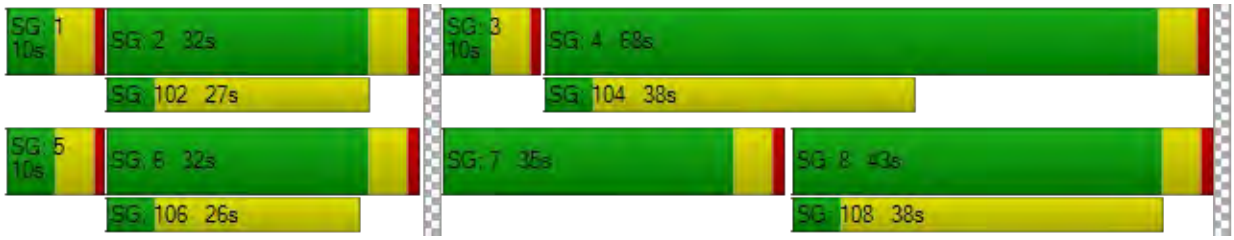
d_M, Delay for Movement [s/veh]	34.73	18.00	18.92	47.27	36.04	36.16	38.55	23.34	23.25	39.90	27.82	20.45
Movement LOS	C	B	B	D	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	30.77			36.74			25.50			28.87		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	29.15											
Intersection LOS	C											
Intersection V/C	0.600											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	32.01	32.01	32.01	32.01
l_p,int, Pedestrian LOS Score for Intersection	2.622	2.459	3.229	3.108
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	938	1555	667	667
d_b, Bicycle Delay [s]	11.42	2.00	18.01	18.01
l_b,int, Bicycle LOS Score for Intersection	2.573	2.515	2.314	2.310
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.135

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	86	131	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	42	114	284	16	50	134
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]	42	200	415	16	50	134
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	53	109	4	13	35
Total Analysis Volume [veh/h]	44	211	437	17	53	141
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.14	0.18
d_M, Delay for Movement [s/veh]	8.40	0.00	0.00	0.00	16.88	12.34
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.00	1.36	1.36
95th-Percentile Queue Length [ft/ln]	3.11	0.00	0.00	0.00	33.91	33.91
d_A, Approach Delay [s/veh]	1.45		0.00		13.58	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.33					
Intersection LOS	C					

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Report File: H:\...\7 P2 + OCP PM.pdf

Scenario 14 P2 w Other Cumulative PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.576	26.6	C
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Left	0.021	24.6	C
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.362	19.5	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.301	12.9	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.424	38.9	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Right		3.4	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.249	20.9	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	WB Left		6.1	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.295	15.7	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		5.5	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.802	55.0	D
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.674	38.2	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.814	20.1	C
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.696	15.4	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.684	36.7	D
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.137	22.3	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	26.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	94	102	9	30	65	65	102	105	57	8	130	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	699	9	30	714	488	474	105	164	8	130	20
Peak Hour Factor	0.9800	0.9800	0.9500	0.9500	0.9800	0.9800	0.9800	0.9500	0.9800	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]	38	178	2	8	182	124	121	28	42	2	34	5
Total Analysis Volume [veh/h]	150	713	9	32	729	498	484	111	167	8	137	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	22	49	0	28	55	0	10	53	0	10	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	34	34	3	28	28	14	23	23	1	10
g / C, Green / Cycle	0.11	0.42	0.42	0.03	0.35	0.35	0.18	0.29	0.29	0.01	0.12
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.13	0.02	0.14	0.31	0.14	0.03	0.11	0.00	0.04
s, saturation flow rate [veh/h]	1781	3560	1858	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	192	1503	784	57	1765	551	611	1017	454	36	424
d1, Uniform Delay [s]	34.81	15.42	15.42	38.19	19.95	24.89	31.55	21.09	22.83	39.30	32.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.31	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
d2, Incremental Delay [s]	6.81	0.12	0.23	8.31	0.15	14.40	2.36	0.05	0.50	3.09	0.44
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	0.78	0.32	0.32	0.56	0.41	0.90	0.79	0.11	0.37	0.22	0.32
d, Delay for Lane Group [s/veh]	41.63	15.54	15.65	46.50	20.10	39.29	33.90	21.14	23.33	42.39	32.74
Lane Group LOS	D	B	B	D	C	D	C	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.14	2.75	2.89	0.74	3.32	10.63	4.53	0.75	2.48	0.09	1.21
50th-Percentile Queue Length [ft/ln]	78.39	68.67	72.35	18.45	83.04	265.84	113.29	18.75	62.10	2.30	30.32
95th-Percentile Queue Length [veh/ln]	5.64	4.94	5.21	1.33	5.98	15.98	8.02	1.35	4.47	0.17	2.18
95th-Percentile Queue Length [ft/ln]	141.11	123.60	130.23	33.21	149.48	399.53	200.57	33.74	111.77	4.14	54.58

Movement, Approach, & Intersection Results

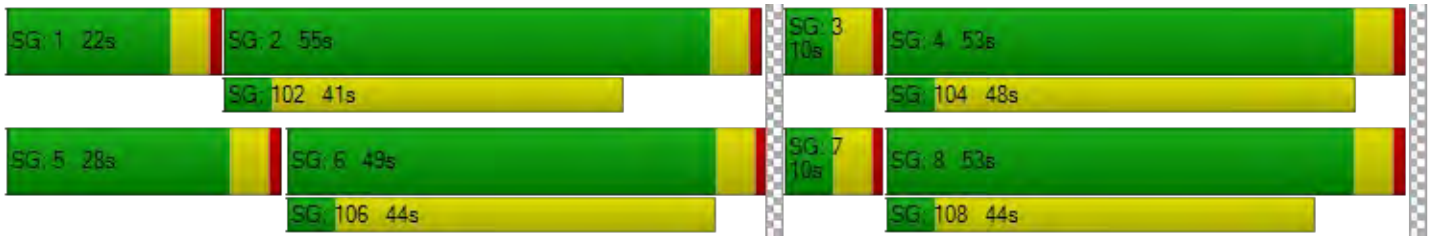
d_M, Delay for Movement [s/veh]	41.63	15.58	15.65	46.50	20.10	39.29	33.90	21.14	23.33	42.39	32.74	0.00
Movement LOS	D	B	B	D	C	D	C	C	C	D	C	
d_A, Approach Delay [s/veh]	20.06			28.36			29.73			33.27		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.56											
Intersection LOS	C											
Intersection V/C	0.576											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.46	31.46	31.46	31.46
l_p,int, Pedestrian LOS Score for Intersection	2.837	3.020	2.805	2.497
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1101	1251	1201	1201
d_b, Bicycle Delay [s]	8.07	5.60	6.37	6.37
l_b,int, Bicycle LOS Score for Intersection	2.039	2.252	2.188	1.679
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	24.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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	145	0	0	158
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]	4	4	693	7	25	706
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	1	1	180	2	7	184
Total Analysis Volume [veh/h]	4	4	722	7	26	735
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

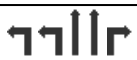
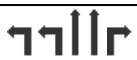
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	24.64	10.73	0.00	0.00	9.26	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.02	0.00	0.00	0.09	0.00
95th-Percentile Queue Length [ft/ln]	1.63	0.48	0.00	0.00	2.31	0.00
d_A, Approach Delay [s/veh]	17.69		0.00		0.32	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.26					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.362

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	39	29	47	9	39	17	18	66	61	73	103	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	111	164	120	277	95	55	470	180	268	507	56
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]	34	29	43	31	72	25	14	122	47	70	132	15
Total Analysis Volume [veh/h]	136	116	171	125	289	99	57	490	188	279	528	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	47	0	14	47	0	11	47	0	17	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	51	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	3	10	10	7	14	14
g / C, Green / Cycle	0.08	0.20	0.20	0.08	0.20	0.20	0.05	0.20	0.20	0.13	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.03	0.11	0.04	0.08	0.06	0.02	0.14	0.12	0.08	0.15	0.04
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	292	703	314	284	694	310	191	712	318	448	978	436
d1, Uniform Delay [s]	22.33	17.04	18.47	22.37	18.04	17.68	23.22	18.98	18.57	21.08	15.81	13.97
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.16	0.11	1.48	1.08	0.40	0.59	0.86	1.19	1.75	1.42	0.47	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	0.47	0.17	0.55	0.44	0.42	0.32	0.30	0.69	0.59	0.62	0.54	0.13
d, Delay for Lane Group [s/veh]	23.48	17.15	19.94	23.44	18.44	18.27	24.08	20.17	20.32	22.50	16.27	14.11
Lane Group LOS	C	B	B	C	B	B	C	C	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.76	0.52	1.76	0.70	1.38	0.95	0.33	2.52	1.96	1.52	2.36	0.46
50th-Percentile Queue Length [ft/ln]	19.04	12.99	43.88	17.49	34.47	23.76	8.19	63.07	48.99	38.10	59.02	11.57
95th-Percentile Queue Length [veh/ln]	1.37	0.94	3.16	1.26	2.48	1.71	0.59	4.54	3.53	2.74	4.25	0.83
95th-Percentile Queue Length [ft/ln]	34.28	23.39	78.99	31.48	62.05	42.77	14.74	113.53	88.18	68.58	106.23	20.82

Movement, Approach, & Intersection Results

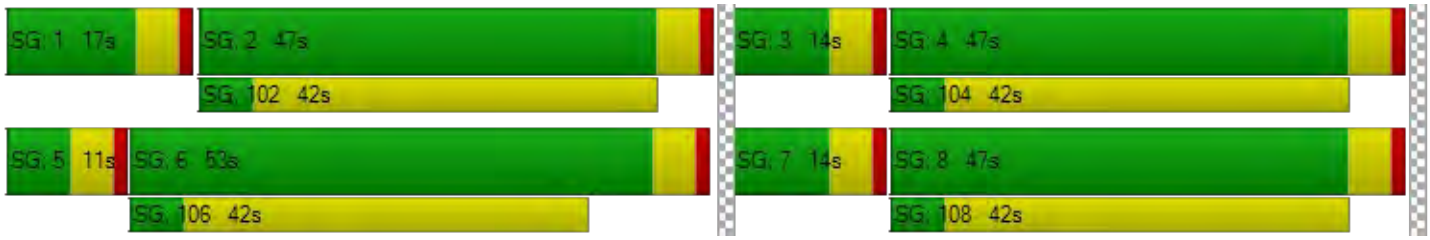
d_M, Delay for Movement [s/veh]	23.48	17.15	19.94	23.44	18.44	18.27	24.08	20.17	20.32	22.50	16.27	14.11
Movement LOS	C	B	B	C	B	B	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	20.32			19.63			20.51			18.14		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	19.49											
Intersection LOS	B											
Intersection V/C	0.362											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.31	17.31	17.31	17.31
l_p,int, Pedestrian LOS Score for Intersection	2.730	2.669	2.774	2.796
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1646	1646	1646	1881
d_b, Bicycle Delay [s]	0.80	0.80	0.80	0.09
l_b,int, Bicycle LOS Score for Intersection	1.909	1.983	2.166	2.273
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.301

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	29	0	0	0	0	0	0	96	26	0	155	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	8	8	5	4	10	17	464	170	21	646	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	2	2	1	1	3	5	136	50	6	190	2
Total Analysis Volume [veh/h]	132	9	9	6	5	12	20	546	200	25	760	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	11	14	14	1	4	90	82	82	90	82	82
g / C, Green / Cycle	0.09	0.12	0.12	0.01	0.04	0.75	0.68	0.68	0.75	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.07	0.00	0.01	0.00	0.01	0.03	0.15	0.13	0.03	0.21	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	766	3560	1589	785	3560	1589
c, Capacity [veh/h]	162	223	190	14	61	598	2429	1084	631	2440	1089
d1, Uniform Delay [s]	53.59	46.79	46.83	59.26	56.29	4.39	7.16	6.94	4.12	7.55	5.97
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.61	0.07	0.10	18.30	2.47	0.10	0.21	0.38	0.03	0.33	0.01
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
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	0.82	0.04	0.05	0.42	0.28	0.03	0.22	0.18	0.04	0.31	0.01
d, Delay for Lane Group [s/veh]	63.20	46.86	46.93	77.56	58.76	4.49	7.38	7.31	4.15	7.89	5.98
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.34	0.24	0.25	0.25	0.54	0.13	2.55	1.87	0.14	3.78	0.06
50th-Percentile Queue Length [ft/ln]	108.56	6.10	6.13	6.36	13.60	3.22	63.84	46.84	3.61	94.45	1.62
95th-Percentile Queue Length [veh/ln]	7.76	0.44	0.44	0.46	0.98	0.23	4.60	3.37	0.26	6.80	0.12
95th-Percentile Queue Length [ft/ln]	194.00	10.98	11.03	11.46	24.48	5.80	114.92	84.31	6.49	170.00	2.91

Movement, Approach, & Intersection Results

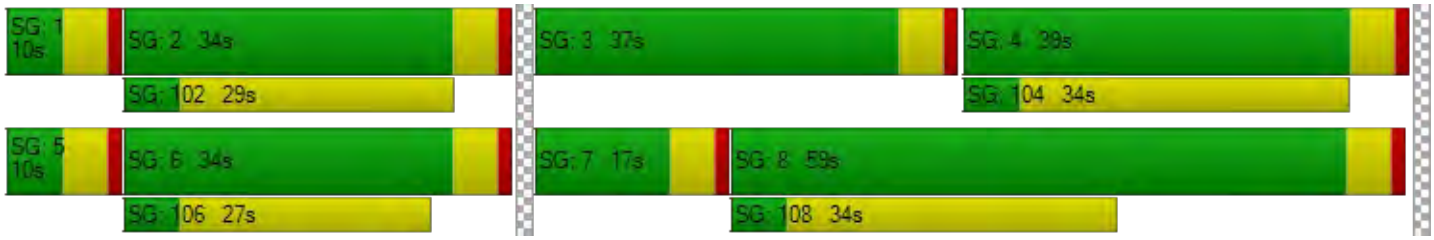
d_M, Delay for Movement [s/veh]	63.20	46.86	46.93	77.56	58.76	58.76	4.49	7.38	7.31	4.15	7.89	5.98
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	61.25			63.66			7.29			7.75		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	12.92											
Intersection LOS	B											
Intersection V/C	0.301											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.264	1.995	2.739	2.688
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.807	1.598	2.192	2.214
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	18	8	0	18	30	20	76	0	9	124	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	288	92	221	515	171	109	376	46	132	459	156
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	75	24	58	134	45	28	98	12	34	120	41
Total Analysis Volume [veh/h]	53	300	96	230	536	178	114	392	48	138	478	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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	42	0	19	46	46	18	43	0	16	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	56	56	10	61	76	10	23	23	11	24	24
g / C, Green / Cycle	0.04	0.47	0.47	0.08	0.51	0.63	0.08	0.19	0.19	0.09	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.06	0.07	0.15	0.11	0.06	0.11	0.03	0.08	0.18	0.18
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1710
c, Capacity [veh/h]	70	1655	739	292	1817	1005	143	683	305	164	380	348
d1, Uniform Delay [s]	57.12	18.77	18.29	53.91	16.96	9.14	54.23	44.07	40.44	53.63	46.39	46.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.12
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]	15.29	0.24	0.36	4.69	0.41	0.38	9.50	0.76	0.24	10.82	6.97	7.80
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	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.18	0.13	0.79	0.30	0.18	0.79	0.57	0.16	0.84	0.88	0.88
d, Delay for Lane Group [s/veh]	72.41	19.01	18.65	58.60	17.37	9.52	63.73	44.84	40.68	64.45	53.36	54.23
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.50	1.60	3.60	4.34	1.98	3.76	5.37	1.21	4.59	10.38	9.60
50th-Percentile Queue Length [ft/ln]	47.25	62.53	40.01	89.93	108.46	49.57	94.07	134.36	30.29	114.79	259.42	240.11
95th-Percentile Queue Length [veh/ln]	3.40	4.50	2.88	6.47	7.75	3.57	6.77	9.18	2.18	8.11	15.66	14.69
95th-Percentile Queue Length [ft/ln]	85.05	112.55	72.01	161.87	193.86	89.22	169.33	229.41	54.52	202.65	391.50	367.18

Movement, Approach, & Intersection Results

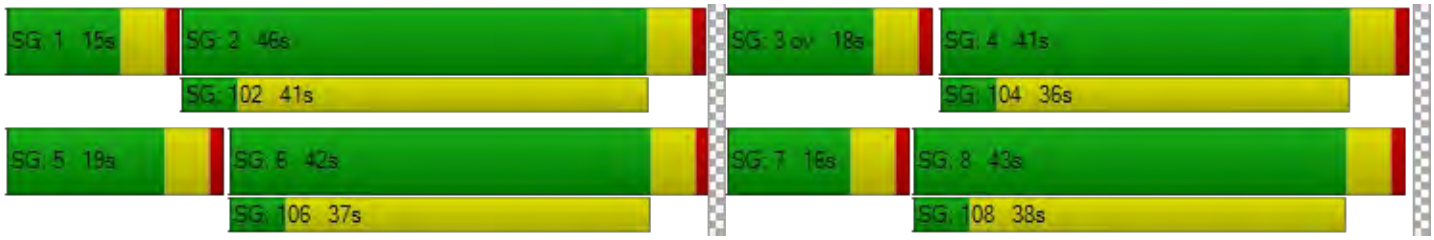
d_M, Delay for Movement [s/veh]	72.41	19.01	18.65	58.60	17.37	9.52	63.73	44.84	40.68	64.45	53.62	54.23
Movement LOS	E	B	B	E	B	A	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	25.24			25.94			48.36			55.66		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.87											
Intersection LOS	D											
Intersection V/C	0.424											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.658	2.821	2.673	2.607
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	616	683	633	600
d_b, Bicycle Delay [s]	28.72	26.02	28.03	29.42
l_b,int, Bicycle LOS Score for Intersection	1.930	2.338	2.017	2.202
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	3.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	68	0	0	0	0	0	0	50	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	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]	60	0	0	0	0	0	0	15	40	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	0	68	0	0	0	0	15	40	50	22	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	20	0	0	0	0	4	12	15	7	0
Total Analysis Volume [veh/h]	71	0	81	0	0	0	0	18	48	60	26	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	18			158			60			71		
Exiting Flow Rate [veh/h]	108			0			98			99		
Demand Flow Rate [veh/h]	60	0	68	0	0	0	0	15	40	50	22	0
Adjusted Demand Flow Rate [veh/h]	71	0	81	0	0	0	0	18	48	60	26	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	1.00	0.99	0.99
Entry Flow Rate [veh/h]	152	0	67	87
Capacity of Entry and Bypass Lanes [veh/h]	1355	1176	1299	1284
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1355	1176	1292	1276
X, volume / capacity	0.11	0.00	0.05	0.07

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.38	0.00	0.16	0.22
95th-Percentile Queue Length [ft]	9.46	0.00	4.04	5.41
Approach Delay [s/veh]	3.55	3.06	3.19	3.36
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	3.42			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.249

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	100	150	22	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	349	595	67	68	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	96	163	18	19	0
Total Analysis Volume [veh/h]	0	384	654	74	75	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.25	0.00
d_M, Delay for Movement [s/veh]	9.13	0.00	0.00	0.00	20.86	14.30
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.96	0.96
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	24.04	24.04
d_A, Approach Delay [s/veh]	0.00		0.00		20.86	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.32					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	6.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	72	41	0	52	0	0	0	0	46	0	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]	184	60	46	0	40	0	0	45	123	75	67	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	184	132	87	0	92	0	0	45	123	121	67	1
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	39	26	0	27	0	0	13	37	36	20	0
Total Analysis Volume [veh/h]	219	157	104	0	110	0	0	54	146	144	80	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	55			452			259			384		
Exiting Flow Rate [veh/h]	408			161			305			161		
Demand Flow Rate [veh/h]	184	132	87	0	92	0	0	45	123	121	67	1
Adjusted Demand Flow Rate [veh/h]	219	157	104	0	110	0	0	54	146	144	80	1

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	490	113	205	230
Capacity of Entry and Bypass Lanes [veh/h]	1305	871	1060	934
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1280	854	1039	915
X, volume / capacity	0.38	0.13	0.19	0.25

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.77	0.44	0.71	0.97
95th-Percentile Queue Length [ft]	44.27	11.05	17.76	24.19
Approach Delay [s/veh]	6.37	5.49	5.25	6.44
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.07			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.295

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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	9	0	0	8	141	90	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	231	52	40	370	179	102	21	5	32	34	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	63	14	11	102	49	28	6	1	9	9	4
Total Analysis Volume [veh/h]	10	254	57	44	407	197	112	23	5	35	37	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	51	0	10	51	0	0	59	0	0	59	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	86	77	77	86	80	80	24	24	24
g / C, Green / Cycle	0.72	0.64	0.64	0.72	0.67	0.67	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.09	0.04	0.11	0.12	0.15	0.00	0.17
s, saturation flow rate [veh/h]	865	1870	1754	1125	3560	1589	883	1589	513
c, Capacity [veh/h]	678	1205	1130	864	2366	1056	230	316	144
d1, Uniform Delay [s]	4.90	8.29	8.32	4.95	7.62	7.71	45.21	38.65	47.17
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.23	0.25	0.11	0.16	0.39	2.36	0.02	4.03
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	0.01	0.13	0.14	0.05	0.17	0.19	0.59	0.02	0.60
d, Delay for Lane Group [s/veh]	4.91	8.52	8.57	5.06	7.78	8.10	47.57	38.67	51.20
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	1.62	1.58	0.32	1.95	1.98	3.94	0.12	2.77
50th-Percentile Queue Length [ft/ln]	1.67	40.59	39.40	8.00	48.85	49.40	98.61	3.03	69.22
95th-Percentile Queue Length [veh/ln]	0.12	2.92	2.84	0.58	3.52	3.56	7.10	0.22	4.98
95th-Percentile Queue Length [ft/ln]	3.01	73.06	70.91	14.39	87.93	88.92	177.49	5.46	124.60

Movement, Approach, & Intersection Results

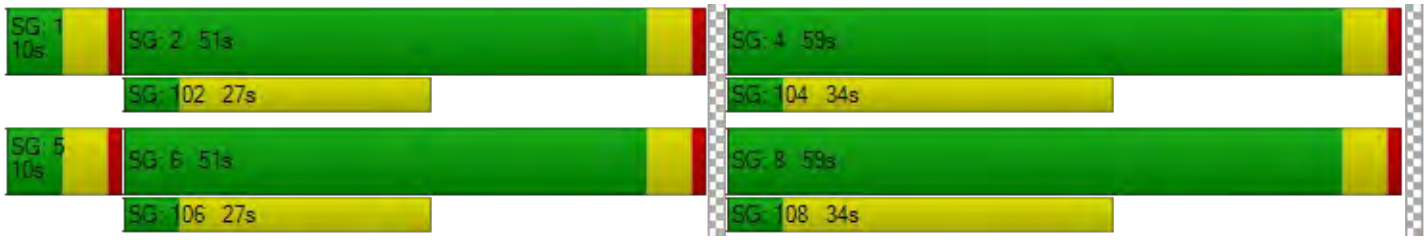
d_M, Delay for Movement [s/veh]	4.91	8.54	8.57	5.06	7.78	8.10	47.57	47.57	38.67	51.20	51.20	51.20
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.43			7.69			47.25			51.20		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	15.69											
Intersection LOS	B											
Intersection V/C	0.295											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.515	2.912	2.090	1.874
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	767	767	900	900
d_b, Bicycle Delay [s]	22.82	22.82	18.15	18.15
l_b,int, Bicycle LOS Score for Intersection	1.824	2.094	1.791	1.703
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	104	32	0	94	0	0	0	0	24	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	57	274	0	0	216	22	15	0	38	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	57	378	32	0	310	22	15	0	38	24	0	0
Peak Hour Factor	0.9500	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9500	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	102	9	0	83	6	4	0	10	6	0	0
Total Analysis Volume [veh/h]	60	406	34	0	333	24	16	0	40	26	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	16			88			366			492		
Exiting Flow Rate [veh/h]	407			430			86			0		
Demand Flow Rate [veh/h]	57	378	32	0	310	22	15	0	38	24	0	0
Adjusted Demand Flow Rate [veh/h]	60	406	34	0	333	24	16	0	40	26	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	476	0	365	58	27
Capacity of Entry and Bypass Lanes [veh/h]	1358	1380	1262	950	836
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1331	1353	1238	932	820
X, volume / capacity	0.35	0.03	0.29	0.06	0.03

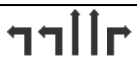
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	1.59	0.08	1.20	0.19	0.10
95th-Percentile Queue Length [ft]	39.84	1.93	30.09	4.79	2.46
Approach Delay [s/veh]	5.70		5.53	4.41	4.70
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	5.53				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	55.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.802

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	26	26	33	218	27	0	0	252	27	24	228	204
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	444	348	513	523	231	274	1049	91	596	1050	469
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	119	94	138	141	62	74	282	24	160	282	126
Total Analysis Volume [veh/h]	302	477	374	552	562	248	295	1128	98	641	1129	504
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	68	0	11	60	0	10	49	0	12	51	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	129	129	129	129	129	129	129	129	129	129	129	129
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14	30	30	23	39	39	13	30	30	26	43	43
g / C, Green / Cycle	0.11	0.23	0.23	0.18	0.30	0.30	0.10	0.23	0.23	0.20	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.24	0.16	0.11	0.16	0.09	0.22	0.06	0.19	0.32	0.30
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	368	1182	369	619	1551	484	360	1180	368	701	1176	546
d1, Uniform Delay [s]	56.55	42.07	49.64	51.85	35.15	37.05	56.72	49.02	40.67	50.42	42.45	41.70
k, delay calibration	0.11	0.11	0.44	0.11	0.11	0.20	0.11	0.11	0.11	0.11	0.20	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]	4.57	0.22	47.57	4.73	0.14	1.52	4.64	5.61	0.38	5.18	9.69	23.54
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	0.82	0.40	1.01	0.89	0.36	0.51	0.82	0.96	0.27	0.91	0.96	0.92
d, Delay for Lane Group [s/veh]	61.11	42.29	97.21	56.58	35.29	38.57	61.35	54.63	41.06	55.60	52.14	65.24
Lane Group LOS	E	D	F	E	D	D	E	D	D	E	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.07	4.37	16.76	9.16	4.68	6.71	4.85	12.24	2.55	10.65	19.11	18.94
50th-Percentile Queue Length [ft/ln]	126.85	109.18	418.89	228.88	117.04	167.72	121.32	306.06	63.85	266.14	477.68	473.54
95th-Percentile Queue Length [veh/ln]	8.77	7.79	23.67	14.12	8.23	10.96	8.47	17.98	4.60	16.00	26.28	26.08
95th-Percentile Queue Length [ft/ln]	219.20	194.86	591.67	352.93	205.76	273.92	211.64	449.52	114.94	399.91	656.90	651.98

Movement, Approach, & Intersection Results

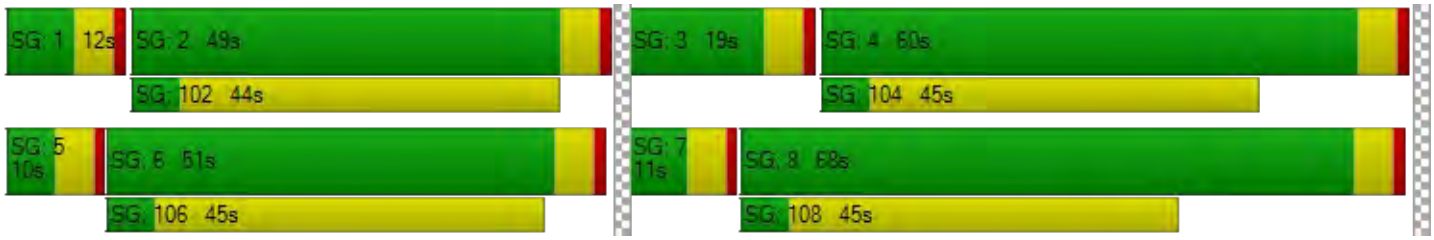
d_M, Delay for Movement [s/veh]	61.11	42.29	97.21	56.58	35.29	38.57	61.35	54.63	41.06	55.60	52.14	65.24
Movement LOS	E	D	F	E	D	D	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	65.04			44.52			55.06			56.02		
Approach LOS	E			D			E			E		
d_I, Intersection Delay [s/veh]	54.95											
Intersection LOS	D											
Intersection V/C	0.802											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.06	56.06	56.06	56.06
l_p,int, Pedestrian LOS Score for Intersection	3.134	3.154	3.388	3.272
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	973	849	680	710
d_b, Bicycle Delay [s]	17.07	21.43	28.22	26.92
l_b,int, Bicycle LOS Score for Intersection	2.194	2.309	2.396	3.436
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	503	0	0	457	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	44	181	384	48	134	221	1366	80	252	1583	265
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	11	46	98	12	34	56	348	20	64	404	68
Total Analysis Volume [veh/h]	142	45	185	392	49	137	226	1394	82	257	1615	270
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	75	75	11	67	67
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.54	0.54	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.27	0.05	0.07	0.32	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	239	245	214	468	224	250	2734	853	274	2423	756
d1, Uniform Delay [s]	55.31	55.31	59.34	59.01	58.95	59.26	20.68	15.84	64.12	28.18	23.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.15	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]	1.02	0.99	10.06	4.04	7.70	15.30	0.68	0.22	14.40	1.47	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
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	0.39	0.87	0.84	0.83	0.91	0.51	0.10	0.94	0.67	0.36
d, Delay for Lane Group [s/veh]	56.33	56.30	69.40	63.05	66.65	74.57	21.36	16.06	78.52	29.65	24.50
Lane Group LOS	E	E	E	E	E	E	C	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.14	7.04	7.06	6.92	8.97	9.84	1.36	5.12	14.13	5.97
50th-Percentile Queue Length [ft/ln]	76.75	78.39	176.01	176.45	173.02	224.24	246.10	34.00	127.98	353.15	149.23
95th-Percentile Queue Length [veh/ln]	5.53	5.64	11.39	11.41	11.24	13.88	14.99	2.45	8.83	20.29	9.98
95th-Percentile Queue Length [ft/ln]	138.15	141.10	284.80	285.37	280.88	347.04	374.73	61.21	220.75	507.25	249.40

Movement, Approach, & Intersection Results

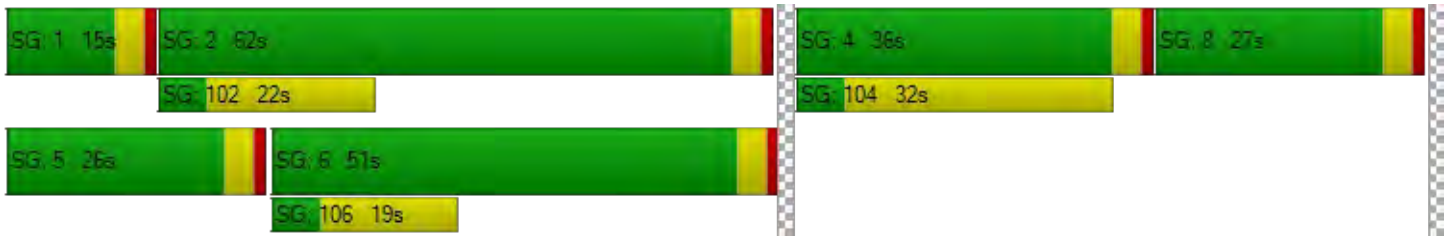
d_M, Delay for Movement [s/veh]	56.32	56.30	69.40	63.05	66.65	66.65	74.57	21.36	16.06	78.52	29.65	24.50
Movement LOS	E	E	E	E	E	E	E	C	B	E	C	C
d_A, Approach Delay [s/veh]	62.82			64.21			28.17			34.86		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.20											
Intersection LOS	D											
Intersection V/C	0.674											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.599	2.540	3.186	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.173	2.513	2.496	2.738
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.814

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	274	0	170	0	321	182	0	286	224
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	662	1	971	0	1368	707	0	1514	734
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	171	0	250	0	353	182	0	390	189
Total Analysis Volume [veh/h]	0	0	0	682	1	1001	0	1410	729	0	1561	757
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	15	0	0	105	0	0	105	105
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		28	28	28	30	30	30	63
g / C, Green / Cycle		0.41	0.41	0.41	0.44	0.44	0.44	0.93
(v / s)_i Volume / Saturation Flow Rate		0.19	0.19	0.36	0.28	0.46	0.31	0.48
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		736	736	1162	2241	699	2241	1473
d1, Uniform Delay [s]		14.50	14.50	18.19	14.76	19.06	15.39	0.35
k, delay calibration		0.11	0.11	0.11	0.11	0.46	0.11	0.49
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.46	0.46	2.01	0.29	44.19	0.40	1.25
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	1.00	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		0.46	0.46	0.86	0.63	1.04	0.70	0.51
d, Delay for Lane Group [s/veh]		14.95	14.95	20.20	15.05	63.25	15.79	1.60
Lane Group LOS		B	B	C	B	F	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		3.57	3.57	6.71	5.08	18.22	5.88	0.51
50th-Percentile Queue Length [ft/ln]		89.13	89.13	167.72	127.02	455.61	146.93	12.78
95th-Percentile Queue Length [veh/ln]		6.42	6.42	10.96	8.78	25.99	9.85	0.92
95th-Percentile Queue Length [ft/ln]		160.44	160.44	273.92	219.43	649.82	246.32	23.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.95	14.95	20.20	0.00	15.05	63.25	0.00	15.79	1.60
Movement LOS				B	B	C		B	F		B	A
d_A, Approach Delay [s/veh]	0.00			18.07			31.48			11.15		
Approach LOS	A			B			C			B		
d_I, Intersection Delay [s/veh]	20.13											
Intersection LOS	C											
Intersection V/C	0.814											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.67	25.67	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.165	2.921	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	293	880	880
d_b, Bicycle Delay [s]	34.08	24.81	10.68	10.68
l_b,int, Bicycle LOS Score for Intersection	4.132	4.338	2.736	2.835
Bicycle LOS	D	E	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	170	0	290	0	0	0	0	414	182	0	340	201
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	713	1	1026	0	0	0	0	1427	619	0	1545	480
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	186	0	267	0	0	0	0	372	161	0	402	125
Total Analysis Volume [veh/h]	743	1	1069	0	0	0	0	1486	645	0	1609	500
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	65	0	0	0	0	0	55	55	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	65	65	65		65	65	65	65
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	29	29	29		27	60	27	27
g / C, Green / Cycle	0.44	0.44	0.44		0.41	0.92	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.21	0.21	0.38		0.29	0.41	0.32	0.31
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	779	779	1231		2089	1468	2089	652
d1, Uniform Delay [s]	13.11	13.11	16.73		16.11	0.32	16.68	16.65
k, delay calibration	0.11	0.11	0.11		0.11	0.35	0.11	0.21
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.46	2.02		0.46	0.67	0.62	3.62
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	0.48	0.48	0.87		0.71	0.44	0.77	0.77
d, Delay for Lane Group [s/veh]	13.57	13.57	18.75		16.57	0.99	17.30	20.27
Lane Group LOS	B	B	B		B	A	B	C
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.55	3.55	6.67		5.57	0.27	6.27	6.37
50th-Percentile Queue Length [ft/ln]	88.72	88.72	166.77		139.28	6.80	156.65	159.37
95th-Percentile Queue Length [veh/ln]	6.39	6.39	10.91		9.44	0.49	10.37	10.52
95th-Percentile Queue Length [ft/ln]	159.70	159.70	272.67		236.05	12.24	259.28	262.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.57	13.57	18.75	0.00	0.00	0.00	0.00	16.57	0.99	0.00	17.30	20.27
Movement LOS	B	B	B					B	A		B	C
d_A, Approach Delay [s/veh]	16.63			0.00			11.85			18.01		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	15.43											
Intersection LOS	B											
Intersection V/C	0.696											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.32	24.32	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.922	2.088	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1835	0	1529	1529
d_b, Bicycle Delay [s]	0.22	32.70	1.81	1.81
l_b,int, Bicycle LOS Score for Intersection	4.551	4.132	2.732	2.720
Bicycle LOS	E	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	36.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.684

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	122	30	21	20	20	246	381	188	134	23	174	30
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	504	70	170	20	64	322	499	1449	421	233	1195	31
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	134	19	45	5	17	86	133	385	112	62	318	8
Total Analysis Volume [veh/h]	536	74	181	21	68	343	531	1541	448	248	1271	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	43	0	51	75	0	14	34	0	12	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	32	32	2	15	15	18	37	37	10	28	28
g / C, Green / Cycle	0.18	0.31	0.31	0.02	0.15	0.15	0.18	0.37	0.37	0.10	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.15	0.04	0.11	0.01	0.13	0.13	0.15	0.30	0.28	0.07	0.25	0.02
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1670	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	638	589	501	40	255	243	633	1869	583	334	1430	446
d1, Uniform Delay [s]	39.56	24.55	26.61	48.61	41.27	41.27	39.64	28.88	28.05	44.18	34.65	26.56
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.39	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]	3.07	0.09	0.44	10.40	6.59	6.92	3.07	0.97	7.43	3.24	2.09	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.13	0.36	0.53	0.82	0.82	0.84	0.82	0.77	0.74	0.89	0.07
d, Delay for Lane Group [s/veh]	42.63	24.65	27.05	59.02	47.85	48.19	42.71	29.85	35.48	47.42	36.74	26.63
Lane Group LOS	D	C	C	E	D	D	D	C	D	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.56	1.26	3.37	0.63	5.46	5.22	6.51	11.03	10.41	3.13	9.96	0.59
50th-Percentile Queue Length [ft/ln]	164.11	31.60	84.27	15.81	136.46	130.48	162.65	275.79	260.16	78.18	249.01	14.67
95th-Percentile Queue Length [veh/ln]	10.77	2.28	6.07	1.14	9.29	8.97	10.69	16.48	15.70	5.63	15.14	1.06
95th-Percentile Queue Length [ft/ln]	269.16	56.88	151.69	28.46	232.26	224.15	267.23	411.97	392.42	140.72	378.40	26.40

Movement, Approach, & Intersection Results

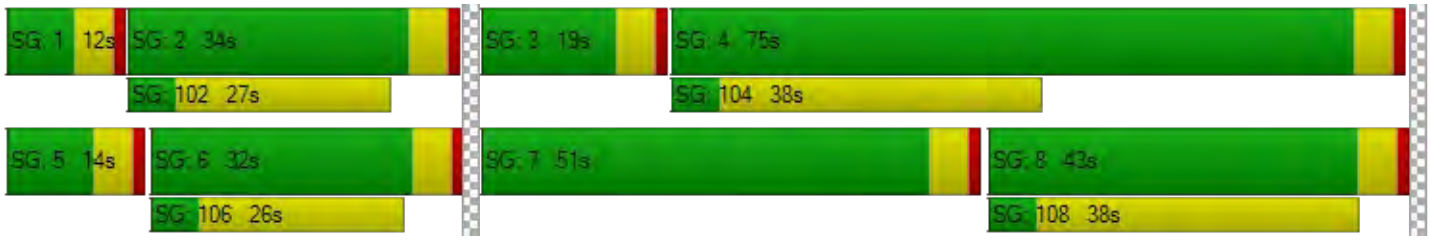
d_M, Delay for Movement [s/veh]	42.63	24.65	27.05	59.02	47.85	48.05	42.71	29.85	35.48	47.42	36.74	26.63
Movement LOS	D	C	C	E	D	D	D	C	D	D	D	C
d_A, Approach Delay [s/veh]	37.39			48.55			33.56			38.23		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	36.72											
Intersection LOS	D											
Intersection V/C	0.684											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.55	41.55	41.55	41.55
l_p,int, Pedestrian LOS Score for Intersection	2.712	2.515	3.362	3.213
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	758	1396	578	538
d_b, Bicycle Delay [s]	19.34	4.57	25.34	26.78
l_b,int, Bicycle LOS Score for Intersection	2.865	2.272	2.946	2.413
Bicycle LOS	C	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	22.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.137

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	159	120	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	142	300	201	52	31	83
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]	142	459	321	52	31	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	121	84	14	8	22
Total Analysis Volume [veh/h]	149	483	338	55	33	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.00	0.00	0.00	0.14	0.11
d_M, Delay for Movement [s/veh]	8.55	0.00	0.00	0.00	22.31	11.79
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.44	0.00	0.00	0.00	0.95	0.95
95th-Percentile Queue Length [ft/ln]	10.99	0.00	0.00	0.00	23.76	23.76
d_A, Approach Delay [s/veh]	2.02		0.00		14.68	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.65					
Intersection LOS	C					

Appendix D-8

Phase 1+2+3 without Project (2031)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\8 P3 AM.pdf

Scenario 15 P3 no Project AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.285	14.4	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.004	12.6	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.264	17.1	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.387	22.7	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.443	43.7	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.081	12.1	B
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.075	9.3	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.184	15.5	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.043	9.4	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.596	29.4	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.425	21.6	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	SB Right	0.553	8.7	A
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.533	9.0	A
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	EB Left	0.429	21.6	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.285

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	6	8	6	0	18	18	8	29	16	7	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	548	6	0	256	202	373	29	68	7	19	0
Peak Hour Factor	0.9600	0.9600	0.9500	0.9500	0.9600	0.9600	0.9600	0.9500	0.9600	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]	13	143	2	0	67	53	97	8	18	2	5	0
Total Analysis Volume [veh/h]	53	571	6	0	267	210	389	31	71	7	20	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	12	46	0	21	49	0	25	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	42	42	42	42	42	42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	2	12	12	0	10	10	7	9	9	0	2	2
g / C, Green / Cycle	0.06	0.29	0.29	0.00	0.24	0.24	0.18	0.22	0.22	0.01	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.00	0.05	0.13	0.11	0.01	0.04	0.00	0.01	0.00
s, saturation flow rate [veh/h]	1781	3560	1860	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	100	1046	546	1	1211	378	619	784	350	34	96	81
d1, Uniform Delay [s]	19.29	11.73	11.73	0.00	12.88	14.07	15.96	12.89	13.38	20.64	19.12	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	4.27	0.21	0.40	0.00	0.09	1.28	1.06	0.02	0.28	2.87	1.07	0.00
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	0.53	0.36	0.36	0.00	0.22	0.56	0.63	0.04	0.20	0.20	0.21	0.00
d, Delay for Lane Group [s/veh]	23.55	11.94	12.14	0.00	12.97	15.34	17.02	12.91	13.66	23.51	20.20	0.00
Lane Group LOS	C	B	B	A	B	B	B	B	B	C	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.56	1.16	1.24	0.00	0.57	1.58	1.55	0.10	0.49	0.04	0.19	0.00
50th-Percentile Queue Length [ft/ln]	14.04	29.02	31.12	0.00	14.30	39.53	38.87	2.48	12.21	1.10	4.84	0.00
95th-Percentile Queue Length [veh/ln]	1.01	2.09	2.24	0.00	1.03	2.85	2.80	0.18	0.88	0.08	0.35	0.00
95th-Percentile Queue Length [ft/ln]	25.26	52.24	56.01	0.00	25.73	71.15	69.96	4.47	21.99	1.98	8.71	0.00

Movement, Approach, & Intersection Results

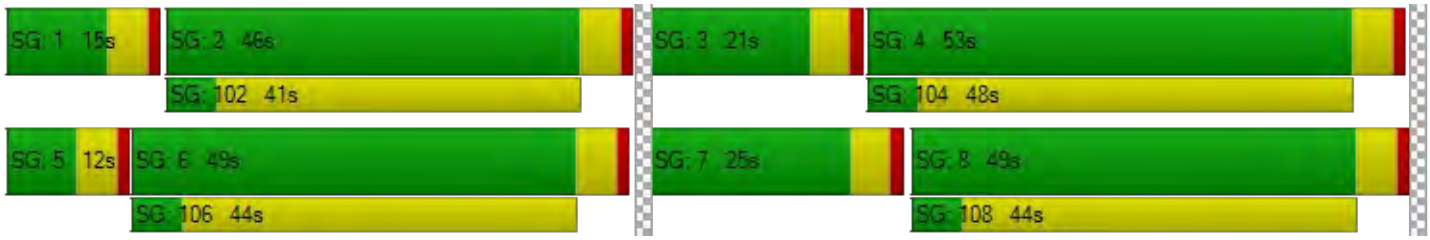
d_M, Delay for Movement [s/veh]	23.55	12.01	12.14	0.00	12.97	15.34	17.02	12.91	13.66	23.51	20.20	0.00
Movement LOS	C	B	B	A	B	B	B	B	B	C	C	A
d_A, Approach Delay [s/veh]	12.98			14.02			16.27			21.06		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	14.41											
Intersection LOS	B											
Intersection V/C	0.285											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	12.91	12.91	12.91	12.91
l_p,int, Pedestrian LOS Score for Intersection	2.690	2.860	2.662	2.423
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2101	1958	2101	2292
d_b, Bicycle Delay [s]	0.05	0.01	0.05	0.45
l_b,int, Bicycle LOS Score for Intersection	1.906	1.822	1.965	1.604
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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	35	0	0	26
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	540	0	3	494
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	159	0	1	145
Total Analysis Volume [veh/h]	0	2	635	0	4	581
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

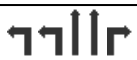
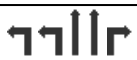
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	23.28	12.56	0.00	0.00	8.81	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.01	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.31	0.00	0.00	0.32	0.00
d_A, Approach Delay [s/veh]	12.56		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.264

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	6	0	6	7	13	13	23	0	0	12	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	219	121	40	57	50	73	406	55	127	383	114
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	61	34	11	16	14	20	113	15	35	106	32
Total Analysis Volume [veh/h]	60	243	134	44	63	56	81	451	61	141	426	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	47	0	10	47	0	13	47	0	16	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	46	46	46	46	46	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	3	10	10	4	11	11
g / C, Green / Cycle	0.06	0.21	0.21	0.05	0.20	0.20	0.07	0.22	0.22	0.09	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.08	0.01	0.02	0.04	0.02	0.13	0.04	0.04	0.12	0.08
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	209	762	340	170	721	322	250	768	343	319	840	375
d1, Uniform Delay [s]	20.94	15.46	15.73	21.35	15.10	15.37	20.55	16.42	14.91	20.03	15.46	14.80
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.24	0.74	0.80	0.05	0.25	0.75	0.72	0.25	0.96	0.48	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	1.00	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	0.29	0.32	0.39	0.26	0.09	0.17	0.32	0.59	0.18	0.44	0.51	0.34
d, Delay for Lane Group [s/veh]	21.69	15.70	16.47	22.15	15.15	15.62	21.29	17.13	15.15	20.99	15.94	15.33
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	0.97	1.13	0.23	0.24	0.45	0.40	1.94	0.48	0.69	1.74	1.02
50th-Percentile Queue Length [ft/ln]	7.60	24.29	28.30	5.71	6.06	11.31	10.08	48.61	12.06	17.31	43.57	25.45
95th-Percentile Queue Length [veh/ln]	0.55	1.75	2.04	0.41	0.44	0.81	0.73	3.50	0.87	1.25	3.14	1.83
95th-Percentile Queue Length [ft/ln]	13.69	43.71	50.93	10.27	10.92	20.36	18.15	87.50	21.70	31.15	78.42	45.80

Movement, Approach, & Intersection Results

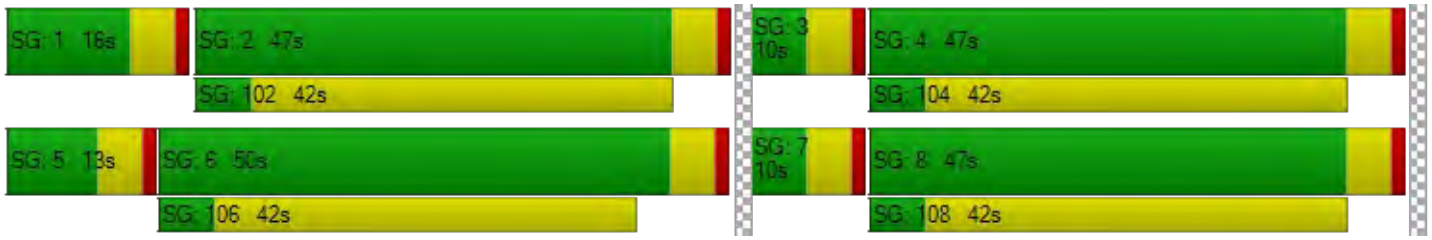
d_M, Delay for Movement [s/veh]	21.69	15.70	16.47	22.15	15.15	15.62	21.29	17.13	15.15	20.99	15.94	15.33
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.76			17.20			17.50			16.85		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.06											
Intersection LOS	B											
Intersection V/C	0.264											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.10	15.10	15.10	15.10
l_p,int, Pedestrian LOS Score for Intersection	2.658	2.646	2.718	2.744
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1808	1808	1808	1937
d_b, Bicycle Delay [s]	0.21	0.21	0.21	0.02
l_b,int, Bicycle LOS Score for Intersection	1.920	1.694	2.049	2.132
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	13	0	0	0	0	0	0	16	13	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	23	35	41	16	98	156	393	68	52	470	60
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	7	11	13	5	31	49	123	21	16	147	19
Total Analysis Volume [veh/h]	160	29	44	51	20	123	195	491	85	65	588	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	39	0	37	52	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	13	21	21	5	13	80	70	70	80	70	70
g / C, Green / Cycle	0.11	0.17	0.17	0.04	0.11	0.66	0.58	0.58	0.66	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.09	0.02	0.03	0.03	0.09	0.22	0.14	0.05	0.07	0.17	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	875	3560	1589	926	3560	1589
c, Capacity [veh/h]	189	325	276	68	172	599	2078	928	642	2061	920
d1, Uniform Delay [s]	52.68	41.62	42.14	57.18	52.65	8.32	12.08	11.00	7.43	12.75	11.17
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.80	0.12	0.27	15.11	9.97	1.44	0.27	0.20	0.07	0.35	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.84	0.09	0.16	0.75	0.83	0.33	0.24	0.09	0.10	0.29	0.08
d, Delay for Lane Group [s/veh]	62.48	41.74	42.41	72.29	62.62	9.77	12.34	11.19	7.50	13.10	11.35
Lane Group LOS	E	D	D	E	E	A	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.25	0.74	1.14	1.82	4.70	2.07	3.20	1.04	0.57	4.02	0.92
50th-Percentile Queue Length [ft/ln]	131.21	18.43	28.41	45.46	117.51	51.64	80.04	25.89	14.37	100.47	23.01
95th-Percentile Queue Length [veh/ln]	9.01	1.33	2.05	3.27	8.26	3.72	5.76	1.86	1.03	7.23	1.66
95th-Percentile Queue Length [ft/ln]	225.14	33.17	51.15	81.84	206.40	92.96	144.07	46.60	25.86	180.84	41.42

Movement, Approach, & Intersection Results

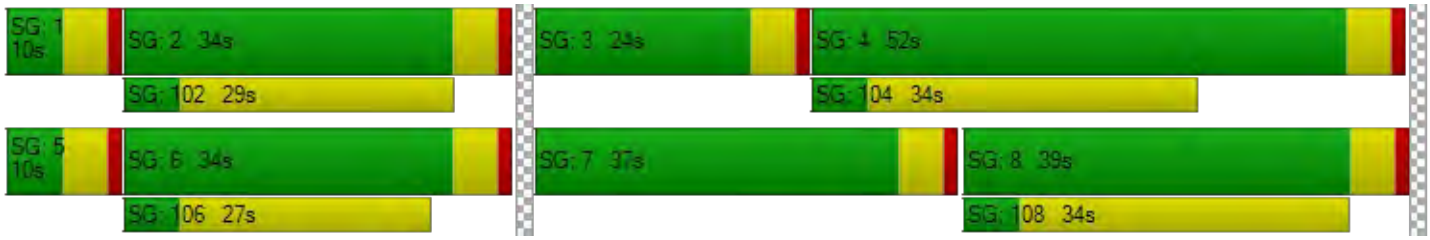
d_M, Delay for Movement [s/veh]	62.48	41.74	42.41	72.29	62.62	62.62	9.77	12.34	11.19	7.50	13.10	11.35
Movement LOS	E	D	D	E	E	E	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	56.11			65.16			11.56			12.42		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.68											
Intersection LOS	C											
Intersection V/C	0.387											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.300	2.281	2.735	2.682
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	783	483	483
d_b, Bicycle Delay [s]	30.83	22.22	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	1.944	1.880	2.196	2.160
Bicycle LOS	A	A	B	B

Sequence

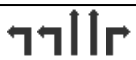
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	43.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.443

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	13	7	0	13	0	0	16	0	6	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	330	182	135	212	59	80	239	38	207	241	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	109	60	44	70	19	26	79	13	68	79	47
Total Analysis Volume [veh/h]	100	434	239	178	279	78	105	314	50	272	317	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	21	43	0	27	49	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	66	66	9	65	80	10	14	14	22	26	26
g / C, Green / Cycle	0.07	0.50	0.50	0.07	0.50	0.62	0.07	0.11	0.11	0.17	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.15	0.05	0.08	0.05	0.06	0.09	0.03	0.15	0.14	0.14
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1640
c, Capacity [veh/h]	124	1796	802	234	1790	978	132	384	171	296	374	328
d1, Uniform Delay [s]	59.66	18.19	18.80	59.57	17.45	10.13	59.26	56.75	53.43	53.35	48.56	48.60
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.19	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]	11.75	0.32	0.95	5.02	0.19	0.16	10.48	4.31	0.93	17.49	2.58	2.98
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	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.24	0.30	0.76	0.16	0.08	0.80	0.82	0.29	0.92	0.72	0.72
d, Delay for Lane Group [s/veh]	71.41	18.51	19.75	64.59	17.63	10.29	69.74	61.06	54.36	70.84	51.14	51.58
Lane Group LOS	E	B	B	E	B	B	E	E	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	3.79	4.43	3.05	2.33	0.95	3.79	5.28	1.56	10.18	8.42	7.46
50th-Percentile Queue Length [ft/ln]	91.50	94.65	110.77	76.32	58.13	23.66	94.86	132.05	38.98	254.52	210.43	186.52
95th-Percentile Queue Length [veh/ln]	6.59	6.81	7.88	5.49	4.19	1.70	6.83	9.05	2.81	15.41	13.18	11.94
95th-Percentile Queue Length [ft/ln]	164.69	170.37	197.07	137.37	104.63	42.59	170.74	226.28	70.16	385.34	329.38	298.50

Movement, Approach, & Intersection Results

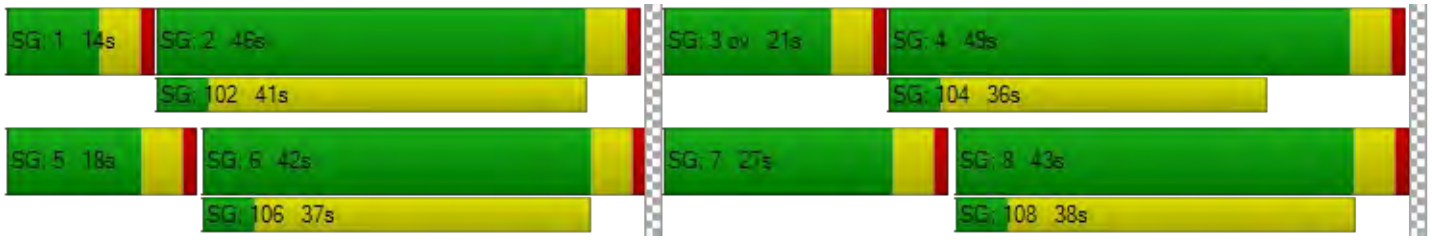
d_M, Delay for Movement [s/veh]	71.41	18.51	19.75	64.59	17.63	10.29	69.74	61.06	54.36	70.84	51.20	51.58
Movement LOS	E	B	B	E	B	B	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	25.74			32.18			62.29			58.17		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	43.67											
Intersection LOS	D											
Intersection V/C	0.443											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.695	2.789	2.628	2.613
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	677
d_b, Bicycle Delay [s]	33.27	30.47	32.56	28.45
l_b,int, Bicycle LOS Score for Intersection	2.197	2.001	1.947	2.201
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	0	0	18	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	41	0	0	18	0
Peak Hour Factor	1.0000	0.8200	0.9500	0.8200	0.8200	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	0	0	5	0
Total Analysis Volume [veh/h]	0	50	0	0	22	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.11	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.11		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.081

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	6	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	342	208	19	40	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	97	59	5	11	0
Total Analysis Volume [veh/h]	0	389	236	22	45	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.08	0.00
d_M, Delay for Movement [s/veh]	7.76	0.00	0.00	0.00	12.09	9.53
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.26	0.26
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.62	6.62
d_A, Approach Delay [s/veh]	0.00		0.00		12.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	31	24	0	36	60	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	24	0	36	60	1
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	7	0	10	17	0
Total Analysis Volume [veh/h]	35	27	0	41	68	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.34	0.00	9.27	8.85
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.24	0.24
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.12	6.12
d_A, Approach Delay [s/veh]	0.00		0.00		9.27	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.184

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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	6	0	0	7	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	273	12	10	179	16	42	7	3	29	33	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	75	3	3	49	4	12	2	1	8	9	9
Total Analysis Volume [veh/h]	3	300	13	11	197	18	46	8	3	32	36	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	96	89	89	96	90	90	14	14	14
g / C, Green / Cycle	0.80	0.74	0.74	0.80	0.75	0.75	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.08	0.01	0.06	0.01	0.06	0.00	0.10
s, saturation flow rate [veh/h]	1189	1870	1843	1100	3560	1589	868	1589	1055
c, Capacity [veh/h]	1026	1392	1372	947	2683	1198	157	187	163
d1, Uniform Delay [s]	2.43	4.27	4.27	2.46	3.86	3.69	49.56	46.82	51.91
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.00	0.16	0.17	0.02	0.05	0.02	1.28	0.03	3.98
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	0.00	0.11	0.11	0.01	0.07	0.02	0.34	0.02	0.63
d, Delay for Lane Group [s/veh]	2.43	4.44	4.44	2.48	3.91	3.71	50.84	46.85	55.88
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.01	1.03	1.03	0.05	0.58	0.11	1.58	0.08	3.25
50th-Percentile Queue Length [ft/ln]	0.30	25.80	25.63	1.21	14.44	2.63	39.48	2.04	81.16
95th-Percentile Queue Length [veh/ln]	0.02	1.86	1.85	0.09	1.04	0.19	2.84	0.15	5.84
95th-Percentile Queue Length [ft/ln]	0.53	46.44	46.14	2.17	26.00	4.73	71.07	3.67	146.08

Movement, Approach, & Intersection Results

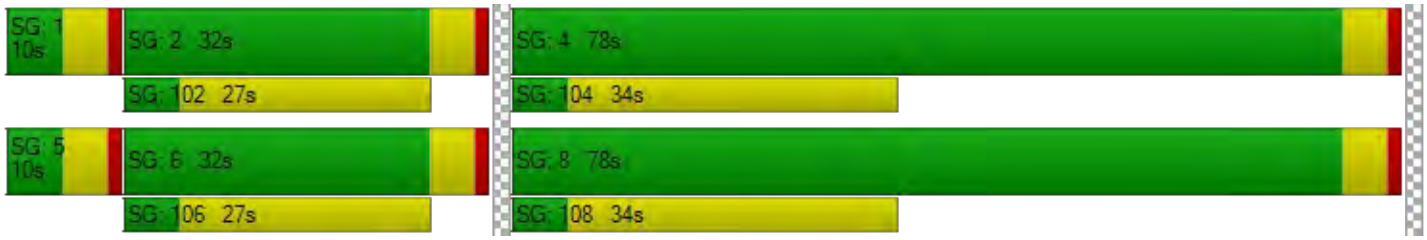
d_M, Delay for Movement [s/veh]	2.43	4.44	4.44	2.48	3.91	3.71	50.84	50.84	46.85	55.88	55.88	55.88
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	4.42			3.83			50.63			55.88		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	15.53											
Intersection LOS	B											
Intersection V/C	0.184											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.467	2.759	1.996	1.808
Crosswalk LOS	B	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.820	1.746	1.654	1.730
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	55	12	0	97	34	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	12	0	97	34	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	3	0	27	9	0
Total Analysis Volume [veh/h]	60	13	0	107	37	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

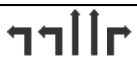
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.36	0.00	9.36	8.69
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	3.44	3.44
d_A, Approach Delay [s/veh]	0.00		0.00		9.34	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.63					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	6	6	6	43	5	0	0	49	5	7	57	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	482	393	253	245	101	185	835	37	323	648	194
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	124	101	65	63	26	48	215	10	83	167	50
Total Analysis Volume [veh/h]	113	497	405	261	253	104	191	861	38	333	668	200
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	21	54	0	17	50	0	19	49	0	20	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	79	79	79	79	79	79	79	79	79	79	79	79
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	23	23	8	27	27	7	17	17	10	21	21
g / C, Green / Cycle	0.06	0.29	0.29	0.11	0.34	0.34	0.08	0.22	0.22	0.13	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.25	0.08	0.05	0.07	0.06	0.17	0.02	0.10	0.19	0.12
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	200	1495	466	371	1745	545	291	1107	346	450	938	435
d1, Uniform Delay [s]	36.41	21.95	26.59	34.21	18.04	18.35	35.24	29.25	24.90	33.23	26.50	24.49
k, delay calibration	0.11	0.11	0.20	0.11	0.11	0.11	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]	2.48	0.13	8.72	2.45	0.04	0.17	2.52	1.21	0.14	2.42	1.02	0.76
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	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	0.56	0.33	0.87	0.70	0.14	0.19	0.66	0.78	0.11	0.74	0.71	0.46
d, Delay for Lane Group [s/veh]	38.89	22.08	35.31	36.67	18.08	18.51	37.76	30.46	25.04	35.65	27.52	25.25
Lane Group LOS	D	C	D	D	B	B	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.11	2.34	8.01	2.49	1.03	1.31	1.78	4.84	0.54	3.15	5.61	3.12
50th-Percentile Queue Length [ft/ln]	27.78	58.57	200.32	62.30	25.85	32.86	44.46	121.00	13.62	78.66	140.28	78.08
95th-Percentile Queue Length [veh/ln]	2.00	4.22	12.66	4.49	1.86	2.37	3.20	8.45	0.98	5.66	9.50	5.62
95th-Percentile Queue Length [ft/ln]	50.00	105.43	316.38	112.13	46.53	59.16	80.03	211.21	24.52	141.59	237.40	140.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.89	22.08	35.31	36.67	18.08	18.51	37.76	30.46	25.04	35.65	27.52	25.25
Movement LOS	D	C	D	D	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	29.23			26.00			31.55			29.40		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.42											
Intersection LOS	C											
Intersection V/C	0.596											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.11	31.11	31.11	31.11
l_p,int, Pedestrian LOS Score for Intersection	3.022	3.008	3.165	3.053
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1237	1136	1111	1136
d_b, Bicycle Delay [s]	5.76	7.38	7.82	7.38
l_b,int, Bicycle LOS Score for Intersection	2.118	1.900	2.159	2.550
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 6th Edition	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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	98	0	0	113	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	11	138	102	10	18	43	1268	80	175	1081	168
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	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	3	35	26	3	5	11	323	20	45	276	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1294	82	179	1103	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	9	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.25	0.05	0.05	0.22	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	189	190	168	248	120	58	3271	1021	229	3441	1074
d1, Uniform Delay [s]	57.77	57.76	61.40	62.20	61.35	67.15	12.02	9.45	64.37	9.40	8.25
k, delay calibration	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
d2, Incremental Delay [s]	0.86	0.85	10.44	1.13	0.98	17.85	0.36	0.15	5.76	0.25	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.76	0.40	0.08	0.78	0.32	0.16
d, Delay for Lane Group [s/veh]	58.63	58.62	71.85	63.34	62.33	85.00	12.38	9.61	70.13	9.65	8.57
Lane Group LOS	E	E	E	E	E	F	B	A	E	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.42	1.82	0.98	1.86	6.48	1.00	3.34	4.63	1.95
50th-Percentile Queue Length [ft/ln]	47.05	47.38	135.55	45.51	24.47	46.40	161.91	24.89	83.48	115.83	48.86
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.24	3.28	1.76	3.34	10.65	1.79	6.01	8.16	3.52
95th-Percentile Queue Length [ft/ln]	84.69	85.29	231.03	81.92	44.05	83.51	266.25	44.81	150.26	204.08	87.94

Movement, Approach, & Intersection Results

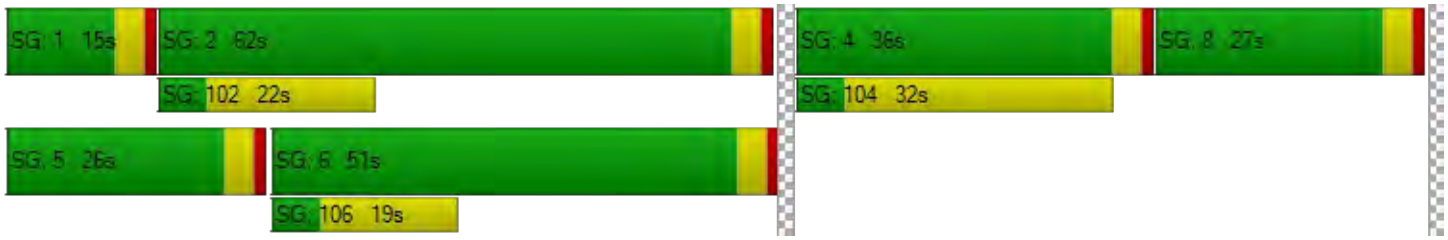
d_M, Delay for Movement [s/veh]	58.62	58.62	71.85	63.34	62.33	62.33	85.00	12.38	9.61	70.13	9.65	8.57
Movement LOS	E	E	E	E	E	E	F	B	A	E	A	A
d_A, Approach Delay [s/veh]	65.99			63.12			14.47			16.97		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	21.56											
Intersection LOS	C											
Intersection V/C	0.425											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.070	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.341	2.359
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	63	0	38	0	66	32	0	76	100
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	231	1	552	0	1056	540	0	855	818
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	60	0	142	0	272	139	0	220	211
Total Analysis Volume [veh/h]	0	0	0	238	1	569	0	1089	557	0	881	843
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		16	16	16	21	21	21	42
g / C, Green / Cycle		0.33	0.33	0.33	0.45	0.45	0.45	0.89
(v / s)_i Volume / Saturation Flow Rate		0.07	0.07	0.20	0.21	0.35	0.17	0.53
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		596	596	942	2304	719	2304	1420
d1, Uniform Delay [s]		11.14	11.14	13.03	8.96	10.84	8.52	0.57
k, delay calibration		0.11	0.11	0.11	0.11	0.11	0.11	0.31
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.16	0.16	0.63	0.15	1.83	0.10	1.13
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		0.20	0.20	0.60	0.47	0.77	0.38	0.59
d, Delay for Lane Group [s/veh]		11.31	11.31	13.66	9.11	12.67	8.62	1.70
Lane Group LOS		B	B	B	A	B	A	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		0.77	0.77	2.14	1.99	4.01	1.53	0.45
50th-Percentile Queue Length [ft/ln]		19.18	19.18	53.56	49.83	100.17	38.26	11.17
95th-Percentile Queue Length [veh/ln]		1.38	1.38	3.86	3.59	7.21	2.75	0.80
95th-Percentile Queue Length [ft/ln]		34.52	34.52	96.42	89.70	180.31	68.87	20.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	11.31	11.31	13.66	0.00	9.11	12.67	0.00	8.62	1.70
Movement LOS				B	B	B		A	B		A	A
d_A, Approach Delay [s/veh]	0.00			12.96			10.31			5.24		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	8.73											
Intersection LOS	A											
Intersection V/C	0.553											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.29	15.29	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.088	2.791	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	640	1921	1921
d_b, Bicycle Delay [s]	23.43	10.83	0.04	0.04
l_b,int, Bicycle LOS Score for Intersection	4.132	2.893	2.465	2.508
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	38	0	94	0	0	0	0	97	32	0	138	67
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	440	3	586	0	0	0	0	622	700	0	1232	452
Peak Hour Factor	0.9700	0.9700	0.9700	0.9500	0.9500	0.9500	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	113	1	151	0	0	0	0	160	180	0	318	116
Total Analysis Volume [veh/h]	454	3	604	0	0	0	0	641	722	0	1270	466
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	45	45	45		45	45	45	45
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	16	16	16		19	40	19	19
g / C, Green / Cycle	0.35	0.35	0.35		0.43	0.89	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.21		0.13	0.45	0.25	0.29
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	629	629	993		2177	1415	2177	679
d1, Uniform Delay [s]	10.94	10.93	12.14		8.54	0.50	9.94	10.56
k, delay calibration	0.11	0.11	0.11		0.11	0.21	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	0.35	0.61		0.07	0.55	0.25	1.24
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	0.36	0.36	0.61		0.29	0.51	0.58	0.69
d, Delay for Lane Group [s/veh]	11.29	11.29	12.75		8.61	1.05	10.19	11.80
Lane Group LOS	B	B	B		A	A	B	B
Critical Lane Group	No	No	No		No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.44	1.44	2.11		1.07	0.22	2.50	3.09
50th-Percentile Queue Length [ft/ln]	36.11	36.10	52.80		26.87	5.39	62.39	77.31
95th-Percentile Queue Length [veh/ln]	2.60	2.60	3.80		1.93	0.39	4.49	5.57
95th-Percentile Queue Length [ft/ln]	64.99	64.99	95.04		48.37	9.70	112.30	139.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.29	11.29	12.75	0.00	0.00	0.00	0.00	8.61	1.05	0.00	10.19	11.80
Movement LOS	B	B	B					A	A		B	B
d_A, Approach Delay [s/veh]	12.12			0.00			4.61			10.62		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	9.03											
Intersection LOS	A											
Intersection V/C	0.533											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.58	14.58	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.807	2.057	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	661	0	1984	1984
d_b, Bicycle Delay [s]	10.16	22.68	0.00	0.00
l_b,int, Bicycle LOS Score for Intersection	3.310	4.132	2.309	2.514
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.429

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	97	0	17	0	0	0	0	101	91	16	108	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	440	33	100	0	35	96	52	860	242	121	1146	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	116	9	26	0	9	25	14	226	64	32	302	0
Total Analysis Volume [veh/h]	463	35	105	0	37	101	55	905	255	127	1206	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	43	0	10	43	0	56	60	0	27	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	63	63	63	63	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	11	21	21	0	9	9	3	18	18	4	20	20
g / C, Green / Cycle	0.18	0.32	0.32	0.00	0.14	0.14	0.05	0.29	0.29	0.07	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.07	0.00	0.04	0.04	0.02	0.18	0.16	0.04	0.24	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1725	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	624	606	515	0	248	229	171	1482	462	244	1590	496
d1, Uniform Delay [s]	24.68	14.81	15.56	0.00	24.31	24.35	29.22	19.46	19.06	28.53	19.73	15.07
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.77	0.04	0.19	0.00	0.62	0.71	1.08	0.41	1.03	1.71	0.76	0.00
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	0.74	0.06	0.20	0.00	0.28	0.30	0.32	0.61	0.55	0.52	0.76	0.00
d, Delay for Lane Group [s/veh]	26.46	14.85	15.76	0.00	24.93	25.06	30.30	19.87	20.09	30.24	20.49	15.07
Lane Group LOS	C	B	B	A	C	C	C	B	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.25	0.33	1.04	0.00	0.94	0.91	0.41	3.59	3.06	0.95	4.99	0.01
50th-Percentile Queue Length [ft/ln]	81.19	8.22	26.09	0.00	23.49	22.66	10.34	89.72	76.42	23.71	124.64	0.24
95th-Percentile Queue Length [veh/ln]	5.85	0.59	1.88	0.00	1.69	1.63	0.74	6.46	5.50	1.71	8.65	0.02
95th-Percentile Queue Length [ft/ln]	146.15	14.80	46.97	0.00	42.28	40.78	18.61	161.50	137.56	42.67	216.19	0.43

Movement, Approach, & Intersection Results

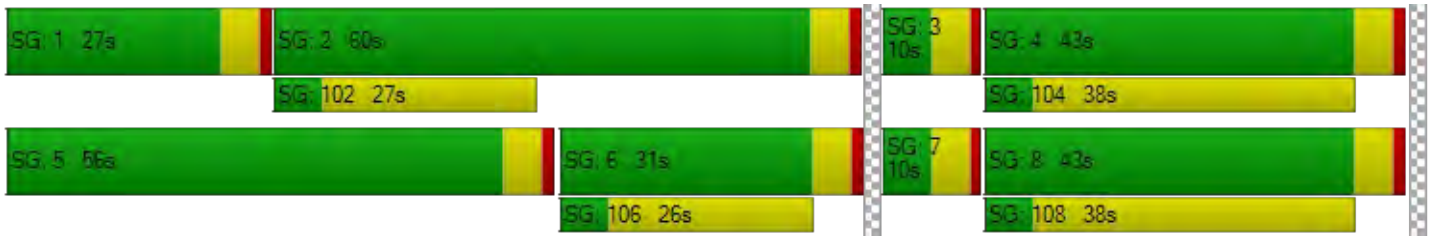
d_M, Delay for Movement [s/veh]	26.46	14.85	15.76	0.00	24.93	25.02	30.30	19.87	20.09	30.24	20.49	15.07
Movement LOS	C	B	B	A	C	C	C	B	C	C	C	B
d_A, Approach Delay [s/veh]	23.92			24.99			20.39			21.41		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.64											
Intersection LOS	C											
Intersection V/C	0.429											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.38	23.38	23.38	23.38
l_p,int, Pedestrian LOS Score for Intersection	2.603	2.328	3.156	3.087
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1197	1197	1733	819
d_b, Bicycle Delay [s]	5.11	5.11	0.57	11.07
l_b,int, Bicycle LOS Score for Intersection	2.555	1.787	2.228	2.293
Bicycle LOS	B	A	B	B

Sequence

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



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Report File: H:\...\8 P3 PM.pdf

Scenario 16 P3 no Project PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.463	17.4	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Left	0.022	25.7	D
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.296	18.3	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.248	12.8	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.383	38.0	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.142	15.3	C
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.067	9.7	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.184	10.7	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.033	9.7	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.710	42.0	D
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.620	38.7	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.706	14.1	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.607	12.6	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	EB Left	0.562	27.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	19	27	9	0	20	20	27	30	11	8	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	624	9	0	669	443	399	30	118	8	36	0
Peak Hour Factor	0.9800	0.9800	0.9500	0.9500	0.9800	0.9800	0.9800	0.9500	0.9800	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	159	2	0	171	113	102	8	30	2	9	0
Total Analysis Volume [veh/h]	73	637	9	0	683	452	407	32	120	8	38	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	16	46	0	22	49	0	26	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	58	58	58	58	58	58	58	58	58	58	58	58
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	24	24	0	20	20	10	14	14	1	5	5
g / C, Green / Cycle	0.06	0.41	0.41	0.00	0.35	0.35	0.17	0.24	0.24	0.01	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.00	0.13	0.28	0.12	0.01	0.08	0.00	0.02	0.00
s, saturation flow rate [veh/h]	1781	3560	1857	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	107	1455	759	0	1775	554	576	839	375	37	149	127
d1, Uniform Delay [s]	26.69	11.50	11.51	0.00	14.20	17.18	22.81	17.08	18.31	28.42	25.04	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	7.43	0.11	0.21	0.00	0.14	3.00	1.61	0.02	0.49	2.95	0.89	0.00
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	0.68	0.29	0.29	0.00	0.38	0.82	0.71	0.04	0.32	0.22	0.26	0.00
d, Delay for Lane Group [s/veh]	34.12	11.61	11.72	0.00	14.34	20.18	24.41	17.10	18.80	31.38	25.94	0.00
Lane Group LOS	C	B	B	A	B	C	C	B	B	C	C	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.15	1.62	1.71	0.00	2.02	5.25	2.55	0.15	1.27	0.07	0.50	0.00
50th-Percentile Queue Length [ft/ln]	28.75	40.41	42.77	0.00	50.39	131.26	63.77	3.85	31.75	1.68	12.46	0.00
95th-Percentile Queue Length [veh/ln]	2.07	2.91	3.08	0.00	3.63	9.01	4.59	0.28	2.29	0.12	0.90	0.00
95th-Percentile Queue Length [ft/ln]	51.75	72.74	76.98	0.00	90.71	225.21	114.78	6.92	57.16	3.02	22.42	0.00

Movement, Approach, & Intersection Results

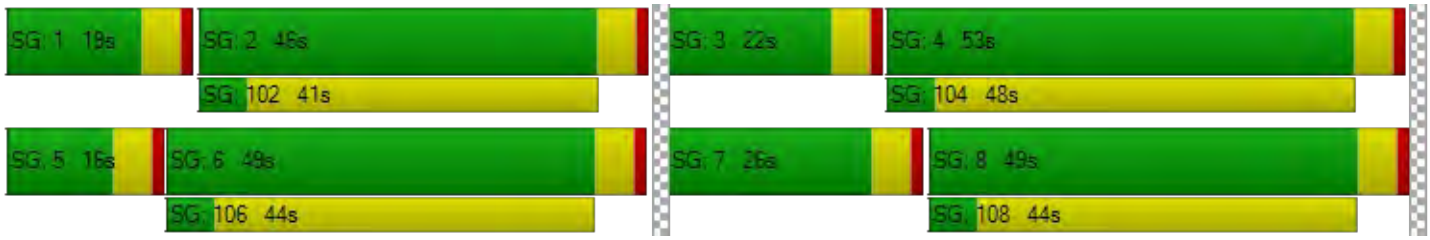
d_M, Delay for Movement [s/veh]	34.12	11.65	11.72	0.00	14.34	20.18	24.41	17.10	18.80	31.38	25.94	0.00
Movement LOS	C	B	B	A	B	C	C	B	B	C	C	A
d_A, Approach Delay [s/veh]	13.93			16.66			22.79			26.88		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.45											
Intersection LOS	B											
Intersection V/C	0.463											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.60	20.60	20.60	20.60
l_p,int, Pedestrian LOS Score for Intersection	2.786	2.970	2.729	2.446
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1522	1419	1522	1661
d_b, Bicycle Delay [s]	1.65	2.44	1.65	0.83
l_b,int, Bicycle LOS Score for Intersection	1.955	2.184	2.021	1.636
Bicycle LOS	A	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	25.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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	39	0	0	44
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]	4	4	587	7	25	592
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	1	1	153	2	7	154
Total Analysis Volume [veh/h]	4	4	611	7	26	617
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

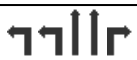
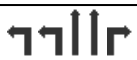
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	25.69	12.35	0.00	0.00	8.85	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.02	0.00	0.00	0.08	0.00
95th-Percentile Queue Length [ft/ln]	1.72	0.61	0.00	0.00	2.08	0.00
d_A, Approach Delay [s/veh]	19.02		0.00		0.36	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.30					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.296

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	9	0	9	8	17	18	21	0	0	27	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	92	91	117	120	246	95	55	425	119	195	431	56
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]	24	24	30	31	64	25	14	111	31	51	112	15
Total Analysis Volume [veh/h]	96	95	122	125	256	99	57	443	124	203	449	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	48	0	11	49	0	11	47	0	14	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	3	10	10	5	12	12
g / C, Green / Cycle	0.08	0.20	0.20	0.09	0.20	0.20	0.06	0.21	0.21	0.10	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.08	0.04	0.07	0.06	0.02	0.12	0.08	0.06	0.13	0.04
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	266	696	311	297	727	325	199	733	327	361	900	402
d1, Uniform Delay [s]	21.46	16.28	17.17	21.23	16.70	16.53	22.10	17.63	16.74	20.86	15.64	14.19
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	0.09	0.81	0.95	0.29	0.52	0.78	0.81	0.72	1.37	0.43	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	0.36	0.14	0.39	0.42	0.35	0.30	0.29	0.60	0.38	0.56	0.50	0.14
d, Delay for Lane Group [s/veh]	22.28	16.37	17.97	22.18	16.99	17.06	22.88	18.44	17.47	22.23	16.07	14.35
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.51	0.40	1.13	0.66	1.12	0.88	0.31	2.07	1.12	1.07	1.91	0.45
50th-Percentile Queue Length [ft/ln]	12.64	9.98	28.19	16.38	27.92	22.00	7.70	51.79	28.08	26.67	47.80	11.34
95th-Percentile Queue Length [veh/ln]	0.91	0.72	2.03	1.18	2.01	1.58	0.55	3.73	2.02	1.92	3.44	0.82
95th-Percentile Queue Length [ft/ln]	22.75	17.97	50.75	29.49	50.26	39.59	13.86	93.22	50.55	48.01	86.05	20.42

Movement, Approach, & Intersection Results

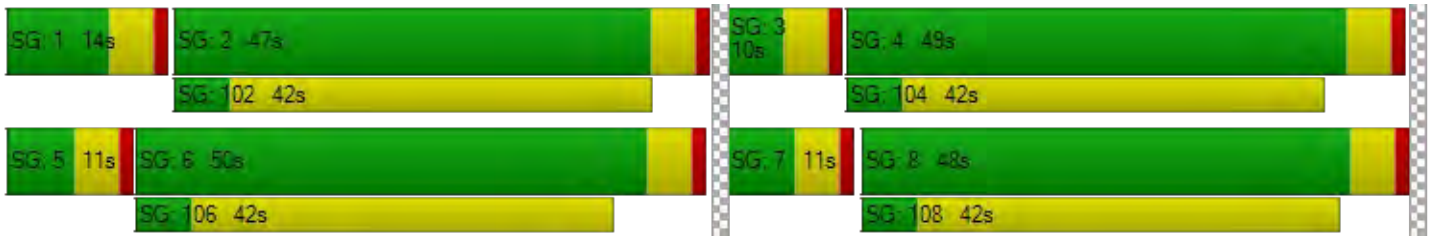
d_M, Delay for Movement [s/veh]	22.28	16.37	17.97	22.18	16.99	17.06	22.88	18.44	17.47	22.23	16.07	14.35
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.81			18.36			18.65			17.69		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.29											
Intersection LOS	B											
Intersection V/C	0.296											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.20	16.20	16.20	16.20
l_p,int, Pedestrian LOS Score for Intersection	2.688	2.659	2.740	2.758
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1765	1806	1724	1847
d_b, Bicycle Delay [s]	0.34	0.23	0.47	0.14
l_b,int, Bicycle LOS Score for Intersection	1.818	1.956	2.074	2.145
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.248

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	17	0	0	0	0	0	0	11	18	0	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	8	8	5	4	10	17	379	162	21	510	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	2	2	1	1	3	5	111	48	6	150	2
Total Analysis Volume [veh/h]	118	9	9	6	5	12	20	446	191	25	600	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	10	13	13	1	4	91	83	83	91	83	83
g / C, Green / Cycle	0.08	0.11	0.11	0.01	0.04	0.76	0.69	0.69	0.76	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.07	0.00	0.01	0.00	0.01	0.02	0.13	0.12	0.03	0.17	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	871	3560	1589	855	3560	1589
c, Capacity [veh/h]	147	207	176	14	61	693	2459	1098	697	2470	1103
d1, Uniform Delay [s]	54.13	47.68	47.73	59.26	56.29	3.89	6.57	6.53	3.77	6.77	5.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.84	0.09	0.12	18.30	2.47	0.08	0.16	0.35	0.02	0.23	0.01
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
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	0.80	0.04	0.05	0.42	0.28	0.03	0.18	0.17	0.04	0.24	0.01
d, Delay for Lane Group [s/veh]	63.97	47.77	47.84	77.56	58.76	3.97	6.73	6.88	3.79	7.00	5.67
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.90	0.25	0.25	0.25	0.54	0.12	1.95	1.71	0.14	2.72	0.06
50th-Percentile Queue Length [ft/ln]	97.58	6.17	6.20	6.36	13.60	3.02	48.64	42.87	3.42	67.89	1.56
95th-Percentile Queue Length [veh/ln]	7.03	0.44	0.45	0.46	0.98	0.22	3.50	3.09	0.25	4.89	0.11
95th-Percentile Queue Length [ft/ln]	175.64	11.11	11.16	11.46	24.48	5.43	87.55	77.17	6.15	122.21	2.81

Movement, Approach, & Intersection Results

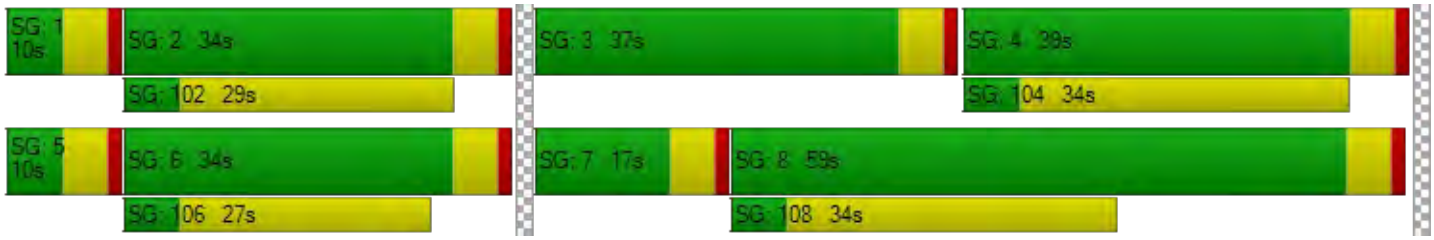
d_M, Delay for Movement [s/veh]	63.97	47.77	47.84	77.56	58.76	58.76	3.97	6.73	6.88	3.79	7.00	5.67
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	61.83			63.66			6.69			6.86		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	12.84											
Intersection LOS	B											
Intersection V/C	0.248											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.259	1.995	2.694	2.646
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.784	1.598	2.102	2.082
Bicycle LOS	A	A	B	B

Sequence

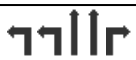
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.383

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	18	8	0	18	0	0	11	0	9	19	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	288	92	221	515	141	89	311	46	132	354	156
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	75	24	58	134	37	23	81	12	34	92	41
Total Analysis Volume [veh/h]	53	300	96	230	536	147	93	324	48	138	369	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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	42	0	19	46	46	18	43	0	16	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	61	61	10	66	80	8	18	18	11	21	21
g / C, Green / Cycle	0.04	0.51	0.51	0.08	0.55	0.66	0.07	0.15	0.15	0.09	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.06	0.07	0.15	0.09	0.05	0.09	0.03	0.08	0.15	0.15
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1679
c, Capacity [veh/h]	70	1806	806	292	1967	1052	121	533	238	164	325	292
d1, Uniform Delay [s]	57.12	15.92	15.52	53.91	14.16	7.57	55.05	47.77	44.77	53.63	48.14	48.22
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]	15.29	0.20	0.30	4.69	0.34	0.28	9.89	1.13	0.41	10.82	6.51	7.62
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	0.76	0.17	0.12	0.79	0.27	0.14	0.77	0.61	0.20	0.84	0.86	0.87
d, Delay for Lane Group [s/veh]	72.41	16.12	15.82	58.60	14.50	7.85	64.95	48.90	45.19	64.45	54.65	55.84
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.26	1.45	3.60	3.88	1.44	3.10	4.62	1.29	4.59	8.68	7.97
50th-Percentile Queue Length [ft/ln]	47.25	56.62	36.23	89.93	97.08	35.94	77.50	115.61	32.21	114.79	216.89	199.14
95th-Percentile Queue Length [veh/ln]	3.40	4.08	2.61	6.47	6.99	2.59	5.58	8.15	2.32	8.11	13.51	12.59
95th-Percentile Queue Length [ft/ln]	85.05	101.92	65.22	161.87	174.74	64.70	139.49	203.78	57.98	202.65	337.66	314.86

Movement, Approach, & Intersection Results

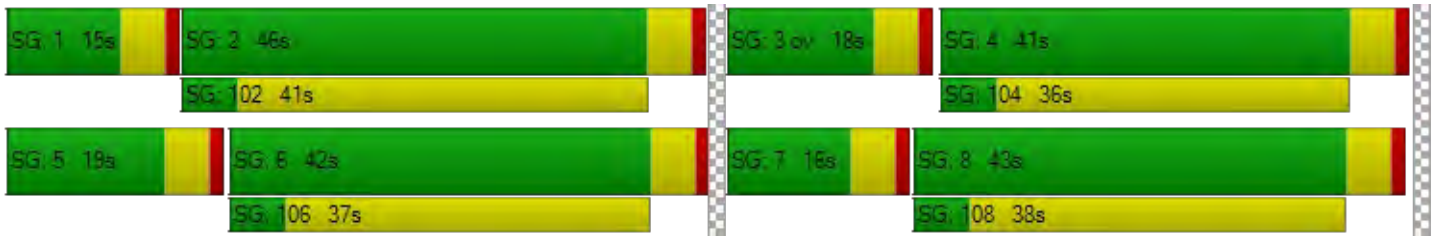
d_M, Delay for Movement [s/veh]	72.41	16.12	15.82	58.60	14.50	7.85	64.95	48.90	45.19	64.45	54.94	55.84
Movement LOS	E	B	B	E	B	A	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	22.70			24.54			51.72			57.12		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.01											
Intersection LOS	D											
Intersection V/C	0.383											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.658	2.814	2.636	2.573
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	616	683	633	600
d_b, Bicycle Delay [s]	28.72	26.02	28.03	29.42
l_b,int, Bicycle LOS Score for Intersection	1.930	2.313	1.943	2.112
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	68	0	0	50	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	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
Total Hourly Volume [veh/h]	0	68	0	0	50	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	0	0	15	0
Total Analysis Volume [veh/h]	0	81	0	0	60	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.31	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.31		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.142

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	9	8	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	258	453	45	53	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	71	124	12	15	0
Total Analysis Volume [veh/h]	0	284	498	49	58	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.14	0.00
d_M, Delay for Movement [s/veh]	8.53	0.00	0.00	0.00	15.29	11.25
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	12.30	12.30
d_A, Approach Delay [s/veh]	0.00		0.00		15.29	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	72	41	0	52	46	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	41	0	52	46	1
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	12	0	15	14	0
Total Analysis Volume [veh/h]	86	49	0	62	55	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.48	0.00	9.73	9.14
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.22	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	5.49	5.49
d_A, Approach Delay [s/veh]	0.00		0.00		9.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.15					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.184

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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	9	0	0	8	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	231	52	40	370	38	12	21	5	32	34	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	63	14	11	102	10	3	6	1	9	9	4
Total Analysis Volume [veh/h]	10	254	57	44	407	42	13	23	5	35	37	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	100	91	91	100	93	93	10	10	10
g / C, Green / Cycle	0.83	0.76	0.76	0.83	0.78	0.78	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.09	0.04	0.11	0.03	0.02	0.00	0.07
s, saturation flow rate [veh/h]	978	1870	1754	1117	3560	1589	1666	1589	1262
c, Capacity [veh/h]	877	1420	1332	995	2776	1239	180	133	147
d1, Uniform Delay [s]	1.73	3.80	3.81	1.75	3.29	2.99	51.40	50.56	54.63
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.16	0.17	0.08	0.11	0.05	0.54	0.12	3.73
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	0.01	0.11	0.11	0.04	0.15	0.03	0.20	0.04	0.59
d, Delay for Lane Group [s/veh]	1.74	3.95	3.98	1.83	3.40	3.04	51.94	50.68	58.37
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.03	0.95	0.93	0.14	1.07	0.21	1.04	0.14	2.75
50th-Percentile Queue Length [ft/ln]	0.71	23.85	23.18	3.62	26.82	5.27	26.04	3.57	68.75
95th-Percentile Queue Length [veh/ln]	0.05	1.72	1.67	0.26	1.93	0.38	1.88	0.26	4.95
95th-Percentile Queue Length [ft/ln]	1.28	42.94	41.73	6.51	48.27	9.49	46.88	6.43	123.75

Movement, Approach, & Intersection Results

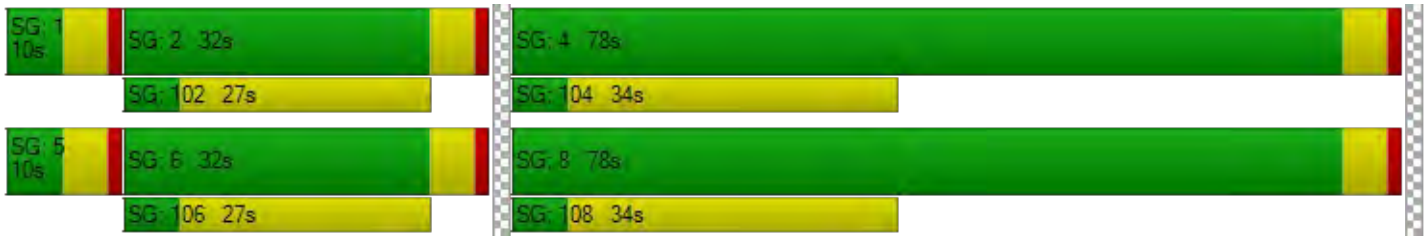
d_M, Delay for Movement [s/veh]	1.74	3.96	3.98	1.83	3.40	3.04	51.94	51.94	50.68	58.37	58.37	58.37
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	3.90			3.23			51.78			58.37		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	10.66											
Intersection LOS	B											
Intersection V/C	0.184											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	51.33	51.33	51.33
l_p,int, Pedestrian LOS Score for Intersection	2.515	2.736	2.009	1.881
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.03	36.03	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.824	1.966	1.627	1.703
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	104	32	0	94	24	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	32	0	94	24	0
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	9	0	25	6	0
Total Analysis Volume [veh/h]	112	34	0	101	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

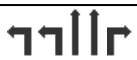
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.51	0.00	9.69	8.85
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	2.54	2.54
d_A, Approach Delay [s/veh]	0.00		0.00		9.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.92					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	42.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.710

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	10	10	9	93	11	0	0	102	11	8	95	87
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	428	324	388	507	231	274	899	75	580	917	352
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	115	87	104	136	62	74	242	20	156	247	95
Total Analysis Volume [veh/h]	285	460	348	417	545	248	295	967	81	624	986	378
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	50	0	17	50	0	22	49	0	24	51	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	12	27	27	16	31	31	12	24	24	23	35	35
g / C, Green / Cycle	0.11	0.24	0.24	0.15	0.28	0.28	0.11	0.22	0.22	0.21	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.22	0.12	0.11	0.16	0.09	0.19	0.05	0.18	0.28	0.23
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	366	1236	386	505	1440	449	376	1135	354	715	1142	530
d1, Uniform Delay [s]	47.93	34.69	40.40	45.62	31.69	33.53	47.77	41.02	35.02	42.24	35.10	32.90
k, delay calibration	0.11	0.11	0.29	0.11	0.11	0.12	0.11	0.11	0.11	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
d2, Incremental Delay [s]	3.60	0.19	17.71	3.49	0.16	1.21	3.62	1.92	0.33	3.51	2.08	5.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.37	0.90	0.83	0.38	0.55	0.78	0.85	0.23	0.87	0.86	0.71
d, Delay for Lane Group [s/veh]	51.53	34.87	58.11	49.12	31.85	34.75	51.40	42.94	35.34	45.74	37.18	37.99
Lane Group LOS	D	C	E	D	C	C	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.97	3.43	10.90	5.74	3.89	5.73	4.00	8.21	1.75	8.46	12.49	9.49
50th-Percentile Queue Length [ft/ln]	99.24	85.71	272.58	143.39	97.13	143.29	99.93	205.34	43.77	211.49	312.18	237.19
95th-Percentile Queue Length [veh/ln]	7.15	6.17	16.32	9.66	6.99	9.66	7.19	12.91	3.15	13.23	18.28	14.54
95th-Percentile Queue Length [ft/ln]	178.63	154.27	407.97	241.59	174.83	241.45	179.87	322.84	78.78	330.74	457.06	363.47

Movement, Approach, & Intersection Results

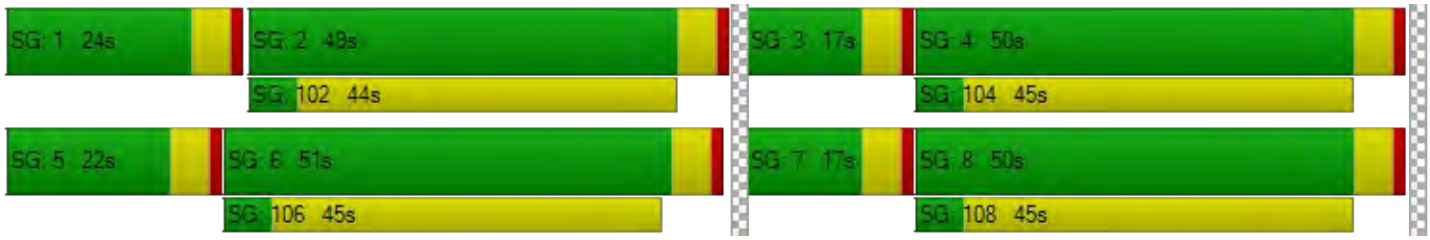
d_M, Delay for Movement [s/veh]	51.53	34.87	58.11	49.12	31.85	34.75	51.40	42.94	35.34	45.74	37.18	37.99
Movement LOS	D	C	E	D	C	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	46.62			38.40			44.34			40.02		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41.98											
Intersection LOS	D											
Intersection V/C	0.710											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.26	46.26	46.26	46.26
l_p,int, Pedestrian LOS Score for Intersection	3.114	3.114	3.325	3.190
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	820	820	802	838
d_b, Bicycle Delay [s]	19.11	19.11	19.71	18.53
l_b,int, Bicycle LOS Score for Intersection	2.161	2.225	2.298	3.200
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	38.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.620

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	204	0	0	191	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	44	181	384	48	134	221	1067	80	252	1317	265
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	11	46	98	12	34	56	272	20	64	336	68
Total Analysis Volume [veh/h]	142	45	185	392	49	137	226	1089	82	257	1344	270
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	75	75	11	67	67
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.54	0.54	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.21	0.05	0.07	0.26	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	239	245	214	468	224	250	2734	853	274	2423	756
d1, Uniform Delay [s]	55.31	55.31	59.34	59.01	58.95	59.26	19.11	15.84	64.12	26.14	23.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.15	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]	1.02	0.99	10.06	4.04	7.70	15.30	0.44	0.22	14.40	0.92	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
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	0.39	0.87	0.84	0.83	0.91	0.40	0.10	0.94	0.55	0.36
d, Delay for Lane Group [s/veh]	56.33	56.30	69.40	63.05	66.65	74.57	19.54	16.06	78.52	27.06	24.50
Lane Group LOS	E	E	E	E	E	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.14	7.04	7.06	6.92	8.97	7.09	1.36	5.12	10.86	5.97
50th-Percentile Queue Length [ft/ln]	76.75	78.39	176.01	176.45	173.02	224.24	177.25	34.00	127.98	271.45	149.23
95th-Percentile Queue Length [veh/ln]	5.53	5.64	11.39	11.41	11.24	13.88	11.46	2.45	8.83	16.26	9.98
95th-Percentile Queue Length [ft/ln]	138.15	141.10	284.80	285.37	280.88	347.04	286.42	61.21	220.75	406.56	249.40

Movement, Approach, & Intersection Results

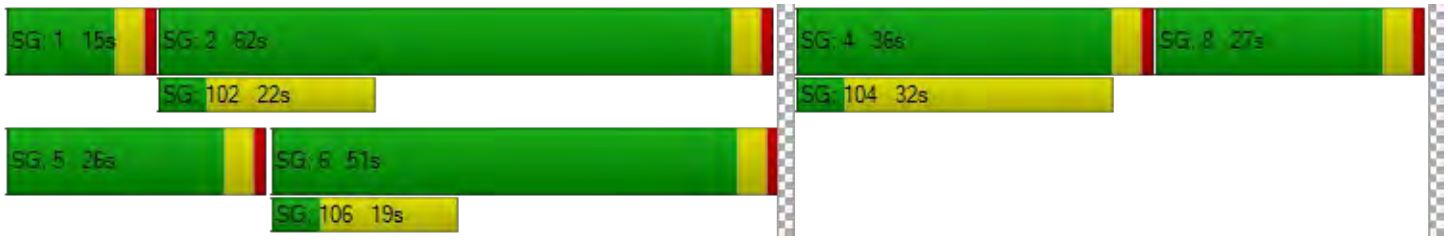
d_M, Delay for Movement [s/veh]	56.32	56.30	69.40	63.05	66.65	66.65	74.57	19.54	16.06	78.52	27.06	24.50
Movement LOS	E	E	E	E	E	E	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	62.82			64.21			28.24			33.76		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.67											
Intersection LOS	D											
Intersection V/C	0.620											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.599	2.540	3.116	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
I_b,int, Bicycle LOS Score for Intersection	2.173	2.513	2.328	2.589
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	92	0	68	0	131	73	0	122	127
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	480	1	869	0	1178	598	0	1350	637
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	124	0	224	0	304	154	0	348	164
Total Analysis Volume [veh/h]	0	0	0	495	1	896	0	1214	616	0	1392	657
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		25	25	25	28	28	28	58
g / C, Green / Cycle		0.40	0.40	0.40	0.44	0.44	0.44	0.92
(v / s)_i Volume / Saturation Flow Rate		0.14	0.14	0.32	0.24	0.39	0.27	0.41
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		712	712	1125	2246	701	2246	1463
d1, Uniform Delay [s]		13.14	13.14	16.59	12.88	16.02	13.50	0.34
k, delay calibration		0.11	0.11	0.11	0.11	0.29	0.11	0.33
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.29	0.29	1.34	0.20	9.36	0.28	0.67
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		0.35	0.35	0.80	0.54	0.88	0.62	0.45
d, Delay for Lane Group [s/veh]		13.43	13.43	17.93	13.08	25.38	13.78	1.00
Lane Group LOS		B	B	B	B	C	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.24	2.24	5.19	3.68	8.71	4.43	0.27
50th-Percentile Queue Length [ft/ln]		56.05	56.05	129.81	92.00	217.70	110.75	6.76
95th-Percentile Queue Length [veh/ln]		4.04	4.04	8.93	6.62	13.55	7.88	0.49
95th-Percentile Queue Length [ft/ln]		100.89	100.89	223.23	165.59	338.68	197.05	12.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	13.43	13.43	17.93	0.00	13.08	25.38	0.00	13.78	1.00
Movement LOS				B	B	B		B	C		B	A
d_A, Approach Delay [s/veh]	0.00			16.33			17.22			9.69		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	14.06											
Intersection LOS	B											
Intersection V/C	0.706											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.00	23.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.124	2.862	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	478	1435	1435
d_b, Bicycle Delay [s]	31.35	18.15	2.50	2.50
l_b,int, Bicycle LOS Score for Intersection	4.132	3.856	2.566	2.687
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.607

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	68	0	139	0	0	0	0	151	73	0	181	84
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	611	1	875	0	0	0	0	1164	510	0	1386	363
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	159	0	228	0	0	0	0	303	133	0	361	95
Total Analysis Volume [veh/h]	636	1	911	0	0	0	0	1213	531	0	1444	378
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	56	56	56		56	56	56	56
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	24	24	24		22	51	22	22
g / C, Green / Cycle	0.42	0.42	0.42		0.40	0.91	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.32		0.24	0.33	0.28	0.24
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	750	751	1185		2040	1448	2040	637
d1, Uniform Delay [s]	11.44	11.44	13.90		13.24	0.33	14.08	13.23
k, delay calibration	0.11	0.11	0.11		0.11	0.16	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	0.38	1.08		0.28	0.23	0.46	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	0.42	0.42	0.77		0.59	0.37	0.71	0.59
d, Delay for Lane Group [s/veh]	11.83	11.82	14.97		13.52	0.57	14.54	14.12
Lane Group LOS	B	B	B		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.45	2.45	4.30		3.47	0.09	4.41	3.35
50th-Percentile Queue Length [ft/ln]	61.30	61.30	107.44		86.76	2.34	110.32	83.77
95th-Percentile Queue Length [veh/ln]	4.41	4.41	7.70		6.25	0.17	7.86	6.03
95th-Percentile Queue Length [ft/ln]	110.34	110.33	192.44		156.17	4.21	196.45	150.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.82	11.82	14.97	0.00	0.00	0.00	0.00	13.52	0.57	0.00	14.54	14.12
Movement LOS	B	B	B					B	A		B	B
d_A, Approach Delay [s/veh]	13.68			0.00			9.58			14.45		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	12.55											
Intersection LOS	B											
Intersection V/C	0.607											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.71	19.71	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.860	2.040	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	536	0	1608	1608
d_b, Bicycle Delay [s]	14.99	27.98	1.07	1.07
l_b,int, Bicycle LOS Score for Intersection	4.114	4.132	2.519	2.562
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	27.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	122	0	21	0	0	0	0	156	134	23	143	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	504	40	170	0	44	76	118	1417	421	233	1164	1
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	134	11	45	0	12	20	31	377	112	62	310	0
Total Analysis Volume [veh/h]	536	43	181	0	47	81	126	1507	448	248	1238	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	48	0	10	44	0	51	37	0	45	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	82	82	82	82	82	82	82	82	82	82	82	82
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	16	25	25	0	9	9	5	28	28	8	32	32
g / C, Green / Cycle	0.19	0.31	0.31	0.00	0.12	0.12	0.06	0.35	0.35	0.10	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.15	0.02	0.11	0.00	0.04	0.04	0.04	0.30	0.28	0.07	0.24	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1780	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	665	575	489	1	206	184	211	1765	551	354	1977	617
d1, Uniform Delay [s]	31.76	20.19	22.26	0.00	33.41	33.49	37.65	24.94	24.45	35.69	20.34	15.41
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.27	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]	2.37	0.05	0.47	0.00	0.89	1.08	2.71	1.26	7.01	2.51	0.33	0.00
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	0.81	0.07	0.37	0.00	0.32	0.34	0.60	0.85	0.81	0.70	0.63	0.00
d, Delay for Lane Group [s/veh]	34.12	20.25	22.73	0.00	34.30	34.57	40.36	26.20	31.46	38.20	20.67	15.41
Lane Group LOS	C	C	C	A	C	C	D	C	C	D	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.15	0.58	2.70	0.00	1.23	1.17	1.29	8.77	8.56	2.47	6.09	0.01
50th-Percentile Queue Length [ft/ln]	128.63	14.42	67.48	0.00	30.74	29.35	32.26	219.28	214.06	61.79	152.23	0.28
95th-Percentile Queue Length [veh/ln]	8.86	1.04	4.86	0.00	2.21	2.11	2.32	13.63	13.36	4.45	10.14	0.02
95th-Percentile Queue Length [ft/ln]	221.62	25.95	121.46	0.00	55.34	52.83	58.07	340.70	334.03	111.22	253.40	0.51

Movement, Approach, & Intersection Results

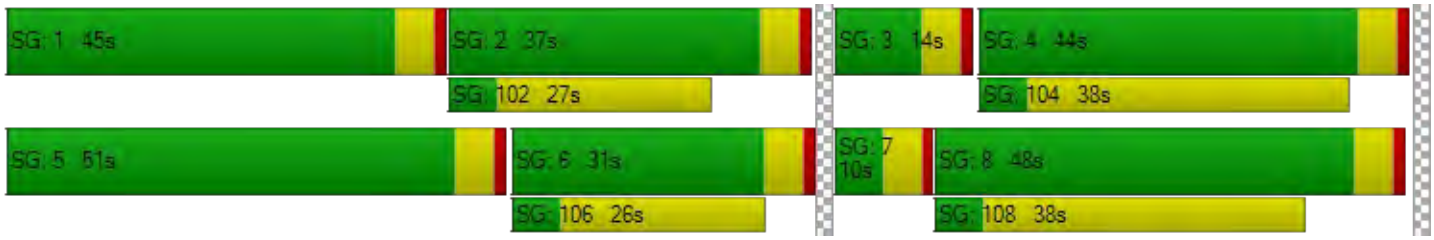
d_M, Delay for Movement [s/veh]	34.12	20.25	22.73	0.00	34.30	34.51	40.36	26.20	31.46	38.20	20.67	15.41
Movement LOS	C	C	C	A	C	C	D	C	C	D	C	B
d_A, Approach Delay [s/veh]	30.62			34.43			28.19			23.59		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.25											
Intersection LOS	C											
Intersection V/C	0.562											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	32.52	32.52	32.52	32.52
l_p,int, Pedestrian LOS Score for Intersection	2.694	2.355	3.273	3.190
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1048	951	780	634
d_b, Bicycle Delay [s]	9.29	11.29	15.26	19.14
l_b,int, Bicycle LOS Score for Intersection	2.814	1.771	2.704	2.377
Bicycle LOS	C	A	B	B

Sequence

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



Appendix D-9

Phase 1+2+3 with Project (2031)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\9 P3 + P AM.pdf

Scenario 17 P3 + Project AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.302	17.4	B
2	Bellegrave Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	WB Left	0.398	17.4	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.289	17.6	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.407	23.0	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.454	44.7	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Left		5.2	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.081	12.1	B
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	EB Right		5.6	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.199	18.2	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	SB Thru		5.5	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.623	31.8	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.437	21.3	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	SB Right	0.381	9.4	A
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.639	11.4	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.623	31.0	C
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.181	18.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.302

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	6	8	29	11	18	18	8	40	16	26	48	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	548	29	11	256	202	373	40	68	26	48	29
Peak Hour Factor	0.9600	0.9600	0.9500	0.9500	0.9600	0.9600	0.9600	0.9500	0.9600	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]	13	143	8	3	67	53	97	11	18	7	13	8
Total Analysis Volume [veh/h]	53	571	31	12	267	210	389	42	71	27	51	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	12	46	0	21	49	0	25	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	47	47	47	47	47	47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	12	12	1	10	10	8	13	13	2	7	7
g / C, Green / Cycle	0.05	0.25	0.25	0.02	0.21	0.21	0.17	0.28	0.28	0.03	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.01	0.05	0.13	0.11	0.01	0.04	0.01	0.03	0.02
s, saturation flow rate [veh/h]	1781	3560	1821	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	97	887	454	29	1075	335	595	1000	446	113	264	225
d1, Uniform Delay [s]	21.88	15.06	15.07	23.13	15.59	17.02	18.33	12.42	12.85	22.38	17.98	17.84
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	4.79	0.35	0.70	9.42	0.12	1.92	1.23	0.02	0.16	1.09	0.35	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	0.55	0.45	0.45	0.42	0.25	0.63	0.65	0.04	0.16	0.24	0.19	0.14
d, Delay for Lane Group [s/veh]	26.67	15.41	15.77	32.55	15.71	18.94	19.56	12.44	13.01	23.47	18.34	18.12
Lane Group LOS	C	B	B	C	B	B	B	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.65	1.60	1.70	0.20	0.71	1.99	1.86	0.14	0.51	0.15	0.47	0.28
50th-Percentile Queue Length [ft/ln]	16.25	40.09	42.47	4.91	17.85	49.70	46.39	3.55	12.73	3.77	11.66	7.08
95th-Percentile Queue Length [veh/ln]	1.17	2.89	3.06	0.35	1.29	3.58	3.34	0.26	0.92	0.27	0.84	0.51
95th-Percentile Queue Length [ft/ln]	29.26	72.16	76.45	8.84	32.14	89.45	83.50	6.40	22.92	6.78	20.99	12.74

Movement, Approach, & Intersection Results

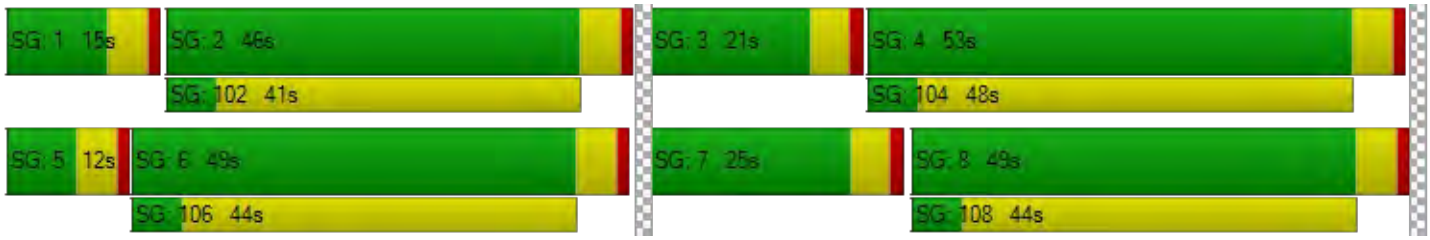
d_M, Delay for Movement [s/veh]	26.67	15.52	15.77	32.55	15.71	18.94	19.56	12.44	13.01	23.47	18.34	18.12
Movement LOS	C	B	B	C	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.44			17.51			18.04			19.55		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.39											
Intersection LOS	B											
Intersection V/C	0.302											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.51	15.51	15.51	15.51
l_p,int, Pedestrian LOS Score for Intersection	2.703	2.873	2.675	2.452
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1861	1734	1861	2030
d_b, Bicycle Delay [s]	0.12	0.42	0.12	0.01
l_b,int, Bicycle LOS Score for Intersection	1.920	1.829	1.974	1.739
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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]	114	116	35	89	59	26
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]	114	118	540	89	62	494
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	35	159	26	18	145
Total Analysis Volume [veh/h]	134	139	635	105	73	581
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
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.0	0.0	4.0	4.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	17	0	34	0	69	103
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	24	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	3.0	0.0	3.0	3.0
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	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	12	12	87	87	6	98
g / C, Green / Cycle	0.10	0.10	0.72	0.72	0.05	0.82
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.20	0.21	0.04	0.31
s, saturation flow rate [veh/h]	1781	1589	1870	1781	1781	1870
c, Capacity [veh/h]	179	159	1349	1284	95	1527
d1, Uniform Delay [s]	52.51	53.21	5.81	5.89	56.03	2.93
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]	6.21	13.50	0.50	0.57	12.00	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	1.00	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	0.75	0.87	0.27	0.29	0.77	0.38
d, Delay for Lane Group [s/veh]	58.72	66.71	6.32	6.45	68.03	3.66
Lane Group LOS	E	E	A	A	E	A
Critical Lane Group	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.24	4.73	3.14	3.19	2.50	3.03
50th-Percentile Queue Length [ft/ln]	105.90	118.16	78.52	79.77	62.49	75.74
95th-Percentile Queue Length [veh/ln]	7.61	8.29	5.65	5.74	4.50	5.45
95th-Percentile Queue Length [ft/ln]	190.28	207.30	141.33	143.59	112.48	136.33

Movement, Approach, & Intersection Results

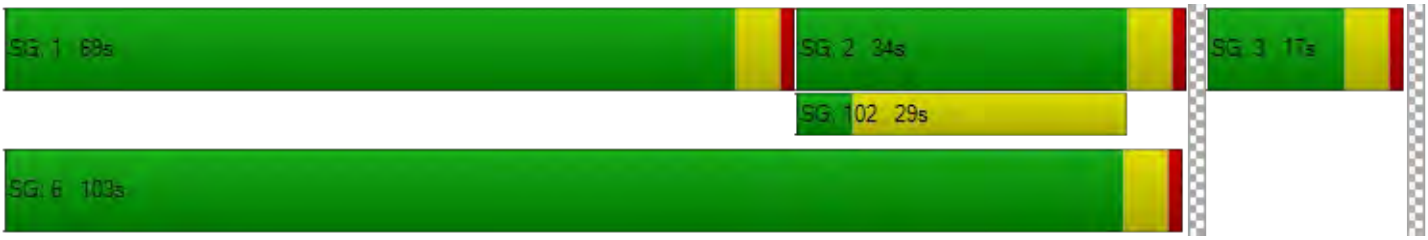
d_M, Delay for Movement [s/veh]	58.72	66.71	6.37	6.45	68.03	3.66
Movement LOS	E	E	A	A	E	A
d_A, Approach Delay [s/veh]	62.79		6.38		10.84	
Approach LOS	E		A		B	
d_I, Intersection Delay [s/veh]	17.37					
Intersection LOS	B					
Intersection V/C	0.398					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.102	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	483	1634
d_b, Bicycle Delay [s]	48.59	34.50	2.01
l_b,int, Bicycle LOS Score for Intersection	1.560	2.170	2.639
Bicycle LOS	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	6	0	6	7	35	51	101	0	0	49	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	219	121	40	57	72	111	484	55	127	420	114
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	61	34	11	16	20	31	134	15	35	117	32
Total Analysis Volume [veh/h]	60	243	134	44	63	80	123	538	61	141	467	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	10	47	0	15	47	0	15	47	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	46	46	46	46	46	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	4	10	10	4	10	10
g / C, Green / Cycle	0.06	0.21	0.21	0.05	0.20	0.20	0.09	0.22	0.22	0.09	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.08	0.01	0.02	0.05	0.04	0.15	0.04	0.04	0.13	0.08
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	206	761	340	167	720	322	301	773	345	317	789	352
d1, Uniform Delay [s]	20.95	15.45	15.72	21.36	15.08	15.60	20.12	16.81	14.84	20.03	16.24	15.34
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.77	0.24	0.74	0.83	0.05	0.40	0.89	1.14	0.24	0.98	0.71	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	0.29	0.32	0.39	0.26	0.09	0.25	0.41	0.70	0.18	0.45	0.59	0.36
d, Delay for Lane Group [s/veh]	21.72	15.69	16.46	22.20	15.13	16.00	21.01	17.96	15.09	21.02	16.95	15.96
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.30	0.97	1.13	0.23	0.24	0.66	0.60	2.41	0.48	0.69	2.00	1.05
50th-Percentile Queue Length [ft/ln]	7.61	24.27	28.28	5.72	6.06	16.47	15.11	60.26	12.03	17.32	50.07	26.23
95th-Percentile Queue Length [veh/ln]	0.55	1.75	2.04	0.41	0.44	1.19	1.09	4.34	0.87	1.25	3.60	1.89
95th-Percentile Queue Length [ft/ln]	13.70	43.69	50.90	10.29	10.91	29.65	27.20	108.47	21.65	31.17	90.12	47.22

Movement, Approach, & Intersection Results

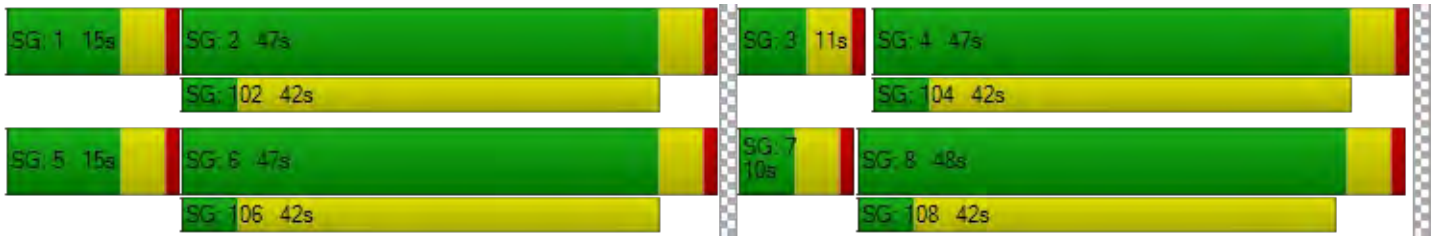
d_M, Delay for Movement [s/veh]	21.72	15.69	16.46	22.20	15.13	16.00	21.01	17.96	15.09	21.02	16.95	15.96
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.75			17.17			18.24			17.56		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.59											
Intersection LOS	B											
Intersection V/C	0.289											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.08	15.08	15.08	15.08
l_p,int, Pedestrian LOS Score for Intersection	2.658	2.655	2.745	2.762
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1853	1809	1809	1809
d_b, Bicycle Delay [s]	0.13	0.21	0.21	0.21
l_b,int, Bicycle LOS Score for Intersection	1.920	1.714	2.155	2.166
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	23.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.407

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	29	0	0	0	0	0	0	74	34	0	27	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	144	23	35	41	16	98	156	451	89	52	491	60
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	7	11	13	5	31	49	141	28	16	153	19
Total Analysis Volume [veh/h]	180	29	44	51	20	123	195	564	111	65	614	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	39	0	37	52	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	14	22	22	5	13	78	69	69	78	68	68
g / C, Green / Cycle	0.12	0.19	0.19	0.04	0.11	0.65	0.57	0.57	0.65	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.10	0.02	0.03	0.03	0.09	0.23	0.16	0.07	0.08	0.17	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	860	3560	1589	861	3560	1589
c, Capacity [veh/h]	209	346	294	68	172	576	2038	910	584	2021	902
d1, Uniform Delay [s]	52.01	40.50	41.00	57.18	52.65	8.95	13.04	11.80	8.07	13.56	11.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.85	0.10	0.23	15.11	9.98	1.59	0.34	0.27	0.08	0.39	0.18
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	0.86	0.08	0.15	0.75	0.83	0.34	0.28	0.12	0.11	0.30	0.08
d, Delay for Lane Group [s/veh]	61.86	40.60	41.24	72.29	62.63	10.54	13.38	12.08	8.15	13.95	11.96
Lane Group LOS	E	D	D	E	E	B	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.89	0.73	1.12	1.82	4.70	2.16	3.90	1.42	0.60	4.38	0.95
50th-Percentile Queue Length [ft/ln]	147.22	18.14	27.96	45.46	117.52	54.05	97.42	35.58	15.03	109.40	23.77
95th-Percentile Queue Length [veh/ln]	9.87	1.31	2.01	3.27	8.26	3.89	7.01	2.56	1.08	7.81	1.71
95th-Percentile Queue Length [ft/ln]	246.72	32.64	50.32	81.84	206.41	97.28	175.36	64.05	27.05	195.17	42.78

Movement, Approach, & Intersection Results

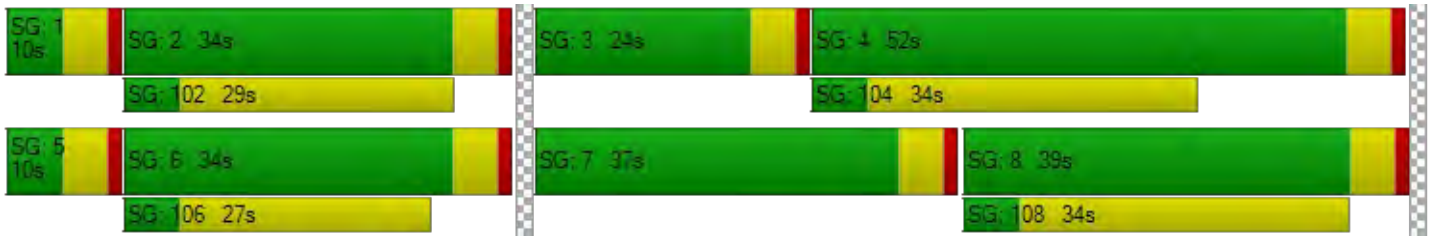
d_M, Delay for Movement [s/veh]	61.86	40.60	41.24	72.29	62.63	62.63	10.54	13.38	12.08	8.15	13.95	11.96
Movement LOS	E	D	D	E	E	E	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	55.84			65.17			12.58			13.25		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	23.03											
Intersection LOS	C											
Intersection V/C	0.407											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.310	2.278	2.759	2.698
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	783	483	483
d_b, Bicycle Delay [s]	30.83	22.22	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	1.977	1.880	2.277	2.182
Bicycle LOS	A	A	B	B

Sequence

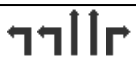
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	44.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.454

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	13	7	0	13	11	29	45	0	6	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	330	182	135	212	70	109	268	38	207	251	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	109	60	44	70	23	36	88	13	68	83	47
Total Analysis Volume [veh/h]	100	434	239	178	279	92	143	353	50	272	330	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	19	43	0	27	51	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	64	64	9	64	81	12	15	15	22	25	25
g / C, Green / Cycle	0.07	0.49	0.49	0.07	0.49	0.63	0.09	0.12	0.12	0.17	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.15	0.05	0.08	0.06	0.08	0.10	0.03	0.15	0.15	0.15
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1645
c, Capacity [veh/h]	124	1755	784	234	1750	993	169	424	189	296	356	313
d1, Uniform Delay [s]	59.66	19.03	19.67	59.57	18.25	9.71	57.89	56.00	52.08	53.35	49.97	50.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.19	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]	11.75	0.34	1.00	5.02	0.20	0.18	10.81	4.29	0.73	17.49	3.59	4.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.25	0.30	0.76	0.16	0.09	0.84	0.83	0.26	0.92	0.77	0.78
d, Delay for Lane Group [s/veh]	71.41	19.37	20.67	64.59	18.44	9.89	68.71	60.29	52.82	70.84	53.56	54.14
Lane Group LOS	E	B	C	E	B	A	E	E	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	3.89	4.55	3.05	2.39	1.09	5.14	5.92	1.53	10.18	8.85	7.87
50th-Percentile Queue Length [ft/ln]	91.50	97.24	113.82	76.32	59.71	27.28	128.57	148.04	38.31	254.52	221.34	196.87
95th-Percentile Queue Length [veh/ln]	6.59	7.00	8.05	5.49	4.30	1.96	8.86	9.91	2.76	15.41	13.73	12.48
95th-Percentile Queue Length [ft/ln]	164.69	175.03	201.30	137.37	107.48	49.10	221.55	247.81	68.95	385.34	343.33	311.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.41	19.37	20.67	64.59	18.44	9.89	68.71	60.29	52.82	70.84	53.66	54.14
Movement LOS	E	B	C	E	B	A	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	26.50			31.97			61.81			59.69		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	44.75											
Intersection LOS	D											
Intersection V/C	0.454											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.695	2.796	2.645	2.623
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	708
d_b, Bicycle Delay [s]	33.27	30.47	32.56	27.15
l_b,int, Bicycle LOS Score for Intersection	2.197	2.013	2.010	2.211
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	41	0	0	0	0	0	0	18	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	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]	124	123	0	0	45	102	108	0	161	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	124	123	41	0	45	102	108	0	161	18	0	0
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	38	13	0	14	31	33	0	49	5	0	0
Total Analysis Volume [veh/h]	151	150	50	0	55	124	132	0	196	22	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	135			173			77			436		
Exiting Flow Rate [veh/h]	273			285			277			50		
Demand Flow Rate [veh/h]	124	123	41	0	45	102	108	0	161	18	0	0
Adjusted Demand Flow Rate [veh/h]	151	150	50	0	55	124	132	0	196	22	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	0.99	0.99	1.00
Entry Flow Rate [veh/h]	351	182	331	22
Capacity of Entry and Bypass Lanes [veh/h]	1203	1157	1276	885
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1203	1142	1266	885
X, volume / capacity	0.29	0.16	0.26	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.22	0.56	1.04	0.08
95th-Percentile Queue Length [ft]	30.55	13.89	26.00	1.91
Approach Delay [s/veh]	5.68	4.53	5.13	4.30
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.21			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.081

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	6	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	342	208	19	40	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	97	59	5	11	0
Total Analysis Volume [veh/h]	0	389	236	22	45	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.08	0.00
d_M, Delay for Movement [s/veh]	7.76	0.00	0.00	0.00	12.09	9.53
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.26	0.26
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.62	6.62
d_A, Approach Delay [s/veh]	0.00		0.00		12.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	31	24	0	36	0	0	0	0	60	0	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]	87	154	0	25	151	21	52	13	166	0	16	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	185	24	25	187	21	52	13	166	60	16	30
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	53	7	7	53	6	15	4	47	17	5	9
Total Analysis Volume [veh/h]	99	210	27	28	213	24	59	15	189	68	18	34
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	104			189			315			375		
Exiting Flow Rate [veh/h]	479			309			144			71		
Demand Flow Rate [veh/h]	87	185	24	25	187	21	52	13	166	60	16	30
Adjusted Demand Flow Rate [veh/h]	99	210	27	28	213	24	59	15	189	68	18	34

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	343	271	269	123
Capacity of Entry and Bypass Lanes [veh/h]	1242	1139	1001	942
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1217	1117	981	923
X, volume / capacity	0.28	0.24	0.27	0.13

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.13	0.93	1.09	0.45
95th-Percentile Queue Length [ft]	28.32	23.15	27.14	11.16
Approach Delay [s/veh]	5.46	5.41	6.35	5.14
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.65			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.199

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	11	6	0	0	7	0	0	19	10	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	273	12	10	179	16	42	26	13	29	55	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	75	3	3	49	4	12	7	4	8	15	9
Total Analysis Volume [veh/h]	15	300	13	11	197	18	46	29	14	32	60	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	94	87	87	94	87	87	16	16	16
g / C, Green / Cycle	0.78	0.73	0.73	0.78	0.72	0.72	0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.08	0.01	0.06	0.01	0.08	0.01	0.11
s, saturation flow rate [veh/h]	1199	1870	1843	1101	3560	1589	968	1589	1128
c, Capacity [veh/h]	1009	1357	1338	924	2572	1148	180	216	191
d1, Uniform Delay [s]	2.93	4.92	4.92	2.94	4.90	4.68	47.77	45.17	50.52
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.17	0.18	0.02	0.06	0.02	1.53	0.12	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
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	0.01	0.12	0.12	0.01	0.08	0.02	0.42	0.06	0.66
d, Delay for Lane Group [s/veh]	2.93	5.09	5.10	2.96	4.96	4.70	49.30	45.29	54.44
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	1.14	1.13	0.06	0.68	0.12	2.17	0.37	3.97
50th-Percentile Queue Length [ft/ln]	1.72	28.42	28.23	1.38	17.11	3.10	54.18	9.34	99.26
95th-Percentile Queue Length [veh/ln]	0.12	2.05	2.03	0.10	1.23	0.22	3.90	0.67	7.15
95th-Percentile Queue Length [ft/ln]	3.09	51.16	50.81	2.48	30.80	5.57	97.52	16.81	178.67

Movement, Approach, & Intersection Results

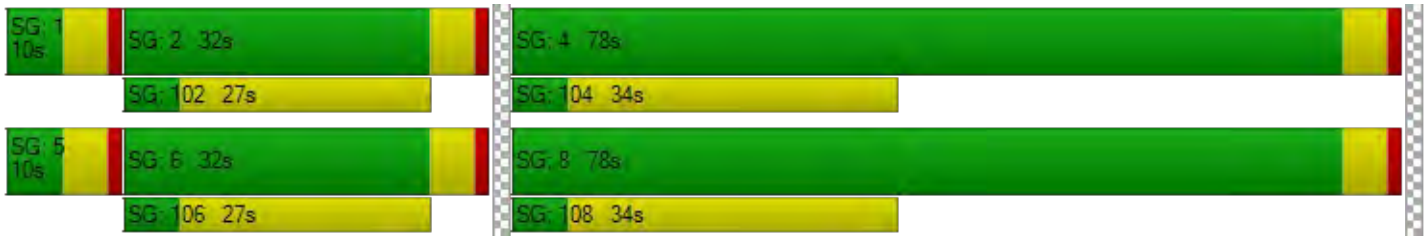
d_M, Delay for Movement [s/veh]	2.93	5.10	5.10	2.96	4.96	4.70	49.30	49.30	45.29	54.44	54.44	54.44
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	5.00			4.84			48.67			54.44		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	18.15											
Intersection LOS	B											
Intersection V/C	0.199											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.472	2.759	2.030	1.829
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.830	1.746	1.706	1.769
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	55	12	0	97	0	0	0	0	34	0	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]	23	198	0	19	290	8	21	0	57	0	0	22
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	23	253	12	19	387	8	21	0	57	34	0	23
Peak Hour Factor	0.9500	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9500	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	70	3	5	106	2	6	0	15	9	0	6
Total Analysis Volume [veh/h]	24	278	13	21	425	9	23	0	60	37	0	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	45			62			493			332		
Exiting Flow Rate [veh/h]	532			333			34			21		
Demand Flow Rate [veh/h]	23	253	12	19	387	8	21	0	57	34	0	23
Adjusted Demand Flow Rate [veh/h]	24	278	13	21	425	9	23	0	60	37	0	25

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	309	0	465	85	64
Capacity of Entry and Bypass Lanes [veh/h]	1319	1351	1296	835	985
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1293	1324	1270	819	965
X, volume / capacity	0.23	0.01	0.36	0.10	0.06

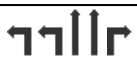
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.91	0.03	1.65	0.34	0.21
95th-Percentile Queue Length [ft]	22.70	0.74	41.22	8.43	5.14
Approach Delay [s/veh]	4.72		6.20	5.40	4.31
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	5.49				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	31.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.623

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	6	6	15	87	5	0	0	58	5	30	79	88
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	482	402	297	245	101	185	844	37	346	670	232
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	124	104	77	63	26	48	218	10	89	173	60
Total Analysis Volume [veh/h]	113	497	414	306	253	104	191	870	38	357	691	239
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	52	0	18	50	0	20	49	0	21	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	25	25	10	30	30	7	18	18	11	23	23
g / C, Green / Cycle	0.05	0.29	0.29	0.12	0.36	0.36	0.08	0.22	0.22	0.14	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.26	0.09	0.05	0.07	0.06	0.17	0.02	0.10	0.19	0.14
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	190	1499	468	413	1827	570	285	1099	343	468	956	444
d1, Uniform Delay [s]	39.21	23.44	28.60	36.14	18.38	18.69	37.85	31.50	26.76	35.41	28.19	26.56
k, delay calibration	0.11	0.11	0.24	0.11	0.11	0.11	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]	2.95	0.13	11.68	2.65	0.03	0.15	2.73	1.33	0.14	2.62	1.05	1.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.59	0.33	0.89	0.74	0.14	0.18	0.67	0.79	0.11	0.76	0.72	0.54
d, Delay for Lane Group [s/veh]	42.16	23.57	40.28	38.78	18.42	18.84	40.58	32.83	26.90	38.03	29.24	27.57
Lane Group LOS	D	C	D	D	B	B	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.21	2.54	9.21	3.15	1.09	1.38	1.93	5.35	0.59	3.65	6.29	4.13
50th-Percentile Queue Length [ft/ln]	30.23	63.49	230.19	78.72	27.26	34.61	48.30	133.69	14.84	91.24	157.20	103.31
95th-Percentile Queue Length [veh/ln]	2.18	4.57	14.18	5.67	1.96	2.49	3.48	9.14	1.07	6.57	10.40	7.44
95th-Percentile Queue Length [ft/ln]	54.41	114.28	354.60	141.69	49.08	62.30	86.93	228.51	26.72	164.23	260.02	185.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.16	23.57	40.28	38.78	18.42	18.84	40.58	32.83	26.90	38.03	29.24	27.57
Movement LOS	D	C	D	D	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	32.37			27.88			33.97			31.37		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	31.76											
Intersection LOS	C											
Intersection V/C	0.623											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.86	33.86	33.86	33.86
l_p,int, Pedestrian LOS Score for Intersection	3.029	3.020	3.174	3.075
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1109	1062	1038	1062
d_b, Bicycle Delay [s]	8.41	9.33	9.80	9.33
l_b,int, Bicycle LOS Score for Intersection	2.123	1.924	2.164	2.621
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	160	0	0	197	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	11	138	102	10	18	43	1330	80	175	1165	168
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	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	3	35	26	3	5	11	339	20	45	297	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1357	82	179	1189	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	9	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.27	0.05	0.05	0.23	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	189	190	168	248	120	58	3271	1021	229	3441	1074
d1, Uniform Delay [s]	57.77	57.76	61.40	62.20	61.35	67.15	12.22	9.45	64.37	9.61	8.25
k, delay calibration	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
d2, Incremental Delay [s]	0.86	0.85	10.44	1.13	0.98	17.85	0.39	0.15	5.76	0.28	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.76	0.41	0.08	0.78	0.35	0.16
d, Delay for Lane Group [s/veh]	58.63	58.62	71.85	63.34	62.33	85.00	12.61	9.61	70.13	9.89	8.57
Lane Group LOS	E	E	E	E	E	F	B	A	E	A	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.42	1.82	0.98	1.86	6.91	1.00	3.34	5.11	1.95
50th-Percentile Queue Length [ft/ln]	47.05	47.38	135.55	45.51	24.47	46.40	172.70	24.89	83.48	127.64	48.86
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.24	3.28	1.76	3.34	11.22	1.79	6.01	8.81	3.52
95th-Percentile Queue Length [ft/ln]	84.69	85.29	231.03	81.92	44.05	83.51	280.46	44.81	150.26	220.28	87.94

Movement, Approach, & Intersection Results

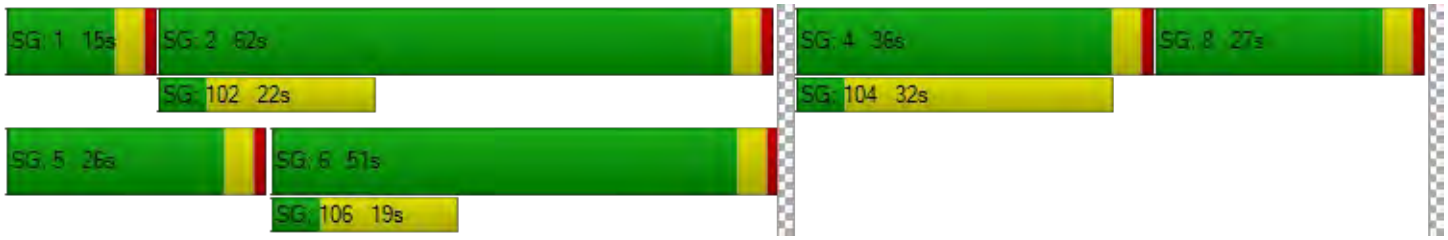
d_M, Delay for Movement [s/veh]	58.62	58.62	71.85	63.34	62.33	62.33	85.00	12.61	9.61	70.13	9.89	8.57
Movement LOS	E	E	E	E	E	E	F	B	A	E	A	A
d_A, Approach Delay [s/veh]	65.99			63.12			14.59			16.75		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	21.26											
Intersection LOS	C											
Intersection V/C	0.437											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.088	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.375	2.406
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	127	0	38	0	128	32	0	159	243
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	295	1	552	0	1118	540	0	938	961
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	76	0	142	0	288	139	0	242	248
Total Analysis Volume [veh/h]	0	0	0	304	1	569	0	1153	557	0	967	991
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		17	17	17	22	22	22	44
g / C, Green / Cycle		0.35	0.35	0.35	0.45	0.45	0.45	0.90
(v / s)_i Volume / Saturation Flow Rate		0.09	0.09	0.20	0.23	0.35	0.19	0.62
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		619	620	979	2293	715	2293	1429
d1, Uniform Delay [s]		11.51	11.51	13.19	9.67	11.52	9.24	0.67
k, delay calibration		0.11	0.11	0.11	0.11	0.13	0.11	0.45
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.20	0.20	0.55	0.17	2.22	0.12	2.51
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		0.25	0.25	0.58	0.50	0.78	0.42	0.69
d, Delay for Lane Group [s/veh]		11.72	11.72	13.74	9.84	13.73	9.36	3.19
Lane Group LOS		B	B	B	A	B	A	A
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		1.05	1.05	2.23	2.35	4.43	1.88	1.00
50th-Percentile Queue Length [ft/ln]		26.13	26.14	55.87	58.75	110.84	46.98	24.95
95th-Percentile Queue Length [veh/ln]		1.88	1.88	4.02	4.23	7.89	3.38	1.80
95th-Percentile Queue Length [ft/ln]		47.04	47.04	100.57	105.74	197.17	84.56	44.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	11.72	11.72	13.74	0.00	9.84	13.73	0.00	9.36	3.19
Movement LOS				B	B	B		A	B		A	A
d_A, Approach Delay [s/veh]	0.00			13.04			11.11			6.23		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	9.38											
Intersection LOS	A											
Intersection V/C	0.381											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.49	16.49	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.091	2.823	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	608	1824	1824
d_b, Bicycle Delay [s]	24.67	11.95	0.19	0.19
l_b,int, Bicycle LOS Score for Intersection	4.132	3.002	2.500	2.637
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	38	0	148	0	0	0	0	224	32	0	365	239
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	440	3	640	0	0	0	0	749	700	0	1459	624
Peak Hour Factor	0.9700	0.9700	0.9700	0.9500	0.9500	0.9500	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	113	1	165	0	0	0	0	193	180	0	376	161
Total Analysis Volume [veh/h]	454	3	660	0	0	0	0	772	722	0	1504	643
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	57	57	57		57	57	57	57
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	19	19	19		28	52	28	28
g / C, Green / Cycle	0.34	0.34	0.34		0.48	0.91	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.23		0.15	0.45	0.30	0.40
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	607	608	959		2466	1450	2466	769
d1, Uniform Delay [s]	14.24	14.24	16.22		8.97	0.40	10.80	12.78
k, delay calibration	0.11	0.11	0.11		0.11	0.33	0.11	0.27
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	0.39	0.89		0.07	0.82	0.25	5.85
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	0.38	0.38	0.69		0.31	0.50	0.61	0.84
d, Delay for Lane Group [s/veh]	14.63	14.63	17.11		9.04	1.22	11.04	18.63
Lane Group LOS	B	B	B		A	A	B	B
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.05	2.05	3.38		1.62	0.33	3.82	6.96
50th-Percentile Queue Length [ft/ln]	51.15	51.15	84.42		40.48	8.22	95.38	173.93
95th-Percentile Queue Length [veh/ln]	3.68	3.68	6.08		2.91	0.59	6.87	11.28
95th-Percentile Queue Length [ft/ln]	92.07	92.06	151.95		72.86	14.80	171.68	282.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.63	14.63	17.11	0.00	0.00	0.00	0.00	9.04	1.22	0.00	11.04	18.63
Movement LOS	B	B	B					A	A		B	B
d_A, Approach Delay [s/veh]	16.09			0.00			5.26			13.32		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	11.44											
Intersection LOS	B											
Intersection V/C	0.639											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.21	20.21	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.828	2.128	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	526	0	1579	1579
d_b, Bicycle Delay [s]	15.47	28.50	1.26	1.26
l_b,int, Bicycle LOS Score for Intersection	3.403	4.132	2.381	2.740
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	31.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.623

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	97	11	17	29	29	399	180	101	91	16	108	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	440	44	100	29	64	495	232	860	242	121	1146	12
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]	116	12	26	8	17	130	61	226	64	32	302	3
Total Analysis Volume [veh/h]	463	46	105	31	67	521	244	905	255	127	1206	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	75	0	12	58	0	22	40	0	13	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	86	86	86	86	86	86	86	86	86	86	86	86
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14	30	30	3	18	18	9	28	28	5	24	24
g / C, Green / Cycle	0.17	0.35	0.35	0.03	0.22	0.22	0.10	0.32	0.32	0.06	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.07	0.02	0.18	0.18	0.07	0.18	0.16	0.04	0.24	0.01
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1645	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	579	659	560	54	354	343	344	1651	515	208	1451	453
d1, Uniform Delay [s]	34.38	18.47	19.29	41.09	32.31	32.33	37.50	23.86	23.37	39.41	28.79	22.15
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	2.60	0.04	0.16	9.01	5.46	5.70	2.71	0.29	0.74	2.90	1.30	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.07	0.19	0.57	0.84	0.84	0.71	0.55	0.49	0.61	0.83	0.03
d, Delay for Lane Group [s/veh]	36.97	18.52	19.45	50.11	37.77	38.03	40.21	24.15	24.11	42.31	30.09	22.18
Lane Group LOS	D	B	B	D	D	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.74	0.60	1.44	0.77	6.31	6.13	2.57	4.89	4.12	1.37	7.63	0.19
50th-Percentile Queue Length [ft/ln]	118.51	15.00	35.90	19.35	157.71	153.37	64.20	122.33	103.02	34.25	190.76	4.72
95th-Percentile Queue Length [veh/ln]	8.31	1.08	2.58	1.39	10.43	10.20	4.62	8.52	7.42	2.47	12.16	0.34
95th-Percentile Queue Length [ft/ln]	207.77	27.00	64.62	34.84	260.68	254.91	115.55	213.02	185.43	61.65	304.02	8.49

Movement, Approach, & Intersection Results

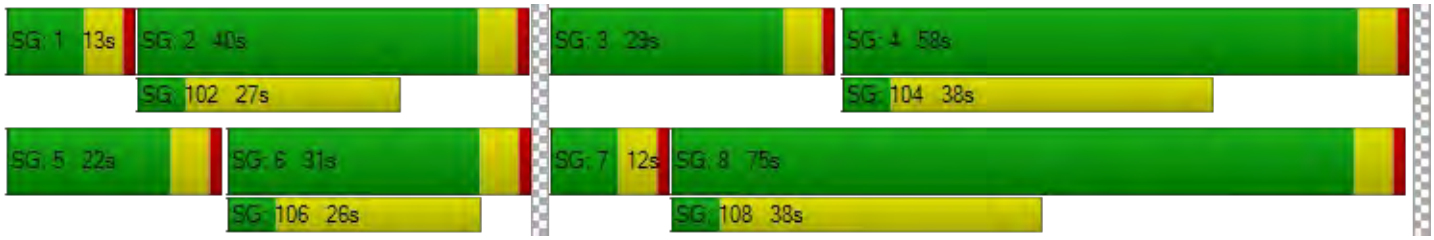
d_M, Delay for Movement [s/veh]	36.97	18.52	19.45	50.11	37.77	37.91	40.21	24.15	24.11	42.31	30.09	22.18
Movement LOS	D	B	B	D	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	32.59			38.51			26.93			31.16		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	31.03											
Intersection LOS	C											
Intersection V/C	0.623											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.36	34.36	34.36	34.36
l_p,int, Pedestrian LOS Score for Intersection	2.625	2.479	3.238	3.107
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1632	1236	816	606
d_b, Bicycle Delay [s]	1.45	6.26	15.03	20.83
l_b,int, Bicycle LOS Score for Intersection	2.573	2.581	2.332	2.300
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.181

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	86	131	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	42	159	322	25	61	134
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]	42	245	453	25	61	134
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	64	119	7	16	35
Total Analysis Volume [veh/h]	44	258	477	26	64	141
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.18	0.19
d_M, Delay for Movement [s/veh]	8.55	0.00	0.00	0.00	18.90	13.55
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.00	1.69	1.69
95th-Percentile Queue Length [ft/ln]	3.25	0.00	0.00	0.00	42.24	42.24
d_A, Approach Delay [s/veh]	1.25		0.00		15.22	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.46					
Intersection LOS	C					

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Report File: H:\...\9 P3 + P PM.pdf

Scenario 18 P3 + Project PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.474	20.0	C
2	Bellegrave Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	NB Right	0.379	14.8	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.310	18.6	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.277	13.3	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.403	38.2	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	SB Thru		4.7	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.142	15.3	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		6.2	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.188	11.4	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		5.7	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.739	45.4	D
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.629	38.5	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.706	14.3	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.695	15.3	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.683	36.8	D
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.149	23.0	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	20.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	19	27	13	30	20	20	27	60	11	13	55	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	624	13	30	669	443	399	60	118	13	55	20
Peak Hour Factor	0.9800	0.9800	0.9500	0.9500	0.9800	0.9800	0.9800	0.9500	0.9800	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	159	3	8	171	113	102	16	30	3	14	5
Total Analysis Volume [veh/h]	73	637	14	32	683	452	407	63	120	14	58	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	49	0	17	53	0	21	49	0	25	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	R
C, Cycle Length [s]	63	63	63	63	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	23	23	2	21	21	10	17	17	1	8	8
g / C, Green / Cycle	0.06	0.37	0.37	0.03	0.34	0.34	0.16	0.26	0.26	0.02	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.02	0.13	0.28	0.12	0.02	0.08	0.00	0.03	0.01
s, saturation flow rate [veh/h]	1781	3560	1849	1781	5094	1589	3459	3560	1589	3459	1870	1589
c, Capacity [veh/h]	103	1301	676	61	1743	544	563	944	421	61	224	190
d1, Uniform Delay [s]	29.16	14.41	14.42	29.90	15.74	19.04	25.02	17.32	18.40	30.53	25.19	24.74
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.14	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.69	0.15	0.28	6.70	0.14	4.36	1.77	0.03	0.37	1.92	0.61	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	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	0.33	0.33	0.52	0.39	0.83	0.72	0.07	0.28	0.23	0.26	0.11
d, Delay for Lane Group [s/veh]	37.86	14.56	14.70	36.61	15.88	23.40	26.79	17.35	18.77	32.45	25.80	24.99
Lane Group LOS	D	B	B	D	B	C	C	B	B	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.28	2.02	2.13	0.57	2.28	6.09	2.84	0.32	1.33	0.12	0.78	0.28
50th-Percentile Queue Length [ft/ln]	32.01	50.50	53.27	14.24	57.12	152.29	71.10	8.07	33.35	2.91	19.62	6.97
95th-Percentile Queue Length [veh/ln]	2.30	3.64	3.84	1.02	4.11	10.14	5.12	0.58	2.40	0.21	1.41	0.50
95th-Percentile Queue Length [ft/ln]	57.62	90.91	95.89	25.62	102.82	253.48	127.98	14.53	60.03	5.24	35.31	12.55

Movement, Approach, & Intersection Results

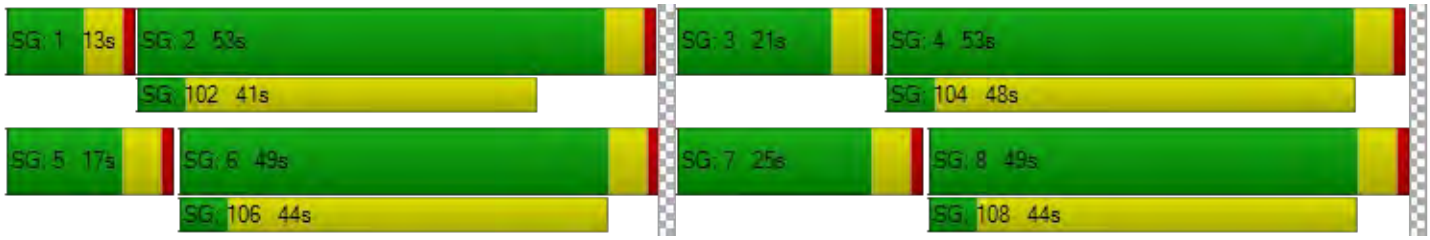
d_M, Delay for Movement [s/veh]	37.86	14.61	14.70	36.61	15.88	23.40	26.79	17.35	18.77	32.45	25.80	24.99
Movement LOS	D	B	B	D	B	C	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	16.95			19.36			24.15			26.62		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.04											
Intersection LOS	C											
Intersection V/C	0.474											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.06	23.06	23.06	23.06
l_p,int, Pedestrian LOS Score for Intersection	2.792	2.981	2.740	2.469
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1401	1528	1401	1528
d_b, Bicycle Delay [s]	2.82	1.75	2.82	1.75
l_b,int, Bicycle LOS Score for Intersection	1.958	2.201	2.046	1.713
Bicycle LOS	A	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.379

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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]	53	71	39	73	107	44
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]	57	75	587	80	132	592
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	15	20	153	21	34	154
Total Analysis Volume [veh/h]	59	78	611	83	138	617
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
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.0	0.0	4.0	4.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	65	0	34	0	21	55
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	24	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	3.0	0.0	3.0	3.0
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	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	8	8	86	86	11	102
g / C, Green / Cycle	0.07	0.07	0.72	0.72	0.09	0.85
(v / s)_i Volume / Saturation Flow Rate	0.03	0.05	0.19	0.19	0.08	0.33
s, saturation flow rate [veh/h]	1781	1589	1870	1794	1781	1870
c, Capacity [veh/h]	119	107	1337	1283	165	1589
d1, Uniform Delay [s]	54.00	54.90	5.98	6.04	53.51	2.03
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]	3.14	9.25	0.47	0.52	10.39	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	1.00	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	0.49	0.73	0.26	0.27	0.83	0.39
d, Delay for Lane Group [s/veh]	57.14	64.15	6.45	6.56	63.90	2.74
Lane Group LOS	E	E	A	A	E	A
Critical Lane Group	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.83	2.59	2.99	3.03	4.57	2.27
50th-Percentile Queue Length [ft/ln]	45.64	64.70	74.77	75.71	114.22	56.86
95th-Percentile Queue Length [veh/ln]	3.29	4.66	5.38	5.45	8.07	4.09
95th-Percentile Queue Length [ft/ln]	82.15	116.46	134.59	136.28	201.86	102.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.14	64.15	6.50	6.56	63.90	2.74
Movement LOS	E	E	A	A	E	A
d_A, Approach Delay [s/veh]	61.13		6.51		13.92	
Approach LOS	E		A		B	
d_I, Intersection Delay [s/veh]	14.75					
Intersection LOS	B					
Intersection V/C	0.379					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.072	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	483	833
d_b, Bicycle Delay [s]	14.99	34.50	20.41
I_b,int, Bicycle LOS Score for Intersection	1.560	2.132	2.805
Bicycle LOS	A	B	C

Sequence

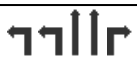
Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.310

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	9	0	9	8	49	40	70	0	0	102	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	92	91	117	120	246	127	77	474	119	195	506	56
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]	24	24	30	31	64	33	20	123	31	51	132	15
Total Analysis Volume [veh/h]	96	95	122	125	256	132	80	494	124	203	527	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	12	47	0	15	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	3	10	10	5	12	12
g / C, Green / Cycle	0.08	0.20	0.20	0.08	0.20	0.20	0.07	0.21	0.21	0.10	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.08	0.04	0.07	0.08	0.02	0.14	0.08	0.06	0.15	0.04
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	263	696	311	294	728	325	240	735	328	358	856	382
d1, Uniform Delay [s]	21.43	16.23	17.11	21.20	16.65	16.85	21.64	17.85	16.68	20.85	16.53	14.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.85	0.09	0.81	0.97	0.29	0.82	0.81	1.08	0.72	1.42	0.72	0.18
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	0.36	0.14	0.39	0.43	0.35	0.41	0.33	0.67	0.38	0.57	0.62	0.15
d, Delay for Lane Group [s/veh]	22.28	16.32	17.92	22.18	16.94	17.66	22.45	18.93	17.39	22.27	17.26	14.80
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.51	0.40	1.13	0.66	1.11	1.21	0.42	2.36	1.12	1.07	2.37	0.46
50th-Percentile Queue Length [ft/ln]	12.64	9.96	28.13	16.38	27.86	30.16	10.61	59.01	28.02	26.70	59.31	11.61
95th-Percentile Queue Length [veh/ln]	0.91	0.72	2.03	1.18	2.01	2.17	0.76	4.25	2.02	1.92	4.27	0.84
95th-Percentile Queue Length [ft/ln]	22.75	17.93	50.64	29.49	50.15	54.28	19.10	106.23	50.44	48.05	106.75	20.89

Movement, Approach, & Intersection Results

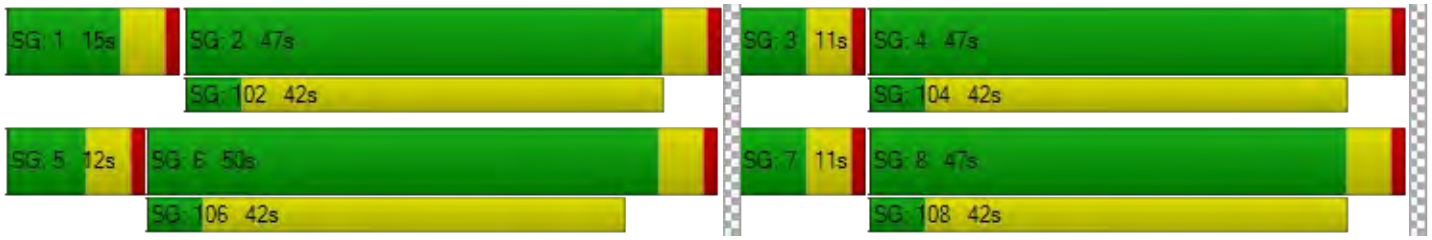
d_M, Delay for Movement [s/veh]	22.28	16.32	17.92	22.18	16.94	17.66	22.45	18.93	17.39	22.27	17.26	14.80
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.77			18.40			19.06			18.37		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.64											
Intersection LOS	B											
Intersection V/C	0.310											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.17	16.17	16.17	16.17
l_p,int, Pedestrian LOS Score for Intersection	2.688	2.667	2.765	2.776
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1726	1726	1726	1849
d_b, Bicycle Delay [s]	0.46	0.46	0.46	0.14
l_b,int, Bicycle LOS Score for Intersection	1.818	1.983	2.135	2.210
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.277

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	31	0	0	0	0	0	0	50	29	0	79	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	8	8	5	4	10	17	418	173	21	570	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	2	2	1	1	3	5	123	51	6	168	2
Total Analysis Volume [veh/h]	134	9	9	6	5	12	20	492	204	25	671	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	11	14	14	1	4	90	82	82	90	82	82
g / C, Green / Cycle	0.09	0.12	0.12	0.01	0.04	0.75	0.68	0.68	0.75	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.08	0.00	0.01	0.00	0.01	0.02	0.14	0.13	0.03	0.19	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	823	3560	1589	817	3560	1589
c, Capacity [veh/h]	164	225	191	14	61	644	2424	1082	657	2436	1087
d1, Uniform Delay [s]	53.52	46.66	46.70	59.26	56.29	4.29	7.09	7.01	4.11	7.38	6.02
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.59	0.07	0.10	18.30	2.47	0.09	0.19	0.39	0.02	0.28	0.01
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
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	0.82	0.04	0.05	0.42	0.28	0.03	0.20	0.19	0.04	0.28	0.01
d, Delay for Lane Group [s/veh]	63.10	46.73	46.80	77.56	58.76	4.38	7.28	7.40	4.13	7.66	6.03
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.41	0.24	0.24	0.25	0.54	0.13	2.27	1.93	0.15	3.25	0.07
50th-Percentile Queue Length [ft/ln]	110.14	6.09	6.12	6.36	13.60	3.21	56.79	48.16	3.63	81.18	1.63
95th-Percentile Queue Length [veh/ln]	7.85	0.44	0.44	0.46	0.98	0.23	4.09	3.47	0.26	5.85	0.12
95th-Percentile Queue Length [ft/ln]	196.19	10.96	11.01	11.46	24.48	5.78	102.22	86.68	6.53	146.13	2.93

Movement, Approach, & Intersection Results

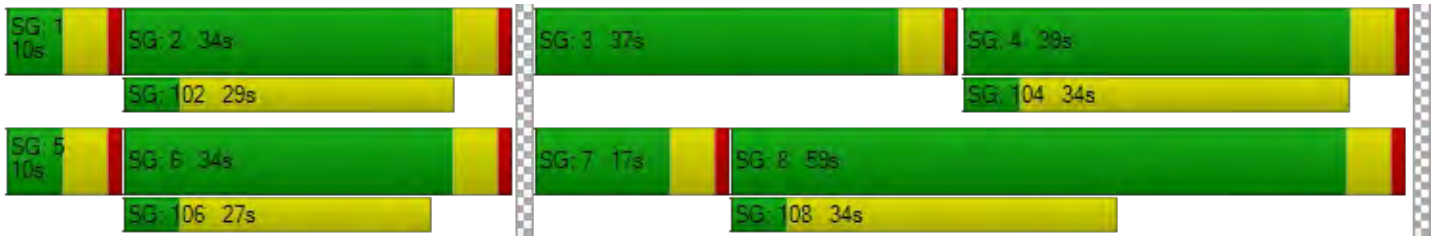
d_M, Delay for Movement [s/veh]	63.10	46.73	46.80	77.56	58.76	58.76	4.38	7.28	7.40	4.13	7.66	6.03
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	61.17			63.66			7.23			7.51		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	13.31											
Intersection LOS	B											
Intersection V/C	0.277											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.265	1.995	2.717	2.665
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.810	1.598	2.150	2.140
Bicycle LOS	A	A	B	B

Sequence

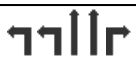
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.403

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	18	8	0	18	30	20	31	0	9	49	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	288	92	221	515	171	109	331	46	132	384	156
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	75	24	58	134	45	28	86	12	34	100	41
Total Analysis Volume [veh/h]	53	300	96	230	536	178	114	345	48	138	400	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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	42	0	19	46	46	18	43	0	16	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	58	58	10	64	79	10	20	20	11	22	22
g / C, Green / Cycle	0.04	0.49	0.49	0.08	0.53	0.65	0.08	0.17	0.17	0.09	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.06	0.07	0.15	0.11	0.06	0.10	0.03	0.08	0.16	0.16
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1689
c, Capacity [veh/h]	70	1731	773	292	1892	1039	143	608	271	164	341	308
d1, Uniform Delay [s]	57.12	17.32	16.88	53.91	15.53	8.12	54.23	45.72	42.58	53.63	47.65	47.72
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]	15.29	0.22	0.33	4.69	0.38	0.36	9.50	0.84	0.31	10.82	6.57	7.55
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	0.76	0.17	0.12	0.79	0.28	0.17	0.79	0.57	0.18	0.84	0.86	0.87
d, Delay for Lane Group [s/veh]	72.41	17.54	17.21	58.60	15.90	8.48	63.73	46.56	42.89	64.45	54.22	55.27
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.38	1.52	3.60	4.11	1.84	3.76	4.80	1.25	4.59	9.15	8.42
50th-Percentile Queue Length [ft/ln]	47.25	59.58	38.12	89.93	102.77	45.94	94.07	120.07	31.24	114.79	228.87	210.55
95th-Percentile Queue Length [veh/ln]	3.40	4.29	2.74	6.47	7.40	3.31	6.77	8.40	2.25	8.11	14.12	13.18
95th-Percentile Queue Length [ft/ln]	85.05	107.24	68.61	161.87	184.99	82.69	169.33	209.93	56.23	202.65	352.92	329.53

Movement, Approach, & Intersection Results

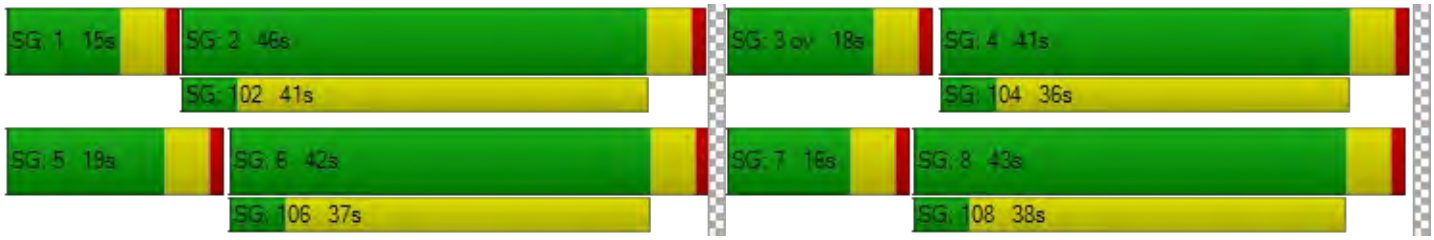
d_M, Delay for Movement [s/veh]	72.41	17.54	17.21	58.60	15.90	8.48	63.73	46.56	42.89	64.45	54.49	55.27
Movement LOS	E	B	B	E	B	A	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	23.94			24.91			50.07			56.63		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.20											
Intersection LOS	D											
Intersection V/C	0.403											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.658	2.821	2.653	2.583
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	616	683	633	600
d_b, Bicycle Delay [s]	28.72	26.02	28.03	29.42
l_b,int, Bicycle LOS Score for Intersection	1.930	2.338	1.978	2.138
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	68	0	0	0	0	0	0	50	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	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]	108	83	0	0	130	50	41	0	80	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	108	83	68	0	130	50	41	0	80	50	0	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	25	20	0	39	15	12	0	24	15	0	0
Total Analysis Volume [veh/h]	129	99	81	0	155	60	49	0	95	60	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	50			189			215			278		
Exiting Flow Rate [veh/h]	310			149			190			81		
Demand Flow Rate [veh/h]	108	83	68	0	130	50	41	0	80	50	0	0
Adjusted Demand Flow Rate [veh/h]	129	99	81	0	155	60	49	0	95	60	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	0.99	0.99	1.00
Entry Flow Rate [veh/h]	309	217	145	60
Capacity of Entry and Bypass Lanes [veh/h]	1312	1139	1109	1040
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1312	1132	1101	1040
X, volume / capacity	0.24	0.19	0.13	0.06

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.92	0.70	0.45	0.18
95th-Percentile Queue Length [ft]	22.95	17.48	11.24	4.59
Approach Delay [s/veh]	4.77	4.87	4.42	3.96
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.66			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.142

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	9	8	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	258	453	45	53	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	71	124	12	15	0
Total Analysis Volume [veh/h]	0	284	498	49	58	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.14	0.00
d_M, Delay for Movement [s/veh]	8.53	0.00	0.00	0.00	15.29	11.25
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	12.30	12.30
d_A, Approach Delay [s/veh]	0.00		0.00		15.29	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	6.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	72	41	0	52	0	0	0	0	46	0	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]	156	146	0	6	146	56	37	4	107	0	3	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	156	218	41	6	198	56	37	4	107	46	3	7
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	65	12	2	59	17	11	1	32	14	1	2
Total Analysis Volume [veh/h]	186	260	49	7	236	67	44	5	127	55	4	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	57			250			304			500		
Exiting Flow Rate [veh/h]	426			318			262			62		
Demand Flow Rate [veh/h]	156	218	41	6	198	56	37	4	107	46	3	7
Adjusted Demand Flow Rate [veh/h]	186	260	49	7	236	67	44	5	127	55	4	8

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	505	317	180	69
Capacity of Entry and Bypass Lanes [veh/h]	1302	1070	1013	829
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1277	1049	993	813
X, volume / capacity	0.39	0.30	0.18	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.86	1.24	0.64	0.27
95th-Percentile Queue Length [ft]	46.62	31.06	16.07	6.72
Approach Delay [s/veh]	6.53	6.35	5.30	5.24
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.19			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.188

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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]	2	9	0	0	8	0	0	5	2	0	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	231	52	40	370	38	12	26	7	32	38	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	63	14	11	102	10	3	7	2	9	10	4
Total Analysis Volume [veh/h]	12	254	57	44	407	42	13	29	8	35	42	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	99	90	90	99	93	93	11	11	11
g / C, Green / Cycle	0.83	0.75	0.75	0.83	0.77	0.77	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.09	0.04	0.11	0.03	0.02	0.01	0.07
s, saturation flow rate [veh/h]	981	1870	1754	1118	3560	1589	1698	1589	1265
c, Capacity [veh/h]	873	1410	1323	989	2750	1228	190	141	154
d1, Uniform Delay [s]	1.84	3.96	3.97	1.86	3.51	3.19	50.98	50.08	54.22
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.16	0.18	0.08	0.11	0.05	0.58	0.17	3.71
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	0.01	0.11	0.12	0.04	0.15	0.03	0.22	0.06	0.60
d, Delay for Lane Group [s/veh]	1.85	4.12	4.15	1.94	3.62	3.24	51.56	50.25	57.93
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.04	0.98	0.96	0.15	1.13	0.22	1.21	0.23	2.90
50th-Percentile Queue Length [ft/ln]	0.90	24.58	23.88	3.81	28.14	5.52	30.28	5.69	72.53
95th-Percentile Queue Length [veh/ln]	0.06	1.77	1.72	0.27	2.03	0.40	2.18	0.41	5.22
95th-Percentile Queue Length [ft/ln]	1.62	44.25	42.99	6.85	50.66	9.94	54.51	10.24	130.55

Movement, Approach, & Intersection Results

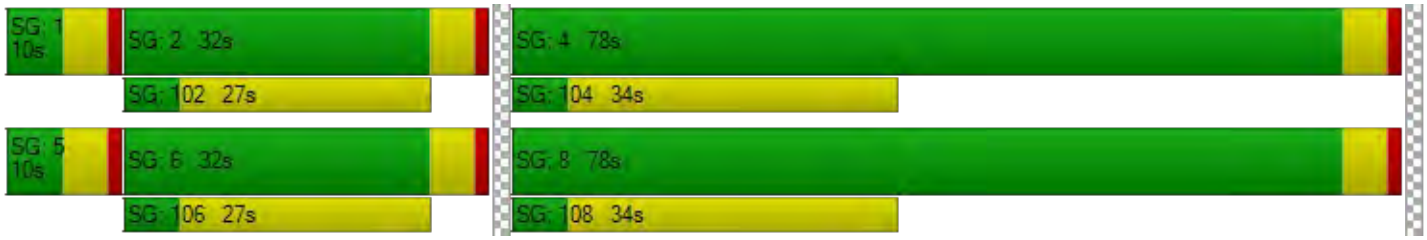
d_M, Delay for Movement [s/veh]	1.85	4.13	4.15	1.94	3.62	3.24	51.56	51.56	50.25	57.93	57.93	57.93
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	4.05			3.44			51.35			57.93		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	11.38											
Intersection LOS	B											
Intersection V/C	0.188											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	51.33	51.33	51.33
l_p,int, Pedestrian LOS Score for Intersection	2.516	2.736	2.016	1.887
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.03	36.03	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.826	1.966	1.642	1.711
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	104	32	0	94	0	0	0	0	24	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	60	282	0	5	226	22	15	0	40	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	386	32	5	320	22	15	0	40	24	0	4
Peak Hour Factor	0.9500	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9500	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	104	9	1	86	6	4	0	11	6	0	1
Total Analysis Volume [veh/h]	63	415	34	5	344	24	16	0	42	26	0	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	21			91			383			504		
Exiting Flow Rate [veh/h]	420			444			89			5		
Demand Flow Rate [veh/h]	60	386	32	5	320	22	15	0	40	24	0	4
Adjusted Demand Flow Rate [veh/h]	63	415	34	5	344	24	16	0	42	26	0	4

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	488	0	381	60	31
Capacity of Entry and Bypass Lanes [veh/h]	1351	1373	1258	935	826
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1324	1346	1234	916	810
X, volume / capacity	0.36	0.03	0.30	0.06	0.04

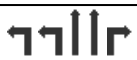
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	1.67	0.08	1.29	0.20	0.12
95th-Percentile Queue Length [ft]	41.73	1.94	32.13	5.06	2.88
Approach Delay [s/veh]	5.84		5.69	4.51	4.81
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	5.67				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	45.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.739

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	10	10	33	101	11	0	0	126	11	24	111	97
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	428	348	396	507	231	274	923	75	596	933	362
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	115	94	106	136	62	74	248	20	160	251	97
Total Analysis Volume [veh/h]	285	460	374	426	545	248	295	992	81	641	1003	389
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	50	0	17	50	0	20	49	0	24	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	117	117	117	117	117	117	117	117	117	117	117	117
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	12	30	30	17	34	34	13	26	26	25	38	38
g / C, Green / Cycle	0.10	0.25	0.25	0.15	0.29	0.29	0.11	0.22	0.22	0.21	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.24	0.12	0.11	0.16	0.09	0.19	0.05	0.19	0.28	0.24
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	361	1279	399	508	1496	467	371	1137	355	723	1156	537
d1, Uniform Delay [s]	51.46	36.29	43.17	48.86	32.89	34.81	51.29	44.13	37.44	45.23	37.38	35.11
k, delay calibration	0.11	0.11	0.37	0.11	0.11	0.15	0.11	0.11	0.11	0.11	0.11	0.37
I, Upstream Filtering Factor	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	0.17	26.10	3.77	0.15	1.33	3.89	2.26	0.32	3.93	2.17	6.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.36	0.94	0.84	0.36	0.53	0.79	0.87	0.23	0.89	0.87	0.72
d, Delay for Lane Group [s/veh]	55.32	36.46	69.27	52.63	33.04	36.13	55.18	46.39	37.77	49.16	39.55	41.40
Lane Group LOS	E	D	E	D	C	D	E	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.29	3.65	13.44	6.33	4.12	6.10	4.32	9.19	1.89	9.42	13.72	10.68
50th-Percentile Queue Length [ft/ln]	107.13	91.34	335.91	158.22	103.09	152.45	108.10	229.64	47.29	235.46	343.07	267.08
95th-Percentile Queue Length [veh/ln]	7.68	6.58	19.45	10.45	7.42	10.15	7.73	14.16	3.41	14.45	19.80	16.04
95th-Percentile Queue Length [ft/ln]	192.01	164.40	486.20	261.37	185.55	253.70	193.36	353.91	85.13	361.29	494.95	401.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.32	36.46	69.27	52.63	33.04	36.13	55.18	46.39	37.77	49.16	39.55	41.40
Movement LOS	E	D	E	D	C	D	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	52.23			40.52			47.77			42.93		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	45.39											
Intersection LOS	D											
Intersection V/C	0.739											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	50.09	50.09	50.09	50.09
l_p,int, Pedestrian LOS Score for Intersection	3.122	3.119	3.335	3.206
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	766	766	749	817
d_b, Bicycle Delay [s]	22.36	22.36	22.98	20.55
l_b,int, Bicycle LOS Score for Intersection	2.175	2.230	2.312	3.237
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	38.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.629

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	261	0	0	231	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	44	181	384	48	134	221	1124	80	252	1357	265
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	11	46	98	12	34	56	287	20	64	346	68
Total Analysis Volume [veh/h]	142	45	185	392	49	137	226	1147	82	257	1385	270
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	75	75	11	67	67
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.54	0.54	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.23	0.05	0.07	0.27	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	239	245	214	468	224	250	2734	853	274	2423	756
d1, Uniform Delay [s]	55.31	55.31	59.34	59.01	58.95	59.26	19.39	15.84	64.12	26.43	23.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.15	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]	1.02	0.99	10.06	4.04	7.70	15.30	0.47	0.22	14.40	0.99	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
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	0.39	0.87	0.84	0.83	0.91	0.42	0.10	0.94	0.57	0.36
d, Delay for Lane Group [s/veh]	56.33	56.30	69.40	63.05	66.65	74.57	19.86	16.06	78.52	27.42	24.50
Lane Group LOS	E	E	E	E	E	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.14	7.04	7.06	6.92	8.97	7.58	1.36	5.12	11.32	5.97
50th-Percentile Queue Length [ft/ln]	76.75	78.39	176.01	176.45	173.02	224.24	189.49	34.00	127.98	282.98	149.23
95th-Percentile Queue Length [veh/ln]	5.53	5.64	11.39	11.41	11.24	13.88	12.09	2.45	8.83	16.84	9.98
95th-Percentile Queue Length [ft/ln]	138.15	141.10	284.80	285.37	280.88	347.04	302.37	61.21	220.75	420.91	249.40

Movement, Approach, & Intersection Results

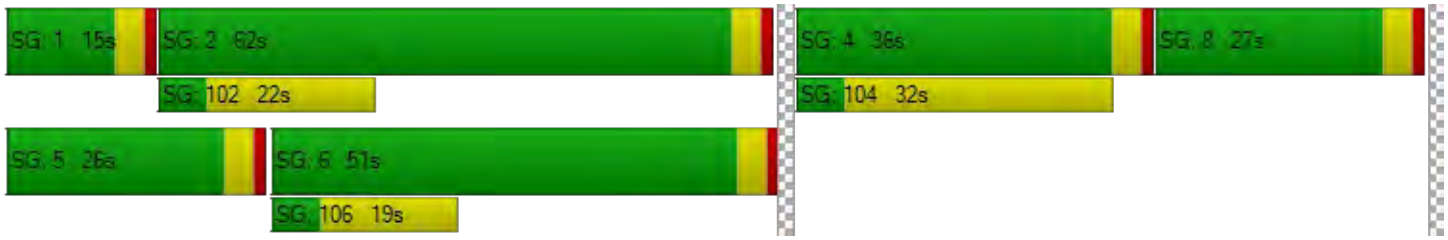
d_M, Delay for Movement [s/veh]	56.32	56.30	69.40	63.05	66.65	66.65	74.57	19.86	16.06	78.52	27.42	24.50
Movement LOS	E	E	E	E	E	E	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	62.82			64.21			28.14			33.87		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.50											
Intersection LOS	D											
Intersection V/C	0.629											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.599	2.540	3.128	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.173	2.513	2.360	2.611
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	274	0	68	0	188	73	0	163	224
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	662	1	869	0	1235	598	0	1391	734
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	171	0	224	0	318	154	0	359	189
Total Analysis Volume [veh/h]	0	0	0	682	1	896	0	1273	616	0	1434	757
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		64	64	64	64	64	64	64
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		26	26	26	28	28	28	59
g / C, Green / Cycle		0.40	0.40	0.40	0.44	0.44	0.44	0.92
(v / s)_i Volume / Saturation Flow Rate		0.19	0.19	0.32	0.25	0.39	0.28	0.48
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		721	721	1138	2235	697	2235	1465
d1, Uniform Delay [s]		13.99	13.99	16.59	13.40	16.41	13.99	0.37
k, delay calibration		0.11	0.11	0.11	0.11	0.30	0.11	0.44
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.49	0.49	1.25	0.23	9.98	0.31	1.14
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		0.47	0.47	0.79	0.57	0.88	0.64	0.52
d, Delay for Lane Group [s/veh]		14.48	14.48	17.84	13.63	26.39	14.30	1.52
Lane Group LOS		B	B	B	B	C	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		3.34	3.34	5.24	4.04	9.03	4.76	0.47
50th-Percentile Queue Length [ft/ln]		83.50	83.49	131.06	100.93	225.63	118.90	11.64
95th-Percentile Queue Length [veh/ln]		6.01	6.01	9.00	7.27	13.95	8.33	0.84
95th-Percentile Queue Length [ft/ln]		150.29	150.29	224.93	181.67	348.80	208.32	20.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.48	14.48	17.84	0.00	13.63	26.39	0.00	14.30	1.52
Movement LOS				B	B	B		B	C		B	A
d_A, Approach Delay [s/veh]	0.00			16.39			17.79			9.88		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	14.34											
Intersection LOS	B											
Intersection V/C	0.706											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.53	23.53	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.125	2.903	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	470	1411	1411
d_b, Bicycle Delay [s]	31.89	18.66	2.77	2.77
l_b,int, Bicycle LOS Score for Intersection	4.132	4.165	2.599	2.765
Bicycle LOS	D	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	68	0	290	0	0	0	0	390	73	0	319	201
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	611	1	1026	0	0	0	0	1403	510	0	1524	480
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	159	0	267	0	0	0	0	365	133	0	397	125
Total Analysis Volume [veh/h]	636	1	1069	0	0	0	0	1461	531	0	1588	500
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
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	64	64	64		64	64	64	64
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	28	28	28		26	59	26	26
g / C, Green / Cycle	0.44	0.44	0.44		0.41	0.92	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.38		0.29	0.33	0.31	0.31
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	775	775	1225		2084	1466	2084	650
d1, Uniform Delay [s]	12.48	12.48	16.53		15.74	0.29	16.31	16.37
k, delay calibration	0.11	0.11	0.11		0.11	0.23	0.11	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	0.35	2.10		0.44	0.32	0.59	3.50
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	0.41	0.41	0.87		0.70	0.36	0.76	0.77
d, Delay for Lane Group [s/veh]	12.83	12.83	18.63		16.17	0.61	16.90	19.87
Lane Group LOS	B	B	B		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.87	2.87	6.57		5.33	0.13	6.03	6.24
50th-Percentile Queue Length [ft/ln]	71.77	71.77	164.28		133.35	3.21	150.68	156.01
95th-Percentile Queue Length [veh/ln]	5.17	5.17	10.78		9.12	0.23	10.05	10.34
95th-Percentile Queue Length [ft/ln]	129.19	129.19	269.38		228.03	5.78	251.34	258.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.83	12.83	18.63	0.00	0.00	0.00	0.00	16.17	0.61	0.00	16.90	19.87
Movement LOS	B	B	B					B	A		B	B
d_A, Approach Delay [s/veh]	16.47			0.00			12.02			17.61		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	15.35											
Intersection LOS	B											
Intersection V/C	0.695											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.82	23.82	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.890	2.087	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	466	0	1398	1398
d_b, Bicycle Delay [s]	18.94	32.20	2.92	2.92
l_b,int, Bicycle LOS Score for Intersection	4.375	4.132	2.655	2.708
Bicycle LOS	E	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	36.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.683

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	122	30	21	20	20	255	390	156	134	23	143	30
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	504	70	170	20	64	331	508	1417	421	233	1164	31
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	134	19	45	5	17	88	135	377	112	62	310	8
Total Analysis Volume [veh/h]	536	74	181	21	68	352	540	1507	448	248	1238	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	25	56	0	12	43	0	33	56	0	16	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	32	32	2	16	16	19	37	37	10	28	28
g / C, Green / Cycle	0.18	0.32	0.32	0.02	0.16	0.16	0.19	0.36	0.36	0.10	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.15	0.04	0.11	0.01	0.13	0.13	0.16	0.30	0.28	0.07	0.24	0.02
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1669	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	638	594	505	40	260	248	642	1857	580	334	1404	438
d1, Uniform Delay [s]	39.63	24.38	26.43	48.69	41.18	41.18	39.57	28.86	28.29	44.25	34.88	26.96
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.39	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]	3.09	0.09	0.43	10.57	6.62	6.93	3.09	0.89	7.67	3.26	1.99	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.12	0.36	0.53	0.83	0.83	0.84	0.81	0.77	0.74	0.88	0.08
d, Delay for Lane Group [s/veh]	42.71	24.48	26.86	59.26	47.80	48.12	42.65	29.75	35.97	47.51	36.87	27.04
Lane Group LOS	D	C	C	E	D	D	D	C	D	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.58	1.26	3.36	0.63	5.58	5.34	6.62	10.74	10.50	3.13	9.70	0.59
50th-Percentile Queue Length [ft/ln]	164.43	31.50	84.00	15.87	139.54	133.51	165.60	268.58	262.40	78.32	242.55	14.81
95th-Percentile Queue Length [veh/ln]	10.78	2.27	6.05	1.14	9.46	9.13	10.84	16.12	15.81	5.64	14.81	1.07
95th-Percentile Queue Length [ft/ln]	269.58	56.70	151.19	28.56	236.40	228.26	271.12	402.96	395.22	140.98	370.26	26.67

Movement, Approach, & Intersection Results

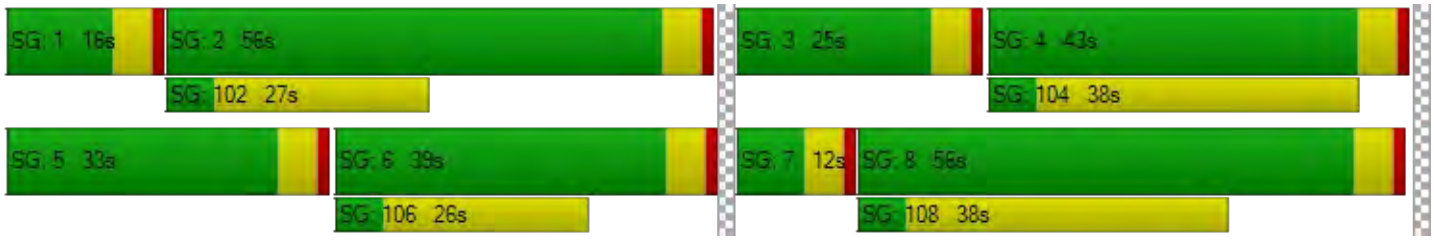
d_M, Delay for Movement [s/veh]	42.71	24.48	26.86	59.26	47.80	47.98	42.65	29.75	35.97	47.51	36.87	27.04
Movement LOS	D	C	C	E	D	D	D	C	D	D	D	C
d_A, Approach Delay [s/veh]	37.38			48.49			33.66			38.39		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	36.84											
Intersection LOS	D											
Intersection V/C	0.683											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.62	41.62	41.62	41.62
l_p,int, Pedestrian LOS Score for Intersection	2.712	2.519	3.357	3.206
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1016	757	1016	677
d_b, Bicycle Delay [s]	12.17	19.41	12.17	21.97
l_b,int, Bicycle LOS Score for Intersection	2.865	2.287	2.932	2.395
Bicycle LOS	C	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	23.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.149

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	159	120	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	142	309	211	55	33	83
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]	142	468	331	55	33	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	123	87	14	9	22
Total Analysis Volume [veh/h]	149	493	348	58	35	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.00	0.00	0.00	0.15	0.11
d_M, Delay for Movement [s/veh]	8.60	0.00	0.00	0.00	22.97	12.09
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.45	0.00	0.00	0.00	1.02	1.02
95th-Percentile Queue Length [ft/ln]	11.13	0.00	0.00	0.00	25.42	25.42
d_A, Approach Delay [s/veh]	2.00		0.00		15.21	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.68					
Intersection LOS	C					

Appendix D-10

Phase 1+2+3 with Project plus

Other Cumulative Projects (2031)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\10 P3 + OCP AM.pdf

Scenario 19 P3 w Other Cumulative AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.359	18.1	B
2	Bellegrave Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	WB Left	0.413	16.8	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.309	17.8	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.415	22.8	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.478	45.0	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Left		5.2	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.081	12.1	B
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	EB Right		5.6	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.199	18.2	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	SB Thru		5.5	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.650	34.5	C
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.459	20.9	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.381	10.5	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.639	11.6	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.627	31.2	C
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.181	18.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.359

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	29	31	29	11	84	84	31	106	82	26	71	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	571	29	11	322	268	396	106	134	26	71	29
Peak Hour Factor	0.9600	0.9600	0.9500	0.9500	0.9600	0.9600	0.9600	0.9500	0.9600	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	149	8	3	84	70	103	28	35	7	19	8
Total Analysis Volume [veh/h]	77	595	31	12	335	279	413	112	140	27	75	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	51	0	19	55	0	12	50	0	15	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	15	15	1	12	12	9	14	14	2	7
g / C, Green / Cycle	0.07	0.29	0.29	0.02	0.24	0.24	0.18	0.27	0.27	0.03	0.13
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.01	0.07	0.18	0.12	0.03	0.09	0.01	0.02
s, saturation flow rate [veh/h]	1781	3560	1823	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	118	1022	523	28	1206	376	608	975	435	110	462
d1, Uniform Delay [s]	23.29	14.69	14.70	24.91	15.92	18.04	19.70	13.91	14.77	24.13	19.75
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream 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]	6.05	0.26	0.51	9.92	0.12	2.89	1.34	0.05	0.42	1.14	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	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	0.66	0.40	0.41	0.43	0.28	0.74	0.68	0.11	0.32	0.25	0.16
d, Delay for Lane Group [s/veh]	29.34	14.95	15.21	34.83	16.05	20.93	21.04	13.96	15.19	25.27	19.91
Lane Group LOS	C	B	B	C	B	C	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.03	1.72	1.81	0.21	0.96	2.98	2.17	0.43	1.18	0.16	0.37
50th-Percentile Queue Length [ft/ln]	25.70	42.97	45.25	5.27	23.98	74.47	54.25	10.85	29.62	4.11	9.28
95th-Percentile Queue Length [veh/ln]	1.85	3.09	3.26	0.38	1.73	5.36	3.91	0.78	2.13	0.30	0.67
95th-Percentile Queue Length [ft/ln]	46.25	77.35	81.45	9.48	43.17	134.04	97.64	19.53	53.32	7.40	16.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.34	15.03	15.21	34.83	16.05	20.93	21.04	13.96	15.19	25.27	19.91	0.00
Movement LOS	C	B	B	C	B	C	C	B	B	C	B	
d_A, Approach Delay [s/veh]	16.60			18.59			18.62			21.33		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.06											
Intersection LOS	B											
Intersection V/C	0.359											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.23	17.23	17.23	17.23
l_p,int, Pedestrian LOS Score for Intersection	2.733	2.896	2.718	2.466
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1808	1966	1769	1887
d_b, Bicycle Delay [s]	0.23	0.01	0.34	0.08
l_b,int, Bicycle LOS Score for Intersection	1.946	1.904	2.108	1.644
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.413

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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]	114	116	101	89	59	49
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]	114	118	606	89	62	517
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	35	178	26	18	152
Total Analysis Volume [veh/h]	134	139	713	105	73	608
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
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.0	0.0	4.0	4.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	17	0	34	0	69	103
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	24	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	3.0	0.0	3.0	3.0
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	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	12	12	87	87	6	98
g / C, Green / Cycle	0.10	0.10	0.72	0.72	0.05	0.82
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.22	0.23	0.04	0.33
s, saturation flow rate [veh/h]	1781	1589	1870	1789	1781	1870
c, Capacity [veh/h]	179	159	1349	1290	95	1527
d1, Uniform Delay [s]	52.51	53.21	5.97	6.04	56.03	3.00
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]	6.21	13.50	0.58	0.65	12.00	0.78
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	0.75	0.87	0.30	0.32	0.77	0.40
d, Delay for Lane Group [s/veh]	58.72	66.71	6.55	6.69	68.03	3.77
Lane Group LOS	E	E	A	A	E	A
Critical Lane Group	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.24	4.73	3.57	3.62	2.50	3.24
50th-Percentile Queue Length [ft/ln]	105.90	118.16	89.19	90.62	62.49	81.02
95th-Percentile Queue Length [veh/ln]	7.61	8.29	6.42	6.52	4.50	5.83
95th-Percentile Queue Length [ft/ln]	190.28	207.30	160.54	163.12	112.48	145.83

Movement, Approach, & Intersection Results

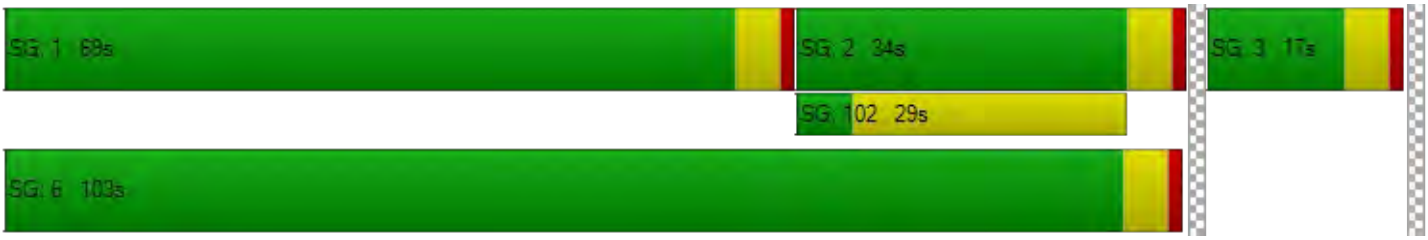
d_M, Delay for Movement [s/veh]	58.72	66.71	6.61	6.69	68.03	3.77
Movement LOS	E	E	A	A	E	A
d_A, Approach Delay [s/veh]	62.79		6.62		10.66	
Approach LOS	E		A		B	
d_I, Intersection Delay [s/veh]	16.83					
Intersection LOS	B					
Intersection V/C	0.413					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.102	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	483	1634
d_b, Bicycle Delay [s]	48.59	34.50	2.01
l_b,int, Bicycle LOS Score for Intersection	1.560	2.234	2.683
Bicycle LOS	A	B	B

Sequence

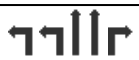
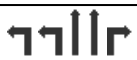
Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.309

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	6	0	6	7	35	51	167	0	0	72	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	219	121	40	57	72	111	550	55	127	443	114
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	61	34	11	16	20	31	153	15	35	123	32
Total Analysis Volume [veh/h]	60	243	134	44	63	80	123	611	61	141	492	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	10	47	0	15	47	0	15	47	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	48	48	48	48	48	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	4	11	11	4	11	11
g / C, Green / Cycle	0.06	0.21	0.21	0.05	0.20	0.20	0.08	0.24	0.24	0.09	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.08	0.01	0.02	0.05	0.04	0.17	0.04	0.04	0.14	0.08
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	202	742	331	163	702	313	294	840	375	309	855	382
d1, Uniform Delay [s]	21.53	16.05	16.33	21.94	15.66	16.19	20.71	16.82	14.49	20.63	15.99	14.98
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	0.25	0.79	0.87	0.05	0.42	0.94	1.23	0.20	1.05	0.61	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	0.30	0.33	0.40	0.27	0.09	0.26	0.42	0.73	0.16	0.46	0.58	0.33
d, Delay for Lane Group [s/veh]	22.34	16.30	17.12	22.82	15.71	16.62	21.65	18.05	14.69	21.67	16.60	15.48
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.32	1.01	1.18	0.24	0.25	0.69	0.63	2.81	0.48	0.72	2.12	1.04
50th-Percentile Queue Length [ft/ln]	7.88	25.37	29.57	5.91	6.33	17.20	15.66	70.26	12.00	17.96	53.03	26.11
95th-Percentile Queue Length [veh/ln]	0.57	1.83	2.13	0.43	0.46	1.24	1.13	5.06	0.86	1.29	3.82	1.88
95th-Percentile Queue Length [ft/ln]	14.18	45.67	53.22	10.64	11.39	30.97	28.19	126.47	21.59	32.33	95.46	46.99

Movement, Approach, & Intersection Results

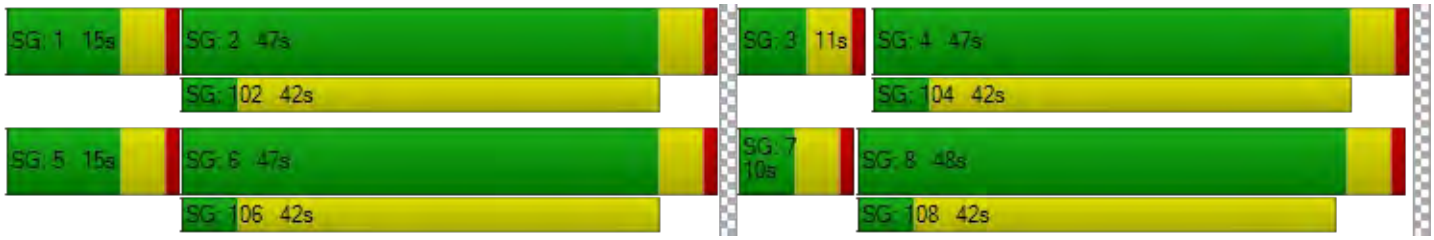
d_M, Delay for Movement [s/veh]	22.34	16.30	17.12	22.82	15.71	16.62	21.65	18.05	14.69	21.67	16.60	15.48
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.38			17.77			18.35			17.36		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.76											
Intersection LOS	B											
Intersection V/C	0.309											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.66	15.66	15.66	15.66
l_p,int, Pedestrian LOS Score for Intersection	2.659	2.656	2.760	2.777
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1806	1764	1764	1764
d_b, Bicycle Delay [s]	0.22	0.33	0.33	0.33
l_b,int, Bicycle LOS Score for Intersection	1.920	1.714	2.215	2.187
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.415

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	29	0	0	0	0	0	0	140	34	0	50	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	144	23	35	41	16	98	156	517	89	52	514	60
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	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	7	11	13	5	31	49	162	28	16	161	19
Total Analysis Volume [veh/h]	180	29	44	51	20	123	195	646	111	65	643	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	22	39	0	37	54	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	14	22	22	5	13	78	69	69	78	68	68
g / C, Green / Cycle	0.12	0.18	0.18	0.04	0.11	0.65	0.57	0.57	0.65	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.10	0.02	0.03	0.03	0.09	0.23	0.18	0.07	0.08	0.18	0.05
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1624	842	3560	1589	811	3560	1589
c, Capacity [veh/h]	209	345	294	68	172	563	2039	910	546	2023	903
d1, Uniform Delay [s]	52.06	40.54	41.05	57.18	52.65	9.03	13.38	11.78	8.24	13.67	11.75
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	10.08	0.10	0.23	15.11	9.98	1.68	0.41	0.27	0.10	0.41	0.18
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	0.86	0.08	0.15	0.75	0.83	0.35	0.32	0.12	0.12	0.32	0.08
d, Delay for Lane Group [s/veh]	62.14	40.64	41.28	72.29	62.63	10.71	13.79	12.05	8.33	14.08	11.93
Lane Group LOS	E	D	D	E	E	B	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.90	0.73	1.12	1.82	4.70	2.17	4.59	1.42	0.60	4.62	0.95
50th-Percentile Queue Length [ft/ln]	147.57	18.15	27.97	45.46	117.52	54.20	114.67	35.54	15.03	115.60	23.74
95th-Percentile Queue Length [veh/ln]	9.89	1.31	2.01	3.27	8.26	3.90	8.10	2.56	1.08	8.15	1.71
95th-Percentile Queue Length [ft/ln]	247.18	32.66	50.35	81.84	206.41	97.56	202.48	63.97	27.06	203.76	42.73

Movement, Approach, & Intersection Results

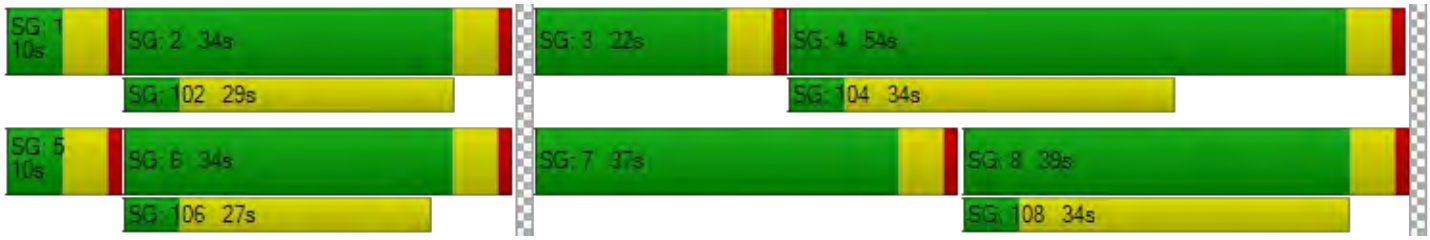
d_M, Delay for Movement [s/veh]	62.14	40.64	41.28	72.29	62.63	62.63	10.71	13.79	12.05	8.33	14.08	11.93
Movement LOS	E	D	D	E	E	E	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	56.05			65.17			12.96			13.40		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	22.75											
Intersection LOS	C											
Intersection V/C	0.415											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.310	2.278	2.777	2.716
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	566	816	483	483
d_b, Bicycle Delay [s]	30.83	21.02	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	1.977	1.880	2.345	2.206
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	45.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	13	7	0	13	11	29	111	0	6	39	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	330	182	135	212	70	109	334	38	207	274	143
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	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	109	60	44	70	23	36	110	13	68	90	47
Total Analysis Volume [veh/h]	100	434	239	178	279	92	143	439	50	272	361	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	29	43	0	27	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	61	61	9	61	78	13	19	19	22	28	28
g / C, Green / Cycle	0.07	0.47	0.47	0.07	0.47	0.60	0.10	0.14	0.14	0.17	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.15	0.05	0.08	0.06	0.08	0.12	0.03	0.15	0.16	0.16
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1657
c, Capacity [veh/h]	124	1667	744	234	1661	957	173	513	229	296	398	353
d1, Uniform Delay [s]	59.66	20.95	21.65	59.57	20.08	10.92	57.61	54.33	49.17	53.35	47.68	47.70
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.19	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]	11.75	0.38	1.14	5.02	0.22	0.20	9.45	4.21	0.47	17.49	2.58	2.93
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	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.26	0.32	0.76	0.17	0.10	0.83	0.86	0.22	0.92	0.73	0.73
d, Delay for Lane Group [s/veh]	71.41	21.33	22.79	64.59	20.30	11.12	67.06	58.54	49.65	70.84	50.26	50.64
Lane Group LOS	E	C	C	E	C	B	E	E	D	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	4.12	4.82	3.05	2.53	1.17	5.08	7.32	1.48	10.18	9.08	8.10
50th-Percentile Queue Length [ft/ln]	91.50	102.96	120.59	76.32	63.20	29.33	126.92	182.96	36.93	254.52	226.90	202.58
95th-Percentile Queue Length [veh/ln]	6.59	7.41	8.43	5.49	4.55	2.11	8.77	11.76	2.66	15.41	14.02	12.77
95th-Percentile Queue Length [ft/ln]	164.69	185.32	210.63	137.37	113.76	52.80	219.30	293.88	66.47	385.34	350.41	319.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.41	21.33	22.79	64.59	20.30	11.12	67.06	58.54	49.65	70.84	50.33	50.64
Movement LOS	E	C	C	E	C	B	E	E	D	E	D	D
d_A, Approach Delay [s/veh]	28.26			33.12			59.76			57.19		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	44.96											
Intersection LOS	D											
Intersection V/C	0.478											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.695	2.796	2.664	2.646
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	554
d_b, Bicycle Delay [s]	33.27	30.47	32.56	33.99
l_b,int, Bicycle LOS Score for Intersection	2.197	2.013	2.081	2.237
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	41	0	0	0	0	0	0	18	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	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]	124	123	0	0	45	102	108	0	161	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	124	123	41	0	45	102	108	0	161	18	0	0
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	38	13	0	14	31	33	0	49	5	0	0
Total Analysis Volume [veh/h]	151	150	50	0	55	124	132	0	196	22	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	135			173			77			436		
Exiting Flow Rate [veh/h]	273			285			277			50		
Demand Flow Rate [veh/h]	124	123	41	0	45	102	108	0	161	18	0	0
Adjusted Demand Flow Rate [veh/h]	151	150	50	0	55	124	132	0	196	22	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	0.99	0.99	1.00
Entry Flow Rate [veh/h]	351	182	331	22
Capacity of Entry and Bypass Lanes [veh/h]	1203	1157	1276	885
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1203	1142	1266	885
X, volume / capacity	0.29	0.16	0.26	0.02

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.22	0.56	1.04	0.08
95th-Percentile Queue Length [ft]	30.55	13.89	26.00	1.91
Approach Delay [s/veh]	5.68	4.53	5.13	4.30
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.21			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.081

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	6	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	342	208	19	40	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	97	59	5	11	0
Total Analysis Volume [veh/h]	0	389	236	22	45	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.08	0.00
d_M, Delay for Movement [s/veh]	7.76	0.00	0.00	0.00	12.09	9.53
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.26	0.26
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.62	6.62
d_A, Approach Delay [s/veh]	0.00		0.00		12.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	31	24	0	36	0	0	0	0	60	0	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]	87	154	0	25	151	21	52	13	166	0	16	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	185	24	25	187	21	52	13	166	60	16	30
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	53	7	7	53	6	15	4	47	17	5	9
Total Analysis Volume [veh/h]	99	210	27	28	213	24	59	15	189	68	18	34
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	104			189			315			375		
Exiting Flow Rate [veh/h]	479			309			144			71		
Demand Flow Rate [veh/h]	87	185	24	25	187	21	52	13	166	60	16	30
Adjusted Demand Flow Rate [veh/h]	99	210	27	28	213	24	59	15	189	68	18	34

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	343	271	269	123
Capacity of Entry and Bypass Lanes [veh/h]	1242	1139	1001	942
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1217	1117	981	923
X, volume / capacity	0.28	0.24	0.27	0.13

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.13	0.93	1.09	0.45
95th-Percentile Queue Length [ft]	28.32	23.15	27.14	11.16
Approach Delay [s/veh]	5.46	5.41	6.35	5.14
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.65			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.199

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	11	6	0	0	7	0	0	19	10	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	273	12	10	179	16	42	26	13	29	55	32
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	75	3	3	49	4	12	7	4	8	15	9
Total Analysis Volume [veh/h]	15	300	13	11	197	18	46	29	14	32	60	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	94	87	87	94	87	87	16	16	16
g / C, Green / Cycle	0.78	0.73	0.73	0.78	0.72	0.72	0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.08	0.01	0.06	0.01	0.08	0.01	0.11
s, saturation flow rate [veh/h]	1199	1870	1843	1101	3560	1589	968	1589	1128
c, Capacity [veh/h]	1009	1357	1338	924	2572	1148	180	216	191
d1, Uniform Delay [s]	2.93	4.92	4.92	2.94	4.90	4.68	47.77	45.17	50.52
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.17	0.18	0.02	0.06	0.02	1.53	0.12	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
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	0.01	0.12	0.12	0.01	0.08	0.02	0.42	0.06	0.66
d, Delay for Lane Group [s/veh]	2.93	5.09	5.10	2.96	4.96	4.70	49.30	45.29	54.44
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	1.14	1.13	0.06	0.68	0.12	2.17	0.37	3.97
50th-Percentile Queue Length [ft/ln]	1.72	28.42	28.23	1.38	17.11	3.10	54.18	9.34	99.26
95th-Percentile Queue Length [veh/ln]	0.12	2.05	2.03	0.10	1.23	0.22	3.90	0.67	7.15
95th-Percentile Queue Length [ft/ln]	3.09	51.16	50.81	2.48	30.80	5.57	97.52	16.81	178.67

Movement, Approach, & Intersection Results

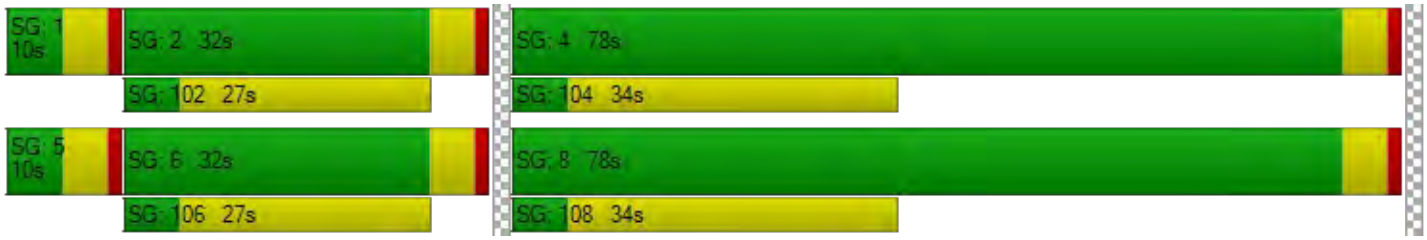
d_M, Delay for Movement [s/veh]	2.93	5.10	5.10	2.96	4.96	4.70	49.30	49.30	45.29	54.44	54.44	54.44
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	5.00			4.84			48.67			54.44		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	18.15											
Intersection LOS	B											
Intersection V/C	0.199											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.472	2.759	2.030	1.829
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.830	1.746	1.706	1.769
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	55	12	0	97	0	0	0	0	34	0	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]	23	198	0	19	290	8	21	0	57	0	0	22
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	23	253	12	19	387	8	21	0	57	34	0	23
Peak Hour Factor	0.9500	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9500	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	70	3	5	106	2	6	0	15	9	0	6
Total Analysis Volume [veh/h]	24	278	13	21	425	9	23	0	60	37	0	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	45			62			493			332		
Exiting Flow Rate [veh/h]	532			333			34			21		
Demand Flow Rate [veh/h]	23	253	12	19	387	8	21	0	57	34	0	23
Adjusted Demand Flow Rate [veh/h]	24	278	13	21	425	9	23	0	60	37	0	25

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	309	0	465	85	64
Capacity of Entry and Bypass Lanes [veh/h]	1319	1351	1296	835	985
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1293	1324	1270	819	965
X, volume / capacity	0.23	0.01	0.36	0.10	0.06

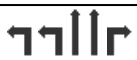
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.91	0.03	1.65	0.34	0.21
95th-Percentile Queue Length [ft]	22.70	0.74	41.22	8.43	5.14
Approach Delay [s/veh]	4.72		6.20	5.40	4.31
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	5.49				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	34.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	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]	14	14	15	142	12	0	0	112	12	30	144	153
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	118	490	402	352	252	101	185	898	44	346	735	297
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	126	104	91	65	26	48	231	11	89	189	77
Total Analysis Volume [veh/h]	122	505	414	363	260	104	191	926	45	357	758	306
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	67	0	13	66	0	10	49	0	11	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	91	91	91	91	91	91	91	91	91	91	91	91
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	26	26	12	33	33	7	20	20	12	25	25
g / C, Green / Cycle	0.06	0.29	0.29	0.13	0.37	0.37	0.08	0.22	0.22	0.13	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.04	0.10	0.26	0.10	0.05	0.07	0.06	0.18	0.03	0.10	0.21	0.19
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	198	1475	460	466	1870	584	279	1141	356	460	983	457
d1, Uniform Delay [s]	42.11	25.60	31.19	38.23	19.29	19.59	40.89	33.64	28.33	38.32	30.42	29.38
k, delay calibration	0.11	0.11	0.28	0.11	0.11	0.11	0.11	0.11	0.11	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]	3.11	0.14	14.83	2.86	0.03	0.14	2.97	1.45	0.16	2.86	1.31	1.87
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	1.00	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	0.34	0.90	0.78	0.14	0.18	0.68	0.81	0.13	0.78	0.77	0.67
d, Delay for Lane Group [s/veh]	45.21	25.74	46.01	41.09	19.32	19.73	43.86	35.09	28.49	41.18	31.73	31.25
Lane Group LOS	D	C	D	D	B	B	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.41	2.84	10.36	4.05	1.21	1.49	2.11	6.23	0.76	3.98	7.62	6.04
50th-Percentile Queue Length [ft/ln]	35.34	71.11	259.03	101.18	30.19	37.19	52.75	155.70	19.04	99.57	190.61	151.08
95th-Percentile Queue Length [veh/ln]	2.54	5.12	15.64	7.28	2.17	2.68	3.80	10.32	1.37	7.17	12.15	10.07
95th-Percentile Queue Length [ft/ln]	63.62	128.00	391.00	182.12	54.34	66.94	94.94	258.02	34.27	179.23	303.83	251.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.21	25.74	46.01	41.09	19.32	19.73	43.86	35.09	28.49	41.18	31.73	31.25
Movement LOS	D	C	D	D	B	B	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	36.08			30.25			36.27			34.00		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	34.48											
Intersection LOS	C											
Intersection V/C	0.650											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.06	37.06	37.06	37.06
l_p,int, Pedestrian LOS Score for Intersection	3.036	3.039	3.200	3.108
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1359	1337	965	987
d_b, Bicycle Delay [s]	4.68	5.01	12.23	11.71
l_b,int, Bicycle LOS Score for Intersection	2.132	1.959	2.199	2.732
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.459

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	269	0	0	327	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	11	138	102	10	18	43	1439	80	175	1295	168
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	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	3	35	26	3	5	11	367	20	45	330	43
Total Analysis Volume [veh/h]	101	11	141	104	10	18	44	1468	82	179	1321	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	5	90	90	9	95	95
g / C, Green / Cycle	0.11	0.11	0.11	0.07	0.07	0.03	0.64	0.64	0.07	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.09	0.03	0.02	0.02	0.29	0.05	0.05	0.26	0.11
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1679	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	189	190	168	248	120	58	3271	1021	229	3441	1074
d1, Uniform Delay [s]	57.77	57.76	61.40	62.20	61.35	67.15	12.60	9.45	64.37	9.95	8.25
k, delay calibration	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
d2, Incremental Delay [s]	0.86	0.85	10.44	1.13	0.98	17.85	0.45	0.15	5.76	0.33	0.32
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
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	0.30	0.30	0.84	0.42	0.23	0.76	0.45	0.08	0.78	0.38	0.16
d, Delay for Lane Group [s/veh]	58.63	58.62	71.85	63.34	62.33	85.00	13.04	9.61	70.13	10.27	8.57
Lane Group LOS	E	E	E	E	E	F	B	A	E	B	A
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.88	1.90	5.42	1.82	0.98	1.86	7.71	1.00	3.34	5.87	1.95
50th-Percentile Queue Length [ft/ln]	47.05	47.38	135.55	45.51	24.47	46.40	192.65	24.89	83.48	146.84	48.86
95th-Percentile Queue Length [veh/ln]	3.39	3.41	9.24	3.28	1.76	3.34	12.26	1.79	6.01	9.85	3.52
95th-Percentile Queue Length [ft/ln]	84.69	85.29	231.03	81.92	44.05	83.51	306.46	44.81	150.26	246.20	87.94

Movement, Approach, & Intersection Results

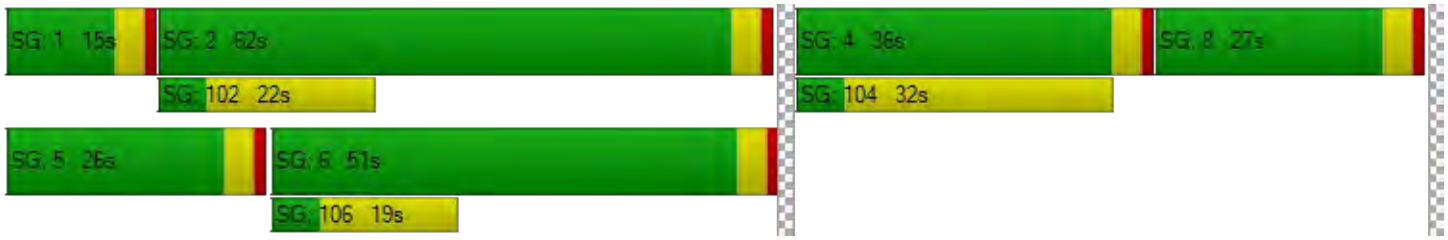
d_M, Delay for Movement [s/veh]	58.62	58.62	71.85	63.34	62.33	62.33	85.00	13.04	9.61	70.13	10.27	8.57
Movement LOS	E	E	E	E	E	E	F	B	A	E	B	A
d_A, Approach Delay [s/veh]	65.99			63.12			14.85			16.51		
Approach LOS	E			E			B			B		
d_I, Intersection Delay [s/veh]	20.90											
Intersection LOS	C											
Intersection V/C	0.459											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.560	2.392	3.118	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	1.977	1.777	2.436	2.479
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	127	0	94	0	190	79	0	233	243
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	295	1	608	0	1180	587	0	1012	961
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	76	0	157	0	304	151	0	261	248
Total Analysis Volume [veh/h]	0	0	0	304	1	627	0	1216	605	0	1043	991
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	20	0	0	50	0	0	50	50
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		19	19	19	25	25	25	49
g / C, Green / Cycle		0.35	0.35	0.35	0.46	0.46	0.46	0.91
(v / s)_i Volume / Saturation Flow Rate		0.09	0.09	0.22	0.24	0.38	0.20	0.62
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		628	628	991	2359	736	2359	1443
d1, Uniform Delay [s]		12.43	12.43	14.62	10.26	12.61	9.82	0.61
k, delay calibration		0.11	0.11	0.11	0.11	0.21	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]		0.20	0.20	0.67	0.18	4.41	0.13	2.69
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		0.24	0.24	0.63	0.52	0.82	0.44	0.69
d, Delay for Lane Group [s/veh]		12.63	12.62	15.29	10.43	17.02	9.95	3.30
Lane Group LOS		B	B	B	B	B	A	A
Critical Lane Group		No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		1.18	1.18	2.85	2.80	5.96	2.29	1.08
50th-Percentile Queue Length [ft/ln]		29.40	29.40	71.33	69.93	149.07	57.35	26.91
95th-Percentile Queue Length [veh/ln]		2.12	2.12	5.14	5.04	9.97	4.13	1.94
95th-Percentile Queue Length [ft/ln]		52.92	52.92	128.40	125.88	249.19	103.23	48.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	12.62	12.62	15.29	0.00	10.43	17.02	0.00	9.95	3.30
Movement LOS				B	B	B		B	B		A	A
d_A, Approach Delay [s/veh]	0.00			14.42			12.62			6.71		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	10.46											
Intersection LOS	B											
Intersection V/C	0.381											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	18.78	18.78	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.112	2.837	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	555	1665	1665
d_b, Bicycle Delay [s]	27.03	14.11	0.76	0.76
l_b,int, Bicycle LOS Score for Intersection	4.132	3.097	2.561	2.678
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	94	0	148	0	0	0	0	238	79	0	382	239
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	496	3	640	0	0	0	0	763	747	0	1476	624
Peak Hour Factor	0.9700	0.9700	0.9700	0.9500	0.9500	0.9500	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	128	1	165	0	0	0	0	197	193	0	380	161
Total Analysis Volume [veh/h]	511	3	660	0	0	0	0	787	770	0	1522	643
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	58	58	58		58	58	58	58
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	20	20	20		28	53	28	28
g / C, Green / Cycle	0.34	0.34	0.34		0.48	0.91	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.23		0.15	0.48	0.30	0.40
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	614	615	971		2455	1452	2455	766
d1, Uniform Delay [s]	14.49	14.49	16.20		9.17	0.42	11.06	13.03
k, delay calibration	0.11	0.11	0.11		0.11	0.38	0.11	0.27
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	0.45	0.85		0.07	1.06	0.26	6.14
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	0.42	0.42	0.68		0.32	0.53	0.62	0.84
d, Delay for Lane Group [s/veh]	14.95	14.95	17.05		9.25	1.48	11.32	19.17
Lane Group LOS	B	B	B		A	A	B	B
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.36	2.36	3.40		1.70	0.43	3.97	7.15
50th-Percentile Queue Length [ft/ln]	59.10	59.09	84.90		42.40	10.71	99.35	178.78
95th-Percentile Queue Length [veh/ln]	4.25	4.25	6.11		3.05	0.77	7.15	11.54
95th-Percentile Queue Length [ft/ln]	106.37	106.36	152.83		76.32	19.28	178.82	288.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.95	14.95	17.05	0.00	0.00	0.00	0.00	9.25	1.48	0.00	11.32	19.17
Movement LOS	B	B	B					A	A		B	B
d_A, Approach Delay [s/veh]	16.13			0.00			5.41			13.65		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	11.62											
Intersection LOS	B											
Intersection V/C	0.639											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.53	20.53	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.843	2.129	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	0	1561	1561
d_b, Bicycle Delay [s]	15.78	28.83	1.39	1.39
l_b,int, Bicycle LOS Score for Intersection	3.497	4.132	2.416	2.750
Bicycle LOS	C	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.627

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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]	97	11	17	29	29	399	180	115	91	16	125	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	440	44	100	29	64	495	232	874	242	121	1163	12
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]	116	12	26	8	17	130	61	230	64	32	306	3
Total Analysis Volume [veh/h]	463	46	105	31	67	521	244	920	255	127	1224	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	60	0	18	54	0	20	49	0	13	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	86	86	86	86	86	86	86	86	86	86	86	86
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14	30	30	3	19	19	9	28	28	5	25	25
g / C, Green / Cycle	0.17	0.35	0.35	0.03	0.22	0.22	0.10	0.33	0.33	0.06	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.07	0.02	0.18	0.18	0.07	0.18	0.16	0.04	0.24	0.01
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1645	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	578	658	559	54	354	342	343	1665	519	207	1465	457
d1, Uniform Delay [s]	34.68	18.65	19.48	41.43	32.60	32.61	37.82	23.95	23.38	39.74	28.94	22.17
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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	0.04	0.16	9.09	5.51	5.76	2.74	0.29	0.72	2.93	1.33	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	0.00	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	0.07	0.19	0.57	0.84	0.85	0.71	0.55	0.49	0.61	0.84	0.03
d, Delay for Lane Group [s/veh]	37.30	18.69	19.64	50.52	38.11	38.37	40.56	24.24	24.10	42.67	30.26	22.19
Lane Group LOS	D	B	B	D	D	D	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.79	0.61	1.45	0.78	6.37	6.20	2.59	5.02	4.14	1.38	7.82	0.19
50th-Percentile Queue Length [ft/ln]	119.67	15.16	36.29	19.52	159.26	154.88	64.81	125.43	103.49	34.57	195.55	4.74
95th-Percentile Queue Length [veh/ln]	8.37	1.09	2.61	1.41	10.51	10.28	4.67	8.69	7.45	2.49	12.41	0.34
95th-Percentile Queue Length [ft/ln]	209.37	27.29	65.32	35.14	262.75	256.93	116.66	217.27	186.28	62.22	310.22	8.54

Movement, Approach, & Intersection Results

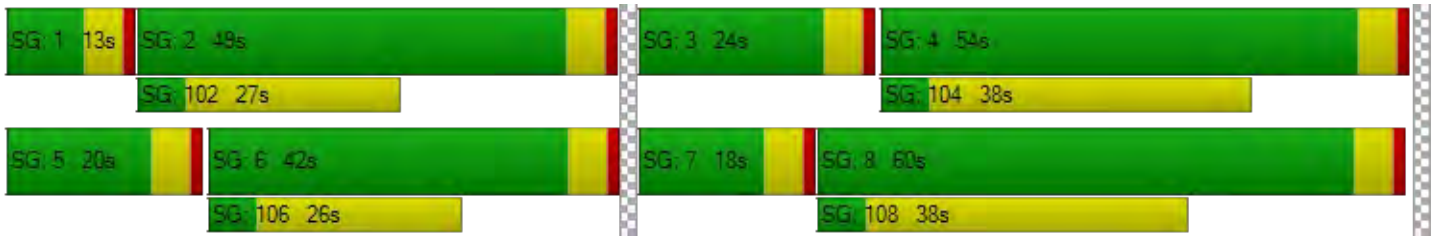
d_M, Delay for Movement [s/veh]	37.30	18.69	19.64	50.52	38.11	38.25	40.56	24.24	24.10	42.67	30.26	22.19
Movement LOS	D	B	B	D	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	32.89			38.85			27.02			31.34		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	31.21											
Intersection LOS	C											
Intersection V/C	0.627											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.70	34.70	34.70	34.70
l_p,int, Pedestrian LOS Score for Intersection	2.625	2.479	3.242	3.111
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1272	1133	1018	856
d_b, Bicycle Delay [s]	5.73	8.12	10.43	14.15
l_b,int, Bicycle LOS Score for Intersection	2.573	2.581	2.340	2.310
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.181

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	86	131	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	42	159	322	25	61	134
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]	42	245	453	25	61	134
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	64	119	7	16	35
Total Analysis Volume [veh/h]	44	258	477	26	64	141
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.18	0.19
d_M, Delay for Movement [s/veh]	8.55	0.00	0.00	0.00	18.90	13.55
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.00	1.69	1.69
95th-Percentile Queue Length [ft/ln]	3.25	0.00	0.00	0.00	42.24	42.24
d_A, Approach Delay [s/veh]	1.25		0.00		15.22	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.46					
Intersection LOS	C					

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\10 P3 + OCP PM.pdf

Scenario 20 P3 w Other Cumulative PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.576	26.6	C
2	Bellegrave Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	NB Right	0.421	14.1	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.324	18.9	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.302	13.0	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.424	38.9	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	SB Thru		4.7	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.142	15.3	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		6.2	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.188	11.4	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		5.7	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.804	55.7	E
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.676	38.2	D
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.814	20.1	C
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.698	15.5	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.690	37.2	D
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.149	23.0	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	26.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	94	102	13	30	65	65	102	105	57	13	130	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	699	13	30	714	488	474	105	164	13	130	20
Peak Hour Factor	0.9800	0.9800	0.9500	0.9500	0.9800	0.9800	0.9800	0.9500	0.9800	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]	38	178	3	8	182	124	121	28	42	3	34	5
Total Analysis Volume [veh/h]	150	713	14	32	729	498	484	111	167	14	137	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	28	46	0	10	53	0	10	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	34	34	3	28	28	14	22	22	1	10
g / C, Green / Cycle	0.11	0.42	0.42	0.03	0.35	0.35	0.18	0.28	0.28	0.02	0.12
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.13	0.02	0.14	0.31	0.14	0.03	0.11	0.00	0.04
s, saturation flow rate [veh/h]	1781	3560	1852	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	192	1503	782	57	1765	551	611	993	444	59	424
d1, Uniform Delay [s]	34.81	15.44	15.44	38.19	19.95	24.89	31.55	21.48	23.25	38.85	32.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.31	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
d2, Incremental Delay [s]	6.82	0.12	0.23	8.31	0.15	14.40	2.36	0.05	0.53	2.07	0.44
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	0.78	0.32	0.32	0.56	0.41	0.90	0.79	0.11	0.38	0.24	0.32
d, Delay for Lane Group [s/veh]	41.63	15.56	15.68	46.50	20.10	39.29	33.90	21.53	23.78	40.92	32.74
Lane Group LOS	D	B	B	D	C	D	C	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.14	2.77	2.91	0.74	3.32	10.63	4.53	0.76	2.51	0.15	1.21
50th-Percentile Queue Length [ft/ln]	78.39	69.30	72.81	18.45	83.04	265.83	113.29	18.96	62.83	3.75	30.32
95th-Percentile Queue Length [veh/ln]	5.64	4.99	5.24	1.33	5.98	15.98	8.02	1.37	4.52	0.27	2.18
95th-Percentile Queue Length [ft/ln]	141.11	124.74	131.06	33.21	149.47	399.52	200.57	34.13	113.10	6.75	54.58

Movement, Approach, & Intersection Results

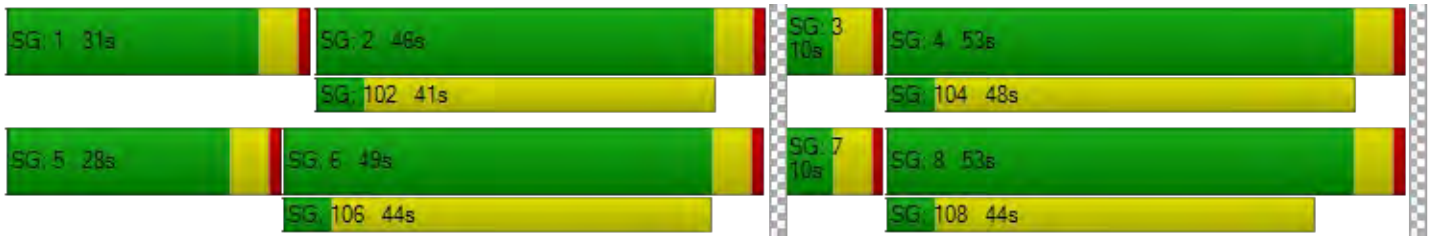
d_M, Delay for Movement [s/veh]	41.63	15.60	15.68	46.50	20.10	39.29	33.90	21.53	23.78	40.92	32.74	0.00
Movement LOS	D	B	B	D	C	D	C	C	C	D	C	
d_A, Approach Delay [s/veh]	20.05			28.36			29.88			33.50		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.61											
Intersection LOS	C											
Intersection V/C	0.576											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.46	31.46	31.46	31.46
l_p,int, Pedestrian LOS Score for Intersection	2.838	3.020	2.805	2.499
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1101	1026	1201	1201
d_b, Bicycle Delay [s]	8.07	9.47	6.37	6.37
l_b,int, Bicycle LOS Score for Intersection	2.042	2.252	2.188	1.684
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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]	53	71	84	73	107	119
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]	57	75	632	80	132	667
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	15	20	165	21	34	174
Total Analysis Volume [veh/h]	59	78	658	83	138	695
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
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.0	0.0	4.0	4.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	62	0	34	0	24	58
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	24	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	3.0	0.0	3.0	3.0
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	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	8	8	86	86	11	102
g / C, Green / Cycle	0.07	0.07	0.71	0.71	0.09	0.85
(v / s)_i Volume / Saturation Flow Rate	0.03	0.05	0.20	0.21	0.08	0.37
s, saturation flow rate [veh/h]	1781	1589	1870	1799	1781	1870
c, Capacity [veh/h]	119	107	1336	1286	166	1589
d1, Uniform Delay [s]	54.00	54.91	6.09	6.15	53.46	2.16
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]	3.14	9.25	0.52	0.57	10.16	0.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.73	0.28	0.29	0.83	0.44
d, Delay for Lane Group [s/veh]	57.14	64.16	6.61	6.72	63.63	3.04
Lane Group LOS	E	E	A	A	E	A
Critical Lane Group	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.83	2.59	3.25	3.29	4.56	2.74
50th-Percentile Queue Length [ft/ln]	45.64	64.70	81.27	82.29	113.96	68.47
95th-Percentile Queue Length [veh/ln]	3.29	4.66	5.85	5.92	8.06	4.93
95th-Percentile Queue Length [ft/ln]	82.16	116.46	146.28	148.12	201.50	123.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.14	64.16	6.65	6.72	63.63	3.04
Movement LOS	E	E	A	A	E	A
d_A, Approach Delay [s/veh]	61.13		6.66		13.08	
Approach LOS	E		A		B	
d_I, Intersection Delay [s/veh]	14.15					
Intersection LOS	B					
Intersection V/C	0.421					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.072	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	950	483	883
d_b, Bicycle Delay [s]	16.53	34.50	18.70
l_b,int, Bicycle LOS Score for Intersection	1.560	2.171	2.934
Bicycle LOS	A	B	C

Sequence

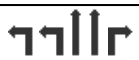
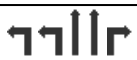
Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.324

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	9	0	9	8	49	40	115	0	0	177	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	92	91	117	120	246	127	77	519	119	195	581	56
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]	24	24	30	31	64	33	20	135	31	51	151	15
Total Analysis Volume [veh/h]	96	95	122	125	256	132	80	541	124	203	605	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	12	47	0	15	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	4	10	10	3	11	11	5	12	12
g / C, Green / Cycle	0.07	0.19	0.19	0.08	0.20	0.20	0.07	0.21	0.21	0.10	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.08	0.04	0.07	0.08	0.02	0.15	0.08	0.06	0.17	0.04
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	260	688	307	290	720	321	237	766	342	354	886	396
d1, Uniform Delay [s]	21.71	16.50	17.39	21.48	16.92	17.13	21.91	17.92	16.49	21.12	16.77	14.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.87	0.09	0.83	1.01	0.30	0.84	0.83	1.21	0.65	1.47	0.94	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.14	0.40	0.43	0.36	0.41	0.34	0.71	0.36	0.57	0.68	0.15
d, Delay for Lane Group [s/veh]	22.58	16.59	18.22	22.49	17.22	17.97	22.75	19.14	17.13	22.58	17.70	14.61
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.51	0.41	1.15	0.67	1.14	1.23	0.43	2.63	1.12	1.08	2.81	0.46
50th-Percentile Queue Length [ft/ln]	12.84	10.15	28.66	16.64	28.39	30.73	10.77	65.85	27.94	27.12	70.24	11.59
95th-Percentile Queue Length [veh/ln]	0.92	0.73	2.06	1.20	2.04	2.21	0.78	4.74	2.01	1.95	5.06	0.83
95th-Percentile Queue Length [ft/ln]	23.11	18.26	51.59	29.96	51.10	55.32	19.39	118.53	50.29	48.82	126.44	20.86

Movement, Approach, & Intersection Results

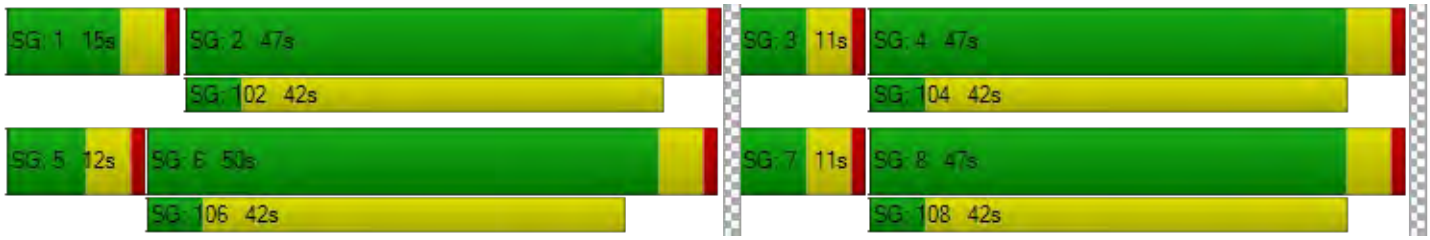
d_M, Delay for Movement [s/veh]	22.58	16.59	18.22	22.49	17.22	17.97	22.75	19.14	17.13	22.58	17.70	14.61
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.06			18.70			19.19			18.64		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.87											
Intersection LOS	B											
Intersection V/C	0.324											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.43	16.43	16.43	16.43
l_p,int, Pedestrian LOS Score for Intersection	2.688	2.667	2.783	2.794
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1707	1707	1707	1829
d_b, Bicycle Delay [s]	0.53	0.53	0.53	0.18
l_b,int, Bicycle LOS Score for Intersection	1.818	1.983	2.174	2.274
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.302

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	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]	31	0	0	0	0	0	0	96	29	0	155	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	8	8	5	4	10	17	464	173	21	646	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	2	2	1	1	3	5	136	51	6	190	2
Total Analysis Volume [veh/h]	134	9	9	6	5	12	20	546	204	25	760	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	11	14	14	1	4	90	82	82	90	82	82
g / C, Green / Cycle	0.09	0.12	0.12	0.01	0.04	0.75	0.68	0.68	0.75	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.08	0.00	0.01	0.00	0.01	0.03	0.15	0.13	0.03	0.21	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1663	766	3560	1589	782	3560	1589
c, Capacity [veh/h]	164	225	191	14	61	597	2424	1082	628	2436	1087
d1, Uniform Delay [s]	53.52	46.66	46.70	59.26	56.29	4.43	7.22	7.01	4.16	7.61	6.02
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.59	0.07	0.10	18.30	2.47	0.10	0.22	0.39	0.03	0.33	0.01
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
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	0.82	0.04	0.05	0.42	0.28	0.03	0.23	0.19	0.04	0.31	0.01
d, Delay for Lane Group [s/veh]	63.10	46.73	46.80	77.56	58.76	4.53	7.43	7.40	4.19	7.95	6.03
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.41	0.24	0.24	0.25	0.54	0.13	2.57	1.93	0.15	3.80	0.07
50th-Percentile Queue Length [ft/ln]	110.14	6.09	6.12	6.36	13.60	3.24	64.17	48.16	3.63	94.93	1.63
95th-Percentile Queue Length [veh/ln]	7.85	0.44	0.44	0.46	0.98	0.23	4.62	3.47	0.26	6.84	0.12
95th-Percentile Queue Length [ft/ln]	196.19	10.96	11.01	11.46	24.48	5.83	115.50	86.68	6.54	170.88	2.93

Movement, Approach, & Intersection Results

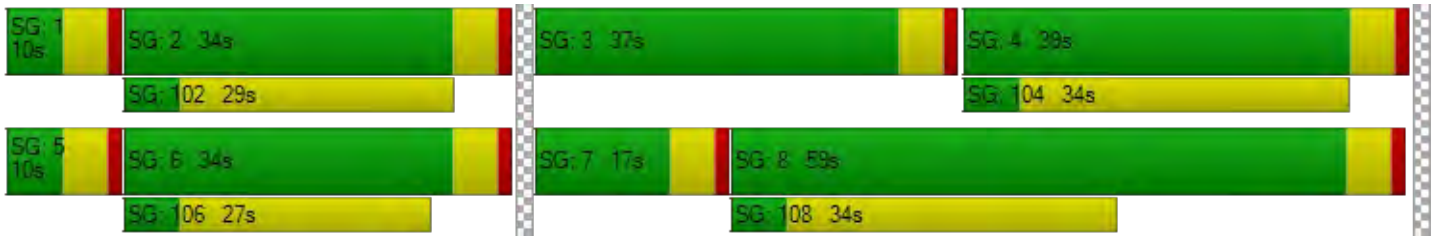
d_M, Delay for Movement [s/veh]	63.10	46.73	46.80	77.56	58.76	58.76	4.53	7.43	7.40	4.19	7.95	6.03
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	61.17			63.66			7.35			7.81		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	13.01											
Intersection LOS	B											
Intersection V/C	0.302											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.265	1.995	2.740	2.688
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.810	1.598	2.195	2.214
Bicycle LOS	A	A	B	B

Sequence

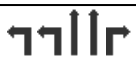
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	38.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	18	8	0	18	30	20	76	0	9	124	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	288	92	221	515	171	109	376	46	132	459	156
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	75	24	58	134	45	28	98	12	34	120	41
Total Analysis Volume [veh/h]	53	300	96	230	536	178	114	392	48	138	478	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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	42	0	19	46	46	18	43	0	16	41	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	5	56	56	10	61	76	10	23	23	11	24	24
g / C, Green / Cycle	0.04	0.47	0.47	0.08	0.51	0.63	0.08	0.19	0.19	0.09	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.06	0.07	0.15	0.11	0.06	0.11	0.03	0.08	0.18	0.18
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1710
c, Capacity [veh/h]	70	1655	739	292	1817	1005	143	683	305	164	380	348
d1, Uniform Delay [s]	57.12	18.77	18.29	53.91	16.96	9.14	54.23	44.07	40.44	53.63	46.39	46.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.12
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]	15.29	0.24	0.36	4.69	0.41	0.38	9.50	0.76	0.24	10.82	6.97	7.80
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	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.18	0.13	0.79	0.30	0.18	0.79	0.57	0.16	0.84	0.88	0.88
d, Delay for Lane Group [s/veh]	72.41	19.01	18.65	58.60	17.37	9.52	63.73	44.84	40.68	64.45	53.36	54.23
Lane Group LOS	E	B	B	E	B	A	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	2.50	1.60	3.60	4.34	1.98	3.76	5.37	1.21	4.59	10.38	9.60
50th-Percentile Queue Length [ft/ln]	47.25	62.53	40.01	89.93	108.46	49.57	94.07	134.36	30.29	114.79	259.42	240.11
95th-Percentile Queue Length [veh/ln]	3.40	4.50	2.88	6.47	7.75	3.57	6.77	9.18	2.18	8.11	15.66	14.69
95th-Percentile Queue Length [ft/ln]	85.05	112.55	72.01	161.87	193.86	89.22	169.33	229.41	54.52	202.65	391.50	367.18

Movement, Approach, & Intersection Results

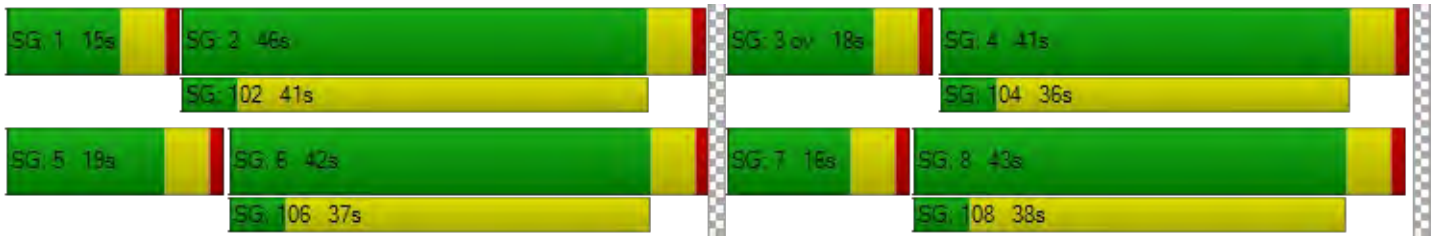
d_M, Delay for Movement [s/veh]	72.41	19.01	18.65	58.60	17.37	9.52	63.73	44.84	40.68	64.45	53.62	54.23
Movement LOS	E	B	B	E	B	A	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	25.24			25.94			48.36			55.66		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	38.87											
Intersection LOS	D											
Intersection V/C	0.424											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.658	2.821	2.673	2.607
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	616	683	633	600
d_b, Bicycle Delay [s]	28.72	26.02	28.03	29.42
l_b,int, Bicycle LOS Score for Intersection	1.930	2.338	2.017	2.202
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	68	0	0	0	0	0	0	50	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	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]	108	83	0	0	130	50	41	0	80	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	108	83	68	0	130	50	41	0	80	50	0	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	25	20	0	39	15	12	0	24	15	0	0
Total Analysis Volume [veh/h]	129	99	81	0	155	60	49	0	95	60	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	50			189			215			278		
Exiting Flow Rate [veh/h]	310			149			190			81		
Demand Flow Rate [veh/h]	108	83	68	0	130	50	41	0	80	50	0	0
Adjusted Demand Flow Rate [veh/h]	129	99	81	0	155	60	49	0	95	60	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	0.99	0.99	1.00
Entry Flow Rate [veh/h]	309	217	145	60
Capacity of Entry and Bypass Lanes [veh/h]	1312	1139	1109	1040
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1312	1132	1101	1040
X, volume / capacity	0.24	0.19	0.13	0.06

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.92	0.70	0.45	0.18
95th-Percentile Queue Length [ft]	22.95	17.48	11.24	4.59
Approach Delay [s/veh]	4.77	4.87	4.42	3.96
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.66			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.142

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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	9	8	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	258	453	45	53	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	71	124	12	15	0
Total Analysis Volume [veh/h]	0	284	498	49	58	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.14	0.00
d_M, Delay for Movement [s/veh]	8.53	0.00	0.00	0.00	15.29	11.25
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	12.30	12.30
d_A, Approach Delay [s/veh]	0.00		0.00		15.29	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	6.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	72	41	0	52	0	0	0	0	46	0	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]	156	146	0	6	146	56	37	4	107	0	3	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	156	218	41	6	198	56	37	4	107	46	3	7
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	65	12	2	59	17	11	1	32	14	1	2
Total Analysis Volume [veh/h]	186	260	49	7	236	67	44	5	127	55	4	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	57			250			304			500		
Exiting Flow Rate [veh/h]	426			318			262			62		
Demand Flow Rate [veh/h]	156	218	41	6	198	56	37	4	107	46	3	7
Adjusted Demand Flow Rate [veh/h]	186	260	49	7	236	67	44	5	127	55	4	8

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	505	317	180	69
Capacity of Entry and Bypass Lanes [veh/h]	1302	1070	1013	829
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1277	1049	993	813
X, volume / capacity	0.39	0.30	0.18	0.08

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.86	1.24	0.64	0.27
95th-Percentile Queue Length [ft]	46.62	31.06	16.07	6.72
Approach Delay [s/veh]	6.53	6.35	5.30	5.24
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.19			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.188

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	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]	2	9	0	0	8	0	0	5	2	0	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	231	52	40	370	38	12	26	7	32	38	14
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	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	63	14	11	102	10	3	7	2	9	10	4
Total Analysis Volume [veh/h]	12	254	57	44	407	42	13	29	8	35	42	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	99	90	90	99	93	93	11	11	11
g / C, Green / Cycle	0.83	0.75	0.75	0.83	0.77	0.77	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.09	0.04	0.11	0.03	0.02	0.01	0.07
s, saturation flow rate [veh/h]	981	1870	1754	1118	3560	1589	1698	1589	1265
c, Capacity [veh/h]	873	1410	1323	989	2750	1228	190	141	154
d1, Uniform Delay [s]	1.84	3.96	3.97	1.86	3.51	3.19	50.98	50.08	54.22
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.16	0.18	0.08	0.11	0.05	0.58	0.17	3.71
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	0.01	0.11	0.12	0.04	0.15	0.03	0.22	0.06	0.60
d, Delay for Lane Group [s/veh]	1.85	4.12	4.15	1.94	3.62	3.24	51.56	50.25	57.93
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.04	0.98	0.96	0.15	1.13	0.22	1.21	0.23	2.90
50th-Percentile Queue Length [ft/ln]	0.90	24.58	23.88	3.81	28.14	5.52	30.28	5.69	72.53
95th-Percentile Queue Length [veh/ln]	0.06	1.77	1.72	0.27	2.03	0.40	2.18	0.41	5.22
95th-Percentile Queue Length [ft/ln]	1.62	44.25	42.99	6.85	50.66	9.94	54.51	10.24	130.55

Movement, Approach, & Intersection Results

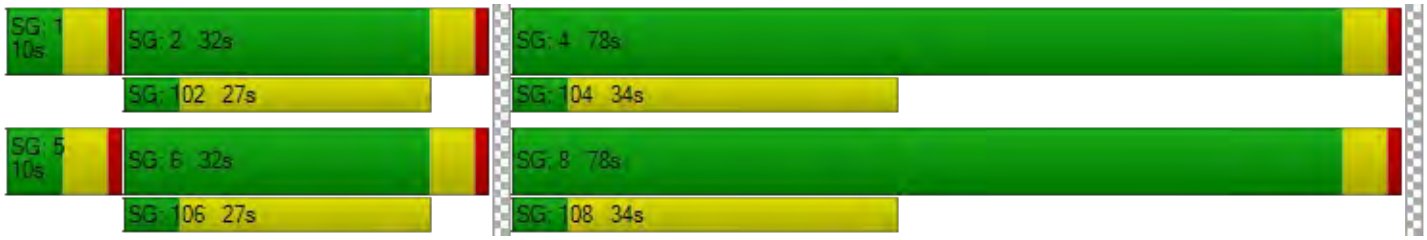
d_M, Delay for Movement [s/veh]	1.85	4.13	4.15	1.94	3.62	3.24	51.56	51.56	50.25	57.93	57.93	57.93
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	4.05			3.44			51.35			57.93		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	11.38											
Intersection LOS	B											
Intersection V/C	0.188											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	51.33	51.33	51.33
l_p,int, Pedestrian LOS Score for Intersection	2.516	2.736	2.016	1.887
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.03	36.03	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.826	1.966	1.642	1.711
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	104	32	0	94	0	0	0	0	24	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	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]	60	282	0	5	226	22	15	0	40	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	386	32	5	320	22	15	0	40	24	0	4
Peak Hour Factor	0.9500	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9500	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	104	9	1	86	6	4	0	11	6	0	1
Total Analysis Volume [veh/h]	63	415	34	5	344	24	16	0	42	26	0	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	21			91			383			504		
Exiting Flow Rate [veh/h]	420			444			89			5		
Demand Flow Rate [veh/h]	60	386	32	5	320	22	15	0	40	24	0	4
Adjusted Demand Flow Rate [veh/h]	63	415	34	5	344	24	16	0	42	26	0	4

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	488	0	381	60	31
Capacity of Entry and Bypass Lanes [veh/h]	1351	1373	1258	935	826
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1324	1346	1234	916	810
X, volume / capacity	0.36	0.03	0.30	0.06	0.04

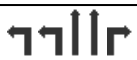
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	1.67	0.08	1.29	0.20	0.12
95th-Percentile Queue Length [ft]	41.73	1.94	32.13	5.06	2.88
Approach Delay [s/veh]	5.84		5.69	4.51	4.81
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	5.67				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	55.7
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	26	26	33	226	27	0	0	252	27	24	228	214
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	444	348	521	523	231	274	1049	91	596	1050	479
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	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	119	94	140	141	62	74	282	24	160	282	129
Total Analysis Volume [veh/h]	302	477	374	560	562	248	295	1128	98	641	1129	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	68	0	11	60	0	10	49	0	12	51	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14	30	30	24	40	40	14	30	30	26	43	43
g / C, Green / Cycle	0.11	0.23	0.23	0.18	0.31	0.31	0.10	0.23	0.23	0.20	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.24	0.16	0.11	0.16	0.09	0.22	0.06	0.19	0.32	0.31
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	368	1178	367	626	1558	486	360	1176	367	701	1173	545
d1, Uniform Delay [s]	56.74	42.29	49.86	51.90	35.12	37.02	56.91	49.27	40.88	50.61	42.69	42.34
k, delay calibration	0.11	0.11	0.44	0.11	0.11	0.20	0.11	0.11	0.11	0.11	0.20	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]	4.59	0.22	48.65	4.78	0.14	1.51	4.66	5.88	0.39	5.22	10.05	27.16
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	0.82	0.41	1.02	0.89	0.36	0.51	0.82	0.96	0.27	0.91	0.96	0.95
d, Delay for Lane Group [s/veh]	61.33	42.51	98.50	56.68	35.26	38.53	61.57	55.15	41.27	55.83	52.73	69.50
Lane Group LOS	E	D	F	E	D	D	E	E	D	E	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.09	4.39	16.86	9.32	4.69	6.72	4.87	12.33	2.57	10.69	19.25	20.05
50th-Percentile Queue Length [ft/ln]	127.31	109.70	421.38	233.06	117.20	167.94	121.78	308.15	64.16	267.20	481.25	501.23
95th-Percentile Queue Length [veh/ln]	8.79	7.82	23.83	14.33	8.24	10.97	8.49	18.08	4.62	16.05	26.45	27.39
95th-Percentile Queue Length [ft/ln]	219.84	195.58	595.82	358.24	205.97	274.20	212.27	452.10	115.49	401.24	661.14	684.81

Movement, Approach, & Intersection Results

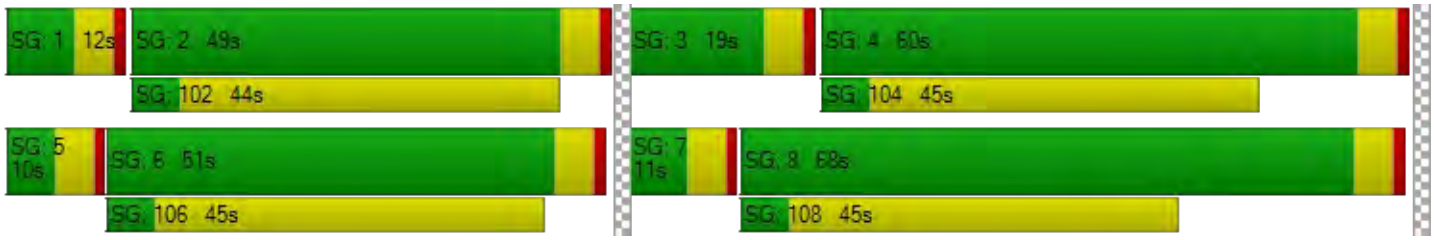
d_M, Delay for Movement [s/veh]	61.33	42.51	98.50	56.68	35.26	38.53	61.57	55.15	41.27	55.83	52.73	69.50
Movement LOS	E	D	F	E	D	D	E	E	D	E	D	E
d_A, Approach Delay [s/veh]	65.60			44.61			55.50			57.38		
Approach LOS	E			D			E			E		
d_I, Intersection Delay [s/veh]	55.66											
Intersection LOS	E											
Intersection V/C	0.804											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.27	56.27	56.27	56.27
l_p,int, Pedestrian LOS Score for Intersection	3.134	3.156	3.388	3.274
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	970	847	677	708
d_b, Bicycle Delay [s]	17.23	21.60	28.41	27.10
l_b,int, Bicycle LOS Score for Intersection	2.194	2.313	2.396	3.445
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	511	0	0	467	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	44	181	384	48	134	221	1374	80	252	1593	265
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	11	46	98	12	34	56	351	20	64	406	68
Total Analysis Volume [veh/h]	142	45	185	392	49	137	226	1402	82	257	1626	270
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	19	19	20	75	75	11	67	67
g / C, Green / Cycle	0.13	0.13	0.13	0.14	0.14	0.14	0.54	0.54	0.08	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.12	0.11	0.11	0.13	0.28	0.05	0.07	0.32	0.17
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	239	245	214	468	224	250	2734	853	274	2423	756
d1, Uniform Delay [s]	55.31	55.31	59.34	59.01	58.95	59.26	20.73	15.84	64.12	28.27	23.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.15	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]	1.02	0.99	10.06	4.04	7.70	15.30	0.69	0.22	14.40	1.50	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
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	0.39	0.87	0.84	0.83	0.91	0.51	0.10	0.94	0.67	0.36
d, Delay for Lane Group [s/veh]	56.33	56.30	69.40	63.05	66.65	74.57	21.42	16.06	78.52	29.77	24.50
Lane Group LOS	E	E	E	E	E	E	C	B	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.07	3.14	7.04	7.06	6.92	8.97	9.92	1.36	5.12	14.27	5.97
50th-Percentile Queue Length [ft/ln]	76.75	78.39	176.01	176.45	173.02	224.24	248.06	34.00	127.98	356.77	149.23
95th-Percentile Queue Length [veh/ln]	5.53	5.64	11.39	11.41	11.24	13.88	15.09	2.45	8.83	20.47	9.98
95th-Percentile Queue Length [ft/ln]	138.15	141.10	284.80	285.37	280.88	347.04	377.21	61.21	220.75	511.66	249.40

Movement, Approach, & Intersection Results

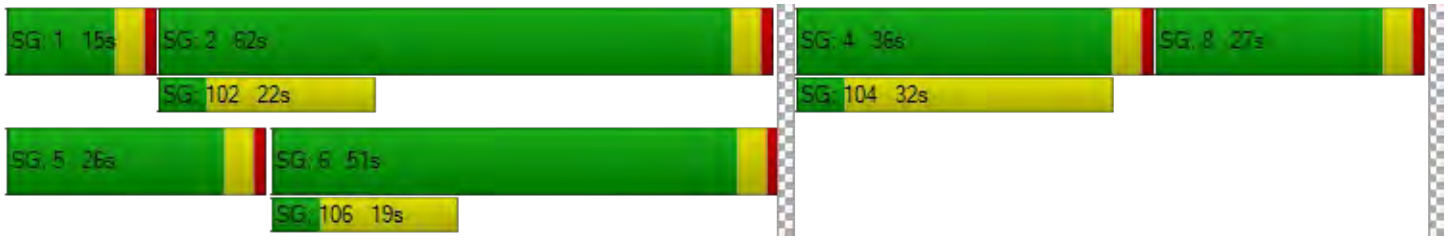
d_M, Delay for Movement [s/veh]	56.32	56.30	69.40	63.05	66.65	66.65	74.57	21.42	16.06	78.52	29.77	24.50
Movement LOS	E	E	E	E	E	E	E	C	B	E	C	C
d_A, Approach Delay [s/veh]	62.82			64.21			28.18			34.93		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	38.20											
Intersection LOS	D											
Intersection V/C	0.676											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.599	2.540	3.188	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.173	2.513	2.500	2.744
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.814

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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	274	0	170	0	330	182	0	296	224
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	662	1	971	0	1377	707	0	1524	734
Peak Hour Factor	0.9500	0.9500	0.9500	0.9700	0.9700	0.9700	0.9500	0.9700	0.9700	0.9500	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	171	0	250	0	355	182	0	393	189
Total Analysis Volume [veh/h]	0	0	0	682	1	1001	0	1420	729	0	1571	757
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	15	0	0	105	0	0	105	105
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		28	28	28	30	30	30	63
g / C, Green / Cycle		0.41	0.41	0.41	0.44	0.44	0.44	0.93
(v / s)_i Volume / Saturation Flow Rate		0.19	0.19	0.36	0.28	0.46	0.31	0.48
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		736	736	1162	2241	699	2241	1473
d1, Uniform Delay [s]		14.50	14.50	18.19	14.80	19.06	15.43	0.35
k, delay calibration		0.11	0.11	0.11	0.11	0.46	0.11	0.49
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.46	0.46	2.01	0.30	44.19	0.41	1.25
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	1.00	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		0.46	0.46	0.86	0.63	1.04	0.70	0.51
d, Delay for Lane Group [s/veh]		14.95	14.95	20.20	15.10	63.25	15.84	1.60
Lane Group LOS		B	B	C	B	F	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		3.57	3.57	6.71	5.13	18.22	5.93	0.51
50th-Percentile Queue Length [ft/ln]		89.14	89.13	167.73	128.28	455.61	148.32	12.78
95th-Percentile Queue Length [veh/ln]		6.42	6.42	10.96	8.85	25.99	9.93	0.92
95th-Percentile Queue Length [ft/ln]		160.44	160.44	273.92	221.16	649.83	248.18	23.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.95	14.95	20.20	0.00	15.10	63.25	0.00	15.84	1.60
Movement LOS				B	B	C		B	F		B	A
d_A, Approach Delay [s/veh]	0.00			18.07			31.43			11.21		
Approach LOS	A			B			C			B		
d_I, Intersection Delay [s/veh]	20.14											
Intersection LOS	C											
Intersection V/C	0.814											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.67	25.67	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.165	2.921	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	293	880	880
d_b, Bicycle Delay [s]	34.08	24.81	10.68	10.68
l_b,int, Bicycle LOS Score for Intersection	4.132	4.338	2.742	2.840
Bicycle LOS	D	E	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.698

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	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]	170	0	290	0	0	0	0	422	182	0	350	201
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	713	1	1026	0	0	0	0	1435	619	0	1555	480
Peak Hour Factor	0.9600	0.9600	0.9600	0.9500	0.9500	0.9500	0.9500	0.9600	0.9600	0.9500	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]	186	0	267	0	0	0	0	374	161	0	405	125
Total Analysis Volume [veh/h]	743	1	1069	0	0	0	0	1495	645	0	1620	500
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	65	0	0	0	0	0	55	55	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	66	66	66		66	66	66	66
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	29	29	29		27	61	27	27
g / C, Green / Cycle	0.44	0.44	0.44		0.41	0.92	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.21	0.21	0.38		0.29	0.41	0.32	0.31
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	778	778	1229		2095	1469	2095	654
d1, Uniform Delay [s]	13.19	13.19	16.82		16.13	0.32	16.71	16.63
k, delay calibration	0.11	0.11	0.11		0.11	0.35	0.11	0.21
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.46	2.05		0.46	0.67	0.63	3.60
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	0.48	0.48	0.87		0.71	0.44	0.77	0.76
d, Delay for Lane Group [s/veh]	13.64	13.64	18.87		16.59	0.99	17.34	20.22
Lane Group LOS	B	B	B		B	A	B	C
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.57	3.57	6.71		5.63	0.27	6.34	6.38
50th-Percentile Queue Length [ft/ln]	89.24	89.24	167.82		140.64	6.83	158.42	159.46
95th-Percentile Queue Length [veh/ln]	6.43	6.43	10.96		9.52	0.49	10.47	10.52
95th-Percentile Queue Length [ft/ln]	160.64	160.63	274.05		237.88	12.30	261.63	263.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.64	13.64	18.87	0.00	0.00	0.00	0.00	16.59	0.99	0.00	17.34	20.22
Movement LOS	B	B	B					B	A		B	C
d_A, Approach Delay [s/veh]	16.73			0.00			11.89			18.02		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	15.47											
Intersection LOS	B											
Intersection V/C	0.698											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.41	24.41	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.922	2.088	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1829	0	1525	1525
d_b, Bicycle Delay [s]	0.24	32.80	1.85	1.85
l_b,int, Bicycle LOS Score for Intersection	4.551	4.132	2.737	2.726
Bicycle LOS	E	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	37.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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]	122	30	21	20	20	255	390	188	134	23	174	30
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	504	70	170	20	64	331	508	1449	421	233	1195	31
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	134	19	45	5	17	88	135	385	112	62	318	8
Total Analysis Volume [veh/h]	536	74	181	21	68	352	540	1541	448	248	1271	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	43	0	50	74	0	15	35	0	12	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	102	102	102	102	102	102	102	102	102	102	102	102
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	19	32	32	2	16	16	19	37	37	10	28	28
g / C, Green / Cycle	0.18	0.32	0.32	0.02	0.16	0.16	0.18	0.37	0.37	0.10	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.15	0.04	0.11	0.01	0.13	0.13	0.16	0.30	0.28	0.07	0.25	0.02
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1669	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	636	593	504	40	259	247	640	1874	585	333	1422	444
d1, Uniform Delay [s]	40.13	24.72	26.80	49.26	41.70	41.70	40.07	29.18	28.34	44.80	35.27	27.03
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.40	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]	3.13	0.09	0.43	10.52	6.69	7.01	3.13	0.95	7.50	3.30	2.21	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.12	0.36	0.53	0.83	0.83	0.84	0.82	0.77	0.74	0.89	0.07
d, Delay for Lane Group [s/veh]	43.26	24.82	27.23	59.79	48.39	48.71	43.20	30.13	35.83	48.09	37.48	27.10
Lane Group LOS	D	C	C	E	D	D	D	C	D	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.67	1.28	3.41	0.64	5.66	5.41	6.72	11.18	10.55	3.18	10.15	0.60
50th-Percentile Queue Length [ft/ln]	166.72	31.97	85.25	16.03	141.42	135.32	167.91	279.57	263.76	79.38	253.76	14.93
95th-Percentile Queue Length [veh/ln]	10.90	2.30	6.14	1.15	9.56	9.23	10.97	16.67	15.88	5.72	15.38	1.08
95th-Percentile Queue Length [ft/ln]	272.60	57.55	153.44	28.85	238.94	230.70	274.17	416.68	396.94	142.88	384.38	26.88

Movement, Approach, & Intersection Results

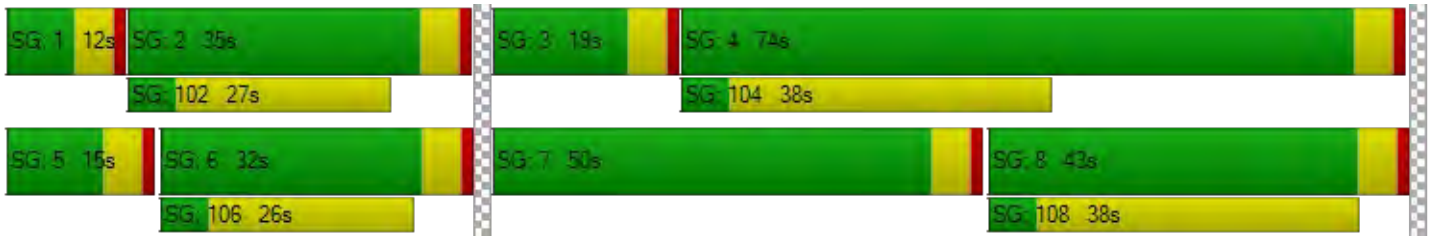
d_M, Delay for Movement [s/veh]	43.26	24.82	27.23	59.79	48.39	48.58	43.20	30.13	35.83	48.09	37.48	27.10
Movement LOS	D	C	C	E	D	D	D	C	D	D	D	C
d_A, Approach Delay [s/veh]	37.87			49.08			33.93			38.95		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	37.24											
Intersection LOS	D											
Intersection V/C	0.690											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	42.21	42.21	42.21	42.21
l_p,int, Pedestrian LOS Score for Intersection	2.713	2.519	3.364	3.214
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	748	1358	590	531
d_b, Bicycle Delay [s]	19.92	5.24	25.24	27.40
l_b,int, Bicycle LOS Score for Intersection	2.865	2.287	2.951	2.413
Bicycle LOS	C	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	23.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.149

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	159	120	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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]	142	309	211	55	33	83
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]	142	468	331	55	33	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	123	87	14	9	22
Total Analysis Volume [veh/h]	149	493	348	58	35	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.00	0.00	0.00	0.15	0.11
d_M, Delay for Movement [s/veh]	8.60	0.00	0.00	0.00	22.97	12.09
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.45	0.00	0.00	0.00	1.02	1.02
95th-Percentile Queue Length [ft/ln]	11.13	0.00	0.00	0.00	25.42	25.42
d_A, Approach Delay [s/veh]	2.00		0.00		15.21	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.68					
Intersection LOS	C					

Option 1: NBR Overlap

Number	11											
Intersection	Limonite Ave @ Hamner Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Total Analysis Volume [veh/h]	302	477	374	560	562	248	295	1128	98	641	1129	515

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fully actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	8	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	68	68	11	60	0	10	49	0	12	51	0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	40	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, 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
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	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.11	0.13	0.40	0.19	0.21	0.21	0.11	0.26	0.26	0.22	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.24	0.16	0.11	0.16	0.09	0.22	0.06	0.19	0.32	0.31
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	391	678	643	660	1076	336	383	1310	409	768	1313	610
X, volume / capacity	0.77	0.70	0.58	0.85	0.52	0.74	0.77	0.86	0.24	0.83	0.86	0.84
d, Delay for Lane Group [s/veh]	47.16	43.53	25.80	42.89	35.99	40.71	47.33	37.86	30.23	40.26	31.47	42.23
Lane Group LOS	D	D	C	D	D	D	D	D	C	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No

50th-Percentile Queue Length [veh/ln]	3.84	3.87	7.20	6.95	4.12	5.99	3.65	8.62	1.85	7.76	12.67	13.33
50th-Percentile Queue Length [ft/ln]	96.06	96.74	180.03	173.82	102.99	149.79	91.22	215.47	46.27	194.12	316.64	333.28
95th-Percentile Queue Length [veh/ln]	6.92	6.97	11.60	11.28	7.42	10.01	6.57	13.43	3.33	12.33	18.50	19.32
95th-Percentile Queue Length [ft/ln]	172.91	174.13	290.05	281.93	185.38	250.15	164.19	335.84	83.29	308.37	462.55	482.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.16	43.53	25.80	42.89	35.99	40.71	47.33	37.86	30.23	40.26	31.47	42.23
Movement LOS	D	D	C	D	D	D	D	D	C	D	C	D
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	38.73			39.66			39.20			36.36		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	38.19											
Intersection LOS	D											
Intersection V/C	0.747											

Appendix D-11

Future Buildout without Project (2040)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\11 Buildout AM.pdf

Scenario 21 Buildout AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.363	14.6	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.007	13.7	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.338	18.0	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.444	23.7	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	WB Left	0.477	46.4	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.126	13.8	B
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.100	9.5	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.255	16.6	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.060	9.7	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.807	53.2	D
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.583	26.8	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.738	16.0	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.672	12.0	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	WB Left	0.526	24.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.363

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	754	0	0	332	257	510	0	73	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	198	0	0	87	68	134	0	19	0	0	0
Total Analysis Volume [veh/h]	66	794	0	0	349	271	537	0	77	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	12	46	0	26	49	0	30	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	43	43	43	43	43	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	13	13	0	10	10	10	10	10	0	0
g / C, Green / Cycle	0.06	0.31	0.31	0.00	0.24	0.24	0.23	0.23	0.23	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.04	0.15	0.15	0.00	0.07	0.17	0.16	0.00	0.05	0.00	0.00
s, saturation flow rate [veh/h]	1781	3560	1870	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	115	1098	576	0	1242	388	788	811	362	1	1
d1, Uniform Delay [s]	19.60	12.09	12.09	0.00	13.24	14.87	15.23	0.00	13.52	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream 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]	4.45	0.32	0.61	0.00	0.12	2.29	1.05	0.00	0.29	0.00	0.00
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	0.57	0.47	0.47	0.00	0.28	0.70	0.68	0.00	0.21	0.00	0.00
d, Delay for Lane Group [s/veh]	24.05	12.41	12.70	0.00	13.36	17.16	16.28	0.00	13.81	0.00	0.00
Lane Group LOS	C	B	B	A	B	B	B	A	B	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.71	1.69	1.82	0.00	0.78	2.26	2.13	0.00	0.54	0.00	0.00
50th-Percentile Queue Length [ft/ln]	17.75	42.25	45.53	0.00	19.55	56.39	53.25	0.00	13.56	0.00	0.00
95th-Percentile Queue Length [veh/ln]	1.28	3.04	3.28	0.00	1.41	4.06	3.83	0.00	0.98	0.00	0.00
95th-Percentile Queue Length [ft/ln]	31.95	76.04	81.95	0.00	35.19	101.51	95.85	0.00	24.40	0.00	0.00

Movement, Approach, & Intersection Results

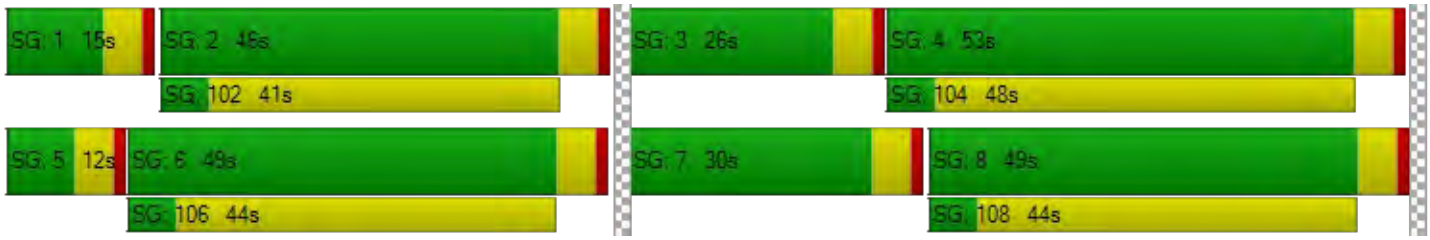
d_M, Delay for Movement [s/veh]	24.05	12.51	12.70	0.00	13.36	17.16	16.28	0.00	13.81	0.00	0.00	0.00
Movement LOS	C	B	B	A	B	B	B	A	B	A	A	
d_A, Approach Delay [s/veh]	13.39			15.02			15.97			0.00		
Approach LOS	B			B			B			A		
d_I, Intersection Delay [s/veh]	14.63											
Intersection LOS	B											
Intersection V/C	0.363											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	13.42	13.42	13.42	13.42
l_p,int, Pedestrian LOS Score for Intersection	2.734	2.925	2.688	2.414
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2048	1909	2048	2234
d_b, Bicycle Delay [s]	0.01	0.04	0.01	0.30
l_b,int, Bicycle LOS Score for Intersection	2.033	1.901	2.066	1.560
Bicycle LOS	B	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	13.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	705	0	4	653
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	186	0	1	172
Total Analysis Volume [veh/h]	0	3	742	0	4	687
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

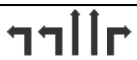
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	29.63	13.72	0.00	0.00	9.18	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.55	0.00	0.00	0.35	0.00
d_A, Approach Delay [s/veh]	13.72		0.00		0.05	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.338

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	297	169	47	70	52	84	535	77	177	518	149
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]	20	78	44	12	18	14	22	141	20	47	136	39
Total Analysis Volume [veh/h]	79	313	178	49	74	55	88	563	81	186	545	157
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	47	0	10	47	0	16	47	0	16	47	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	48	48	48	48	48	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	3	11	11	5	12	12
g / C, Green / Cycle	0.07	0.21	0.21	0.05	0.19	0.19	0.07	0.22	0.22	0.10	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.09	0.11	0.01	0.02	0.03	0.03	0.16	0.05	0.05	0.15	0.10
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	239	747	334	177	683	305	254	791	353	336	876	391
d1, Uniform Delay [s]	21.13	16.31	16.75	21.76	15.89	16.12	21.00	17.13	15.19	20.53	16.00	15.03
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.80	0.37	1.33	0.84	0.07	0.28	0.81	1.20	0.33	1.43	0.73	0.67
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	0.42	0.53	0.28	0.11	0.18	0.35	0.71	0.23	0.55	0.62	0.40
d, Delay for Lane Group [s/veh]	21.93	16.69	18.08	22.60	15.96	16.40	21.81	18.33	15.52	21.95	16.72	15.70
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.41	1.33	1.63	0.26	0.30	0.47	0.45	2.61	0.66	0.96	2.37	1.31
50th-Percentile Queue Length [ft/ln]	10.17	33.33	40.87	6.51	7.51	11.68	11.28	65.13	16.58	23.88	59.17	32.65
95th-Percentile Queue Length [veh/ln]	0.73	2.40	2.94	0.47	0.54	0.84	0.81	4.69	1.19	1.72	4.26	2.35
95th-Percentile Queue Length [ft/ln]	18.31	59.99	73.56	11.72	13.53	21.02	20.30	117.23	29.85	42.98	106.51	58.76

Movement, Approach, & Intersection Results

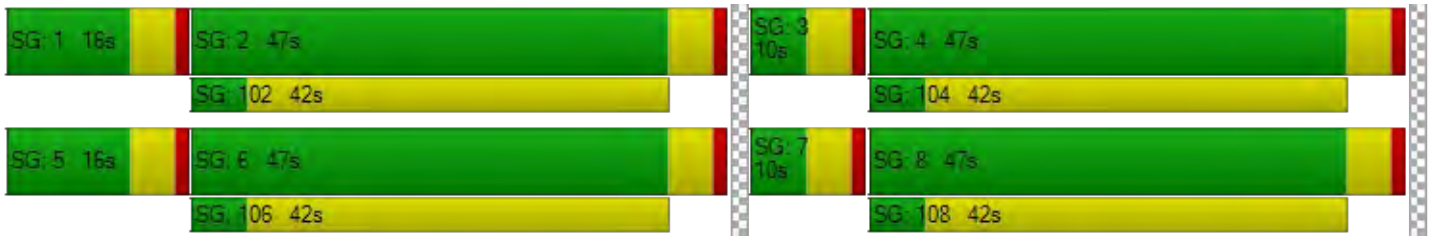
d_M, Delay for Movement [s/veh]	21.93	16.69	18.08	22.60	15.96	16.40	21.81	18.33	15.52	21.95	16.72	15.70
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.85			17.93			18.44			17.64		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.96											
Intersection LOS	B											
Intersection V/C	0.338											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.62	15.62	15.62	15.62
l_p,int, Pedestrian LOS Score for Intersection	2.688	2.664	2.758	2.795
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1767	1767	1767	1767
d_b, Bicycle Delay [s]	0.32	0.32	0.32	0.32
l_b,int, Bicycle LOS Score for Intersection	2.030	1.706	2.164	2.292
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.444

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	161	32	49	57	22	137	218	526	77	73	648	84
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]	42	8	13	15	6	36	57	138	20	19	171	22
Total Analysis Volume [veh/h]	169	34	52	60	23	144	229	554	81	77	682	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	27	40	0	36	49	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	13	23	23	5	15	77	67	67	77	67	67
g / C, Green / Cycle	0.11	0.19	0.19	0.04	0.12	0.64	0.56	0.56	0.64	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.09	0.02	0.03	0.03	0.10	0.28	0.16	0.05	0.09	0.19	0.06
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1623	812	3560	1589	891	3560	1589
c, Capacity [veh/h]	199	352	299	80	197	533	1998	892	592	1987	887
d1, Uniform Delay [s]	52.33	40.30	40.90	56.70	51.69	9.96	13.69	12.18	8.55	14.51	12.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.59	0.12	0.27	13.32	9.76	2.52	0.35	0.20	0.10	0.47	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
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	0.85	0.10	0.17	0.75	0.85	0.43	0.28	0.09	0.13	0.34	0.10
d, Delay for Lane Group [s/veh]	61.91	40.41	41.17	70.02	61.45	12.48	14.04	12.38	8.65	14.98	12.64
Lane Group LOS	E	D	D	E	E	B	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.52	0.85	1.32	2.09	5.45	2.75	3.94	1.05	0.74	5.12	1.16
50th-Percentile Queue Length [ft/ln]	138.08	21.23	33.07	52.36	136.32	68.69	98.51	26.26	18.58	127.96	28.92
95th-Percentile Queue Length [veh/ln]	9.38	1.53	2.38	3.77	9.28	4.95	7.09	1.89	1.34	8.83	2.08
95th-Percentile Queue Length [ft/ln]	234.44	38.21	59.53	94.24	232.06	123.64	177.32	47.26	33.44	220.72	52.05

Movement, Approach, & Intersection Results

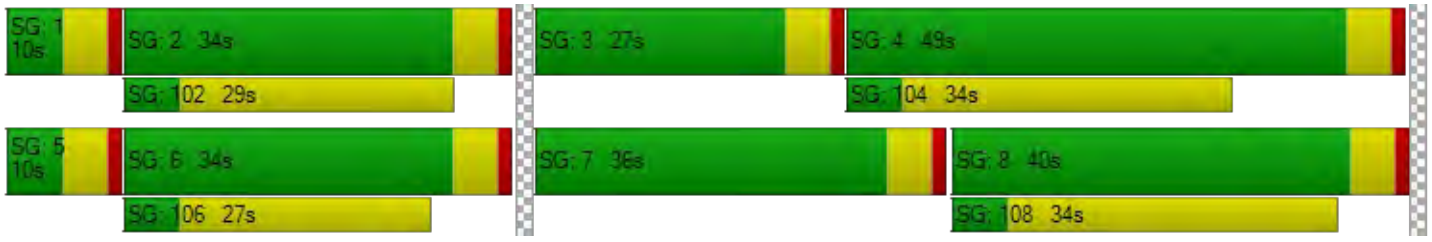
d_M, Delay for Movement [s/veh]	61.91	40.41	41.17	70.02	61.45	61.45	12.48	14.04	12.38	8.65	14.98	12.64
Movement LOS	E	D	D	E	E	E	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	54.82			63.72			13.47			14.16		
Approach LOS	D			E			B			B		
d_I, Intersection Delay [s/veh]	23.75											
Intersection LOS	C											
Intersection V/C	0.444											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.316	2.331	2.770	2.714
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	583	733	483	483
d_b, Bicycle Delay [s]	30.12	24.08	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	1.980	1.934	2.272	2.258
Bicycle LOS	A	A	B	B

Sequence

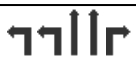
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	46.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	443	244	188	278	82	112	311	53	281	328	200
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]	28	117	64	49	73	22	29	82	14	74	86	53
Total Analysis Volume [veh/h]	112	466	257	198	293	86	118	327	56	296	345	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	15	43	0	27	55	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	64	64	10	64	79	10	15	15	22	26	26
g / C, Green / Cycle	0.07	0.49	0.49	0.07	0.50	0.61	0.08	0.11	0.11	0.17	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.16	0.06	0.08	0.05	0.07	0.09	0.04	0.17	0.16	0.16
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1635
c, Capacity [veh/h]	124	1750	781	254	1763	971	138	398	178	302	381	333
d1, Uniform Delay [s]	60.03	19.34	20.05	59.21	18.06	10.39	59.26	56.49	53.17	53.80	49.00	49.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.23	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]	19.66	0.37	1.12	5.14	0.20	0.18	13.72	4.28	1.00	30.76	3.46	3.97
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	0.90	0.27	0.33	0.78	0.17	0.09	0.85	0.82	0.32	0.98	0.78	0.78
d, Delay for Lane Group [s/veh]	79.69	19.71	21.17	64.35	18.26	10.57	72.98	60.77	54.18	84.55	52.46	52.98
Lane Group LOS	E	B	C	E	B	B	E	E	D	F	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.35	4.24	4.98	3.39	2.50	1.06	4.37	5.49	1.74	12.20	9.48	8.35
50th-Percentile Queue Length [ft/ln]	108.77	105.89	124.60	84.84	62.42	26.56	109.33	137.35	43.62	305.11	236.94	208.86
95th-Percentile Queue Length [veh/ln]	7.77	7.61	8.65	6.11	4.49	1.91	7.80	9.34	3.14	17.93	14.53	13.09
95th-Percentile Queue Length [ft/ln]	194.29	190.27	216.14	152.71	112.36	47.81	195.07	233.45	78.51	448.35	363.16	327.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	79.69	19.71	21.17	64.35	18.26	10.57	72.98	60.77	54.18	84.55	52.53	52.98
Movement LOS	E	B	C	E	B	B	E	E	D	F	D	D
d_A, Approach Delay [s/veh]	28.21			32.93			62.91			63.77		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	46.44											
Intersection LOS	D											
Intersection V/C	0.477											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.712	2.804	2.641	2.637
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	769
d_b, Bicycle Delay [s]	33.27	30.47	32.56	24.62
l_b,int, Bicycle LOS Score for Intersection	2.248	2.036	1.973	2.263
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	41	0	0	18	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	57	0	0	25	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	0	0	7	0
Total Analysis Volume [veh/h]	0	60	0	0	26	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.13	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.13		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.126

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	469	281	27	56	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	123	74	7	15	0
Total Analysis Volume [veh/h]	0	494	296	28	59	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.13	0.00
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	0.00	13.76	10.23
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.43	0.43
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	10.68	10.68
d_A, Approach Delay [s/veh]	0.00		0.00		13.76	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.100

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	31	24	0	36	60	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
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]	43	34	0	50	84	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	9	0	13	22	0
Total Analysis Volume [veh/h]	45	36	0	53	88	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.10	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.37	0.00	9.55	9.05
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.34	0.34
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	8.40	8.40
d_A, Approach Delay [s/veh]	0.00		0.00		9.54	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.81					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.255

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	373	17	14	240	22	59	10	4	40	46	45
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]	1	98	4	4	63	6	16	3	1	11	12	12
Total Analysis Volume [veh/h]	4	393	18	15	253	23	62	11	4	42	48	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	90	83	83	90	84	84	20	20	20
g / C, Green / Cycle	0.75	0.69	0.69	0.75	0.70	0.70	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.00	0.11	0.11	0.01	0.07	0.01	0.10	0.00	0.14
s, saturation flow rate [veh/h]	1130	1870	1841	1019	3560	1589	753	1589	970
c, Capacity [veh/h]	916	1291	1271	820	2498	1115	182	267	202
d1, Uniform Delay [s]	3.82	6.47	6.47	3.90	5.75	5.42	45.62	41.62	49.06
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.00	0.27	0.27	0.04	0.08	0.03	1.42	0.02	3.93
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	0.00	0.16	0.16	0.02	0.10	0.02	0.40	0.01	0.68
d, Delay for Lane Group [s/veh]	3.83	6.73	6.74	3.94	5.84	5.46	47.04	41.64	52.99
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.02	1.82	1.81	0.09	0.99	0.18	2.07	0.10	4.27
50th-Percentile Queue Length [ft/ln]	0.56	45.60	45.20	2.32	24.78	4.39	51.82	2.53	106.82
95th-Percentile Queue Length [veh/ln]	0.04	3.28	3.25	0.17	1.78	0.32	3.73	0.18	7.66
95th-Percentile Queue Length [ft/ln]	1.02	82.08	81.35	4.17	44.60	7.90	93.28	4.56	191.58

Movement, Approach, & Intersection Results

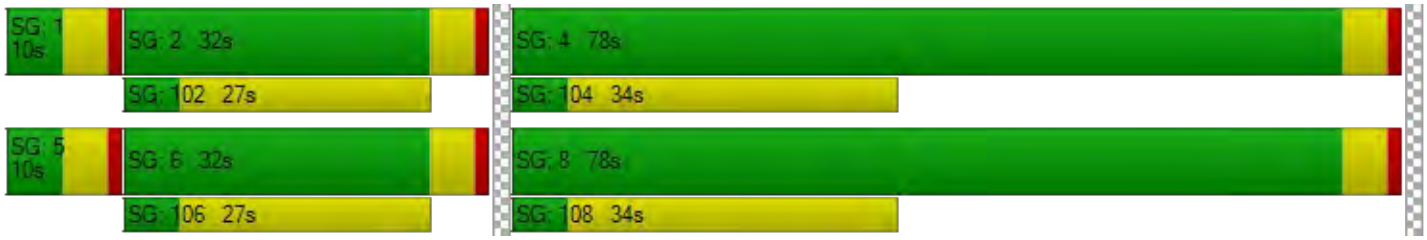
d_M, Delay for Movement [s/veh]	3.83	6.74	6.74	3.94	5.84	5.46	47.04	47.04	41.64	52.99	52.99	52.99
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.71			5.71			46.76			52.99		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	16.64											
Intersection LOS	B											
Intersection V/C	0.255											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.514	2.808	2.009	1.833
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.902	1.800	1.687	1.786
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.060

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	55	12	0	97	34	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
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]	77	17	0	135	47	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	4	0	36	12	0
Total Analysis Volume [veh/h]	81	18	0	142	49	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

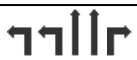
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.41	0.00	9.71	8.86
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.20	0.20
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	4.88	4.88
d_A, Approach Delay [s/veh]	0.00		0.00		9.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.67					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	53.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	664	540	293	335	141	258	1097	45	441	825	201
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]	38	175	142	77	88	37	68	289	12	116	217	53
Total Analysis Volume [veh/h]	153	699	568	308	353	148	272	1155	47	464	868	212
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	57	0	11	54	0	11	49	0	23	61	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	107	107	107	107	107	107	107	107	107	107	107	107
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	7	30	30	12	35	35	11	27	27	17	34	34
g / C, Green / Cycle	0.07	0.28	0.28	0.11	0.33	0.33	0.10	0.26	0.26	0.16	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.36	0.09	0.07	0.09	0.08	0.23	0.03	0.13	0.24	0.13
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	227	1430	446	394	1676	523	355	1310	409	558	1124	522
d1, Uniform Delay [s]	48.82	32.05	38.45	46.07	25.86	26.54	46.71	38.14	30.39	43.43	33.10	28.71
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.11	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]	3.46	0.26	139.53	3.42	0.06	0.29	3.47	2.13	0.12	3.31	1.16	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	0.67	0.49	1.27	0.78	0.21	0.28	0.77	0.88	0.12	0.83	0.77	0.41
d, Delay for Lane Group [s/veh]	52.28	32.31	177.97	49.49	25.92	26.83	50.18	40.28	30.52	46.74	34.26	29.22
Lane Group LOS	D	C	F	D	C	C	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.10	5.01	28.71	4.14	2.16	2.82	3.57	9.45	0.91	6.15	10.17	4.31
50th-Percentile Queue Length [ft/ln]	52.39	125.22	717.82	103.51	53.94	70.38	89.29	236.23	22.70	153.68	254.28	107.67
95th-Percentile Queue Length [veh/ln]	3.77	8.68	42.87	7.45	3.88	5.07	6.43	14.49	1.63	10.21	15.40	7.71
95th-Percentile Queue Length [ft/ln]	94.29	216.97	1071.85	186.32	97.08	126.68	160.72	362.26	40.86	255.33	385.04	192.76

Movement, Approach, & Intersection Results

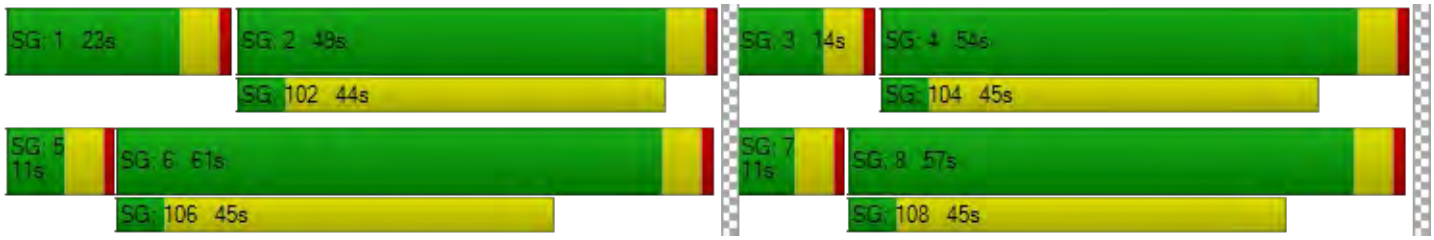
d_M, Delay for Movement [s/veh]	52.28	32.31	177.97	49.49	25.92	26.83	50.18	40.28	30.52	46.74	34.26	29.22
Movement LOS	D	C	F	D	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	92.73			35.06			41.79			37.32		
Approach LOS	F			D			D			D		
d_I, Intersection Delay [s/veh]	53.22											
Intersection LOS	D											
Intersection V/C	0.807											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	44.73	44.73	44.73	44.73
l_p,int, Pedestrian LOS Score for Intersection	3.106	3.075	3.288	3.171
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	975	919	825	1050
d_b, Bicycle Delay [s]	14.02	15.60	18.42	12.04
l_b,int, Bicycle LOS Score for Intersection	2.341	2.005	2.370	2.833
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	138	15	193	142	14	25	60	1633	112	244	1351	235
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]	36	4	51	37	4	7	16	430	29	64	356	62
Total Analysis Volume [veh/h]	145	16	203	149	15	26	63	1719	118	257	1422	247
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	6	83	83	11	87	87
g / C, Green / Cycle	0.15	0.15	0.15	0.07	0.07	0.05	0.59	0.59	0.08	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.05	0.04	0.13	0.04	0.02	0.04	0.34	0.07	0.07	0.28	0.16
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1682	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	260	262	232	249	121	82	3000	936	274	3168	989
d1, Uniform Delay [s]	53.48	53.48	58.55	63.00	61.79	66.03	17.86	12.78	64.12	13.88	11.84
k, delay calibration	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
d2, Incremental Delay [s]	0.67	0.66	10.05	2.30	1.64	13.90	0.80	0.28	14.40	0.46	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
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	0.31	0.31	0.88	0.60	0.34	0.77	0.57	0.13	0.94	0.45	0.25
d, Delay for Lane Group [s/veh]	54.15	54.14	68.60	65.30	63.43	79.93	18.66	13.06	78.52	14.34	12.45
Lane Group LOS	D	D	E	E	E	E	B	B	E	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.59	2.62	7.71	2.67	1.45	2.55	11.54	1.74	5.12	7.89	3.62
50th-Percentile Queue Length [ft/ln]	64.84	65.41	192.66	66.64	36.27	63.79	288.41	43.49	127.98	197.30	90.40
95th-Percentile Queue Length [veh/ln]	4.67	4.71	12.26	4.80	2.61	4.59	17.11	3.13	8.83	12.50	6.51
95th-Percentile Queue Length [ft/ln]	116.72	117.74	306.48	119.95	65.29	114.82	427.67	78.28	220.75	312.48	162.71

Movement, Approach, & Intersection Results

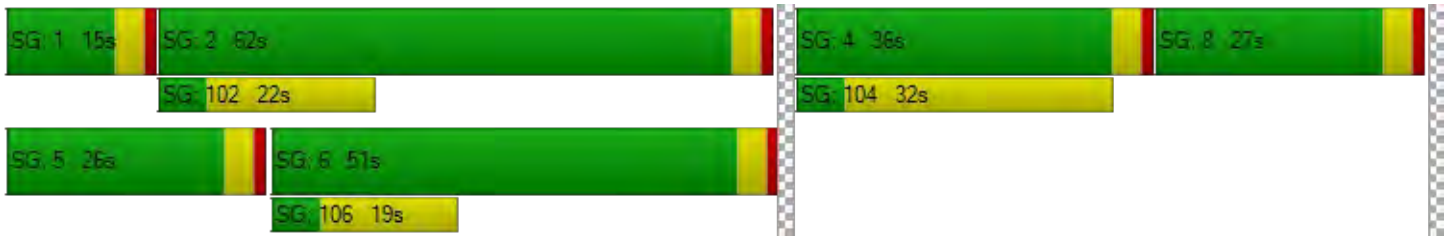
d_M, Delay for Movement [s/veh]	54.14	54.14	68.60	65.30	63.43	63.43	79.93	18.66	13.06	78.52	14.34	12.45
Movement LOS	D	D	E	E	E	E	E	B	B	E	B	B
d_A, Approach Delay [s/veh]	62.21			64.90			20.34			22.66		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	26.77											
Intersection LOS	C											
Intersection V/C	0.583											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.598	2.423	3.174	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.160	1.873	2.605	2.619
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	235	1	718	0	1382	709	0	1087	1002
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]	0	0	0	62	0	189	0	364	187	0	286	264
Total Analysis Volume [veh/h]	0	0	0	247	1	756	0	1455	746	0	1144	1055
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	15	0	0	55	0	0	55	55
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		23	23	23	30	30	30	58
g / C, Green / Cycle		0.37	0.37	0.37	0.47	0.47	0.47	0.92
(v / s)_i Volume / Saturation Flow Rate		0.07	0.07	0.27	0.29	0.47	0.22	0.66
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		659	659	1041	2405	750	2405	1464
d1, Uniform Delay [s]		13.51	13.51	17.18	12.35	16.62	11.37	0.59
k, delay calibration		0.11	0.11	0.11	0.11	0.42	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]		0.14	0.14	0.98	0.25	28.79	0.15	3.10
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		0.19	0.19	0.73	0.61	0.99	0.48	0.72
d, Delay for Lane Group [s/veh]		13.64	13.64	18.17	12.59	45.41	11.52	3.68
Lane Group LOS		B	B	B	B	D	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.12	1.12	4.39	4.40	15.00	3.18	1.26
50th-Percentile Queue Length [ft/ln]		27.98	27.98	109.66	109.96	374.88	79.47	31.47
95th-Percentile Queue Length [veh/ln]		2.01	2.01	7.82	7.84	21.35	5.72	2.27
95th-Percentile Queue Length [ft/ln]		50.37	50.37	195.53	195.95	533.65	143.05	56.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	13.64	13.64	18.17	0.00	12.59	45.41	0.00	11.52	3.68
Movement LOS				B	B	B		B	D		B	A
d_A, Approach Delay [s/veh]	0.00			17.05			23.72			7.76		
Approach LOS	A			B			C			A		
d_I, Intersection Delay [s/veh]	15.99											
Intersection LOS	B											
Intersection V/C	0.738											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.32	23.32	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.167	2.864	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	316	1578	1578
d_b, Bicycle Delay [s]	31.68	22.47	1.41	1.41
l_b,int, Bicycle LOS Score for Intersection	4.132	3.216	2.770	2.769
Bicycle LOS	D	C	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	561	4	687	0	0	0	0	733	933	0	1527	537
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]	148	1	181	0	0	0	0	193	246	0	402	141
Total Analysis Volume [veh/h]	591	4	723	0	0	0	0	772	982	0	1607	565
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
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	51	51	0	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	59	59	59		59	59	59	59
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	23	23	23		27	54	27	27
g / C, Green / Cycle	0.38	0.38	0.38		0.45	0.92	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.26		0.15	0.62	0.32	0.36
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	675	675	1066		2309	1456	2309	721
d1, Uniform Delay [s]	13.81	13.80	15.48		10.51	0.55	13.02	13.83
k, delay calibration	0.11	0.11	0.11		0.11	0.50	0.11	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	0.45	0.76		0.08	2.52	0.38	3.84
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	0.44	0.44	0.68		0.33	0.67	0.70	0.78
d, Delay for Lane Group [s/veh]	14.26	14.26	16.24		10.59	3.06	13.41	17.67
Lane Group LOS	B	B	B		B	A	B	B
Critical Lane Group	No	No	No		No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	2.72	2.72	3.71		1.88	1.02	4.89	6.16
50th-Percentile Queue Length [ft/ln]	68.05	68.04	92.64		47.07	25.45	122.34	153.94
95th-Percentile Queue Length [veh/ln]	4.90	4.90	6.67		3.39	1.83	8.52	10.23
95th-Percentile Queue Length [ft/ln]	122.49	122.47	166.75		84.73	45.80	213.04	255.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.26	14.26	16.24	0.00	0.00	0.00	0.00	10.59	3.06	0.00	13.41	17.67
Movement LOS	B	B	B					B	A		B	B
d_A, Approach Delay [s/veh]	15.35			0.00			6.38			14.51		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	12.00											
Intersection LOS	B											
Intersection V/C	0.672											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.42	21.42	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.894	2.105	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	471	0	1547	1547
d_b, Bicycle Delay [s]	17.39	29.74	1.53	1.53
l_b,int, Bicycle LOS Score for Intersection	3.734	4.132	2.524	2.754
Bicycle LOS	D	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	479	46	116	0	49	134	73	1060	211	147	1449	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	126	12	31	0	13	35	19	279	56	39	381	0
Total Analysis Volume [veh/h]	504	48	122	0	52	141	77	1116	222	155	1525	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	43	0	10	43	0	21	32	0	55	66	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	74	74	74	74	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	14	24	24	0	10	10	4	25	25	5	27	27
g / C, Green / Cycle	0.19	0.32	0.32	0.00	0.13	0.13	0.05	0.34	0.34	0.07	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.15	0.03	0.08	0.00	0.06	0.06	0.02	0.22	0.14	0.04	0.30	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1725	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	643	594	505	0	227	209	186	1737	542	253	1836	573
d1, Uniform Delay [s]	28.94	17.83	18.82	0.00	29.84	29.89	34.16	20.75	18.83	33.55	21.79	15.27
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	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]	2.14	0.06	0.25	0.00	1.32	1.50	1.46	0.40	0.50	2.39	1.03	0.00
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	0.78	0.08	0.24	0.00	0.44	0.45	0.41	0.64	0.41	0.61	0.83	0.00
d, Delay for Lane Group [s/veh]	31.08	17.89	19.07	0.00	31.15	31.39	35.62	21.15	19.33	35.94	22.81	15.28
Lane Group LOS	C	B	B	A	C	C	D	C	B	D	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.31	0.56	1.52	0.00	1.67	1.59	0.70	5.19	2.85	1.41	7.69	0.01
50th-Percentile Queue Length [ft/ln]	107.76	14.08	37.98	0.00	41.71	39.78	17.38	129.65	71.23	35.15	192.14	0.26
95th-Percentile Queue Length [veh/ln]	7.72	1.01	2.73	0.00	3.00	2.86	1.25	8.92	5.13	2.53	12.23	0.02
95th-Percentile Queue Length [ft/ln]	192.88	25.34	68.36	0.00	75.08	71.60	31.28	223.02	128.21	63.27	305.81	0.47

Movement, Approach, & Intersection Results

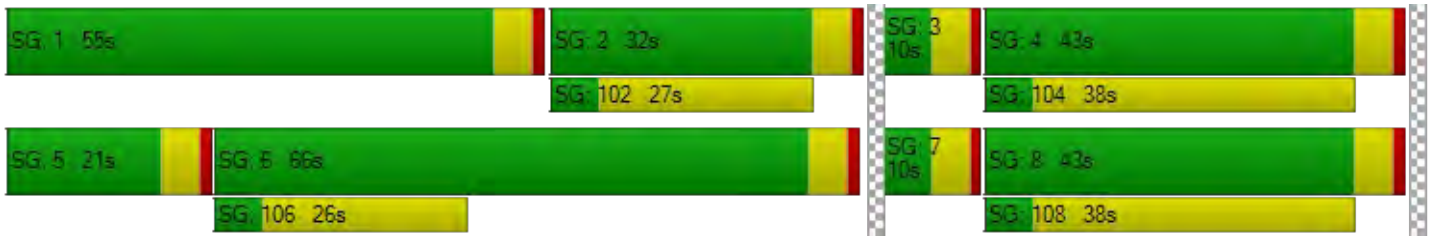
d_M, Delay for Movement [s/veh]	31.08	17.89	19.07	0.00	31.15	31.31	35.62	21.15	19.33	35.94	22.81	15.28
Movement LOS	C	B	B	A	C	C	D	C	B	D	C	B
d_A, Approach Delay [s/veh]	27.97			31.27			21.65			24.02		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.20											
Intersection LOS	C											
Intersection V/C	0.526											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	28.78	28.78	28.78	28.78
l_p,int, Pedestrian LOS Score for Intersection	2.624	2.354	3.230	3.157
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1020	1020	725	1638
d_b, Bicycle Delay [s]	8.93	8.93	15.13	1.22
l_b,int, Bicycle LOS Score for Intersection	2.672	1.878	2.338	2.484
Bicycle LOS	B	A	B	B

Sequence

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



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Report File: H:\...\11 Buildout PM.pdf

Scenario 22 Buildout PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.593	19.1	B
2	Bellegrave Ave @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Left	0.061	43.8	E
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	EB Left	0.405	20.1	C
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.288	13.0	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	WB Left	0.525	41.2	D
6	Shearwater Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	NB Right	0.001	0.0	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.255	20.8	C
8	Park Center Dr @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.086	10.1	B
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.243	11.6	B
10	Boca Pl @ Pats Ranch Rd	Two-way stop	HCM 6th Edition	WB Left	0.050	10.3	B
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.890	67.0	E
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	WB Left	0.838	66.2	E
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.904	26.5	C
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.732	15.7	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Right	0.668	35.9	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	833	0	0	906	591	519	0	149	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	219	0	0	238	156	137	0	39	0	0	0
Total Analysis Volume [veh/h]	78	877	0	0	954	622	546	0	157	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	15	52	0	23	49	0	27	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	65	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	32	32	0	28	28	13	13	13	0	0
g / C, Green / Cycle	0.06	0.49	0.49	0.00	0.43	0.43	0.20	0.20	0.20	0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	0.04	0.16	0.16	0.00	0.19	0.39	0.16	0.00	0.10	0.00	0.00
s, saturation flow rate [veh/h]	1781	3560	1870	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	104	1745	917	0	2200	686	709	730	326	0	0
d1, Uniform Delay [s]	30.43	10.17	10.17	0.00	13.03	17.40	24.64	0.00	23.02	0.00	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.33	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
d2, Incremental Delay [s]	10.27	0.11	0.21	0.00	0.14	12.70	1.81	0.00	1.11	0.00	0.00
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	0.75	0.33	0.33	0.00	0.43	0.91	0.77	0.00	0.48	0.00	0.00
d, Delay for Lane Group [s/veh]	40.70	10.28	10.38	0.00	13.17	30.10	26.45	0.00	24.13	0.00	0.00
Lane Group LOS	D	B	B	A	B	C	C	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.46	2.22	2.36	0.00	2.94	10.04	3.93	0.00	2.12	0.00	0.00
50th-Percentile Queue Length [ft/ln]	36.47	55.47	58.90	0.00	73.59	250.92	98.33	0.00	52.95	0.00	0.00
95th-Percentile Queue Length [veh/ln]	2.63	3.99	4.24	0.00	5.30	15.23	7.08	0.00	3.81	0.00	0.00
95th-Percentile Queue Length [ft/ln]	65.64	99.85	106.02	0.00	132.46	380.81	176.99	0.00	95.30	0.00	0.00

Movement, Approach, & Intersection Results

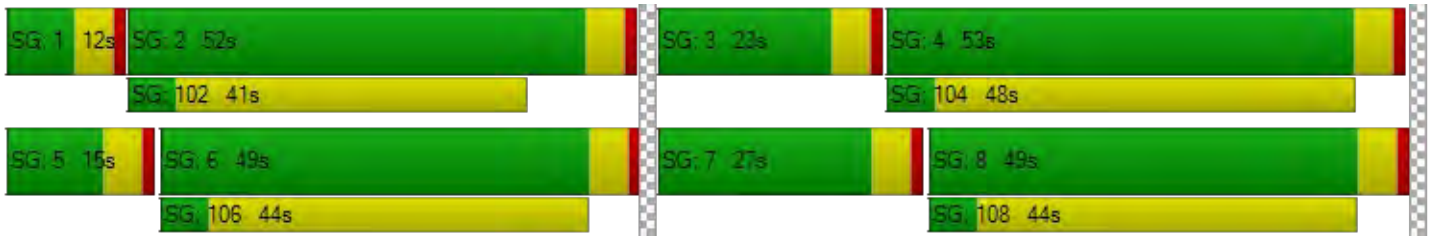
d_M, Delay for Movement [s/veh]	40.70	10.32	10.38	0.00	13.17	30.10	26.45	0.00	24.13	0.00	0.00	0.00
Movement LOS	D	B	B	A	B	C	C	A	C	A	A	
d_A, Approach Delay [s/veh]	12.80			19.85			25.93			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	19.09											
Intersection LOS	B											
Intersection V/C	0.593											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.36	24.36	24.36	24.36
l_p,int, Pedestrian LOS Score for Intersection	2.867	3.076	2.775	2.438
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1344	1436	1344	1466
d_b, Bicycle Delay [s]	3.52	2.61	3.52	2.33
l_b,int, Bicycle LOS Score for Intersection	2.085	2.426	2.140	1.560
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	43.8
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.061

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
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]	6	6	765	10	35	765
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	201	3	9	201
Total Analysis Volume [veh/h]	6	6	805	11	37	805
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

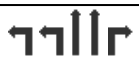
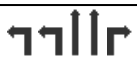
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.02	0.01	0.00	0.05	0.01
d_M, Delay for Movement [s/veh]	43.77	14.56	0.00	0.00	9.65	0.00
Movement LOS	E	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.19	0.05	0.00	0.00	0.14	0.00
95th-Percentile Queue Length [ft/ln]	4.77	1.19	0.00	0.00	3.58	0.00
d_A, Approach Delay [s/veh]	29.17		0.00		0.42	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.42					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	114	163	155	332	109	52	564	166	272	564	67
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]	34	30	43	41	87	29	14	148	44	72	148	18
Total Analysis Volume [veh/h]	135	120	172	163	349	115	55	594	175	286	594	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	47	0	14	47	0	10	47	0	17	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	54	54	54	54	54	54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	5	10	10	3	12	12	7	16	16
g / C, Green / Cycle	0.08	0.18	0.18	0.09	0.19	0.19	0.05	0.23	0.23	0.13	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.04	0.03	0.11	0.05	0.10	0.07	0.02	0.17	0.11	0.08	0.17	0.04
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	281	656	293	296	671	300	182	812	363	449	1086	485
d1, Uniform Delay [s]	23.58	18.49	20.04	23.56	19.60	19.06	24.48	19.20	17.97	22.16	15.56	13.57
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	0.13	1.87	1.60	0.63	0.81	0.92	1.29	1.00	1.51	0.43	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	0.48	0.18	0.59	0.55	0.52	0.38	0.30	0.73	0.48	0.64	0.55	0.15
d, Delay for Lane Group [s/veh]	24.86	18.63	21.91	25.17	20.23	19.87	25.40	20.49	18.97	23.67	15.99	13.71
Lane Group LOS	C	B	C	C	C	B	C	C	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.81	0.59	1.94	0.98	1.84	1.21	0.34	3.22	1.79	1.66	2.73	0.57
50th-Percentile Queue Length [ft/ln]	20.20	14.67	48.44	24.59	45.92	30.17	8.42	80.39	44.85	41.62	68.18	14.34
95th-Percentile Queue Length [veh/ln]	1.45	1.06	3.49	1.77	3.31	2.17	0.61	5.79	3.23	3.00	4.91	1.03
95th-Percentile Queue Length [ft/ln]	36.36	26.41	87.20	44.26	82.66	54.31	15.15	144.70	80.73	74.91	122.73	25.81

Movement, Approach, & Intersection Results

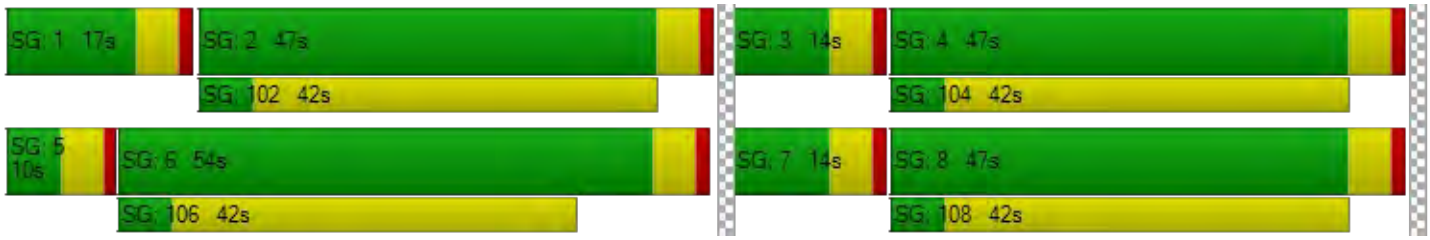
d_M, Delay for Movement [s/veh]	24.86	18.63	21.91	25.17	20.23	19.87	25.40	20.49	18.97	23.67	15.99	13.71
Movement LOS	C	B	C	C	C	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	21.92			21.45			20.49			18.13		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	20.12											
Intersection LOS	C											
Intersection V/C	0.405											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	18.55	18.55	18.55	18.55
l_p,int, Pedestrian LOS Score for Intersection	2.741	2.690	2.801	2.830
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1568	1568	1568	1829
d_b, Bicycle Delay [s]	1.25	1.25	1.25	0.20
l_b,int, Bicycle LOS Score for Intersection	1.912	2.077	2.239	2.344
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.288

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	11	11	7	6	14	24	514	201	29	685	10
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	3	3	2	2	4	6	135	53	8	180	3
Total Analysis Volume [veh/h]	122	12	12	7	6	15	25	541	212	31	721	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	37	59	0	17	39	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	10	14	14	1	5	90	82	82	90	82	82
g / C, Green / Cycle	0.08	0.12	0.12	0.01	0.04	0.75	0.68	0.68	0.75	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.07	0.01	0.01	0.00	0.01	0.03	0.15	0.13	0.04	0.20	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1661	793	3560	1589	785	3560	1589
c, Capacity [veh/h]	151	221	188	16	70	620	2417	1079	632	2429	1084
d1, Uniform Delay [s]	53.98	46.99	47.05	59.16	55.74	4.34	7.30	7.14	4.13	7.60	6.10
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.76	0.10	0.14	16.82	2.33	0.12	0.21	0.41	0.03	0.31	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	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	0.81	0.05	0.06	0.43	0.30	0.04	0.22	0.20	0.05	0.30	0.01
d, Delay for Lane Group [s/veh]	63.74	47.09	47.19	75.98	58.07	4.46	7.51	7.55	4.17	7.91	6.12
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.03	0.33	0.33	0.29	0.66	0.16	2.56	2.03	0.18	3.58	0.09
50th-Percentile Queue Length [ft/ln]	100.71	8.16	8.20	7.20	16.58	4.02	64.01	50.76	4.48	89.56	2.26
95th-Percentile Queue Length [veh/ln]	7.25	0.59	0.59	0.52	1.19	0.29	4.61	3.65	0.32	6.45	0.16
95th-Percentile Queue Length [ft/ln]	181.28	14.70	14.76	12.97	29.85	7.23	115.21	91.37	8.07	161.21	4.06

Movement, Approach, & Intersection Results

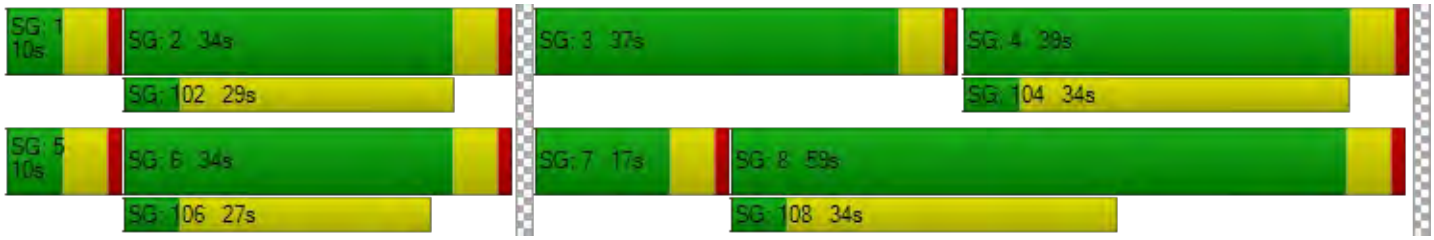
d_M, Delay for Movement [s/veh]	63.74	47.09	47.19	75.98	58.07	58.07	4.46	7.51	7.55	4.17	7.91	6.12
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	61.01			62.55			7.42			7.74		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	13.02											
Intersection LOS	B											
Intersection V/C	0.288											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.273	2.005	2.734	2.683
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	567	483	483
d_b, Bicycle Delay [s]	18.16	30.83	34.51	34.51
l_b,int, Bicycle LOS Score for Intersection	1.801	1.606	2.201	2.189
Bicycle LOS	A	A	B	B

Sequence

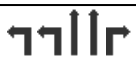
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	41.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.525

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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	377	117	309	694	197	124	419	64	172	468	218
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	99	31	81	183	52	33	110	17	45	123	57
Total Analysis Volume [veh/h]	75	397	123	325	731	207	131	441	67	181	493	229
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	12	42	0	17	47	47	17	43	0	18	44	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	6	50	50	12	55	71	11	25	25	13	27	27
g / C, Green / Cycle	0.05	0.42	0.42	0.10	0.46	0.59	0.09	0.21	0.21	0.11	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.04	0.11	0.08	0.09	0.21	0.13	0.07	0.12	0.04	0.10	0.20	0.20
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1672
c, Capacity [veh/h]	97	1477	659	348	1642	941	160	745	333	194	427	382
d1, Uniform Delay [s]	56.06	23.14	22.29	53.61	21.94	11.47	53.71	42.84	39.19	53.08	44.88	44.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.16	0.16
I, Upstream Filtering Factor	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]	12.44	0.45	0.63	11.52	0.88	0.54	9.93	0.75	0.29	17.77	9.35	10.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.27	0.19	0.93	0.45	0.22	0.82	0.59	0.20	0.93	0.89	0.89
d, Delay for Lane Group [s/veh]	68.50	23.59	22.91	65.13	22.82	12.01	63.65	43.59	39.48	70.84	54.24	55.24
Lane Group LOS	E	C	C	E	C	B	E	D	D	E	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.58	3.80	2.33	5.42	7.13	2.69	4.33	5.99	1.67	6.36	12.05	10.88
50th-Percentile Queue Length [ft/ln]	64.45	95.05	58.21	135.49	178.18	67.15	108.16	149.72	41.75	159.10	301.13	272.02
95th-Percentile Queue Length [veh/ln]	4.64	6.84	4.19	9.24	11.51	4.83	7.74	10.00	3.01	10.50	17.74	16.29
95th-Percentile Queue Length [ft/ln]	116.01	171.10	104.79	230.94	287.63	120.86	193.44	250.06	75.15	262.53	443.42	407.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.50	23.59	22.91	65.13	22.82	12.01	63.65	43.59	39.48	70.84	54.46	55.24
Movement LOS	E	C	C	E	C	B	E	D	D	E	D	E
d_A, Approach Delay [s/veh]	29.11			31.94			47.27			57.94		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	41.23											
Intersection LOS	D											
Intersection V/C	0.525											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.724	2.891	2.698	2.665
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	616	700	633	650
d_b, Bicycle Delay [s]	28.72	25.37	28.03	27.35
l_b,int, Bicycle LOS Score for Intersection	2.050	2.602	2.087	2.305
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	68	0	0	50	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	95	0	0	70	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	25	0	0	18	0
Total Analysis Volume [veh/h]	0	100	0	0	74	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.39	0.00	0.00
Movement LOS		A		A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		9.39		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	20.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.255

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	348	621	63	74	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	92	163	17	19	0
Total Analysis Volume [veh/h]	0	366	654	66	78	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.26	0.00
d_M, Delay for Movement [s/veh]	9.10	0.00	0.00	0.00	20.79	14.38
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.99	0.99
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	24.86	24.86
d_A, Approach Delay [s/veh]	0.00		0.00		20.79	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.086

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	72	41	0	52	46	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
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]	101	57	0	73	64	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	15	0	19	17	0
Total Analysis Volume [veh/h]	106	60	0	77	67	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.09	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.55	0.00	10.09	9.39
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.29	0.29
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	7.17	7.17
d_A, Approach Delay [s/veh]	0.00		0.00		10.08	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.20					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.243

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	310	73	56	505	53	17	29	7	45	47	20
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	82	19	15	133	14	4	8	2	12	12	5
Total Analysis Volume [veh/h]	14	326	77	59	532	56	18	31	7	47	49	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	97	87	87	97	90	90	13	13	13
g / C, Green / Cycle	0.81	0.73	0.73	0.81	0.75	0.75	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.11	0.06	0.15	0.04	0.03	0.00	0.09
s, saturation flow rate [veh/h]	876	1870	1749	1043	3560	1589	1528	1589	1279
c, Capacity [veh/h]	758	1361	1273	895	2664	1189	210	176	184
d1, Uniform Delay [s]	2.40	4.99	5.00	2.42	4.47	3.94	48.71	47.64	52.92
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.24	0.26	0.14	0.17	0.07	0.56	0.09	3.64
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	0.02	0.15	0.15	0.07	0.20	0.05	0.23	0.04	0.64
d, Delay for Lane Group [s/veh]	2.41	5.22	5.26	2.56	4.64	4.02	49.27	47.74	56.56
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	1.52	1.46	0.25	1.78	0.34	1.38	0.19	3.66
50th-Percentile Queue Length [ft/ln]	1.32	37.98	36.54	6.35	44.54	8.60	34.48	4.81	91.39
95th-Percentile Queue Length [veh/ln]	0.09	2.73	2.63	0.46	3.21	0.62	2.48	0.35	6.58
95th-Percentile Queue Length [ft/ln]	2.37	68.36	65.77	11.43	80.18	15.47	62.06	8.67	164.50

Movement, Approach, & Intersection Results

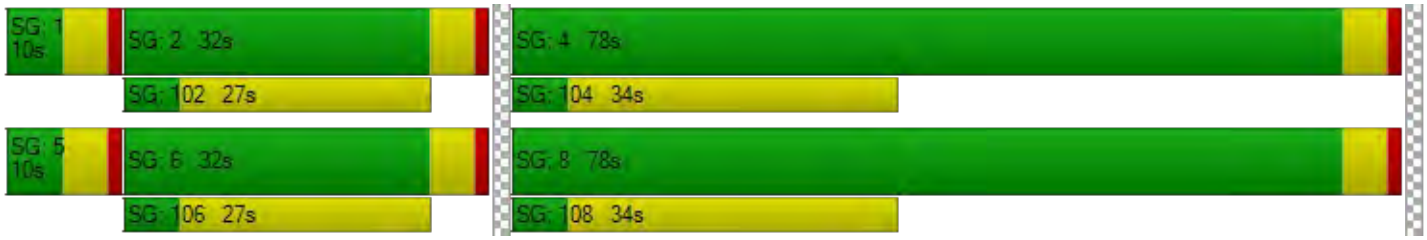
d_M, Delay for Movement [s/veh]	2.41	5.24	5.26	2.56	4.64	4.02	49.27	49.27	47.74	56.56	56.56	56.56
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	5.15			4.39			49.08			56.56		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	11.60											
Intersection LOS	B											
Intersection V/C	0.243											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	51.33	51.33	51.33
l_p,int, Pedestrian LOS Score for Intersection	2.578	2.776	2.028	1.931
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.03	36.03	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.904	2.093	1.652	1.753
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.050

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 Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	104	32	0	94	24	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
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]	145	45	0	131	34	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	12	0	34	9	0
Total Analysis Volume [veh/h]	153	47	0	138	36	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

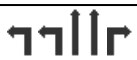
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.05	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.63	0.00	10.25	9.11
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	3.93	3.93
d_A, Approach Delay [s/veh]	0.00		0.00		10.25	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.99					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	67.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.890

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	356	584	440	412	692	322	383	1113	89	799	1148	370
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]	94	154	116	108	182	85	101	293	23	210	302	97
Total Analysis Volume [veh/h]	375	615	463	434	728	339	403	1172	94	841	1208	389
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	69	0	10	69	0	10	49	0	12	51	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	129	129	129	129	129	129	129	129	129	129	129	129
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	17	30	30	19	32	32	18	30	30	30	42	42
g / C, Green / Cycle	0.13	0.23	0.23	0.15	0.25	0.25	0.14	0.23	0.23	0.23	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.11	0.12	0.29	0.13	0.14	0.21	0.12	0.23	0.06	0.24	0.34	0.24
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	443	1189	371	503	1278	399	471	1189	371	802	1172	544
d1, Uniform Delay [s]	54.78	42.93	49.25	53.65	42.07	45.84	54.26	49.04	40.13	49.34	43.10	37.80
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.37	0.11	0.11	0.11	0.11	0.23	0.43
I, Upstream Filtering Factor	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]	4.53	0.35	132.06	4.52	0.40	15.34	4.57	9.25	0.36	29.44	26.38	6.84
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	0.85	0.52	1.25	0.86	0.57	0.85	0.86	0.99	0.25	1.05	1.03	0.71
d, Delay for Lane Group [s/veh]	59.31	43.28	181.30	58.17	42.48	61.18	58.83	58.29	40.48	78.78	69.47	44.64
Lane Group LOS	E	D	F	E	D	E	E	E	D	F	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.22	5.76	25.48	7.18	6.81	12.00	6.52	13.11	2.42	16.10	22.72	11.76
50th-Percentile Queue Length [ft/ln]	155.58	143.88	637.09	179.39	170.35	299.92	163.11	327.87	60.46	402.56	568.05	294.06
95th-Percentile Queue Length [veh/ln]	10.31	9.69	37.92	11.57	11.09	17.68	10.71	19.05	4.35	23.30	31.17	17.39
95th-Percentile Queue Length [ft/ln]	257.86	242.24	948.06	289.22	277.37	441.92	267.84	476.35	108.83	582.51	779.25	434.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.31	43.28	181.30	58.17	42.48	61.18	58.83	58.29	40.48	78.78	69.47	44.64
Movement LOS	E	D	F	E	D	E	E	E	D	F	F	D
d_A, Approach Delay [s/veh]	91.40			51.24			57.42			68.72		
Approach LOS	F			D			E			E		
d_I, Intersection Delay [s/veh]	67.00											
Intersection LOS	E											
Intersection V/C	0.890											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	55.64	55.64	55.64	55.64
l_p,int, Pedestrian LOS Score for Intersection	3.205	3.183	3.451	3.293
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	995	995	684	715
d_b, Bicycle Delay [s]	16.25	16.25	27.85	26.55
l_b,int, Bicycle LOS Score for Intersection	2.359	2.385	2.478	3.571
Bicycle LOS	B	B	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	66.2
Analysis Method:	HCM 6th Edition	Level Of Service:	E
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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	194	61	253	536	67	187	309	1205	112	352	1572	370
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]	51	16	67	141	18	49	81	317	29	93	414	97
Total Analysis Volume [veh/h]	204	64	266	564	71	197	325	1268	118	371	1655	389
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	26	26	26	26	26	22	61	61	11	50	50
g / C, Green / Cycle	0.18	0.18	0.18	0.19	0.19	0.16	0.44	0.44	0.08	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.07	0.07	0.17	0.16	0.16	0.18	0.25	0.07	0.11	0.32	0.24
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	326	333	291	641	307	281	2230	696	275	1833	572
d1, Uniform Delay [s]	50.48	50.48	56.11	55.50	55.42	58.95	29.45	23.90	64.41	42.49	37.98
k, delay calibration	0.11	0.11	0.29	0.11	0.24	0.34	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]	0.82	0.80	23.78	4.13	15.26	95.02	1.06	0.53	161.35	7.76	6.41
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	0.41	0.41	0.91	0.88	0.87	1.16	0.57	0.17	1.35	0.90	0.68
d, Delay for Lane Group [s/veh]	51.29	51.27	79.89	59.63	70.68	153.97	30.51	24.42	225.76	50.25	44.39
Lane Group LOS	D	D	E	E	E	F	C	C	F	D	D
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.21	4.30	11.15	10.07	10.51	17.37	10.89	2.52	11.10	19.30	12.35
50th-Percentile Queue Length [ft/ln]	105.21	107.57	278.73	251.73	262.68	434.17	272.18	62.96	277.52	482.42	308.75
95th-Percentile Queue Length [veh/ln]	7.57	7.70	16.63	15.27	15.82	25.93	16.30	4.53	18.19	26.50	18.11
95th-Percentile Queue Length [ft/ln]	189.32	192.61	415.63	381.83	395.58	648.15	407.46	113.33	454.72	662.52	452.84

Movement, Approach, & Intersection Results

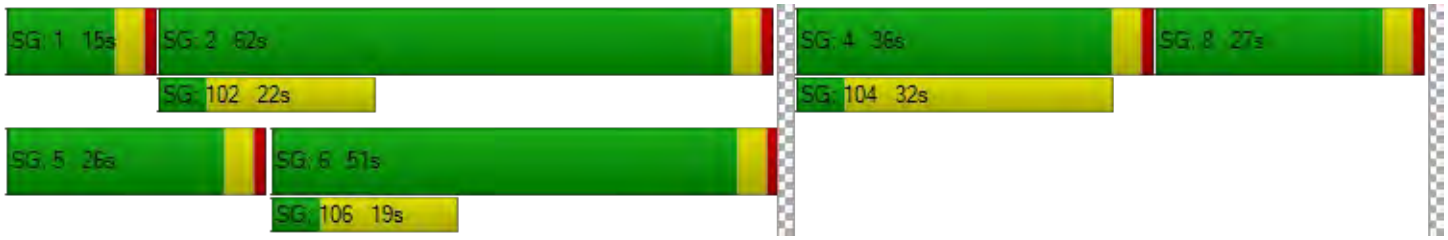
d_M, Delay for Movement [s/veh]	51.29	51.27	79.89	59.63	70.68	70.68	153.97	30.51	24.42	225.76	50.25	44.39
Movement LOS	D	D	E	E	E	E	F	C	C	F	D	D
d_A, Approach Delay [s/veh]	65.53			63.19			53.54			76.27		
Approach LOS	E			E			D			E		
d_I, Intersection Delay [s/veh]	66.16											
Intersection LOS	E											
Intersection V/C	0.838											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.28	61.28	61.28	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.653	2.636	3.207	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	672
d_b, Bicycle Delay [s]	48.88	41.65	24.01	30.88
l_b,int, Bicycle LOS Score for Intersection	2.441	2.932	2.501	2.888
Bicycle LOS	B	C	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	26.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.904

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	542	1	1118	0	1462	733	0	1714	712
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]	0	0	0	143	0	294	0	385	193	0	451	187
Total Analysis Volume [veh/h]	0	0	0	571	1	1177	0	1539	772	0	1804	749
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	19	0	0	51	0	0	51	51
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		30	30	30	30	30	30	65
g / C, Green / Cycle		0.43	0.43	0.43	0.43	0.43	0.43	0.93
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.42	0.30	0.49	0.35	0.47
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		761	761	1202	2187	682	2187	1476
d1, Uniform Delay [s]		13.63	13.63	19.67	16.28	19.91	17.59	0.34
k, delay calibration		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
d2, Incremental Delay [s]		0.31	0.31	8.11	0.42	76.57	0.83	1.24
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		0.38	0.38	0.98	0.70	1.13	0.82	0.51
d, Delay for Lane Group [s/veh]		13.94	13.94	27.78	16.70	96.48	18.42	1.58
Lane Group LOS		B	B	C	B	F	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		2.87	2.87	9.67	6.11	24.33	7.80	0.51
50th-Percentile Queue Length [ft/ln]		71.66	71.65	241.83	152.87	608.13	195.12	12.74
95th-Percentile Queue Length [veh/ln]		5.16	5.16	14.77	10.17	35.28	12.39	0.92
95th-Percentile Queue Length [ft/ln]		128.98	128.98	369.34	254.25	882.07	309.66	22.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	13.94	13.94	27.78	0.00	16.70	96.48	0.00	18.42	1.58
Movement LOS				B	B	C		B	F		B	A
d_A, Approach Delay [s/veh]	0.00			23.26			43.35			13.48		
Approach LOS	A			C			D			B		
d_I, Intersection Delay [s/veh]	26.51											
Intersection LOS	C											
Intersection V/C	0.904											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.53	26.53	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.180	2.931	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	401	1316	1316
d_b, Bicycle Delay [s]	34.95	22.35	4.08	4.08
l_b,int, Bicycle LOS Score for Intersection	4.132	4.445	2.831	2.964
Bicycle LOS	D	E	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	758	1	1027	0	0	0	0	1414	610	0	1682	389
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]	199	0	270	0	0	0	0	372	161	0	443	102
Total Analysis Volume [veh/h]	798	1	1081	0	0	0	0	1488	642	0	1771	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	51	51	0	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	68	68	68		68	68	68	68
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	29	29	29		29	63	29	29
g / C, Green / Cycle	0.43	0.43	0.43		0.42	0.93	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.22	0.22	0.38		0.29	0.40	0.35	0.26
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	764	764	1207		2153	1472	2153	672
d1, Uniform Delay [s]	14.16	14.16	17.84		15.87	0.31	17.22	15.13
k, delay calibration	0.11	0.11	0.11		0.11	0.36	0.11	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.56	2.62		0.40	0.69	0.83	1.06
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	0.52	0.52	0.90		0.69	0.44	0.82	0.61
d, Delay for Lane Group [s/veh]	14.72	14.72	20.46		16.28	1.00	18.05	16.19
Lane Group LOS	B	B	C		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.15	4.15	7.30		5.65	0.28	7.36	4.58
50th-Percentile Queue Length [ft/ln]	103.67	103.66	182.62		141.27	7.00	184.00	114.41
95th-Percentile Queue Length [veh/ln]	7.46	7.46	11.74		9.55	0.50	11.81	8.08
95th-Percentile Queue Length [ft/ln]	186.60	186.59	293.43		238.74	12.60	295.23	202.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.72	14.72	20.46	0.00	0.00	0.00	0.00	16.28	1.00	0.00	18.05	16.19
Movement LOS	B	B	C					B	A		B	B
d_A, Approach Delay [s/veh]	18.02			0.00			11.67			17.70		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	15.72											
Intersection LOS	B											
Intersection V/C	0.732											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.37	25.37	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.932	2.060	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	415	0	1362	1362
d_b, Bicycle Delay [s]	21.22	33.77	3.44	3.44
l_b,int, Bicycle LOS Score for Intersection	4.662	4.132	2.731	2.759
Bicycle LOS	E	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	533	56	208	0	61	106	165	1760	401	293	1425	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	140	15	55	0	16	28	43	463	106	77	375	0
Total Analysis Volume [veh/h]	561	59	219	0	64	112	174	1853	422	308	1500	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	62	0	10	43	0	14	49	0	19	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	24	34	34	0	10	10	9	72	72	14	77	77
g / C, Green / Cycle	0.17	0.24	0.24	0.00	0.07	0.07	0.06	0.51	0.51	0.10	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.16	0.03	0.14	0.00	0.05	0.05	0.05	0.36	0.27	0.09	0.29	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1777	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	593	454	386	1	128	114	222	2614	816	347	2799	873
d1, Uniform Delay [s]	57.34	41.46	46.56	0.00	63.55	63.70	64.54	26.07	22.58	62.19	20.14	14.22
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]	8.44	0.13	1.32	0.00	7.15	9.13	5.96	1.66	2.34	7.63	0.74	0.00
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	0.95	0.13	0.57	0.00	0.71	0.74	0.78	0.71	0.52	0.89	0.54	0.00
d, Delay for Lane Group [s/veh]	65.77	41.59	47.88	0.00	70.70	72.83	70.50	27.73	24.92	69.82	20.88	14.22
Lane Group LOS	E	D	D	A	E	E	E	C	C	E	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	10.52	1.63	6.89	0.00	3.44	3.27	3.25	15.96	9.74	5.80	10.55	0.02
50th-Percentile Queue Length [ft/ln]	262.92	40.86	172.21	0.00	86.02	81.80	81.36	398.93	243.41	144.90	263.76	0.38
95th-Percentile Queue Length [veh/ln]	15.84	2.94	11.19	0.00	6.19	5.89	5.86	22.51	14.85	9.74	15.88	0.03
95th-Percentile Queue Length [ft/ln]	395.88	73.56	279.82	0.00	154.84	147.24	146.44	562.71	371.34	243.61	396.93	0.68

Movement, Approach, & Intersection Results

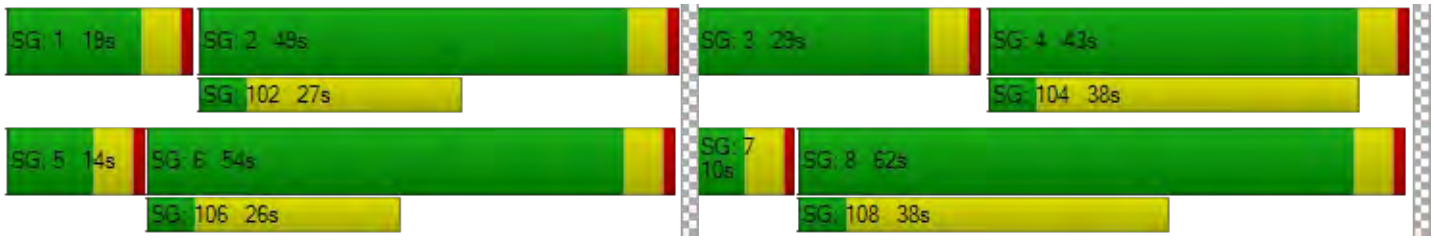
d_M, Delay for Movement [s/veh]	65.77	41.59	47.88	0.00	70.70	72.35	70.50	27.73	24.92	69.82	20.88	14.22
Movement LOS	E	D	D	A	E	E	E	C	C	E	C	B
d_A, Approach Delay [s/veh]	59.40			71.73			30.28			29.21		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	35.93											
Intersection LOS	D											
Intersection V/C	0.668											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersection	2.741	2.402	3.372	3.292
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	814	543	629	700
d_b, Bicycle Delay [s]	24.60	37.16	32.91	29.58
l_b,int, Bicycle LOS Score for Intersection	2.944	1.850	2.907	2.555
Bicycle LOS	C	A	C	B

Sequence

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



Appendix D-12

Future Buildout with Project (2040)

Vistro File: H:\...\21-128 Vernola Ranch (Gateway).vistro
Report File: H:\...\12 Buildout + P AM.pdf

Scenario 23 Buildout + P AM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	SB Left	0.372	17.3	B
2	Bellegrave Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	WB Left	0.446	15.1	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.361	18.4	B
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.461	24.1	C
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	WB Left	0.486	47.3	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Left		4.8	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.126	13.8	B
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	EB Right		5.6	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.272	18.6	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	SB Thru		5.7	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.836	58.2	E
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.595	26.7	C
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.781	17.1	B
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	WB Right	0.781	17.4	B
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.721	40.6	D
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.201	20.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.372

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	540	0	0	238	184	365	0	52	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	22	11	0	0	0	11	0	19	29	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	754	22	11	332	257	510	11	73	19	29	29
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	198	6	3	87	68	134	3	19	5	8	8
Total Analysis Volume [veh/h]	66	794	23	12	349	271	537	12	77	20	31	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	13	46	0	25	49	0	29	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	48	48	48	48	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	14	14	1	11	11	11	13	13	1	3
g / C, Green / Cycle	0.06	0.28	0.28	0.02	0.23	0.23	0.22	0.27	0.27	0.02	0.07
(v / s)_i Volume / Saturation Flow Rate	0.04	0.15	0.15	0.01	0.07	0.17	0.16	0.00	0.05	0.01	0.01
s, saturation flow rate [veh/h]	1781	3560	1843	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	110	1001	518	28	1198	374	759	947	423	86	255
d1, Uniform Delay [s]	22.18	14.77	14.77	23.66	15.23	17.10	17.50	13.11	13.73	23.20	21.09
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream 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]	5.23	0.45	0.87	9.99	0.13	2.68	1.23	0.01	0.20	1.37	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
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	0.60	0.54	0.54	0.43	0.29	0.72	0.71	0.01	0.18	0.23	0.12
d, Delay for Lane Group [s/veh]	27.41	15.22	15.65	33.65	15.36	19.78	18.73	13.11	13.93	24.57	21.30
Lane Group LOS	C	B	B	C	B	B	B	B	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.83	2.21	2.35	0.20	0.94	2.69	2.55	0.04	0.59	0.12	0.16
50th-Percentile Queue Length [ft/ln]	20.63	55.24	58.86	5.07	23.44	67.32	63.66	1.07	14.72	2.98	3.93
95th-Percentile Queue Length [veh/ln]	1.49	3.98	4.24	0.36	1.69	4.85	4.58	0.08	1.06	0.21	0.28
95th-Percentile Queue Length [ft/ln]	37.13	99.43	105.95	9.12	42.20	121.18	114.59	1.92	26.49	5.36	7.08

Movement, Approach, & Intersection Results

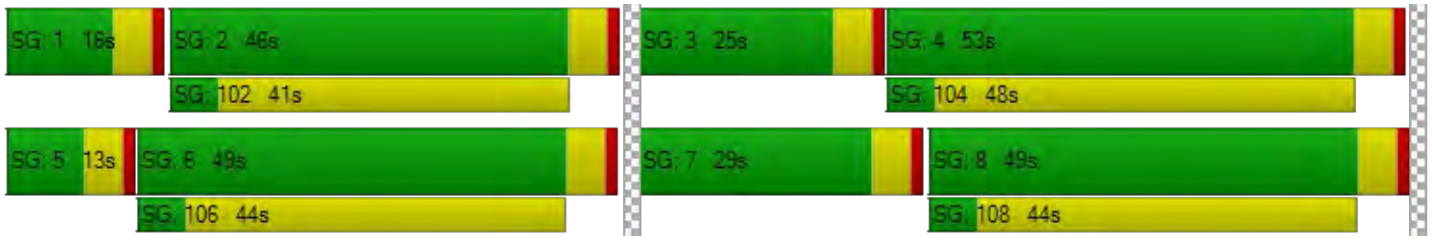
d_M, Delay for Movement [s/veh]	27.41	15.36	15.65	33.65	15.36	19.78	18.73	13.11	13.93	24.57	21.30	0.00
Movement LOS	C	B	B	C	B	B	B	B	B	C	C	
d_A, Approach Delay [s/veh]	16.27			17.60			18.03			22.58		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.30											
Intersection LOS	B											
Intersection V/C	0.372											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.01	16.01	16.01	16.01
l_p,int, Pedestrian LOS Score for Intersection	2.748	2.933	2.701	2.437
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1821	1696	1821	1986
d_b, Bicycle Delay [s]	0.19	0.56	0.19	0.00
l_b,int, Bicycle LOS Score for Intersection	2.045	1.907	2.076	1.602
Bicycle LOS	B	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.446

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	2	505	0	3	468
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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	114	116	0	89	59	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]	114	119	705	89	63	653
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	31	186	23	17	172
Total Analysis Volume [veh/h]	120	125	742	94	66	687
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
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.0	0.0	4.0	4.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	16	0	34	0	70	104
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	24	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	3.0	0.0	3.0	3.0
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	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	11	11	88	88	6	99
g / C, Green / Cycle	0.09	0.09	0.73	0.73	0.05	0.82
(v / s)_i Volume / Saturation Flow Rate	0.07	0.08	0.22	0.23	0.04	0.37
s, saturation flow rate [veh/h]	1781	1589	1870	1799	1781	1870
c, Capacity [veh/h]	164	146	1373	1321	87	1542
d1, Uniform Delay [s]	53.04	53.68	5.45	5.51	56.38	2.91
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]	6.20	13.10	0.57	0.63	12.82	0.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	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	0.73	0.86	0.30	0.32	0.76	0.45
d, Delay for Lane Group [s/veh]	59.23	66.79	6.02	6.14	69.20	3.85
Lane Group LOS	E	E	A	A	E	A
Critical Lane Group	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.81	4.25	3.43	3.48	2.28	3.61
50th-Percentile Queue Length [ft/ln]	95.14	106.18	85.67	86.91	57.11	90.18
95th-Percentile Queue Length [veh/ln]	6.85	7.63	6.17	6.26	4.11	6.49
95th-Percentile Queue Length [ft/ln]	171.25	190.68	154.21	156.44	102.79	162.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.23	66.79	6.08	6.14	69.20	3.85
Movement LOS	E	E	A	A	E	A
d_A, Approach Delay [s/veh]	63.09		6.08		9.58	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	15.13					
Intersection LOS	B					
Intersection V/C	0.446					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.087	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	183	483	1650
d_b, Bicycle Delay [s]	49.50	34.50	1.84
l_b,int, Bicycle LOS Score for Intersection	1.560	2.249	2.802
Bicycle LOS	A	B	C

Sequence

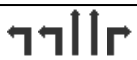
Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.361

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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	54	213	121	34	50	37	60	383	55	127	371	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	22	38	78	0	0	37	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	297	169	47	70	74	122	613	77	177	555	149
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]	20	78	44	12	18	19	32	161	20	47	146	39
Total Analysis Volume [veh/h]	79	313	178	49	74	78	128	645	81	186	584	157
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	47	0	10	47	0	16	47	0	16	47	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	4	12	12	5	13	13
g / C, Green / Cycle	0.07	0.20	0.20	0.05	0.19	0.19	0.08	0.24	0.24	0.09	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.09	0.11	0.01	0.02	0.05	0.04	0.18	0.05	0.05	0.16	0.10
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	234	723	323	174	661	295	292	873	390	329	910	406
d1, Uniform Delay [s]	21.88	17.13	17.59	22.51	16.67	17.16	21.42	17.13	14.78	21.30	16.31	15.13
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	0.41	1.47	0.87	0.07	0.47	1.03	1.25	0.26	1.53	0.76	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	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	0.34	0.43	0.55	0.28	0.11	0.26	0.44	0.74	0.21	0.57	0.64	0.39
d, Delay for Lane Group [s/veh]	22.72	17.54	19.06	23.39	16.74	17.63	22.45	18.38	15.04	22.82	17.07	15.73
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.43	1.41	1.73	0.27	0.32	0.71	0.68	3.07	0.66	1.00	2.64	1.34
50th-Percentile Queue Length [ft/ln]	10.63	35.27	43.30	6.79	7.94	17.83	17.01	76.87	16.55	25.01	65.99	33.41
95th-Percentile Queue Length [veh/ln]	0.77	2.54	3.12	0.49	0.57	1.28	1.22	5.53	1.19	1.80	4.75	2.41
95th-Percentile Queue Length [ft/ln]	19.13	63.49	77.94	12.22	14.29	32.09	30.62	138.36	29.78	45.01	118.79	60.14

Movement, Approach, & Intersection Results

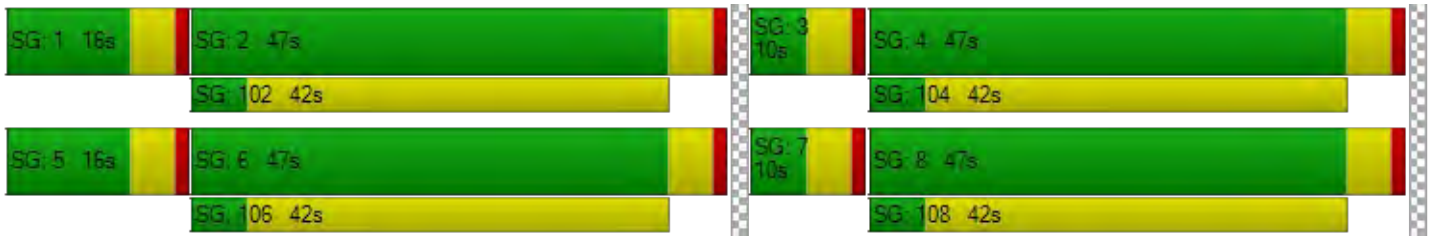
d_M, Delay for Movement [s/veh]	22.72	17.54	19.06	23.39	16.74	17.63	22.45	18.38	15.04	22.82	17.07	15.73
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.73			18.71			18.67			18.00		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.44											
Intersection LOS	B											
Intersection V/C	0.361											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.38	16.38	16.38	16.38
l_p,int, Pedestrian LOS Score for Intersection	2.690	2.675	2.786	2.814
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1710	1710	1710	1710
d_b, Bicycle Delay [s]	0.52	0.52	0.52	0.52
l_b,int, Bicycle LOS Score for Intersection	2.030	1.725	2.264	2.324
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	115	23	35	41	16	98	156	377	55	52	464	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	0	0	57	21	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	176	32	49	57	22	137	218	583	98	73	670	84
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]	46	8	13	15	6	36	57	153	26	19	176	22
Total Analysis Volume [veh/h]	185	34	52	60	23	144	229	614	103	77	705	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	40	0	36	48	0	10	34	0	10	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	14	24	24	5	15	76	66	66	76	66	66
g / C, Green / Cycle	0.12	0.20	0.20	0.04	0.12	0.63	0.55	0.55	0.63	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.10	0.02	0.03	0.03	0.10	0.29	0.17	0.06	0.09	0.20	0.06
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1623	801	3560	1589	841	3560	1589
c, Capacity [veh/h]	215	369	314	80	197	515	1965	877	548	1954	872
d1, Uniform Delay [s]	51.77	39.39	39.98	56.70	51.70	10.56	14.56	12.88	9.14	15.23	12.93
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.53	0.11	0.25	13.32	9.76	2.77	0.42	0.27	0.12	0.52	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.86	0.09	0.17	0.75	0.85	0.44	0.31	0.12	0.14	0.36	0.10
d, Delay for Lane Group [s/veh]	61.30	39.50	40.23	70.02	61.46	13.33	14.98	13.16	9.25	15.75	13.17
Lane Group LOS	E	D	D	E	E	B	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.03	0.84	1.31	2.09	5.45	2.85	4.57	1.39	0.77	5.47	1.19
50th-Percentile Queue Length [ft/ln]	150.69	20.95	32.63	52.36	136.32	71.26	114.36	34.77	19.23	136.82	29.65
95th-Percentile Queue Length [veh/ln]	10.05	1.51	2.35	3.77	9.28	5.13	8.08	2.50	1.38	9.31	2.14
95th-Percentile Queue Length [ft/ln]	251.35	37.71	58.74	94.24	232.07	128.26	202.05	62.59	34.62	232.73	53.38

Movement, Approach, & Intersection Results

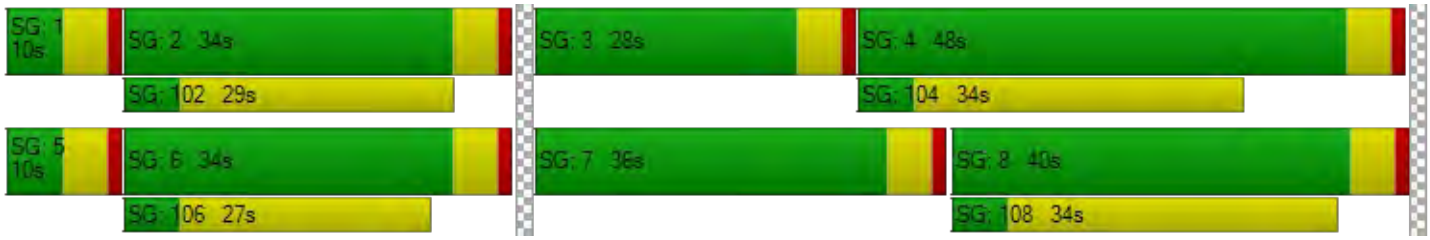
d_M, Delay for Movement [s/veh]	61.30	39.50	40.23	70.02	61.46	61.46	13.33	14.98	13.16	9.25	15.75	13.17
Movement LOS	E	D	D	E	E	E	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	54.52			63.72			14.38			14.92		
Approach LOS	D			E			B			B		
d_I, Intersection Delay [s/veh]	24.12											
Intersection LOS	C											
Intersection V/C	0.461											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.324	2.328	2.790	2.727
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	583	716	483	483
d_b, Bicycle Delay [s]	30.12	24.72	34.52	34.52
l_b,int, Bicycle LOS Score for Intersection	2.007	1.934	2.340	2.277
Bicycle LOS	B	A	B	B

Sequence

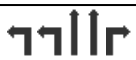
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	47.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	76	317	175	135	199	59	80	223	38	201	235	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	11	29	29	0	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	443	244	188	278	93	141	340	53	281	339	200
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]	28	117	64	49	73	24	37	89	14	74	89	53
Total Analysis Volume [veh/h]	112	466	257	198	293	98	148	358	56	296	357	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	14	42	0	18	46	46	17	43	0	27	53	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	9	63	63	10	63	80	12	16	16	22	26	26
g / C, Green / Cycle	0.07	0.48	0.48	0.07	0.49	0.62	0.09	0.12	0.12	0.17	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.16	0.06	0.08	0.06	0.08	0.10	0.04	0.17	0.16	0.16
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1640
c, Capacity [veh/h]	124	1718	767	254	1731	981	165	430	192	302	369	324
d1, Uniform Delay [s]	60.03	20.03	20.76	59.21	18.70	10.14	58.36	55.89	52.10	53.80	49.97	49.99
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.23	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]	19.66	0.39	1.18	5.14	0.21	0.20	15.21	4.26	0.83	30.76	4.53	5.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.27	0.34	0.78	0.17	0.10	0.90	0.83	0.29	0.98	0.82	0.82
d, Delay for Lane Group [s/veh]	79.69	20.42	21.94	64.35	18.92	10.34	73.57	60.15	52.94	84.55	54.50	55.15
Lane Group LOS	E	C	C	E	B	B	E	E	D	F	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.35	4.33	5.09	3.39	2.55	1.20	5.52	6.00	1.72	12.20	9.88	8.74
50th-Percentile Queue Length [ft/ln]	108.77	108.13	127.26	84.84	63.75	29.90	138.07	150.04	43.01	305.11	247.02	218.46
95th-Percentile Queue Length [veh/ln]	7.77	7.74	8.79	6.11	4.59	2.15	9.38	10.02	3.10	17.93	15.04	13.59
95th-Percentile Queue Length [ft/ln]	194.29	193.39	219.77	152.71	114.74	53.82	234.43	250.48	77.43	448.35	375.89	339.66

Movement, Approach, & Intersection Results

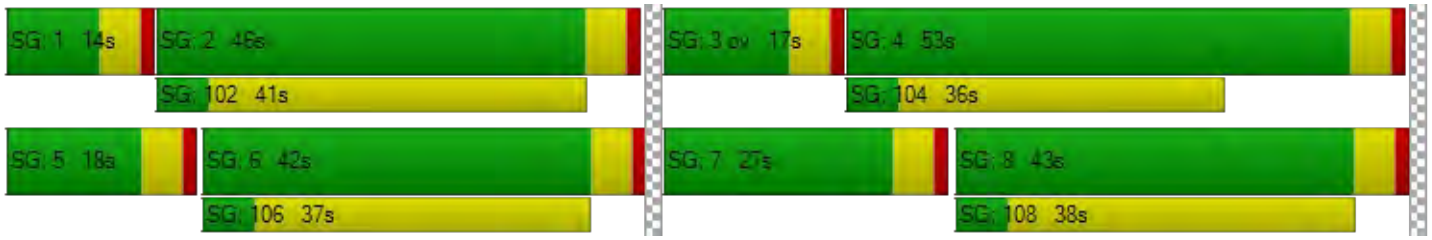
d_M, Delay for Movement [s/veh]	79.69	20.42	21.94	64.35	18.92	10.34	73.57	60.15	52.94	84.55	54.60	55.15
Movement LOS	E	C	C	E	B	B	E	E	D	F	D	E
d_A, Approach Delay [s/veh]	28.84			32.76			62.96			65.00		
Approach LOS	C			C			E			E		
d_I, Intersection Delay [s/veh]	47.34											
Intersection LOS	D											
Intersection V/C	0.486											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.32	56.32	56.32	56.32
l_p,int, Pedestrian LOS Score for Intersection	2.712	2.810	2.655	2.646
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	569	631	585	738
d_b, Bicycle Delay [s]	33.27	30.47	32.56	25.87
l_b,int, Bicycle LOS Score for Intersection	2.248	2.046	2.023	2.272
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	41	0	0	0	0	0	0	18	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	124	123	0	0	45	102	108	0	161	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	124	123	57	0	45	102	108	0	161	25	0	0
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]	33	32	15	0	12	27	28	0	42	7	0	0
Total Analysis Volume [veh/h]	131	129	60	0	47	107	114	0	169	26	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	116			157			73			376		
Exiting Flow Rate [veh/h]	242			245			240			60		
Demand Flow Rate [veh/h]	124	123	57	0	45	102	108	0	161	25	0	0
Adjusted Demand Flow Rate [veh/h]	131	129	60	0	47	107	114	0	169	26	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	0.99	0.99	1.00
Entry Flow Rate [veh/h]	320	157	286	26
Capacity of Entry and Bypass Lanes [veh/h]	1226	1176	1281	941
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1226	1160	1271	941
X, volume / capacity	0.26	0.13	0.22	0.03

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.05	0.46	0.85	0.09
95th-Percentile Queue Length [ft]	26.26	11.44	21.34	2.13
Approach Delay [s/veh]	5.28	4.24	4.76	4.08
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.85			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.126

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	336	201	19	40	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	469	281	27	56	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	123	74	7	15	0
Total Analysis Volume [veh/h]	0	494	296	28	59	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.13	0.00
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	0.00	13.76	10.23
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.43	0.43
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	10.68	10.68
d_A, Approach Delay [s/veh]	0.00		0.00		13.76	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	31	24	0	36	0	0	0	0	60	0	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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	87	154	0	25	151	21	52	13	166	0	16	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	197	34	25	201	21	52	13	166	84	16	30
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	52	9	7	53	6	14	3	44	22	4	8
Total Analysis Volume [veh/h]	92	207	36	26	212	22	55	14	175	88	17	32
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	97			201			333			361		
Exiting Flow Rate [veh/h]	485			300			134			78		
Demand Flow Rate [veh/h]	87	197	34	25	201	21	52	13	166	84	16	30
Adjusted Demand Flow Rate [veh/h]	92	207	36	26	212	22	55	14	175	88	17	32

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	342	266	249	140
Capacity of Entry and Bypass Lanes [veh/h]	1251	1125	984	955
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1226	1103	964	937
X, volume / capacity	0.27	0.24	0.25	0.15

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.12	0.92	1.01	0.51
95th-Percentile Queue Length [ft]	27.93	22.95	25.14	12.79
Approach Delay [s/veh]	5.41	5.45	6.26	5.24
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	5.61			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.272

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	3	267	12	10	172	16	42	7	3	29	33	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	11	0	0	0	0	0	0	19	10	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	373	17	14	240	22	59	29	14	40	68	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	98	4	4	63	6	16	8	4	11	18	12
Total Analysis Volume [veh/h]	16	393	18	15	253	23	62	31	15	42	72	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	10	32	0	0	78	0	0	78	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	88	81	81	88	81	81	22	22	22
g / C, Green / Cycle	0.73	0.67	0.67	0.73	0.67	0.67	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.01	0.11	0.11	0.01	0.07	0.01	0.11	0.01	0.16
s, saturation flow rate [veh/h]	1142	1870	1841	1020	3560	1589	811	1589	1018
c, Capacity [veh/h]	900	1256	1237	799	2388	1066	202	297	228
d1, Uniform Delay [s]	4.45	7.28	7.28	4.50	7.00	6.60	43.97	40.04	47.55
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.28	0.29	0.04	0.09	0.04	1.64	0.07	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
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	0.02	0.16	0.17	0.02	0.11	0.02	0.46	0.05	0.71
d, Delay for Lane Group [s/veh]	4.46	7.56	7.57	4.54	7.09	6.64	45.61	40.11	51.51
Lane Group LOS	A	A	A	A	A	A	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.10	1.97	1.95	0.10	1.13	0.20	2.62	0.37	5.00
50th-Percentile Queue Length [ft/ln]	2.52	49.22	48.77	2.55	28.25	4.99	65.41	9.31	124.91
95th-Percentile Queue Length [veh/ln]	0.18	3.54	3.51	0.18	2.03	0.36	4.71	0.67	8.66
95th-Percentile Queue Length [ft/ln]	4.53	88.59	87.78	4.59	50.85	8.98	117.74	16.77	216.55

Movement, Approach, & Intersection Results

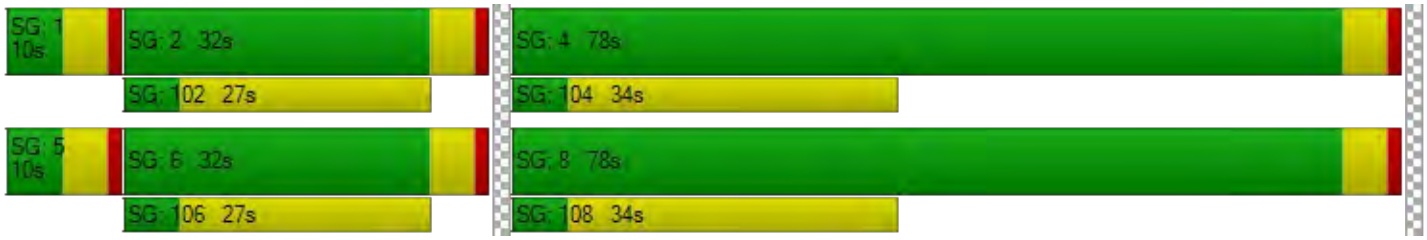
d_M, Delay for Movement [s/veh]	4.46	7.56	7.57	4.54	7.09	6.64	45.61	45.61	40.11	51.51	51.51	51.51
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.45			6.92			44.85			51.51		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	18.57											
Intersection LOS	B											
Intersection V/C	0.272											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.519	2.808	2.042	1.854
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	450	1217	1217
d_b, Bicycle Delay [s]	36.04	36.04	9.20	9.20
l_b,int, Bicycle LOS Score for Intersection	1.912	1.800	1.738	1.825
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	5.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	55	12	0	97	0	0	0	0	34	0	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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	198	0	19	290	8	21	0	57	0	0	22
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	23	275	17	19	425	8	21	0	57	47	0	23
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]	6	72	4	5	112	2	6	0	15	12	0	6
Total Analysis Volume [veh/h]	24	289	18	20	447	8	22	0	60	49	0	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	43			74			526			342		
Exiting Flow Rate [veh/h]	567			342			33			20		
Demand Flow Rate [veh/h]	23	275	17	19	425	8	21	0	57	47	0	23
Adjusted Demand Flow Rate [veh/h]	24	289	18	20	447	8	22	0	60	49	0	24

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	320	0	485	84	75
Capacity of Entry and Bypass Lanes [veh/h]	1321	1352	1280	807	974
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1296	1326	1254	791	955
X, volume / capacity	0.24	0.01	0.38	0.10	0.08

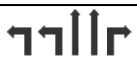
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.95	0.04	1.80	0.35	0.25
95th-Percentile Queue Length [ft]	23.72	1.03	44.90	8.64	6.19
Approach Delay [s/veh]	4.76		6.50	5.60	4.46
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	5.67				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	58.2
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.836

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	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 Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	9	45	0	0	0	9	0	23	23	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	664	549	338	335	141	258	1106	45	464	848	239
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]	38	175	144	89	88	37	68	291	12	122	223	63
Total Analysis Volume [veh/h]	153	699	578	356	353	148	272	1164	47	488	893	252
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	61	0	12	59	0	11	49	0	18	56	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	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	111	111	111	111	111	111	111	111	111	111	111	111
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	7	30	30	14	37	37	11	28	28	19	35	35
g / C, Green / Cycle	0.06	0.27	0.27	0.13	0.33	0.33	0.10	0.25	0.25	0.17	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.36	0.10	0.07	0.09	0.08	0.23	0.03	0.14	0.25	0.15
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	226	1376	429	442	1694	529	353	1298	405	579	1140	529
d1, Uniform Delay [s]	50.77	34.29	40.53	47.11	26.58	27.28	48.61	39.97	31.77	44.83	34.25	30.28
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.11	0.11	0.11	0.11	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]	3.55	0.29	170.68	3.52	0.06	0.29	3.60	2.47	0.13	3.45	1.22	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.51	1.35	0.81	0.21	0.28	0.77	0.90	0.12	0.84	0.78	0.48
d, Delay for Lane Group [s/veh]	54.32	34.58	211.21	50.63	26.64	27.56	52.21	42.43	31.90	48.28	35.47	31.01
Lane Group LOS	D	C	F	D	C	C	D	D	C	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.19	5.32	31.87	4.98	2.24	2.92	3.73	10.05	0.95	6.74	10.95	5.47
50th-Percentile Queue Length [ft/ln]	54.63	133.07	796.73	124.38	56.01	73.05	93.33	251.14	23.82	168.62	273.81	136.87
95th-Percentile Queue Length [veh/ln]	3.93	9.11	48.12	8.63	4.03	5.26	6.72	15.24	1.72	11.00	16.38	9.31
95th-Percentile Queue Length [ft/ln]	98.33	227.66	1202.92	215.83	100.82	131.48	167.99	381.09	42.88	275.10	409.49	232.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.32	34.58	211.21	50.63	26.64	27.56	52.21	42.43	31.90	48.28	35.47	31.01
Movement LOS	D	C	F	D	C	C	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	108.08			36.77			43.89			38.61		
Approach LOS	F			D			D			D		
d_I, Intersection Delay [s/veh]	58.16											
Intersection LOS	E											
Intersection V/C	0.836											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.79	46.79	46.79	46.79
l_p,int, Pedestrian LOS Score for Intersection	3.112	3.086	3.296	3.192
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1010	974	794	920
d_b, Bicycle Delay [s]	13.57	14.58	20.15	16.15
l_b,int, Bicycle LOS Score for Intersection	2.346	2.031	2.375	2.907
Bicycle LOS	B	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.595

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	99	11	138	102	10	18	43	1170	80	175	968	168
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	62	0	0	84	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	138	15	193	142	14	25	60	1695	112	244	1435	235
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]	36	4	51	37	4	7	16	446	29	64	378	62
Total Analysis Volume [veh/h]	145	16	203	149	15	26	63	1784	118	257	1511	247
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	26	62	0	15	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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	10	10	6	83	83	11	87	87
g / C, Green / Cycle	0.15	0.15	0.15	0.07	0.07	0.05	0.59	0.59	0.08	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.05	0.04	0.13	0.04	0.02	0.04	0.35	0.07	0.07	0.30	0.16
s, saturation flow rate [veh/h]	1781	1798	1589	3459	1682	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	260	262	232	249	121	82	3000	936	274	3168	989
d1, Uniform Delay [s]	53.48	53.48	58.55	63.00	61.79	66.03	18.21	12.78	64.12	14.22	11.84
k, delay calibration	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
d2, Incremental Delay [s]	0.67	0.66	10.05	2.30	1.64	13.90	0.88	0.28	14.40	0.52	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
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	0.31	0.31	0.88	0.60	0.34	0.77	0.59	0.13	0.94	0.48	0.25
d, Delay for Lane Group [s/veh]	54.15	54.14	68.60	65.30	63.43	79.93	19.09	13.06	78.52	14.74	12.45
Lane Group LOS	D	D	E	E	E	E	B	B	E	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.59	2.62	7.71	2.67	1.45	2.55	12.22	1.74	5.12	8.60	3.62
50th-Percentile Queue Length [ft/ln]	64.84	65.41	192.66	66.64	36.27	63.79	305.39	43.49	127.98	214.96	90.40
95th-Percentile Queue Length [veh/ln]	4.67	4.71	12.26	4.80	2.61	4.59	17.95	3.13	8.83	13.41	6.51
95th-Percentile Queue Length [ft/ln]	116.72	117.74	306.48	119.95	65.29	114.82	448.69	78.28	220.75	335.18	162.71

Movement, Approach, & Intersection Results

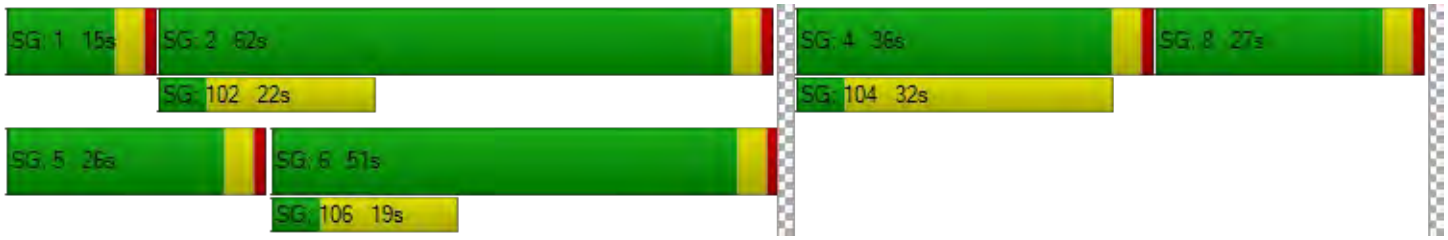
d_M, Delay for Movement [s/veh]	54.14	54.14	68.60	65.30	63.43	63.43	79.93	19.09	13.06	78.52	14.74	12.45
Movement LOS	D	D	E	E	E	E	E	B	B	E	B	B
d_A, Approach Delay [s/veh]	62.21			64.90			20.67			22.59		
Approach LOS	E			E			C			C		
d_I, Intersection Delay [s/veh]	26.71											
Intersection LOS	C											
Intersection V/C	0.595											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.598	2.423	3.192	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	829	671
d_b, Bicycle Delay [s]	48.89	41.65	24.01	30.89
l_b,int, Bicycle LOS Score for Intersection	2.160	1.873	2.640	2.668
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.781

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	168	1	514	0	990	508	0	779	718
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	65	0	0	0	62	0	0	84	143
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	300	1	718	0	1444	709	0	1171	1145
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]	0	0	0	79	0	189	0	380	187	0	308	301
Total Analysis Volume [veh/h]	0	0	0	316	1	756	0	1520	746	0	1233	1205
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	15	0	0	55	0	0	55	55
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		64	64	64	64	64	64	64
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		24	24	24	30	30	30	59
g / C, Green / Cycle		0.38	0.38	0.38	0.47	0.47	0.47	0.92
(v / s)_i Volume / Saturation Flow Rate		0.09	0.09	0.27	0.30	0.47	0.24	0.76
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		677	677	1069	2367	738	2367	1466
d1, Uniform Delay [s]		13.58	13.58	16.91	13.15	17.23	12.17	0.80
k, delay calibration		0.11	0.11	0.11	0.11	0.43	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]		0.18	0.18	0.87	0.29	33.38	0.18	5.32
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		0.23	0.23	0.71	0.64	1.01	0.52	0.82
d, Delay for Lane Group [s/veh]		13.75	13.75	17.78	13.44	50.60	12.35	6.12
Lane Group LOS		B	B	B	B	F	B	A
Critical Lane Group		No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]		1.46	1.46	4.37	4.89	16.07	3.66	2.16
50th-Percentile Queue Length [ft/ln]		36.55	36.54	109.36	122.32	401.70	91.61	54.12
95th-Percentile Queue Length [veh/ln]		2.63	2.63	7.80	8.52	22.81	6.60	3.90
95th-Percentile Queue Length [ft/ln]		65.78	65.78	195.12	213.01	570.31	164.91	97.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	13.75	13.75	17.78	0.00	13.44	50.60	0.00	12.35	6.12
Movement LOS				B	B	B		B	F		B	A
d_A, Approach Delay [s/veh]	0.00			16.59			25.68			9.27		
Approach LOS	A			B			C			A		
d_I, Intersection Delay [s/veh]	17.06											
Intersection LOS	B											
Intersection V/C	0.781											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.83	23.83	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.167	2.896	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	311	1553	1553
d_b, Bicycle Delay [s]	32.20	22.98	1.61	1.61
l_b,int, Bicycle LOS Score for Intersection	4.132	3.330	2.806	2.901
Bicycle LOS	D	C	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.781

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	402	3	492	0	0	0	0	525	668	0	1094	385
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	54	0	0	0	0	127	0	0	227	172
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	561	4	741	0	0	0	0	860	933	0	1754	709
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]	148	1	195	0	0	0	0	226	246	0	462	187
Total Analysis Volume [veh/h]	591	4	780	0	0	0	0	905	982	0	1846	746
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	52	52	0	52	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	64	64	64		64	64	64	64
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	24	24	24		30	59	30	30
g / C, Green / Cycle	0.38	0.38	0.38		0.47	0.92	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.28		0.18	0.62	0.36	0.47
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	677	677	1070		2367	1466	2367	739
d1, Uniform Delay [s]	14.87	14.87	17.14		11.23	0.51	14.49	17.26
k, delay calibration	0.11	0.11	0.11		0.11	0.50	0.11	0.44
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	0.45	0.97		0.10	2.45	0.58	33.33
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	0.44	0.44	0.73		0.38	0.67	0.78	1.01
d, Delay for Lane Group [s/veh]	15.32	15.32	18.11		11.33	2.96	15.07	50.59
Lane Group LOS	B	B	B		B	A	B	F
Critical Lane Group	No	No	No		No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	3.02	3.02	4.58		2.48	1.00	6.58	16.07
50th-Percentile Queue Length [ft/ln]	75.54	75.53	114.54		61.91	24.94	164.57	401.82
95th-Percentile Queue Length [veh/ln]	5.44	5.44	8.09		4.46	1.80	10.79	22.81
95th-Percentile Queue Length [ft/ln]	135.97	135.95	202.30		111.43	44.89	269.76	570.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.32	15.32	18.11	0.00	0.00	0.00	0.00	11.33	2.96	0.00	15.07	50.59
Movement LOS	B	B	B					B	A		B	F
d_A, Approach Delay [s/veh]	16.90			0.00			6.97			25.29		
Approach LOS	B			A			A			C		
d_I, Intersection Delay [s/veh]	17.42											
Intersection LOS	B											
Intersection V/C	0.781											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.85	23.85	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.907	2.168	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	403	0	1458	1458
d_b, Bicycle Delay [s]	20.54	32.23	2.36	2.36
l_b,int, Bicycle LOS Score for Intersection	3.828	4.132	2.597	2.985
Bicycle LOS	D	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	40.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	343	33	83	0	35	96	52	759	151	105	1038	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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	29	29	399	180	0	0	0	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	479	57	116	29	78	533	253	1060	211	147	1449	12
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]	126	15	31	8	21	140	67	279	56	39	381	3
Total Analysis Volume [veh/h]	504	60	122	31	82	561	266	1116	222	155	1525	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	43	0	55	84	0	11	32	0	10	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	37	37	3	23	23	10	34	34	7	30	30
g / C, Green / Cycle	0.17	0.37	0.37	0.03	0.23	0.23	0.10	0.33	0.33	0.07	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.15	0.03	0.08	0.02	0.20	0.20	0.08	0.22	0.14	0.04	0.30	0.01
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1652	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	604	695	591	52	374	360	353	1698	530	232	1519	474
d1, Uniform Delay [s]	40.12	20.52	21.51	48.25	37.54	37.59	43.93	28.63	25.99	45.83	35.30	24.98
k, delay calibration	0.11	0.11	0.11	0.11	0.19	0.19	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]	3.12	0.05	0.17	10.45	10.68	11.49	3.26	0.44	0.53	3.30	11.69	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	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.09	0.21	0.60	0.87	0.88	0.75	0.66	0.42	0.67	1.00	0.03
d, Delay for Lane Group [s/veh]	43.24	20.57	21.68	58.70	48.22	49.08	47.19	29.07	26.52	49.13	46.99	25.00
Lane Group LOS	D	C	C	E	D	D	D	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/ln]	6.21	0.92	1.97	0.91	8.74	8.54	3.36	7.56	4.13	1.99	13.69	0.22
50th-Percentile Queue Length [ft/ln]	155.23	22.98	49.14	22.87	218.41	213.38	83.90	188.89	103.33	49.64	342.21	5.55
95th-Percentile Queue Length [veh/ln]	10.30	1.65	3.54	1.65	13.58	13.33	6.04	12.06	7.44	3.57	19.81	0.40
95th-Percentile Queue Length [ft/ln]	257.39	41.36	88.45	41.17	339.60	333.17	151.01	301.59	186.00	89.35	495.13	9.98

Movement, Approach, & Intersection Results

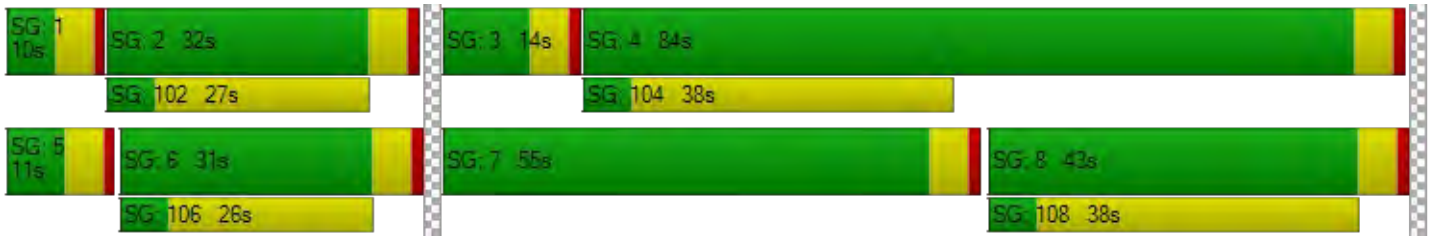
d_M, Delay for Movement [s/veh]	43.24	20.57	21.68	58.70	48.22	48.71	47.19	29.07	26.52	49.13	46.99	25.00
Movement LOS	D	C	C	E	D	D	D	C	C	D	F	C
d_A, Approach Delay [s/veh]	37.42			49.11			31.72			47.01		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	40.64											
Intersection LOS	D											
Intersection V/C	0.721											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.65	41.65	41.65	41.65
l_p,int, Pedestrian LOS Score for Intersection	2.646	2.504	3.310	3.177
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	756	1572	537	517
d_b, Bicycle Delay [s]	19.43	2.30	26.87	27.61
l_b,int, Bicycle LOS Score for Intersection	2.692	2.672	2.442	2.491
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.201

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	86	131	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	159	322	25	61	134
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]	42	279	505	25	61	134
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	73	133	7	16	35
Total Analysis Volume [veh/h]	44	294	532	26	64	141
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.01	0.00	0.20	0.20
d_M, Delay for Movement [s/veh]	8.73	0.00	0.00	0.00	20.87	14.55
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	1.89	1.89
95th-Percentile Queue Length [ft/ln]	3.42	0.00	0.00	0.00	47.25	47.25
d_A, Approach Delay [s/veh]	1.14		0.00		16.53	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	3.43					
Intersection LOS	C					

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Report File: H:\...\12 Buildout + P PM.pdf

Scenario 24 Buildout + P PM
2023-03-13

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Bellegrave Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Left	0.599	23.3	C
2	Bellegrave Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	WB Left	0.481	18.2	B
3	Bellegrave Ave @ Wineville Ave	Signalized	HCM 6th Edition	SB Left	0.419	20.6	C
4	Bellegrave Ave @ Firebush St / Jurupa Rd	Signalized	HCM 6th Edition	SB Left	0.314	13.6	B
5	Bellegrave Ave @ Etiwanda Ave	Signalized	HCM 6th Edition	NB Left	0.545	40.8	D
6	Shearwater Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Left		4.5	A
7	Shearwater Dr @ Wineville Ave	Two-way stop	HCM 6th Edition	EB Left	0.255	20.8	C
8	Park Center Dr @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		6.0	A
9	Park Center Dr @ Wineville Ave	Signalized	HCM 6th Edition	WB Thru	0.247	12.1	B
10	Boca Pl @ Pats Ranch Rd	Roundabout	HCM 6th Edition	NB Thru		6.0	A
11	Limonite Ave @ Hamner Ave	Signalized	HCM 6th Edition	NB Right	0.918	72.7	E
12	Limonite Ave @ Eastvale Gateway	Signalized	HCM 6th Edition	EB Left	0.846	61.8	E
13	Limonite Ave @ I-15 SB	Signalized	HCM 6th Edition	EB Right	0.904	26.0	C
14	Limonite Ave @ I-15 NB	Signalized	HCM 6th Edition	NB Right	0.817	20.8	C
15	Limonite Ave @ Pats Ranch Rd	Signalized	HCM 6th Edition	SB Left	0.768	50.2	D
16	Pats Ranch Rd @ Apartments Dwy	Two-way stop	HCM 6th Edition	EB Left	0.170	25.8	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Bellegrave Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.599

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 Entry Pocket	1	0	0	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	330.00	100.00	100.00	280.00	100.00	250.00	180.00	100.00	250.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	53	597	0	0	649	423	372	0	107	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	4	30	0	0	0	30	0	5	20	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	833	4	30	906	591	519	30	149	5	20	20
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	219	1	8	238	156	137	8	39	1	5	5
Total Analysis Volume [veh/h]	78	877	4	32	954	622	546	32	157	5	21	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	49	0	16	53	0	22	49	0	26	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	39	0	0	36	0	0	39	0	0	43	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	72	72	72	72	72	72	72	72	72	72	72
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	32	32	2	30	30	14	17	17	0	3
g / C, Green / Cycle	0.06	0.44	0.44	0.03	0.41	0.41	0.20	0.24	0.24	0.01	0.05
(v / s)_i Volume / Saturation Flow Rate	0.04	0.16	0.16	0.02	0.19	0.39	0.16	0.01	0.10	0.00	0.01
s, saturation flow rate [veh/h]	1781	3560	1866	1781	5094	1589	3459	3560	1589	3459	3560
c, Capacity [veh/h]	104	1565	820	59	2111	659	694	862	385	24	172
d1, Uniform Delay [s]	33.32	13.48	13.48	34.20	15.16	20.25	27.27	20.83	22.91	35.49	32.74
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.38	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
d2, Incremental Delay [s]	10.31	0.15	0.28	7.40	0.15	19.87	2.02	0.02	0.69	4.28	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
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	0.75	0.37	0.37	0.54	0.45	0.94	0.79	0.04	0.41	0.21	0.12
d, Delay for Lane Group [s/veh]	43.63	13.63	13.76	41.59	15.32	40.11	29.29	20.85	23.60	39.77	33.05
Lane Group LOS	D	B	B	D	B	D	C	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.59	2.89	3.06	0.66	3.46	12.60	4.42	0.20	2.20	0.06	0.18
50th-Percentile Queue Length [ft/ln]	39.82	72.21	76.46	16.39	86.59	315.08	110.59	4.98	55.08	1.41	4.43
95th-Percentile Queue Length [veh/ln]	2.87	5.20	5.50	1.18	6.23	18.43	7.87	0.36	3.97	0.10	0.32
95th-Percentile Queue Length [ft/ln]	71.67	129.98	137.62	29.50	155.86	460.64	196.82	8.97	99.14	2.54	7.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.63	13.67	13.76	41.59	15.32	40.11	29.29	20.85	23.60	39.77	33.05	0.00
Movement LOS	D	B	B	D	B	D	C	C	C	D	C	
d_A, Approach Delay [s/veh]	16.11			25.43			27.71			34.35		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	23.32											
Intersection LOS	C											
Intersection V/C	0.599											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	27.42	27.42	27.42	27.42
l_p,int, Pedestrian LOS Score for Intersection	2.873	3.085	2.787	2.458
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1227	1339	1227	1339
d_b, Bicycle Delay [s]	5.35	3.92	5.35	3.92
l_b,int, Bicycle LOS Score for Intersection	2.087	2.444	2.166	1.581
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Bellegrave Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	4	4	548	7	25	548
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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	53	71	0	73	107	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]	59	77	765	83	142	765
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	20	201	22	37	201
Total Analysis Volume [veh/h]	62	81	805	87	149	805
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
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	4.0	0.0	4.0	0.0	4.0	4.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	13	0	56	0	14	47
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	24	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	0.0	3.0	0.0	3.0	3.0
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	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	8	8	88	88	9	102
g / C, Green / Cycle	0.07	0.07	0.73	0.73	0.08	0.85
(v / s)_i Volume / Saturation Flow Rate	0.03	0.05	0.24	0.25	0.08	0.43
s, saturation flow rate [veh/h]	1781	1589	1870	1808	1781	1870
c, Capacity [veh/h]	118	106	1371	1325	134	1590
d1, Uniform Delay [s]	54.17	55.09	5.61	5.67	55.46	2.36
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]	3.57	11.01	0.63	0.69	70.21	1.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.77	0.33	0.34	1.11	0.51
d, Delay for Lane Group [s/veh]	57.74	66.10	6.24	6.35	125.67	3.52
Lane Group LOS	E	E	A	A	F	A
Critical Lane Group	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.93	2.73	3.75	3.80	6.67	3.48
50th-Percentile Queue Length [ft/ln]	48.27	68.31	93.84	95.11	166.82	87.09
95th-Percentile Queue Length [veh/ln]	3.48	4.92	6.76	6.85	11.29	6.27
95th-Percentile Queue Length [ft/ln]	86.89	122.96	168.91	171.19	282.22	156.76

Movement, Approach, & Intersection Results

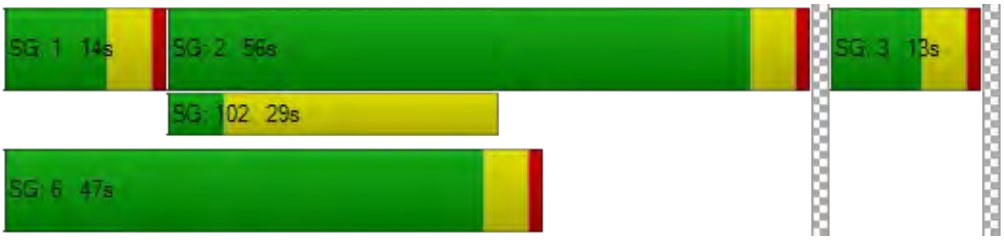
d_M, Delay for Movement [s/veh]	57.74	66.10	6.29	6.35	125.67	3.52
Movement LOS	E	E	A	A	F	A
d_A, Approach Delay [s/veh]	62.47		6.30		22.60	
Approach LOS	E		A		C	
d_I, Intersection Delay [s/veh]	18.15					
Intersection LOS	B					
Intersection V/C	0.481					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.079	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	133	850	700
d_b, Bicycle Delay [s]	52.26	19.83	25.34
l_b,int, Bicycle LOS Score for Intersection	1.560	2.296	3.134
Bicycle LOS	A	B	C

Sequence

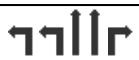
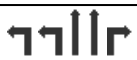
Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Bellegrave Ave @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 6th Edition	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 Entry Pocket	2	0	1	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	300.00	300.00	100.00	250.00	330.00	100.00	240.00	300.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	92	82	117	111	238	78	37	404	119	195	404	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	32	22	49	0	0	75	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	114	163	155	332	141	74	613	166	272	639	67
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]	34	30	43	41	87	37	19	161	44	72	168	18
Total Analysis Volume [veh/h]	135	120	172	163	349	148	78	645	175	286	673	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	47	0	13	48	0	12	47	0	18	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	37	0	0	37	0	0	37	0	0	37	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	55	55	55	55	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	4	10	10	5	10	10	3	13	13	7	17	17
g / C, Green / Cycle	0.08	0.18	0.18	0.08	0.18	0.18	0.06	0.24	0.24	0.13	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.04	0.03	0.11	0.05	0.10	0.09	0.02	0.18	0.11	0.08	0.19	0.04
s, saturation flow rate [veh/h]	3459	3560	1589	3459	3560	1589	3459	3560	1589	3459	3560	1589
c, Capacity [veh/h]	276	642	287	291	657	293	221	864	386	446	1095	489
d1, Uniform Delay [s]	24.19	19.09	20.69	24.18	20.25	20.14	24.61	19.24	17.70	22.71	16.24	13.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.33	0.14	2.02	1.69	0.67	1.35	0.95	1.31	0.84	1.55	0.56	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	0.49	0.19	0.60	0.56	0.53	0.50	0.35	0.75	0.45	0.64	0.61	0.15
d, Delay for Lane Group [s/veh]	25.52	19.23	22.71	25.87	20.92	21.49	25.57	20.55	18.54	24.26	16.80	13.92
Lane Group LOS	C	B	C	C	C	C	C	C	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.83	0.61	2.01	1.01	1.90	1.66	0.48	3.57	1.79	1.71	3.27	0.59
50th-Percentile Queue Length [ft/ln]	20.81	15.20	50.25	25.36	47.61	41.61	12.07	89.14	44.78	42.85	81.69	14.71
95th-Percentile Queue Length [veh/ln]	1.50	1.09	3.62	1.83	3.43	3.00	0.87	6.42	3.22	3.09	5.88	1.06
95th-Percentile Queue Length [ft/ln]	37.46	27.35	90.45	45.64	85.70	74.90	21.73	160.45	80.60	77.14	147.04	26.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.52	19.23	22.71	25.87	20.92	21.49	25.57	20.55	18.54	24.26	16.80	13.92
Movement LOS	C	B	C	C	C	C	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	22.62			22.27			20.59			18.67		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	20.59											
Intersection LOS	C											
Intersection V/C	0.419											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.14	19.14	19.14	19.14
l_p,int, Pedestrian LOS Score for Intersection	2.742	2.699	2.828	2.850
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1533	1569	1533	1752
d_b, Bicycle Delay [s]	1.49	1.27	1.49	0.42
l_b,int, Bicycle LOS Score for Intersection	1.912	2.104	2.300	2.409
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Bellegrave Ave @ Firebush St / Jurupa Rd

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.314

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 Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	83	8	8	5	4	10	17	368	144	21	491	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 Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	0	0	0	0	0	39	10	0	61	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	11	11	7	6	14	24	553	211	29	746	10
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	3	3	2	2	4	6	146	56	8	196	3
Total Analysis Volume [veh/h]	137	12	12	7	6	15	25	582	222	31	785	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	39	0	26	38	0	9	55	0	9	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	29	0	0	29	0	0	24	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	11	15	15	1	5	89	81	81	89	81	81
g / C, Green / Cycle	0.09	0.13	0.13	0.01	0.04	0.74	0.67	0.67	0.74	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.08	0.01	0.01	0.00	0.01	0.03	0.16	0.14	0.04	0.22	0.01
s, saturation flow rate [veh/h]	1781	1870	1589	1781	1661	755	3560	1589	755	3560	1589
c, Capacity [veh/h]	166	236	201	16	70	581	2387	1066	601	2399	1071
d1, Uniform Delay [s]	53.48	46.11	46.16	59.16	55.74	4.74	7.79	7.57	4.45	8.19	6.43
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	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]	9.90	0.09	0.12	16.81	2.33	0.14	0.24	0.44	0.04	0.36	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	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	0.83	0.05	0.06	0.43	0.30	0.04	0.24	0.21	0.05	0.33	0.01
d, Delay for Lane Group [s/veh]	63.38	46.19	46.28	75.97	58.07	4.88	8.03	8.02	4.49	8.56	6.45
Lane Group LOS	E	D	D	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.52	0.32	0.32	0.29	0.66	0.17	2.89	2.22	0.19	4.13	0.09
50th-Percentile Queue Length [ft/ln]	112.90	8.07	8.11	7.20	16.58	4.23	72.28	55.41	4.71	103.36	2.34
95th-Percentile Queue Length [veh/ln]	8.00	0.58	0.58	0.52	1.19	0.30	5.20	3.99	0.34	7.44	0.17
95th-Percentile Queue Length [ft/ln]	200.03	14.52	14.59	12.97	29.85	7.62	130.10	99.73	8.48	186.06	4.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.38	46.19	46.28	75.97	58.07	58.07	4.88	8.03	8.02	4.49	8.56	6.45
Movement LOS	E	D	D	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	60.83			62.54			7.93			8.38		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	13.57											
Intersection LOS	B											
Intersection V/C	0.314											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.35	51.35	51.35	51.35
l_p,int, Pedestrian LOS Score for Intersection	2.279	2.005	2.755	2.700
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	550	833	833
d_b, Bicycle Delay [s]	30.83	31.55	20.42	20.42
l_b,int, Bicycle LOS Score for Intersection	1.825	1.606	2.244	2.242
Bicycle LOS	A	A	B	B

Sequence

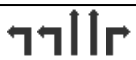
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Bellegrave Ave @ Etiwanda Ave

Control Type:	Signalized	Delay (sec / veh):	40.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
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 Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	350.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	51	270	84	221	497	141	89	300	46	123	335	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	30	20	20	0	0	30	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	377	117	309	694	227	144	439	64	172	498	218
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	99	31	81	183	60	38	116	17	45	131	57
Total Analysis Volume [veh/h]	75	397	123	325	731	239	152	462	67	181	524	229
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	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]	38	26	0	43	31	31	17	35	0	16	34	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	32	0	0	36	36	0	33	0	0	31	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [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
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	7	45	45	14	52	70	13	27	27	14	28	28
g / C, Green / Cycle	0.05	0.37	0.37	0.12	0.44	0.58	0.11	0.22	0.22	0.12	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.04	0.11	0.08	0.09	0.21	0.15	0.09	0.13	0.04	0.10	0.21	0.21
s, saturation flow rate [veh/h]	1781	3560	1589	3459	3560	1589	1781	3560	1589	1781	1870	1680
c, Capacity [veh/h]	98	1331	594	403	1549	927	190	800	357	211	442	397
d1, Uniform Delay [s]	55.95	26.50	25.52	51.73	24.12	12.27	52.38	41.48	37.68	51.92	44.42	44.42
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.19	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]	11.48	0.57	0.79	3.86	1.03	0.67	7.55	0.66	0.25	9.60	10.90	11.94
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	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.30	0.21	0.81	0.47	0.26	0.80	0.58	0.19	0.86	0.90	0.90
d, Delay for Lane Group [s/veh]	67.43	27.08	26.31	55.59	25.15	12.94	59.93	42.14	37.94	61.52	55.32	56.36
Lane Group LOS	E	C	C	E	C	B	E	D	D	E	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.56	4.12	2.53	4.98	7.55	3.27	4.87	6.17	1.63	5.90	12.71	11.53
50th-Percentile Queue Length [ft/ln]	63.88	103.06	63.17	124.60	188.74	81.65	121.77	154.31	40.80	147.62	317.66	288.23
95th-Percentile Queue Length [veh/ln]	4.60	7.42	4.55	8.65	12.06	5.88	8.49	10.25	2.94	9.89	18.55	17.10
95th-Percentile Queue Length [ft/ln]	114.99	185.51	113.71	216.13	301.39	146.97	212.26	256.17	73.44	247.25	463.81	427.44

Movement, Approach, & Intersection Results

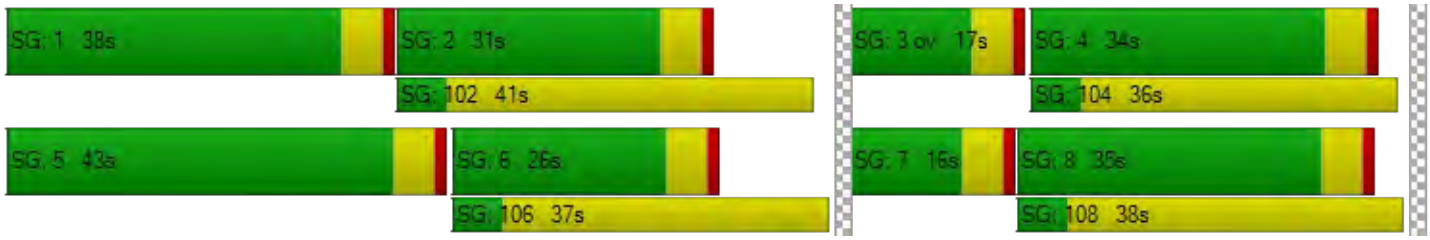
d_M, Delay for Movement [s/veh]	67.43	27.08	26.31	55.59	25.15	12.94	59.93	42.14	37.94	61.52	55.58	56.36
Movement LOS	E	C	C	E	C	B	E	D	D	E	E	E
d_A, Approach Delay [s/veh]	32.00			30.54			45.70			56.92		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	40.76											
Intersection LOS	D											
Intersection V/C	0.545											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.36	51.36	51.36	51.36
l_p,int, Pedestrian LOS Score for Intersection	2.724	2.898	2.715	2.675
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	350	433	500	483
d_b, Bicycle Delay [s]	40.86	36.84	33.77	34.52
l_b,int, Bicycle LOS Score for Intersection	2.050	2.628	2.121	2.330
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Shearwater Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	4.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	68	0	0	0	0	0	0	50	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	108	83	0	0	130	50	41	0	80	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	108	83	95	0	130	50	41	0	80	70	0	0
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]	28	22	25	0	34	13	11	0	21	18	0	0
Total Analysis Volume [veh/h]	114	87	100	0	137	53	43	0	84	74	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	44			188			211			245		
Exiting Flow Rate [veh/h]	295			131			168			100		
Demand Flow Rate [veh/h]	108	83	95	0	130	50	41	0	80	70	0	0
Adjusted Demand Flow Rate [veh/h]	114	87	100	0	137	53	43	0	84	74	0	0

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	1.00	0.99	0.99	1.00
Entry Flow Rate [veh/h]	301	192	128	74
Capacity of Entry and Bypass Lanes [veh/h]	1320	1140	1113	1076
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1320	1133	1106	1076
X, volume / capacity	0.23	0.17	0.11	0.07

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	0.88	0.60	0.39	0.22
95th-Percentile Queue Length [ft]	22.01	15.03	9.70	5.53
Approach Delay [s/veh]	4.67	4.66	4.25	3.94
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	4.51			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 7: Shearwater Dr @ Wineville Ave

Control Type:	Two-way stop	Delay (sec / veh):	20.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.255

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	249	445	45	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	348	621	63	74	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	92	163	17	19	0
Total Analysis Volume [veh/h]	0	366	654	66	78	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.26	0.00
d_M, Delay for Movement [s/veh]	9.10	0.00	0.00	0.00	20.79	14.38
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.99	0.99
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	24.86	24.86
d_A, Approach Delay [s/veh]	0.00		0.00		20.79	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Park Center Dr @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	6.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	72	41	0	52	0	0	0	0	46	0	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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	156	146	0	6	146	56	37	4	107	0	3	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	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]	156	247	57	6	219	56	37	4	107	64	3	7
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]	41	65	15	2	58	15	10	1	28	17	1	2
Total Analysis Volume [veh/h]	164	260	60	6	231	59	39	4	113	67	3	7
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	50			239			310			472		
Exiting Flow Rate [veh/h]	419			312			231			71		
Demand Flow Rate [veh/h]	156	247	57	6	219	56	37	4	107	64	3	7
Adjusted Demand Flow Rate [veh/h]	164	260	60	6	231	59	39	4	113	67	3	7

Lanes

Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	494	302	160	79
Capacity of Entry and Bypass Lanes [veh/h]	1312	1082	1006	853
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1286	1061	987	836
X, volume / capacity	0.38	0.28	0.16	0.09

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A
95th-Percentile Queue Length [veh]	1.78	1.15	0.56	0.30
95th-Percentile Queue Length [ft]	44.49	28.69	14.02	7.59
Approach Delay [s/veh]	6.36	6.10	5.13	5.20
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	6.01			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 9: Park Center Dr @ Wineville Ave

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.247

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 Entry Pocket	1	0	0	1	0	1	0	0	1	0	0	0
Entry Pocket Length [ft]	250.00	100.00	100.00	250.00	100.00	150.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	222	52	40	362	38	12	21	5	32	34	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 Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	0	0	0	0	0	0	5	2	0	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	310	73	56	505	53	17	34	9	45	51	20
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	82	19	15	133	14	4	9	2	12	13	5
Total Analysis Volume [veh/h]	16	326	77	59	532	56	18	36	9	47	54	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	16	0	9	16	0	0	95	0	0	95	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	22	0	0	22	0	0	29	0	0	29	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [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
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]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	96	87	87	96	89	89	14	14	14
g / C, Green / Cycle	0.80	0.72	0.72	0.80	0.74	0.74	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.11	0.06	0.15	0.04	0.03	0.01	0.10
s, saturation flow rate [veh/h]	878	1870	1749	1043	3560	1589	1553	1589	1283
c, Capacity [veh/h]	755	1353	1266	890	2643	1180	219	183	189
d1, Uniform Delay [s]	2.52	5.15	5.16	2.53	4.69	4.13	48.37	47.24	52.61
k, delay calibration	0.11	0.50	0.50	0.50	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]	0.01	0.24	0.26	0.14	0.17	0.08	0.58	0.11	3.64
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	0.02	0.15	0.16	0.07	0.20	0.05	0.25	0.05	0.64
d, Delay for Lane Group [s/veh]	2.53	5.39	5.43	2.67	4.86	4.21	48.95	47.35	56.26
Lane Group LOS	A	A	A	A	A	A	D	D	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.06	1.55	1.49	0.26	1.84	0.36	1.52	0.25	3.81
50th-Percentile Queue Length [ft/ln]	1.56	38.81	37.33	6.57	46.09	8.89	37.88	6.16	95.16
95th-Percentile Queue Length [veh/ln]	0.11	2.79	2.69	0.47	3.32	0.64	2.73	0.44	6.85
95th-Percentile Queue Length [ft/ln]	2.81	69.85	67.19	11.82	82.97	15.99	68.19	11.09	171.29

Movement, Approach, & Intersection Results

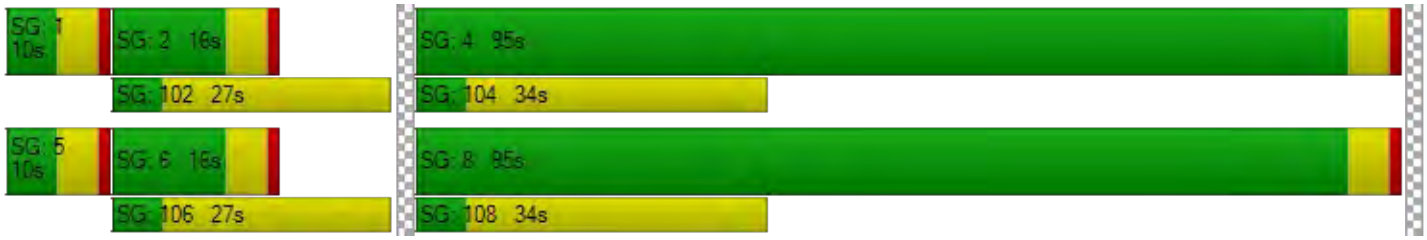
d_M, Delay for Movement [s/veh]	2.53	5.40	5.43	2.67	4.86	4.21	48.95	48.95	47.35	56.26	56.26	56.26
Movement LOS	A	A	A	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	5.30			4.60			48.72			56.26		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	12.09											
Intersection LOS	B											
Intersection V/C	0.247											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.33	51.33	51.33	51.33
l_p,int, Pedestrian LOS Score for Intersection	2.578	2.776	2.034	1.936
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	183	183	1500	1500
d_b, Bicycle Delay [s]	49.50	49.50	3.75	3.75
l_b,int, Bicycle LOS Score for Intersection	1.905	2.093	1.664	1.761
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Boca Pl @ Pats Ranch Rd

Control Type:	Roundabout	Delay (sec / veh):	6.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

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 Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	104	32	0	94	0	0	0	0	24	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	60	282	0	5	226	22	15	0	40	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	427	45	5	357	22	15	0	40	34	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	112	12	1	94	6	4	0	11	9	0	1
Total Analysis Volume [veh/h]	63	449	47	5	376	23	16	0	42	36	0	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	21			101			425			539		
Exiting Flow Rate [veh/h]	463			478			88			5		
Demand Flow Rate [veh/h]	60	427	45	5	357	22	15	0	40	34	0	4
Adjusted Demand Flow Rate [veh/h]	63	449	47	5	376	23	16	0	42	36	0	4

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	523	0	413	60	41
Capacity of Entry and Bypass Lanes [veh/h]	1351	1373	1245	895	797
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1324	1346	1221	877	782
X, volume / capacity	0.39	0.03	0.33	0.07	0.05

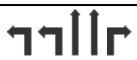
Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	1.86	0.11	1.46	0.21	0.16
95th-Percentile Queue Length [ft]	46.46	2.71	36.58	5.30	4.04
Approach Delay [s/veh]	6.07		6.06	4.73	5.11
Approach LOS	A		A	A	A
Intersection Delay [s/veh]	5.96				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 11: Limonite Ave @ Hamner Ave

Control Type:	Signalized	Delay (sec / veh):	72.7
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.918

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]	11.00	11.00	12.00	11.00	10.00	12.00	10.00	11.00	12.00	12.00	12.00	16.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	2	0	1	2	0	0
Entry Pocket Length [ft]	300.00	100.00	250.00	300.00	100.00	200.00	300.00	100.00	400.00	310.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	24	8	0	0	0	24	0	16	16	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	356	584	464	420	692	322	383	1137	89	815	1164	380
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]	94	154	122	111	182	85	101	299	23	214	306	100
Total Analysis Volume [veh/h]	375	615	488	442	728	339	403	1197	94	858	1225	400
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	64	0	15	53	0	11	49	0	12	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	0	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	129	129	129	129	129	129	129	129	129	129	129	129
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	17	30	30	19	33	33	18	30	30	30	42	42
g / C, Green / Cycle	0.13	0.23	0.23	0.15	0.25	0.25	0.14	0.23	0.23	0.23	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.11	0.12	0.31	0.13	0.14	0.21	0.12	0.23	0.06	0.25	0.34	0.24
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	3560	1653
c, Capacity [veh/h]	443	1186	370	511	1286	401	471	1186	370	800	1167	542
d1, Uniform Delay [s]	54.93	43.14	49.44	53.65	42.01	45.77	54.42	49.44	40.31	49.53	43.31	38.40
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.37	0.11	0.11	0.11	0.11	0.24	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
d2, Incremental Delay [s]	4.51	0.35	161.32	4.51	0.39	14.86	4.56	14.53	0.36	38.60	32.92	8.00
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	0.85	0.52	1.32	0.86	0.57	0.84	0.86	1.01	0.25	1.07	1.05	0.74
d, Delay for Lane Group [s/veh]	59.44	43.49	210.76	58.16	42.41	60.63	58.98	63.97	40.67	88.13	76.23	46.40
Lane Group LOS	E	D	F	E	D	E	E	F	D	F	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.24	5.78	28.46	7.33	6.82	11.96	6.54	13.93	2.43	17.12	23.75	12.39
50th-Percentile Queue Length [ft/ln]	156.01	144.47	711.46	183.14	170.44	299.02	163.59	348.21	60.71	427.97	593.83	309.85
95th-Percentile Queue Length [veh/ln]	10.34	9.72	42.81	11.76	11.10	17.63	10.74	20.16	4.37	24.87	32.79	18.17
95th-Percentile Queue Length [ft/ln]	258.44	243.04	1070.19	294.10	277.50	440.82	268.48	503.96	109.29	621.63	819.72	454.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.44	43.49	210.76	58.16	42.41	60.63	58.98	63.97	40.67	88.13	76.23	46.40
Movement LOS	E	D	F	E	D	E	E	F	D	F	F	D
d_A, Approach Delay [s/veh]	102.76			51.11			61.49			75.54		
Approach LOS	F			D			E			E		
d_I, Intersection Delay [s/veh]	72.69											
Intersection LOS	E											
Intersection V/C	0.918											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	55.82	55.82	55.82	55.82
l_p,int, Pedestrian LOS Score for Intersection	3.210	3.185	3.458	3.306
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	915	744	682	698
d_b, Bicycle Delay [s]	19.00	25.44	28.01	27.36
l_b,int, Bicycle LOS Score for Intersection	2.373	2.390	2.491	3.608
Bicycle LOS	B	B	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 12: Limonite Ave @ Eastvale Gateway

Control Type:	Signalized	Delay (sec / veh):	61.8
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.846

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]	10.00	11.00	12.00	10.00	12.00	12.00	12.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	1	2	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	240.00	100.00	150.00	330.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	200.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	57	0	0	41	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	194	61	253	536	67	187	309	1262	112	352	1613	370
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]	51	16	67	141	18	49	81	332	29	93	424	97
Total Analysis Volume [veh/h]	204	64	266	564	71	197	325	1328	118	371	1698	389
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	35	54	0	23	42	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	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	R
C, Cycle Length [s]	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
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]	26	26	26	26	26	27	55	55	17	45	45
g / C, Green / Cycle	0.18	0.18	0.18	0.19	0.19	0.20	0.40	0.40	0.12	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.07	0.07	0.17	0.16	0.16	0.18	0.26	0.07	0.11	0.33	0.24
s, saturation flow rate [veh/h]	1781	1822	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	326	333	291	641	307	349	2012	628	423	1638	511
d1, Uniform Delay [s]	50.47	50.47	56.10	55.49	55.41	55.35	34.65	27.67	60.36	47.47	42.64
k, delay calibration	0.11	0.11	0.29	0.11	0.24	0.32	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]	0.82	0.80	23.79	4.13	15.25	25.05	1.72	0.66	5.87	32.34	10.24
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	0.41	0.41	0.91	0.88	0.87	0.93	0.66	0.19	0.88	1.04	0.76
d, Delay for Lane Group [s/veh]	51.28	51.26	79.89	59.61	70.66	80.40	36.36	28.33	66.23	79.81	52.88
Lane Group LOS	D	D	E	E	E	F	D	C	E	F	D
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.21	4.30	11.15	10.07	10.51	13.71	12.67	2.74	6.84	23.81	13.56
50th-Percentile Queue Length [ft/ln]	105.20	107.56	278.71	251.71	262.65	342.73	316.73	68.61	170.97	595.35	338.89
95th-Percentile Queue Length [veh/ln]	7.57	7.70	16.62	15.27	15.82	19.78	18.51	4.94	11.13	32.60	19.59
95th-Percentile Queue Length [ft/ln]	189.31	192.60	415.61	381.80	395.54	494.53	462.67	123.50	278.19	814.98	489.85

Movement, Approach, & Intersection Results

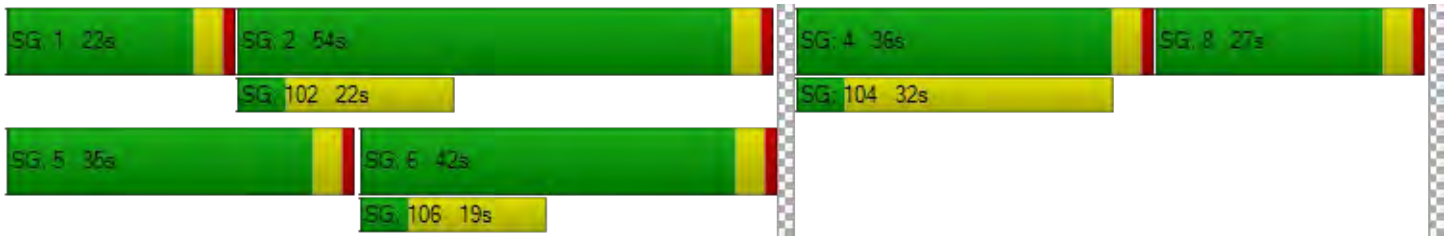
d_M, Delay for Movement [s/veh]	51.28	51.26	79.89	59.61	70.66	70.66	80.40	36.36	28.33	66.23	79.81	52.88
Movement LOS	D	D	E	E	E	E	F	D	C	E	F	D
d_A, Approach Delay [s/veh]	65.53			63.17			43.91			73.50		
Approach LOS	E			E			D			E		
d_I, Intersection Delay [s/veh]	61.84											
Intersection LOS	E											
Intersection V/C	0.846											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.27	61.27	61.27	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.653	2.636	3.219	0.000
Crosswalk LOS	B	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	329	457	714	543
d_b, Bicycle Delay [s]	48.87	41.64	28.91	37.14
l_b,int, Bicycle LOS Score for Intersection	2.441	2.932	2.534	2.912
Bicycle LOS	B	C	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 13: Limonite Ave @ I-15 SB

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.904

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 Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	500.00	100.00	300.00	100.00	100.00	260.00	100.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	900.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	388	1	801	0	1047	525	0	1228	510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	182	0	0	0	57	0	0	41	98
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	724	1	1118	0	1519	733	0	1755	810
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]	0	0	0	191	0	294	0	400	193	0	462	213
Total Analysis Volume [veh/h]	0	0	0	762	1	1177	0	1599	772	0	1847	853
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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap
Signal Group	0	0	0	0	4	0	0	2	0	0	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	0	0	10	10
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	4.0
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	1.0
Split [s]	0	0	0	0	17	0	0	53	0	0	53	53
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	3.0
Walk [s]	0	0	0	0	0	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	0	0	0	18	0	0	40	40
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk					No			No			No	
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	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0
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		L	C	R	C	R	C	R
C, Cycle Length [s]		70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]		5.00	5.00	5.00	5.00	5.00	5.00	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]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]		30	30	30	30	30	30	65
g / C, Green / Cycle		0.43	0.43	0.43	0.43	0.43	0.43	0.93
(v / s)_i Volume / Saturation Flow Rate		0.21	0.21	0.42	0.31	0.49	0.36	0.54
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		761	761	1202	2187	682	2187	1476
d1, Uniform Delay [s]		14.56	14.56	19.66	16.56	19.91	17.82	0.39
k, delay calibration		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
d2, Incremental Delay [s]		0.51	0.51	8.10	0.48	76.64	0.95	1.66
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		0.50	0.50	0.98	0.73	1.13	0.84	0.58
d, Delay for Lane Group [s/veh]		15.07	15.07	27.77	17.04	96.55	18.78	2.04
Lane Group LOS		B	B	C	B	F	B	A
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		4.10	4.10	9.67	6.47	24.33	8.11	0.68
50th-Percentile Queue Length [ft/ln]		102.48	102.47	241.74	161.72	608.32	202.86	16.98
95th-Percentile Queue Length [veh/ln]		7.38	7.38	14.77	10.64	35.30	12.79	1.22
95th-Percentile Queue Length [ft/ln]		184.46	184.45	369.24	266.00	882.39	319.66	30.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.07	15.07	27.77	0.00	17.04	96.55	0.00	18.78	2.04
Movement LOS				B	B	C		B	F		B	A
d_A, Approach Delay [s/veh]	0.00			22.77			42.93			13.49		
Approach LOS	A			C			D			B		
d_I, Intersection Delay [s/veh]	26.01											
Intersection LOS	C											
Intersection V/C	0.904											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.52	26.52	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.180	2.972	0.000	0.000
Crosswalk LOS	B	C	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	343	1374	1374
d_b, Bicycle Delay [s]	34.94	23.97	3.43	3.43
l_b,int, Bicycle LOS Score for Intersection	4.132	4.761	2.864	3.045
Bicycle LOS	D	E	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 14: Limonite Ave @ I-15 NB

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

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 Entry Pocket	0	0	2	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	360.00	100.00	100.00	100.00	100.00	100.00	550.00	100.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	2	0	0	2	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	300.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	543	1	736	0	0	0	0	1013	437	0	1205	279
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	152	0	0	0	0	239	0	0	138	117
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	758	1	1179	0	0	0	0	1653	610	0	1820	506
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]	199	0	310	0	0	0	0	435	161	0	479	133
Total Analysis Volume [veh/h]	798	1	1241	0	0	0	0	1740	642	0	1916	533
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
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	2	0	6	0
Auxiliary Signal Groups									2,8			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	10	0	10	0
Maximum Green [s]	0	30	0	0	0	0	0	30	30	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	50	50	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	40	40	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall		No						No	No		No	
Maximum Recall		No						No	No		No	
Pedestrian Recall		No						No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	70	70	70		70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00		5.00	0.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	30	30	30		30	65	30	30
g / C, Green / Cycle	0.43	0.43	0.43		0.43	0.93	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.22	0.22	0.44		0.34	0.40	0.38	0.34
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	765	765	1208		2173	1475	2173	678
d1, Uniform Delay [s]	14.58	14.58	19.83		17.36	0.30	18.32	17.19
k, delay calibration	0.11	0.11	0.11		0.11	0.38	0.11	0.27
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.55	19.67		0.71	0.72	1.30	5.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.52	1.03		0.80	0.44	0.88	0.79
d, Delay for Lane Group [s/veh]	15.14	15.14	39.50		18.07	1.02	19.62	22.20
Lane Group LOS	B	B	F		B	A	B	C
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.31	4.31	11.93		7.37	0.29	8.66	7.52
50th-Percentile Queue Length [ft/ln]	107.77	107.76	298.13		184.35	7.36	216.61	188.10
95th-Percentile Queue Length [veh/ln]	7.72	7.72	17.91		11.83	0.53	13.49	12.02
95th-Percentile Queue Length [ft/ln]	192.89	192.89	447.70		295.68	13.25	337.30	300.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.14	15.14	39.50	0.00	0.00	0.00	0.00	18.07	1.02	0.00	19.62	22.20
Movement LOS	B	B	F					B	A		B	C
d_A, Approach Delay [s/veh]	29.96			0.00			13.48			20.18		
Approach LOS	C			A			B			C		
d_I, Intersection Delay [s/veh]	20.76											
Intersection LOS	C											
Intersection V/C	0.817											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.39	26.39	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.956	2.102	0.000	0.000
Crosswalk LOS	C	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	431	0	1293	1293
d_b, Bicycle Delay [s]	21.43	34.81	4.35	4.35
l_b,int, Bicycle LOS Score for Intersection	4.926	4.132	2.870	2.907
Bicycle LOS	E	D	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 15: Limonite Ave @ Pats Ranch Rd

Control Type:	Signalized	Delay (sec / veh):	50.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

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]	11.00	11.00	11.00	12.00	12.00	12.00	11.00	12.00	12.00	11.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	300.00	100.00	100.00	150.00	100.00	100.00	350.00	100.00	200.00	350.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	40	149	0	44	76	118	1261	287	210	1021	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	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	0	20	20	255	390	0	0	0	0	30
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	533	86	208	20	81	361	555	1760	401	293	1425	31
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]	140	23	55	5	21	95	146	463	106	77	375	8
Total Analysis Volume [veh/h]	561	91	219	21	85	380	584	1853	422	308	1500	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
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	61	0	10	43	0	31	51	0	18	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	33	0	0	33	0	0	22	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	23	43	43	3	23	23	25	61	61	13	49	49
g / C, Green / Cycle	0.16	0.31	0.31	0.02	0.16	0.16	0.18	0.44	0.44	0.09	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.16	0.05	0.14	0.01	0.14	0.14	0.17	0.36	0.27	0.09	0.29	0.02
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1679	1589	3459	5094	1589	3459	5094	1589
c, Capacity [veh/h]	569	571	485	37	271	257	629	2230	696	323	1779	555
d1, Uniform Delay [s]	58.33	35.51	39.18	67.93	57.37	57.37	56.38	34.78	30.12	63.17	42.01	30.27
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]	14.58	0.13	0.66	13.10	9.05	9.50	6.66	3.78	3.90	14.66	5.07	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.99	0.16	0.45	0.57	0.88	0.88	0.93	0.83	0.61	0.95	0.84	0.06
d, Delay for Lane Group [s/veh]	72.91	35.64	39.83	81.03	66.43	66.87	63.04	38.56	34.02	77.83	47.08	30.47
Lane Group LOS	E	D	D	F	E	E	E	D	C	E	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	11.07	2.33	6.22	0.88	8.96	8.51	10.75	19.19	11.65	6.13	16.72	0.79
50th-Percentile Queue Length [ft/ln]	276.66	58.19	155.38	22.06	224.00	212.83	268.68	479.83	291.26	153.30	418.04	19.67
95th-Percentile Queue Length [veh/ln]	16.52	4.19	10.30	1.59	13.87	13.30	16.12	26.38	17.25	10.19	23.43	1.42
95th-Percentile Queue Length [ft/ln]	413.05	104.75	257.59	39.71	346.72	332.46	403.10	659.45	431.21	254.83	585.69	35.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.91	35.64	39.83	81.03	66.43	66.69	63.04	38.56	34.02	77.83	47.08	30.47
Movement LOS	E	D	D	F	E	E	E	D	C	E	D	C
d_A, Approach Delay [s/veh]	60.70			67.26			42.89			51.93		
Approach LOS	E			E			D			D		
d_I, Intersection Delay [s/veh]	50.15											
Intersection LOS	D											
Intersection V/C	0.768											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	61.29	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersection	2.749	2.555	3.446	3.298
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	543	657	471
d_b, Bicycle Delay [s]	25.20	37.16	31.56	40.89
l_b,int, Bicycle LOS Score for Intersection	2.997	2.362	3.132	2.572
Bicycle LOS	C	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 16: Pats Ranch Rd @ Apartments Dwy

Control Type:	Two-way stop	Delay (sec / veh):	25.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.170

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	300.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	159	120	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3960	1.3960	1.3960	1.3960	1.3960	1.3960
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	142	309	211	55	33	83
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]	142	531	379	55	33	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	140	100	14	9	22
Total Analysis Volume [veh/h]	149	559	399	58	35	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.01	0.00	0.00	0.17	0.11
d_M, Delay for Movement [s/veh]	8.78	0.00	0.00	0.00	25.76	12.90
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.47	0.00	0.00	0.00	1.15	1.15
95th-Percentile Queue Length [ft/ln]	11.70	0.00	0.00	0.00	28.70	28.70
d_A, Approach Delay [s/veh]	1.85		0.00		16.59	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.59					
Intersection LOS	D					

Option 1: NB Right-Turn Overlap

Number	11											
Intersection	Limonite Ave @ Hamner Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	104	476	387	210	240	101	185	786	32	316	591	144
Total Analysis Volume [veh/h]	153	699	578	356	353	148	272	1164	47	488	893	252

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fully actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	8	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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]	14	61	61	12	59	0	11	49	0	18	56	0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	40	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, 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
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	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.06	0.18	0.48	0.13	0.25	0.25	0.10	0.26	0.26	0.25	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.36	0.10	0.07	0.09	0.08	0.23	0.03	0.14	0.18	0.15
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	5094	1653
c, Capacity [veh/h]	225	932	757	442	1252	391	353	1309	409	855	2049	665
X, volume / capacity	0.68	0.75	0.76	0.80	0.28	0.38	0.77	0.89	0.12	0.57	0.44	0.38
d, Delay for Lane Group [s/veh]	53.07	43.08	30.47	49.34	33.17	34.52	50.91	40.97	30.88	36.28	23.58	23.15
Lane Group LOS	D	D	C	D	C	C	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No

50th-Percentile Queue Length [veh/ln]	2.13	5.95	13.16	4.83	2.51	3.29	3.62	9.69	0.92	5.67	5.46	4.54
50th-Percentile Queue Length [ft/ln]	53.15	148.64	328.88	120.81	62.73	82.16	90.62	242.24	23.01	141.66	136.45	113.48
95th-Percentile Queue Length [veh/ln]	3.83	9.94	19.10	8.44	4.52	5.92	6.52	14.79	1.66	9.57	9.29	8.03
95th-Percentile Queue Length [ft/ln]	95.67	248.61	477.59	210.93	112.91	147.89	163.11	369.86	41.42	239.25	232.24	200.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.07	43.08	30.47	49.34	33.17	34.52	50.91	40.97	30.88	36.28	23.58	23.15
Movement LOS	D	D	C	D	C	C	D	D	C	D	C	C
Critical Movement	Yes	No	No	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	39.05			40.12			42.47			27.31		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	36.61											
Intersection LOS	D											
Intersection V/C	0.702											

Option 1: NB Right-Turn Overlap

Number	11											
Intersection	Limonite Ave @ Hamner Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	255	418	315	295	496	231	274	797	64	572	822	265
Total Analysis Volume [veh/h]	375	615	488	442	728	339	403	1197	94	858	1225	400

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fully actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	8	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	4.0	4.0	4.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	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	64	64	15	53	0	11	49	0	12	50	0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	40	40	0	40	0	0	39	0	0	40	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, 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
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	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.13	0.21	0.49	0.15	0.23	0.23	0.14	0.24	0.24	0.24	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.11	0.12	0.31	0.13	0.14	0.21	0.12	0.23	0.06	0.25	0.24	0.24
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	3459	5094	1589	3459	5094	1589	3459	5094	1589	3459	5094	1653
c, Capacity [veh/h]	451	1079	780	519	1179	368	478	1219	380	828	1734	563
X, volume / capacity	0.83	0.57	0.63	0.85	0.62	0.92	0.84	0.98	0.25	1.04	0.71	0.71
d, Delay for Lane Group [s/veh]	57.20	44.76	27.20	55.98	43.73	71.07	56.81	55.90	38.89	72.88	36.45	42.52
Lane Group LOS	E	D	C	E	D	E	E	E	D	F	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No

50th-Percentile Queue Length [veh/ln]	6.01	5.77	11.26	7.06	6.81	12.74	6.30	12.90	2.32	15.72	10.86	11.60
50th-Percentile Queue Length [ft/ln]	150.30	144.27	281.40	176.43	170.33	318.38	157.51	322.43	58.06	393.00	271.50	289.92
95th-Percentile Queue Length [veh/ln]	10.03	9.71	16.76	11.41	11.09	18.59	10.42	18.79	4.18	22.69	16.26	17.18
95th-Percentile Queue Length [ft/ln]	250.83	242.76	418.95	285.34	277.35	464.69	260.42	469.68	104.51	567.27	406.61	429.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.20	44.76	27.20	55.98	43.73	71.07	56.81	55.90	38.89	72.88	36.45	42.52
Movement LOS	E	D	C	E	D	E	E	E	D	F	D	D
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	42.12			53.46			55.17			50.01		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	50.33											
Intersection LOS	D											
Intersection V/C	0.839											

Option 4: Restripe NB

Number	12											
Intersection	Limonite Ave @ Eastvale Gateway											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	139	44	181	384	48	134	221	863	80	252	1126	265
Total Analysis Volume [veh/h]	204	64	266	564	71	197	325	1328	118	371	1698	389

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Fully actuated											
Lost time [s]	0.00											
Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	36	0	35	54	0	23	42	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	31	0	0	27	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, 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
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.13	0.13	0.13	0.19	0.19	0.20	0.45	0.45	0.12	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.11	0.16	0.16	0.18	0.26	0.07	0.11	0.33	0.24
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3		3			3		
s, saturation flow rate [veh/h]	1781	1697	1589	3459	1655	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	224	214	200	641	307	349	2305	719	422	1928	602
X, volume / capacity	0.84	0.84	0.84	0.88	0.87	0.93	0.58	0.16	0.88	0.88	0.65
d, Delay for Lane Group [s/veh]	67.80	68.18	68.72	59.63	70.68	80.36	29.44	23.16	66.44	46.71	41.07
Lane Group LOS	E	E	E	E	E	F	C	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No

50th-Percentile Queue Length [veh/ln]	7.02	6.72	6.32	10.07	10.51	13.71	11.24	2.44	6.85	19.16	11.84
50th-Percentile Queue Length [ft/ln]	175.57	167.96	158.12	251.73	262.68	342.66	281.01	61.07	171.21	479.12	296.07
95th-Percentile Queue Length [veh/ln]	11.37	10.97	10.45	15.27	15.82	19.78	16.74	4.40	11.14	26.34	17.49
95th-Percentile Queue Length [ft/ln]	284.22	274.23	261.24	381.83	395.58	494.45	418.47	109.93	278.51	658.60	437.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	67.85	68.18	68.54	59.63	70.68	70.68	80.36	29.44	23.16	66.44	46.71	41.07
Movement LOS	E	E	E	E	E	E	F	C	C	E	D	D
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	68.22			63.19			38.36			48.79		
Approach LOS	E			E			D			D		
d_I, Intersection Delay [s/veh]	49.49											
Intersection LOS	D											
Intersection V/C	0.784											

Appendix E

Cumulative Projects Information

Table 6: Cumulative Projects

Agency		Project[1]		Location	Land Use	
City of Jurupa Valley	1	**Tacos More Restaurant** (4,500 sf restaurant & sports bar)		5322 Etiwanda	***932***	*High-Turnover (Sit-Down) Restaurant*
	2	**Wineville Marketplace**	Single-Family Homes (130 DU)	SEC Limonite Ave & Wineville Ave	***210***	*Single-Family Detached Housing*
			Retail (37,600 sf)		***820***	*Shopping Center*
	3	**Express Car Wash** (1 tunnel)		6168 Etiwanda Ave	***948***	*Automated Car Wash*
	4	**Mixed Use Development**	Retail (9,500 sf)	5560 Etiwanda Ave	***820***	*Shopping Center*
			Apartments (45 DU)		***220***	*Multifamily Housing (Low-Rise)*
	5	**Light Industrial Business Park** (10,000 sf)		NWC Bellegrave Ave @ Wineville Ave	***770***	*Business Park*
	6	**Vernola Market Place Apartments** (220 DU)		Pats Ranch Rd s/o Limonite Ave	***220***	*Multifamily Housing (Low-Rise)*
	7	**Warehouse Distribution Bldg** (310,760 sf)		NWC Etiwanda & Cantu-Galleano Ranch	***150***	*Warehousing*
	8	**76 Gas Station**	Gas Station w Convenience Store & Car Wash	4585 Pier Enterprise Wy	***945***	*Gasoline/Service Stn w Convenience Mart*
			Fast-Food Restaurant (4,000 sf)		***933***	*Fast-Food Restaurant w/o Drive-Through*
City of Eastvale	9	**Goodman Commerce Center** (additional 96,845 sf planned commercial)		SEC Hamner Ave @ Cantu Galleano Ranch	***820***	*Shopping Center*
	10	**Leal Master Plan**	Lifestyle Center	NWC Hamner Ave @ Limonite Ave	***820***	*Shopping Center*
			General Commercial		***110***	*General Light Industrial*
			Hotel		***310***	*Hotel*
			Housing		***220***	*Multifamily Housing (Low-Rise)*
City of Ontario	11	**Esperanza**	Single-Family Homes (914 DU)	NWC Hamner Ave @ Bellegrave Ave	***210***	*Single-Family Detached Housing*
			Multi-Family Homes (496 DU)		***220***	*Multifamily Housing (Low-Rise)*
	12	**Subarea 29 Addendum**	Single-Family Homes (574 DU)	n/o Bellegrave Ave b/t Scholar Wy & Sumner Ave	***210***	*Single-Family Detached Housing*
	13	**Subarea 29**	Single-Family Homes (2,293 DU)	NWC Bellegrave Ave @ Sumner Ave	***210***	*Single-Family Detached Housing*
			Retail (87,000 sf)		***820***	*Shopping Center*
	14	**Grand Park**	Single-Family Homes (740 DU)	NWC Eucalyptus Ave @ Sumner Ave	***210***	*Single-Family Detached Housing*
			Multi-Family Homes (587 DU)		***220***	*Multifamily Housing (Low-Rise)*
	15	**Rich Haven**	Single-Family Homes (1,833 DU)	NWC Haven Ave @ Edison Ave	***210***	*Single-Family Detached Housing*
			Multi-Family Homes (3,033 DU)		***220***	*Multifamily Housing (Low-Rise)*

City of Jurupa Valley Cumulative Projects List - *Pending* - last update 05.20.21														
Master Application (MA) No.	**Related Entitlement Case Nos.**	**Project Name**	**Project Description**	**Developer**	**Applicant Rep**	**Project Location**	**APNS of Project Site**	**Total Building Square-footage / units**	**Size of Project Site**	**Project Manager**	**Total Single-Family Units**	**Total Mutil-family Units**	**Status of Entitlement**	**Projected Completion date**
MA14143	**GPA1408, CZ1497**	**Pearl Community/Nova Homes**	74 single-family lot subdivision	Nova Homes	Ivano Stamegna	North side of Limonite & east side of Pedley	165-140-039-047, 165-160-017-019,165-200-001&008 &009	74 units	25.6	R. Lopez	74	0	PC Hearing 06.09.21	2024-2025
MA16113	**GPA, ZC,CUP, PCN**	**76 Gas Station**	Gas Station, convenience store, car wash, restaurant	Pier Enterprises	Norah Jaffra	4585 Pier Enterprise Way	106-040-044	7,471 sf	9.64 acres	R. Lopez	0		Approved by Council on 6/18/20 - Reso. 2020-33	2022
MA16045	**DA16001, GPA16001, CZ16003, SP16001, TTM**	**New Rio Vista Specific Plan 2016**	New Specific Plan to replace Rio Vista SP 243. Maximum total of single-family and multi-family units; possible school on site; 24-acre Business Park wtih professional offices; 12-acre business park with commercial retail uses, professional offices; 7-acre self-storage; 600+ acres of the 917.3-acre site will remain as open space; 18.3 acres of the site dedicated to recreational amenities – Community park, Linear Park, and pocket parks	Richland Communities	Brian Hardy	Rio Vista SP Zone No. 243 project site	175-080-010, 175-090-001, 175-090-002 & 004 &008		917 acre	J. Pechous	750	947	4th screen check, contract for revised scope of work going to CC in May	2025 - 2027
MA17051	**SDP17024**	**None at this time**	9,800 sf new commercial retail center	Ed Roane	None	6250 Morton Ave.	163-152-018	9,800 sf	1 acre	Chris Mallec	0	0		
MA17132	**GPA18003, SDP19008, DA19001**	**Proficiency Rubidoux (or Capital)**	General Plan Amendment to modify Mira Loma Warehouse & Distribution Overlay to allow a total of 1.3 million square-feet of logistics on an 81-acre project site	Matt Englhard, Proficiency Rubidoux, LLC.	None	located west of Avalon Street, south of 25th Street, and north of 29th Street	178-030-001 through -003; 178-030-006, 178-030-008 through -10; 178-070-001 through -003; 178-080-009, 178-080-011; 178-080-012; 178-090-010	1.3 million sf of building area	81 acres	Patty Anders	0	0	Development Agreement in process. EIR contract in process.	2025-2027
MA17153	**SDP17069**	**Tacos More Restaurant**	4,500 sf restaurant and sports bar	Zalma Perez	Rogelio Sanchez	5322 Etiwanda	159-301-001	4,500 sf	0.96 acre	Elizabeth Yee	0	0	waiting for resubmittal to 6th review	2022-2025
MA18008	**GPA18001, DA18001, SDP18048, LLA18001**	**Agua Manga Development Project or Carson Companies' project**	Two industrial buildings (total: 335,000 sf); modify the General Plan to allow logistics use; adjusting lot line; development agreement	Carson Companies	Robert Alleborn, Carson Companies	northwest corner of Hall Ave. & Agua Mansa	175-210-059 and 175-210-034	Bldg A: 194,463 square-feet; Bldg B: 140,060 square-feet	23.45 acres	Rocio Lopez	0	0	PC Hearing 06.09.21	2024-2025
MA19029	**TTM37645**	**SLPR, Inc. Project**	Subdivide 162.54 acres into 54 single family lots averaging 7,790 sq.ft.; change land use for only 21.92 acres from OS-RUR (Open Space Rural) to MDR (Medium Density Residential) and Change Zone from R-A-20 (Residential Agricultural min. 20 du/ac) to R-4 (Planned Residential). Remaining 140.62 acres to remain unchanged.	SLPR, Inc.	Keith Christiansen	East of Pauline Avenue, south of Philadelphia Street, and terminus of Philadelphia Avenue	173-110-001; 173-110-002; 173-110-003; 173-110-004; 173-110-006	54 single-family units	162.54 acres	Rocio Lopez	54	0	Waiting for Applicant to resubmit	N/A
MA20065	**CZ, SDP, TTM**	**Clay Street Project**	253 single-family lots	I.H.C Jurupa	None	6501 Clay St.	Multiple APN's	253 sangle-family lpots	67.7 acres	Rocio Lopez	253	0	Waiting for Applicant's resubmittal	2024-25
MA19240	**CUP19009**	**Selva Tires**	Tire sales and repair	Selva	None	6102 Etiwanda	Multiple APN's	2078 SF	2.37	Andrea Hoff	0	0	on hold/pending	n/a project inactive
MA17280	**SDP**	**Neighborhood Commercial**	12,180 sq. ft. neighborhood commercial center			NEC of Mission and Wallace	Multiple APN's	12,180 sq. ft.	1.26 acres	Miguel Del Rio	0	0	Waiting on applicants to resubmit or withdraw	N/A
MA20004	**SDP and TPM**	**Space Center**	1.9 million sq. ft. warehouse buildings	Karcher		Manitou and "C" Street	Multiple APN's		105 acres	E. Yee	0	0	EIR review and 2nd site plan review	2022
MA20090	**TTM37893, CZ20003**	**Montecito**	25 single-family lots	Hobbs	Robert Beers	SEC Mission and Agate	Multiple APN's	25 single-family lots	5.32 acres	Andrea Hoff	25	0	pending	2022
MA20095	**SDP**	**Mondragon Auto Repair**	New Café	Horacio Mondragon		6024 Mission	Multiple	2,400 SF	.14 acres	Reynaldo Aquino	0	0	Awaiting applicants 2nd submittal	July/August 2021
MA20035	**ZC,SDP,CUP, TPM**	**Shops @ Jurupa Valley**	Gas station,car wash, hotel and office space	Panoramna Development	Wes Fifield	NE Corner of Mission Blvd. and Pyrite	171-020-001,171-020-025	Approx. 250,000	31.47 acres	Patty Anders	0	0	Planning Commission 06.09.21	
MA20084	**SDP20042**	**Panda Express**	Proposed construction of three drive-thru restaurants on vacant land with parking, landscaping, and street improvements	Gary Wang & Associates	Ruben Rodela	Mission Blvd. and Valley Way	183-101-010, 183-101-018, 183-101-004, 183-101-005	2,300 sf (panda express), 2,500 sf drive-thru, 3,500 sf drive-thru	1.74 acres	Andrea Hoff	0	0	pending	2023
MA20086	**PAR20011**	**Madone Collection**	new planned residential development proposed with 36 single family lots in gated communnity. Includes street improvements and public open space amenities.	All-Era Properties LLC	Kevin Kent	7586 Jurupa Rd.	183-030-014	36 units with 3 possible floor plans (1,884 sf, 2,048 sf, and 2,284 sf.)	6.92 acres	Andrea Hoff	36	0	pending	2024
MA19212	PUP1452R1	**Pacifica Assisted Living**	Construct 14,325 sf cottage at existing assisted living facility.	Pacifica	Ryley Webb	6280 Clay Street	163-400-030	14,325 sf with 15 rooms	3.5 acres	Andrea Hoff	0	15 (assisted living)	pending	2023
MA21009	**SDP, CUP and TPM, CZ**	**Freeway Commerce Center**	2 phase project - Travel Center (gas station, truck service and fuel station) hotels, full-service restaurant, RV and truck sales	Tom Searles	Tom Searles	N. of SR60, west of Pyrite	Multiple	TBD	27.2 acres	Elizabeth Yee	0	0	Awaiting Site Plan Review, EIR Contract to CC for consent	2022
MA20132	**PAR**		Auto Repair and used car dealership			4170 Soto	174-272-001	3,165 square feet	.64 acres	Miguel Del Rio	0	0	Pre-application review completed	

City of Jurupa Valley Cumulative Projects List - *Pending* - last update 05.20.21														
Master Application (MA) No.	**Related Entitlement Case Nos.**	**Project Name**	**Project Description**	**Developer**	**Applicant Rep**	**Project Location**	**APNS of Project Site**	**Total Building Square-footage / units**	**Size of Project Site**	**Project Manager**	**Total Single-Family Units**	**Total Mutil-family Units**	**Status of Entitlement**	**Projected Completion date**
MA20118	**PAR**	**Bellegrave Marketplace**	office (2,236 sf), warehouse (20,800), retail (5,600), market expansion (800 sf), existing market (1,200)		Fausto Reyes	9372 and 9380 Mission	APN 170-270-020 and 015	office (2,236 sf), warehouse (20,800), retail (5,600), market expansion (800 sf), existing market (1,200)	3.3 acres	Andrea Hoff	0	0	on hold	2024
MA16113 and MA20114	**CUP/PCN**	**Pier Enrterprises**	Alcohol sales at a convenience store	Pier Enterprises	Andrea Arcilla	N of Cantu Galleano and Pier Enterprise way	106-040-044	None, use request in previously approved building	9.64 acres	Chris Mallec	0	0		
MA16161	**TTM37214,CZ17002**	**SLPR, Inc. Project**	Subdivide 84.5 acres into 44 lots and preserve 69.2 acres for Open Space	SLPR, Inc.	Keith Christiansen	9640 Philadelphia	173-020-020,021,022,023	44 single family lot subidvision	84.5 acres	Rocio Lopez	44	0	Waiting for Applicant to resubmit	N/A
MA20115	**SDP**	**Legalization of RV Repair shop**	RV Repair Shop	RV Repair Shop			178-213-006	6,500 square feet	55.028 square feet	Miguel Del Rio	0	0	Awaiting revised plans	Dec-21
MA20219	**SDP**	**Mini Storage**	74,322 sq. ft. mini storage	Platinum Storage Group	Platinum Storage Group	Van Buren and Clay	NEC Clay and Van Buren (163-400-046)	74,322 sq.ft.	4.53 acres	Rocio Lopez	0	0	Under Review	N/A
MA20215	**SDP**	**Metal Warehouse**	5,000 sq, ft. prefab metal bldg.								0	0		
MA20241	**SDP**	**Medical and commercial center**	Medical park with commercial and restaurant uses	ShahidRangoonwala	ShahidRangoonwala	10008 Limonite	APN: 162-220-010	Four 2-Story Medical Office Bldgs (20,250 sf ea); Four 2-Story Medical Office Bldgs (38,000 sf ea); Two Drive-thru restaurants (2,880 sf ea); 1-story 8,880 sf retail bldg 247,640 sf overall bldg. area, 0.34 FAR	19 acres	Rocio Lopez	0	0	Incomplete	N/A
MA20251	**CZ, CUP**	**Recycling Facility**		Richard Boyd	Irma Flores	5190 Wilson	178-050-034, 178-050-046, 178-350-025			R. Aquino	0	0	Incomplete	
MA20258	**SDP**	**O'Reiley Auto Parts**	8,000 sq. ft. store	O'Reilly's	TAIT & Associates	4210 Agate St.	171-101-071	approx. 8,000 sq. feet	0.91 acres	Rocio Lopez	0	0	Waiting for Applicant to resubmit	2023-24
MA20276	**SDP20110, CZ20015, GPA20004**	**Kingley Terrace**	176 Multi-family units	Mike Koopman	Max Ahmadi	10001 Limonite	162-200-011	176 apartment units	9.76 acre site, aprox. 10 proposed bldgs	Andrea Hoff		176	pending	unknown
MA20259	**PAR**	**RV Parking and Storage**		Balwinder Wraich		Pyrite, South of Mission		21,500 SF storage building and 11,000 SF RV parking		R. Aquino	0	0	Awaiting on applicant for submittal of pending items	Estimate July 2021
MA19032	**IUP19001**	**Adesa Auto Storage**	approximately 5 acres being used for storage of autos	Adesa	Steve Hood	6464 33rd St.	177-110-016; 177-110-018	n/a	24.05 acres	Andrea Hoff	0	0	on hold	existing
MA19253	**CUP19011**	**Mobile Modular**	CUP for storage of shipping containers	Mobile Modular Management	Fayers Hall	11450 Mission Blvd.	156-320-020 to 156-320-030 and 156-140-032	Office Addition at 7,920 sf to an existing 7,374 sf office building	95± ACRES	Andrea Hoff	0	0	on hold during moratorium	unknown
MA20083	**CUP20004**	**Space Center parking**	Develop parking lot for trucks	Space Center	Tom Cruikshank	11215 Riverside Dr.	156-130-008, 156-120-040, 156-120-041	no buildings	4.7 acres	Andrea Hoff	Unknown	0	on hold during moratorium	unknown
Specific Plan	**Agua Manza Commerce Park Specific Plan**		Industrial Business Park			1500 Rubidoux		4.4 million sq. ft. industrial business park		Annette Tam	0	0		
MA20154		**Havana**	Trucking Operation			2780 Rubidoux				Rocio Lopez	0	0	Waiting for applicant to revise plans	N/A
MA21108	**CZ, CUP, SDP**	**F&C Pallets**	legalization of existing pallet yard	F&C Pallets	Trip Hord	4247-4287 Campbell St.	170-250-032, 170-250-33, 170-250-34		1.09	Andrea Hoff	1	0	pending	unknown
MA21070	**SDP**	**Troy Industrial**	3 Industrial Buildings	Daniel karcher	Daniel Karcher	4725 -4795 Troy Court	167,110-035, 036,037	187,738 SF	10.43 Acres	Reynaldo Aquino	0	0	1st submittal comments sent to applicant	unknown
MA21045	**CUP, SDP**	**Paradise Knolls Commercial Center**	10,000 sq. ft. commercdial center, including gas station, and 4 retail tenant spaces	Panorama Development	Wes Fifield	Beach and Limonite	162-230-013	10,000 sf	2.22 acres	Andrea Hoff	0	0	pending	2023
MA21017	**PAR**	**N/a**	TTM to subdivide 1.9 acres into 6 lots	Winston Liu/W2W Land Design Consultants	Frank Hu	Vernon and 40th St.	171-060-013	6 sf units	1.9 acres	Andrea Hoff	6	0	pending	unknown
MA1496	**CUP, SDP and TPM**	**Country Village Shopping Center**	144,665 SF shopping center on 12 acres of land that includes 2 anchor stores, a gastation with carwash, 2 drive through restaurant pads, and 3 smaller buildingss with muliple suites	HSJQ Realty LLC	Amin Khalili	3150 Country Village Rd		144,665 sf	12 acres	Elizabeth Yee	0	0	Waiting for 5th resubmittal	2022-2025
MA21117	**SDP**	**Cardenal Three Tilt-Up Building**	17,387 square foot tilt-up manufacturing building				156310029	17,387 square feet		Miguel Del Rio	0	0	preparing 1st review letter	Dec-21
MA18230	**SDP**	**Truck and Trailer Repair and Service Center**	Truck and Trailer Repair and Service Center			8675 63rd Street	163-152-021	6,425 square feet		Miguel Del Rio	0	0	Preparing 2nd review letter	Oct-21
MA16107	**SDP**	**Truck Repair Shop**	Truck Repair Shop			2725 Hall	178-230-018, 178-230-019	7,659 square feet	87,783 square feet	Miguel Del Rio	0	0	awaiting complete submital	May-22

City of Jurupa Valley Cumulative Projects List - *Inactive or Completed* - last update: 05/20/21

Master Application (MA) No.	Related Entitlement Case Nos.	Project Name	Project Description	Developer	Applicant Rep	Project Location	APNS of Project Site	Total Building Square-footage / units	Size of Project Site	Project Manager	Projected Completion date	Total Single-Family Units	Total Multi-family Units
MA1202	**GPA1203, CZ1202, CUP1202, & TTM36060**	**Pedley Crossing Shopping Center**	255,978 square-foot shopping center	RBE	Mark Hawley	SR 60 & Pedley	169-040-017; 169-040-019; 169-070-028; 169-070-029	255,978 square-foot shopping center	30 acres	Tamara Campbell	TBD	0	0
MA1203	**GPA901, CZ7619, TTM36081, SP376**	**Thorough-bred Farms**	Specific Plan No. 376 for 42.6 acres light industrial, 36.5 acres business park, 11.5 acres commercial/ retail, & 7.6 acres tourist/commercial	Industrial Development International	None	North of Bellegrave, west of Wineville Avenue, east of I-15 Freeway, and south of Landon Drive.	160-040-014, 160-040-024, & 160-040-026	No buildings are included with the Specific Plan.	108.2	Laurie Lovret	Entitlements Approved; no construction at this time	0	0
MA1212	**GPA1207, CZ1205, TTM31894, TPM36812, & VAR1505**	**Highland Park**	Master planned residential community with 398 single-family residential lots, one public park site, three pocketpark sites, water quality basins, open space (including natural, graded, and community open space)	John Schafer, Richland Communities	None	North side of Canal St., east of Sierra Ave. in the Sunnyslope area	175-080-011; 177-020-004& 016-017; 177-030-001-002 & -004 & -006 & -010 & -016; 177-110-006-008	398 SF	168.3 AC	Annette Tam	Entitlements Approved; construction completion 2019/2020; extensions of time approved; pending grading permit application 5/10/19	398	0
MA1322	**DOU1302 & CUP1308**	**Da Vita Medical Dialysis Center**	A 9,622 square-foot dialysis facility	Da Vita	Market Street Development, LLC	NW corner of Clay St.& Limonite Ave	166-620-043-6	9,622 square-foot building	wtihin an existing shopping center	Annette Tam	Entitlements approved; construction completed & operating	0	0
MA1402	**LLA1402 & SDP31380**	**Market Street Commercial**	Proposed 3,098 square-foot gas station with convenience store; 4,750 square-foot sit down restaurant; 2,860 square-foot drive-thru restaurant; and 2,850 square-foot drive-thru car wash	Market Street Commercial	Terry Tabliolo	1890 Market St.	178-350-018	Total square-footage of shopping center is 13,558 (4 buildings)	5.74 AC	Rocio Lopez	pending permitting process 5/10/19	0	0
MA1407	**TTM36692, CZ1401 & Map No. 14-01**	**Barrington Place (Harmony Trails prevoiusly)**	176 single family R4 lots on 36 acres. Lot sizes range from 3,900 to 10,000 sf	Homebuilder: Frontier; Entitlement Applicant: Stratham	None	SE corner of Wineville & Cantu-Galleano (Vanderham Dairy)	160-060-039 & -062	176 single-family lots	36 AC	Annette Tam	Entitlements Approved: 12/4/2015; currently under construction	176	0
MA1496	**TTM36857, CUP15003, & SDP31423**	**Country Village Shopping Center**	145,000 square-foot shopping center	Torksadeh	Torksadeh	3150 Country Village	173-020-056	Approx. 145K sq. ft.	12.5 acres	Elizabeth Yee	Unknown		
MA14112	**TTM36827 & VAR1501**	**Ridgewood Subdivision**	Subdivide 1 – 3.35 acre lot into 13 lots to build 13 single-family units	SPB Engineering	same	Ridgewood Drive	182-361-009	13 single-family units	3.35 AC	Rocio Lopez	Approved for second extension of time on 5/8/19	13	0
MA14115	**GPA1406, CZ1496, TTM36822, TTM36823, Neighborhood Development Plan 1601, & DA1403**	**Paradise Knolls**	Redevelopment of existing 109 acre golf course (74 acres net) into a residential development -- 650 single-family units	Lansing	Jim Kozak	South side of Limonite between Downey and Beach (Paradise Knolls Golf Course)	162-220-011 & -013; 162-230-001 - 003, -005, & -006	102 SF, 548 MF & 30,000 sf commercial/ retail	109 AC	Tamara Campbell	Entitlements approved	650	0
MA1412	**PP21201EOT**	**Palm Communities**	extension of time for PP21201. PP21201 is an approval for 49 unit apartment complex (affordable housing)	Palm Communiities	none	3901 Briggs St	181-041-015	49 multi-family units	3.04 AC	Tamara Campbell	Entitlements approved and construction completed	0	49
MA14126	**SDP31436, CPM1504, LLA1501; EIR**	**Space Center**	2 new industrial buildings: first building is 606,112 SF and second building is 517,903 SF	Space Center	Graham Tingler	Southwest corner of Etiwanda Avenue & Iberia Street	156-040-042; -043- & -044	1,124,015 sf (total square-footage of both buildings)	52.9 AC	Annette Tam	Entitlements Approved: November 2017; pending Permit applications for grading and building 5/10/19	0	0
MA1413	**GPA1402, CZ1402, TTM36751, & VAR1402**	**Monarch at The Quarry**	86 single family units on minimum 7,000 square-foot lots	Armada Armstrong	Steve Jenkins	Northwest side of Armstrong, south of Sierra in Sunnyslope	174340037; 174340038; 174340040; 174380001-11; 174381001-15;	86 single-family on R-1 Lots	22 acres	Annette Tam	Entitlements Approved and Constructed	86	0
MA 14135	**CUP1401 & SDP31436**	**Mission Plaza**	118,683 SF shopping center	Successor Agency to EDA	Eric Sydow	S/E corner of Riverview & Mission	181-020-010; 181-020-022 - 031	n/a	15 acres	Annette Tam	Unknown: entitlement process has been inactive for a few years	0	0
MA1414	**TTM36702 & VAR1401**	**Tentative Tract Map No. 36702**	17 lot subdivision for half acre equestrian estate lots	Global Investments	Webb Engineering	5289 Stone Ave	166-070-018	17 SF on 20,000 sf lots & 1 Water Quality basin	10.48 AC	Rocio Lopez	Scheduled for PC Hearing for 1st Extension of Time on 6/12/19	17	0
MA14146	**SDP31445**	**Flabob's Hanger Village**	Installing 58 hangers for airplane storage at airport	Flabob Airport	Beth LaRock	4130 MENNES	181-190-010	58 hangars	within airport	Annette Tam	Entitlements Approved: April 2016; construction complete	0	0
MA14160	**CUP1402 & SDP**	**Arco Gas Station**	New Arco Gas Station to include a 2,900 sq.ft. AM/PM Convenience Store (with beer and wine sales for off-site consumption); a 3,258.5 sq.ft. canopy; and 768 sq.ft. automated/drive-thru car wash	Pankdt Bhavana	Fred Cohen	7850 Limonite Avenue	166-330-007	Gas station, convenience store, and multi-tenant commercial buildings	25,000 sq.ft.	Rocio Lopez	Completed & operating	0	
MA14170	**SDP31454, SDP31507, LLA1503, SBA15001 (related: DOU1501)**	**Boatman Development (Lots 38 & 39)**	147,990 square-foot business park with 4 buildings	Boatman Development Company	Brad Boatman	Lots 38 & 39; De Forest Circle & Noble Court, Mira Loma Commerce Center	156-360-023; 156-360-027; 156-360-028;	147,990 square-foot business park with 4 buildings	11 acres	Annette Tam	Expired Entitlements	0	0
MA14173	**TPM30828, VAR16003, & SDP31488**	**San Sevaine**	3 industrial buildings on individual lots	Gonsalves & Santucci, Inc.		Van Buren & Bain	156-210-093	Building 1 – 23,000 sq. ft.; Building 2 – 243,114 sq. ft.; Building 3 – 5,374 sq. ft.	18.79 acres	Tamara Campbell	Under construction 5/10/19	0	0
MA14180	**SDP31458**	**Galena Business Park Bldg. E**	47,500 sf industrial bldg	Boatman Development Company	Brad Boatman	Troy Court	167-110-034	47,500 sf industrial bldg	2.32 acres	Tamara Campbell	Constructed	0	0
MA1424	**SDP31388**	**Legend Shopping Center**	50,000 square foot retail and office center on a vacant 4.5 acre site	Legend International	Patrick Chiu	South side of Mission Blvd., east of Opal	182-032-007	50,000 square-foot shopping center	4.5 AC	Annette Tam	Entitlements approved; under construction 5/10/19	0	0
MA1432	**TTM33649 & VAR16001**	**"Avalon Court" TTM33649**	24 single family lot R-4 subdivision	Secured Income Group & Homequest	Stefan Lanthier	Northwest corner of Avalon and 36th Street in Rubidoux	179-060-027	total: 24 single-family lots	5 acres	Annette Tam	Final Map scheduled to be recorded April 2018	24	0
MA1463	**GPA1403, CZ1404, TTM36720, & SDP31456**	**Jurupa Valley Veterans Enriched Neighborhood "TTM36720"**	residential sudivision of project site into 26 single-family lots	Habitat for Humanity	Kathy Michalak	at the terminus of Armarillo Road	169-070-035; 169-100-055; 169-100-057	26 single-family units on minimum 5,000 square-feet lots	5.5 acres	Annette Tam	Entitlements Expired	26	0
MA1473	**SDP31411**	**Pedley Station**	3 new structures: 1,684 Sq.ft. Dental Office bldg..; 2,450 sq.ft. retail bldg.; & 3,856 sq.ft retail bldg with drive-thru coffee shop or fast food restaurant= 7,990 sq.ft. overall	Sergio Hernandez & Angela Avila	Raul Espino	Northwest corner of Limonite and Pedely	165-190-044	3 detached bldgs. Bldg. A: 1,684 sf; Bldg. B: 2,450 sf; Bldg. C: 3,850 sf.	1.07 AC	Rocio Lopez	Entitlement Expired	0	0
MA1485	**GPA1404, SPA1401, SDP31416, CZ1405, & SDP31416**	**Vernola Marketplace Apartments**	397 apartment units	Rick Bondar	Rick Bondar	North side of 68th between Pats Ranch Road & I-15	152-020-012, 152-020-021, 152-020-022	397 apartments	17.4 acres	Laurie Lovret	Entitlements approved; applicant intend to submit for permit application in Summer 2019	0	397
MA1492	**PUP1401**	**Flabob - River Springs Charter School**	Charter School -7 -12th Grade (several modular classroom buildings) -200 students 15 faculty	River Springs Charter School	River Springs Charter School	Southeast corner of Mennes & Fort Drive	181-190-010	7 -12th Grade -several modular classroom buildings	unknown	Annette Tam	Entitlements Approved: 2016; pending permit applications 5/10/19	0	0
MA15009	**TTM36572 & SDP**	**Fathi Manasrah**	Subdivide .84 acres into 6-unit residential condo project	Fathi Manasrah	same	9125 Bellegrave	169-060-005	6 residential condo project	0.84 acres	Rocio Lopez	Under Construction (4/9/19)	6	
MA15040	**PP24948EOT**	**Farmer Boys Development**	**Extension of Time only** for PP24948; PP24948 is an approval for an 8,000 sq.ft. retail commercial bldg. with drive-thru on parcel 1; and a 4,908 sq.ft. retail commercial bldg. on parcel 3. Parcel 2 has an existing Farmer boys drive-thru restaurant five w/(5) additional truck parking spaces	Havadjia Holdings	Joe Mineo	4020 Etiwanda Ave	156-200-047, 048, 049, 050	No change from original PP24948 approval (4/4/13)	Parcel 1: 1.14 acres Parcel 3 - 1.05 acres	Rocio Lopez	Building C constructed (4/9/19); remainder of site to be constructed at a later time		

City of Jurupa Valley Cumulative Projects List - *Inactive or Completed* - last update: 05/20/21

Master Application (MA) No.	Related Entitlement Case Nos.	Project Name	Project Description	Developer	Applicant Rep	Project Location	APNS of Project Site	Total Building Square-footage / units	Size of Project Site	Project Manager	Projected Completion date	Total Single-Family Units	Total Multi-family Units
MA15069	**SDP31499**	**99 Cent Only Store**	New 18,012 sq. ft. retail bldg.	99 Cent Only Store	Same as Developer	6316 Mission Blvd.	182-031-005	18,012 square-foot building	3.24 acre	Rocio Lopez	Inactive	0	0
MA15072	**GPA15004, CZ15003, & TTM36948**	**Emerald Ridge South**	118 condominiumns and 97 single-family lots; change zoning to PUD-02; change land use designation to residential	28 & Canal, LLC	Nick Brose	North of SR-60, west of Avalaon St., east of Canal St., and soth of Kenwood Pl.	179-060-004, 179-060-006, 179-060-007, 178-191-001, 178-191-002, 178-191-004, 178-191-015	total: 118 condo units and 97 single-familly lots	25 acres	Annette Tam	Entitlements approved; current owner has submitted a new Tentative Tract Map under MA18141 and it was approved in Spring 2019	97	118
MA15099	**GPA15001, CZ15001, TTM36957, TTM36846, CUP15001, & SDP31513**	**Wineville Marketplace**	130 single-family lots, 2 neighborhood commercial areas	John Russo & Ben Chai Group	John Russo	SE corner - Limonite Ave. & Wineville Ave.	157-250-013; 157-250-011	130 single-family & 37,657 sf Comercilal	34 AC	Annette Tam	w/in 5 years (Entitlements approved: 01/2017)	130	0
MA15148	**GPA15004, CZ15003, & TTM36947**	**Emerald Ridge North**	184 single-family lot subdivision; change zoning to PUD; change land use designation to residential	28 & Canal, LLC	Nick Brose	North of SR-60, west of Canal Street, and south of 28th Street	178-070-004,006,007; 178-120-001,002; 179-060-002	total: 184 lots	43 acres	Annette Tam	Entitlements approved; construction unknown	184	0
MA15146	**SDP31606 & CUP16006**	**Rubidioux Commercial Development LLC**	306,894 square-foot business park which includes 9 new speculative industrial buildings	Rubidioux Commercial Development LLC	Rubidioux Commercial Development LLC	20th and Caterpillar	175-160-026; 027; 028; 038; 044; 045; 046; & 047.	total of 306,394 square-foot (9 buildings)	Unknown at this time; applicant to provide	Rocio Lopez	Pending permitting process	0	0
MA15151	**SDP31534**	**West Riverside Landfill Solar**	An 8.17 megawatt (MW) alternating current (AC), grid-tied, fixed-tilt solar project on former West Riverside Landfill site operated by the RCDWM as a Class II solid waste disposal site 1/64 until 11/83. Approx. 31,872 REC 300 Watt modules or equivalent will be installed.	Lamb Energy	Ralph Boyd	North side of SR 60 east of Rubidoux Blvd. at West Riverside Landfill site -2700 Hall Ave	178-281-06, 08, 11 and 178-291-03, 06, and 13	none	74 AC	Tamara Campbell	Entitlement approved; pending permit process	0	0
MA15192	**SDP31556, CUP15004, TPM36977, & PCN15005**	**Mission Pyrite Plaza**	32,000 square-foot Commercial development with gas station & drive thru car wash, fast food restaurant, sit down restaurant & multi tenant retail building.	Chandi Group	Gabriela and Daniel Marks	SWC of Mission Blvd. and Pyrite Rd.	171-260-013	32,000 sf	4.44 acres	Rocio Lopez	Gas Station Constructed; remainder of site unconstructed;	0	0
MA15201	**CUP15005, SDP31562, TPM37062, AND PCN15004**	**Limonite Plaza**	Shopping center with retail, gas station, and restaurants	Chandi Group	Gabriela Marks	NWC of Limonite and Felspar	165-240-019	total: 38,800 square-feet of tenant space	5.45 acres	Annette Tam	Gas Station Constructed; remainder of site unconstructed; entitlements approved 2016	0	0
MA16046	**PUP1402**	**Spartan College of Aeronautics and Technology**	Aircraft Mechanic School: Intends to use existing on-site modular offices (total: 8,840 sf) & new 22,000 sf Hangar with parking lot [total 300 students maximum]	**Spartan College of Aeronautics and Technology**	none	small area of Flabob Airport	181-190-010	total 45,126 sf (new and exisiting buildings)	Unknown at this time; applicant to provide	Annette Tam	Entiltements approved & under construction	0	0
MA16076	**GPA16002, CZ16005 & PUP16001**	**RCSD Headquarters**	New 33,390 square-foot, two story field office.	RCSD	none	3590 Rubidoux Blvd. & parcel with APN: 179-160-004	179-104-008 & 179-160-004	33,390 square-foot headquarters	2.97	Annette Tam	Inactive project; may find a new site to occupy	0	0
MA16111	**CUP16006 and SDP31606**	**Inland Empire Cold Storage**	New 40,800 square-foot Cold Storage Facility	IECS	C.R. Carney Architects	SEC of El Rivino and Hall Ave.	175-220-021	40,800 square-foot facility	4.82 AC	Rocio Lopez	Construction completed & operating	0	0
MA16144	**CZ16007 & SDP16002**	**Shops @ Bellegrave**	10,000 square-foot shopping center on 1.64 acres	Jennifer Moore	none	SEC of Bellegrave and Etiwanda	159-101-040, 159-101-035 through 037	10,000	1.64 acres	Annette Tam	Entitlements approved; construction almost complete and partially occupied (5/10/19)	0	0
MA16170	**GPA16003, CZ16008, SP16002, TPM & DA16002**	**Agua Mansa Commerce Park**	New Specific Plan for 302.8-acre Project Site. Specific Plan will eliminate the Agua Mansa Specific Plan #210 on the Project Site. The Specific Plan area would consist of three primary land uses: 1) Industrial Park, 2) Business Park (with potential retail component) and 3) Open Space. The project also includes the construction of 4.4 million square-foot industrial business park with a total of six industrial speoulation buildings; the subdivision of the project site into 13 parcels	Erik Zitek & Tate Goss, Crestmore Redevelopme nt, LLC	None	former TXI Riverside Cement; 1500 Rubidoux Boulevard	APNs: 175-170- 005, portions of 006, 027, 028, 030, 036, 040, 042, 043, 045, and 046; 175-180-001; and 175-200-001 through 005 and 007 through 009	Buildings 1- 5 has a total of 4,261,000 square-feet on 190 acres in the Industrial Park District; Building 6 is 200,000 square-feet in the Business Park District; and 67-acre of open space	302.8 acres for development including a 67-acre park	Annette Tam	Approved on 5/7/20 by City Council	0	0
MA16175	**SDP16014**	**Express Car Wash**	Drive-thru carwash with 17 vacuum stalls	Alan Smith	Alan Smith	6168 Etiwanda Ave	161-300-006	4,702 square-foot car wash building	0.78 acre project site	Kinson Wong	Entitlement approved; no construction yet (applicant intends to sell the site)	0	0
MA16186	**SDP16019, CUP16011, TPM37125**	**Pilot Flying J Travel Center**	Proposed truck travel center with 15,220 sf building (convenience store, fast food restaurant, marketplace & deli)	Pilot Flying J	None	Mission and Etiwanda	156-120-005	15,220 square-foot retail commercial building	11.95 acres	Tamara Campbell	Project completed	0	0
MA16205	**CUP16012, SDP16031, and CPM1601**	**Karaki - Western States**	Construction of a new gas station with 3,360 square-foot canopy, 3,886 square-foot convenience store and Drive-thru car wash. CUP for the sales of type 20 alcohol; parcel merger; SDP for Sign Approval	Joseph Karaki	none	9306 Jurupa Rd.	167-231-002 and 167-231-003	Total: 7,246 square-foot of canapy and convenience store	0.99 acre	Rocio Lopez	Under Construction (4/9/19)	0	0
MA16210	**CUP16014 & SDP16037**	**Jurupa Valley Clinic**	40,000 square-foot medical clinic building	Jurupa Valley Clinic (Richard Boureston)	EDP Solutions	Southwest corner of Pedley Road & Mission Boulevard	169-172-072 and -073	40,000 square-foot medical clinic building	3.89 acres	Tamara Campbell	Project completed	0	0
MA17013	**IUP1701**	**Trinity Equipment, Inc.**	Interim Use Permit for existing heavy equipment sales & rental business	Trinity Equipment, Inc.	Debbie Melvin, ACDY Corp.	8531 Mission Blvd	171-090-010; 011; 012 and 013	Total of 10,189 square-foot of existing buildings	8.35 acres	Rocio Lopez	Terminated Application due to inactivity; Existing Use	0	0
MA17078	**SDP17043 & TPM37005**	**Mira Loma Business Park**	169,443 square-foot business park on 10 acres (5 buildings); each building on a lot	Boatman Development Company	none	northwest corner of De Forest and Nobel Ct.	156-360-027 and 156-360-028	169,443 sf total for 5 buildings	10.13 acres	Annette Tam	Entitlements approved; final map recorded; currently under construction	0	0
MA17099	**TTM37211 & CZ17003**	**TTM37211 & CZ17003**	Subdivide a 10.40 acre parcel into 48 single family residential lots (6,000 sq.ft. min.) - Change zone from R-1 to R-4	Sequanota Partners, LP	Paul Onufer	Southeast corner of Opal & Canal	177-130-007 & 177-142-018	48 single-family lots	10.4 acres	Rocio Lopez	Approved in March 2019 by CC	48	0
MA17104	**CUP17002**	**Bailey Building**	32,700 square-foot industrial building; contractor's storage yard	Scott Bailey	Alyssa Bailey	Stockdale Court (on Rubidoux - between 26th and 28th Street)	178-150-013	32,700 square-feet	11.3 acres	Annette Tam	Entitlements approved in 2018	0	0
MA17126	**CUP17003**	**None**	Mobile home park with 39 lots and open space area	Sun Kim	King Woods	9045 56th Street	165-040-019 & -018	39 mobile home lots	4.88	Rocio Lopez	Withdrawn	39	0
MA17130	**PAR17007**	**Carnegie School**	New private school grades 6-12	Carnegie Schools	none	5200 Van Buren Blvd.	169-290-003	(24 classrooms total); two 6,400 sf dorm buildings; solar field; soccer field; 2800 sf builing for cooking facilities; 4,000 sf of shaded canopy; 1,600 sf structure for showers;	23.5	Rocio Lopez	Completed Pre-Application; no formal application made	0	0
MA17042	**PAR17003**	**Multi-family project**	121 multi-family homes	RC Hobbs	RC Hobbs	Camino Real, between Lakeside and Limonite	185-460-001; 185-470-001 & -002	121 multi-family units	15.49 acres	Tamara Campbell	**Completed Pre-Application & No formal entitlement application has been submitted**	0	121
MA17156	**PAR17009**	**44-unit Senior Housing**	Two-story 44-unit senior housing complex on 3 acres. Types of Units: Studios, 1 bedroom, and 2 bedrooms	Rick Boutros	None	Northwest corner of Baldwin Ave. & Limonite Ave.	166-210-004	17,660 square-feet	3 acres	Annette Tam	**Completed the Pre-Application. No formal entitlement has been submitted.**	0	44

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Master Application (MA) No.	Related Entitlement Case Nos.	Project Name	Project Description	Developer	Applicant Rep	Project Location	APNS of Project Site	Total Building Square-footage / units	Size of Project Site	Project Manager	Projected Completion date	Total Single-Family Units	Total Multi-family Units
MA17200	**CUP16111R1**	**Inland Empire Cold Storage**	Expand the existing (approved) maintenance bldg by 5,500 square-feet. New total is 11,000 square-feet (Original Approval is under MA16111)	Inland Empire Cold Storage	None	1090 Hall Ave.	175-220-021)	Expanded the maintenance facility from 5,500 square-feet to 11,000 square-feet	4.82 AC	Rocio Lopez	Construction completed	0	0
MA17245	**SDP17111 & CUP17004**	**Chevron station**	Neighborhood center: 2,900 sf Chevron gas station canopy; 6,600 square-foot, 2-story building (4,500 square-foot convenience store on first floor and 2,100 square-foot office on second floor); 2,500 square-foot drive-thru	Rofia Godazandeh, Shield Tech, LLC.	None	Northwest Corner of Pedley & Ben Nevis	169-031-008 and 169-031-002 thru 006	12,000 square-foot total	1.8 acres	Rocio Lopez	Prooject completed	0	0
MA17287	**CUP17008**	**Trimming Land Company**	Recycling facility for woodchips	Trimming Land Company	Tony Martinez, Trimming Land Company	6840 Van Buren	163-300-020-05; 163-400-011-6	Total: 11,250 sf (two office buildings)	4.73	Annette Tam	**Application Terminated**	0	0
MA18033		**None**	Commercial center on 16.22 acres		Harry Heady, Heavy Design	Southeast corner of Rutile and Van Buren	167-110-039; 167-330-006; -010; -015	113,796 square-feet	16 acres	Rocio Lopez	Pending approval	0	0
MA18081	**PAR18002**	**None**	Mixed-use Development (9,500 sf. Retail / restaurant and 3- detached 3-story apartment units.	Pete Volbeda		5560 Etiwanda	161-060-015	Retail and Restaurant Bldg: 9,500 sf; Apartments (all 3): 24,744 sf.		Rocio Lopez	Completed Pre-Application	0	45
MA18089	**CZ18001, TTM37470, & VAR18004**	**Highland Park 2**	34 single-family lots	JA Bray, LLC	John Schafer	South side of 30th Street and west of Sierra extension	177-020-012 and 177-020-018	34 units	6.5 acres	Annette Tam	Approved on 3/21/19; pending permit application 5/10/19	34	0
MA18132	**PAR18003**	**Clay Street Project**	Proposed subdivision of a total 68 acre parcel into 226 single-family lots: 124 lots at minimum 4,000 square-feet and 102 lots with a minimum of 5,000 square-feet	I.H. C. Jurupa, LLC	Robert Zoller	6501 Clay St.	163-400-052 (50.54 acres) and -001 (16.84 acres)	226 single-family units	67 acres	R. Lopez	Completed Pre-Application	226	0
MA18141	**TTM37640 & Amendment to PUD-02 Development Plan**	**Emerald Ridge South**	New TTM37640 for 97-single-family lots and 118 townhomes with changes to the internal circulation, architecture, and open space areas. **Background:** In 2017, the City Council approved two tentative tracts (TTM36948 & TTM36947) with other entitlements (GPA, CZ and EIR) on approximately 68 acres of land. The project was called Emerald Ridge. Emerald Ridge South, TTM36948, was approved for 97 single-family lots, 118 condominium units, and several open space lots. Emerald Ridge North, TTM36947, was approved for 184 single-family lots with several open space lots. This tract is located between Rio Vista SP and Canal Street. It is south of 28th Street and north of SR-60.	Vincent Zou, Signature Homes	None	North of SR-60, between Canal Street and Avalon Street; and south of Kenwood Place	179-060-004; -006; -007; and 178-191-001; -002; -004; -015	Total Units: 215	20.8 acres	Annette Tam	Approved on 2/7/19 - pending permit application 5/10/19; Estimated completion date in 2019	97	118
MA18147	**SDP & DOU18001**	**Midland Carriers**	Construct a 42,132 square-foot building and establish a the following uses: (1) repair and installation of refrigeration units in trailers and bobtail trucks and (2) on-site sales of refrigeration units	Midland Carriers	Lord Constructors	2610 Rubidoux Blvd.	178-150-008 and -009	42,132 square-foot building; use: sales and installation of refrigeration units in trailers	6.1 acres	Annette Tam	pending permit application 5/10/19; construction scheduled to be completed late summer 2019	0	0
MA18186	**PAR18006**	**La Rue Apartments**	80-unit apartment complex	LZ Development, LLC	none	Southeast corner of La Rue & Canal	179-021-001 & 179-051-001	80 units	3.75	Annette Tam	Pre-Application complete & Applicant will submit formal entitlement applications Summer 2019	0	80
MA18190	**PUP18001**	**Vernola Park Community Center**	42,132 square-foot community center, playground, and parking area	JARPD	none	Vernola Park	160-141-051	42,132 sf	8.67 acres	Annette Tam	Approved	0	0
MA18056	**CUP18002 & LLA1719**	**Kiewit Infrastructure West**	Maintenance, repair and storage of equipment in yard.	Kiewit Infrastructur e West Co.	Timothy Jeffrey	(SEC of Rubidoux Ave. and 24th Street)	178-330-005, 006 & 008	25,000 and 38,000 sq.ft. industrial bldgs.	19.5 acres	Rocio Lopez	Under consgtruction	0	0
MA19008	**TTM37601**	**Jurupa Valley Veterans Enriched Neighborhood "TTM37601"**	residential sudivision of project site into 26 single-family lots (to replace the expired MA1463 project)	Habitat for Humanity	none	at the terminus of Armarillo Road	169-070-035; 169-100-055; 169-100-057	26 single-family units on minimum 5,000 square-feet lots	5.5 acres	Chris Mallec	Approved	26	0
MA19069	**SDP19026**	**Horseshoe Lake**	Construct park improvements such as play area, picnic shelters, basketball court, walkways, trails, horse arena, and exercise stations on an existing park site	JARPD	none	southwest corner of Lakeview Ave. and Studio Place	163-240-001	0	14-acre park	Mike Fellows	2019-12-23	0	0
None issued	**CZ 11-01 and CUP 11-01**	**Pick-a-Part**	Change of Zone No. 11-01 from RR (Rural Residential) and W-2 (Controlled Development Area)-to M-H (Manufacturing – Heavy) and CUP 11-01 to allow a vehicle recycling, dismantling salvaging operation with impound yard, outdoor storage and retail sales	Team Truck Dismantling	Tom Searles	3760 Pyrite Street	173-180-003, 014, 016	0	50 acres	Tamara Campbell	Project withdrawn	0	0
None Issued	**GPA1202, CZ1201, TTM36391, DA**	**Riverbend**	464 single-family lots (TTM36391: ; TTM36391-1: ;TTM36391-2	CV Communiities	none	N of Santa Ana River, S of 68th St, W of Dana Ave & E of I-15.	157-190-006-09,157-210-001-014, 152-020-003-005, &007 &008	464 single-family lots	211	Laurie Lovret	Pending buildilng per its	464	0
None issued	**PAR1314**	**Tentative Tract No. 33373**	97 single family R1 lots	KR Land Company	Kathleen Karhoolios, KR Land	APNS: 179-060-004; -006; -007; and 178-191-001;-002; -004; -015	174-040-017 & -019	97 single-family lots	130 acres	Annette Tam	Completed Pre-Application; applicant to submit formal entitlement application in 2019	97	0
None issued	**PAR1320**	**Dos Ranchos**	215 single family dwellings on 56 acres, with lots sizes ranging from 2,500 sq. ft. to 4,000 sq. ft.	Lytle Development	Kevin Lynch	East side of Van Buren between Jurupa Road and 56th Street	165-050-016, 169-290-010, -013, 169-300-002	215 SF	56 acres	Tamara Campbell	Inactive for years	215	0
TR31644-1			206 single-family lots		None		multiple APNs	206 single-family lots		County Approval	Under Construction - April 2017	206	0
TR31768			189 single-family lots	Lyon Homes (Homebuilde r)	None	Between Cantu-Galleano Ranch Rd. & Bellegrave Ave.	multiple APNs	189 single-family lots		County Approval	Under Construction - April 2017	189	0
TR31778		**Serrano Ranch**	111 single-family lots	Lyon Homes (Homebuilde r)	None	northeast corner of Bellegrave Ave. and Landon Dr.	multiple APNs	111 single-family lots		County Approval	Under Construction - April 2017	111	0
TR33428		**Harvest Village**	337 single-family lots (TR33428-3: 93 units; TR33428-2: 106 units; TR33428-1: 138 units)	Lennar (Homebuilde r)	None	Northwest corner of Wineville & Limonite	multiple APNs	337 single-family lots on 117 acres	117 acres	County Approval	Under Construction (246 approved for occupancy in April 2017)	337	0
TR33461	**CZ07185 & TR33461**		203 single-family lots; change zone from A-2-10 to R-1	Lennar (Homebuilde r)	None	Between Cantu-Galleano Ranch Rd. & Bellegrave Ave. [east of TR31768]	multiple APNs	203 single-family lots		County Approval	Under Construction - April 2017	203	0
TR36144		**Rancho Del Sol**	217 single-family lots	DR Horton (homebuilder)	None		multiple APNs	217 single-family lots		County Approval	Under Construction - April 2017	217	0
MA19168	**PAR**	**Emerald Meadows**	office/commercial/warehouse	EM Owner, LLC		South of 60, north of rubidous, west of Santa Ana River	Multiple APN's	See previous column	300 acres (approx)		PAR Completed		
MA16161	**TTM37214**		44 single family lots			9640 Philadelphia	Multiple APN's	44 single-family lots	70 acres				
MA18161	**PAR**	**KUO**	56 single-family lots	Kuo		NWC of Pedley and 54th	Multiple APN's	56 single-family homes		Albert	PAR completed		
MA19029	**GPA,CZ,TTM**	**Mancha**	54 single family lots		Mancha	End of Philadelphia	Multiple APN's	62 single family lots	162 acres				
MA16146	**TTM37052**	**Hudson and 60th Subdivision TTM37052**	28 single-family lot subdivision. R-1 zone	Andy Shores, Owner	Andy Shores	Hudson & 60th St.	165-100-027	28 single-family lots	7.25 ac	Rocio Lopez	Approved	28	0

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MA16161	**TTM37214**	**Philadelphia Subdivision TTM37214**	44 single-family lot Subdivision	SLPR Inc.	Keith Christiansen	9640 Philadelphia	173-020-020;173-020-021; 173-020-022; 173-020-023	44 single-family lots	84.6 acres	Rocio Lopez	Approved	44	0
MA16224	**GPA16006, CZ16011, SDP16043, & TPM37126**	**Mission Gateway Plaza & Mission Gateway Villas**	Proposed Mixed Use of 68-unit multi-family affordable housing apartment complex and a 30,715 SF 2 story commercial building located	Northtown Housing Development Group	none	5171 Mission Blvd.	179-330-002, -003, -004, -005, and -006	31,375 square-foot commercial building and 95,862 square-foot multi-family housing with 68 apartment units	6.95 acres	Rocio Lopez	Project approvec	0	68
MA17250	**SDP17113**	**General Dr. & Clay St. Industrial Park**	5 industrial buildings (total: 328, 056 square-feet)	Grossman	MIG	North and south sides of General Drive (east of Clay Street)	163-400-016-1, 163-400-017-2, 163-400-014-9, 163-400-012, 163-400-013, 163-400-010	328,056 square-feet	26 acres	Tamara Campbell	Approved		
MA18182	**SDP18080**	**Ahern Rentals**	35,000 SF facility for equipment rentals	Brendan Murphy	Alain Giamio	Corner of Riverside Drive & Wineville Road	156-030-016, 156-030-017 156-030-042	35,000 SF	6.88 acres	Reynaldo Aquino			
MA18239	**CUP18011**	**Havana Investments Project**	15,000 sf Concrete Tilt-Up Building (consists of 3,000 Sqft Office on 1st & 2nd Floors, 13,500 Sqft Shop) and Truck and Trailer parking area	Havana Investment Group	Lord Constructors	East side of Rubidoux Blvd. (between 28th and 26th Street)	178-222-010	15,000 sf	3.8 acres	Chris Mallec	Denied by CC	0	0
MA19123	**CUP19005**	**AM/PM Car Wash addition**	Adding 1,296 sf car wash to an existing AM/PM Gas Station	AM/PM	AGC Desgin Concept Inc.	10015 Bellegrave	170-330-025	Additional 1,296 sf	2.66 acres	Chris Mallec			
MA19014	**SDP19006**	**Nick's Tire, Inc.**	Adding 3 new bays to an existing tire shop	Nick Gonzalez, Nick's Tire, Inc.	AAI Architects	9880 Mission Blvd.	170-240-030	Additional 2,560 sf	2.37 acres	Chris Mallec			
MA18163	**SDP18071**	**Crest Global, LLC**	Proposed industrial concrete tilt-up building totaling 19,700 sf with 1,250 sf mezzanine for total area of 20,950 sf on 1.12 acre site. Bldg. will have office, manufacturing and storage uses with 1 grade level and 2 dock high doors within a secured yard.	Crest Global, LLC	Roger Deitos, GAA Architects	11295 Inland Avenue	APN: 156-310-072	Proposed industrial concrete tilt-up building totaling 19,700 sf with 1,250 sf mezzanine for total area of 20,950 sf on 1.12 acre site.	1.12 acres	Chris Mallec		0	0
MA19084	**PAR19003**	**None at this time**	26 single-family lots subdivision	RC Hobbs Companies	Craig Heads	Southeast corner of Mission & Agate	171-101-072	n/a	5.32 acres	C. Mallec	Completed	26	0
MA20082	**PAR20010**	**None at this time**	200 apartment units	Mike Koopman	none	10001 Limonite Ave.	162-200-011	200 apartment units	9.76 acres	Chris Mallec	Completed		
MA20021	**SDP20011**	**Articom refrigeration**	Complete tenant improvements and establish use of existing building for commercial refrigeration business and training lab.	Articom Group	Jason Fay	3675 De Forest Circle	156-390-005	33,733 sf	89,298 sf	Andrea Hoff	Approved	0	0
MA18023	**SDP18013**	**None at this time**	6,980 sf commercial building	Solar Mai	Peter Huang	3685 Rubidoux Blvd.	179-122-020	6,980 sf	0.16 acre	Chris Mallec	inactive		
MA20274	**PAR**	**2,600 sf industrial Bldg.**	PAR for a 26,000 square foot Spec building	Shiv Talwar	Design Concepts	2285 Via Cerro	178-340-016	26,000 SF	1.96 Acres	R. Aquino	Complete		
MA20259	**PAR**	**RV Parking and Storage**	PAR for a 21,500 SF storage building & 11,000 SF RV parking	Balwinder Wraich	Balwinder Wraich	Pyrite, South of Mission	171-170-002	32,500 square foot	2.56 Acres	R. Aquino	Inactive		
MA20256	**PAR**	Auto Repair	1,200 SF auto repair	Pedro Castro	Pedro Castro	6301 Morton	163-151-016	1,200 SF	.53 Acres	R. Aquino	Complete		
MA18092	**SDP18039**	**Green Oaks Dr. Industrial bldgs.**	Two Industrial bldgs. Bldg. A - 9975 sf. Bldg. B - 6175 sf. Blddgs. Include offices and sgtorage	Tavaglione Construction	Bob Perry	Fleetwood Dr.	178-350-023	Two Industrial bldgs. Bldg. A - 9975 sf. Bldg. B - 6175 sf. Blddgs. Include offices and sgtorage	1.96 acres	Andrea Hoff -			
MA20209 - PROJECT WITHDRAWN	**SDP20087**	**Guerrero Auto Shop**	legalize existing structure to be auto shop	Armondo Guerrero		4075 Riverview				Andrea Hoff	Withdrawn		
MA17250	**SDP17113**	**General Dr. & Clay St. Industrial Park**	5 industrial buildings (total: 328, 056 square-feet)	Grossman	MIG	North and south sides of General Drive (east of Clay Street)	163-400-016-1, 163-400-017-2, 163-400-014-9, 163-400-012, 163-400-013, 163-400-010	328,056 square-feet	26 acres	Tamara Campbell			
MA16125	**SDP**	**Nuñez 3 Tenant Retail Building**	Construction of a 3,586 square-foot commercial building on a previously-developed lot.	Juan Nuñez		6072 Etiwanda Avenue	161-260-015	3 tenant building totaling 3,586 square feet	2.48 acres	Miguel Del Rio			
MA19175	**SDP19084**	**Karcher Industrial Project**	190,594 square feet (min.: 27,277 sq. feet, max: 55,606 sq. feet)	Daniel Karcher	Herdman Architecture	East of Rubidoux Blvd., North of 28th Street.	178-150-011 to 017	190,594 square feet (min.: 27,277 sq. feet, max: 55,606 sq. feet)	9.94 acres	Miguel Del Rio			
MA20089	**PAR20012**	**None at this time**	Proposed 22-lot residential subdivision (GPA needed)	Naji Garabet	Binh Wong	8910 Stearns Ave.	165-150-0211, 165-150-022	22 single-family units	5.23 acres	Miguel Del Rio	0	0	
MA18211	**CUP18007 & TPM37614**	**Horizon Business Park**	TPM from 8 to 1 parcel - 13.9 combined acres to accommodate new warehouse distribution bldg. total 310,760 (5,000 sq.ft. devoted to office); 268 parking spaces	Henry Chen	Steve Palmer	NW corner Etiwanda and Cantu Galleano	APNS: 156-350-019 thru 156-350-026	total 310,760 (5,000 sq.ft. devoted to office)	13.9 acres	Rocio Lopez	0	0	PC Approved 2/26/20
MA19041	**CUP19003**	**Van Buren Commercial Development**	96,638 square-foot Shopping Center. Phase 1: 4,800 sq.ft. Gas Station canopy; 5,044 sq.ft. C-Store; 4,670 sq.ft. Drive-thru Car Was;h and Phase 2: 2 drive-thru restaurants (3,052 & 4,892 sq.ft.); 12,000 sq.ft. sit down restaurant; 40,940 Anchor retail bldg.; 20,940 sq.ft. combined retail area adjacent to anchor; 552 parking spaces; Horse hitching area	Control Management, Inc.	Heady Design Inc. – Harry Heady	Southeast corner of Van Buren Blvd. & Rutile	167-330-006; 167-330-010; 167-330-015 & 167-110-039	96,338 square-foot (total)	16 acres	Rocio Lopez	0	0	PC approved 4/22/20
MA20093	**PAR**	**None at this time**	**Drive thru Rest, gas staion/conv store**	Marwan Alabassi		5620 Market	Multiple	Drive thru rest. Gas staion and conv. Market	3 acres	Miguel Del Rio	22	0	Pre-application review completed
MA20099	**PAR**	**Andy Espinoza**	**Car Auto Auction House, 16K sf commercial**	Andy Esponoza	Sachin Parlikar	9577 Mission blvd	Multiple	Car Auto Auction house 16k sq. ft. commercial buildklng	3.19 ac	Reynaldo Aquino		0	Closed
MA20021	**SDP20011**	**Articom refrigeration**	Complete tenant improvements and establish use of existing building for commercial refrigeration business and training lab.	Articom Group	Jason Fay	3675 De Forest Circle	156-390-005	33,733 sf	89,298 sf	Andrea Hoff	0	0	approved
MA20042	**SDP20023**	**Salazar Recycling**	Establish recycling collection facility in existing building in Rubidoux East Village with parking and landscaping.	Antonio Salazar	Antonio Salazar	5313 Mission Blvd.	179-260-036	4,448 sf	.12 acres	Andrea Hoff	0	0	inactive/on hold
MA20055	**SDP20029**	**Pingo Solar**	Establish use of existing warehouse for solar company and complete tenant improvements	Pingo Solar	Hayden Horan	3420 De Forest Circle	156-391-014	9,095	.59 acres	Andrea Hoff	0	0	approved
MA20134	**SDP**		Outdoor use of Parking lot for commercial cannabis			9806 Mission				Miguel	0	0	withdrawn
MA16224	**GPA,CZ,TPM, SDP**	Mission Gateway Plaza	57 multi-family affordable housing with 29,540 sq. ft. of commercial	Northtown Housing	same	NEC of Mission and Crestmore	179-330-002,003,004,005,006	57 affordable units, 29,540 sq. ft. commercial	1.8 acres	Rocio Lopez		57	City Council Approved 10/29/20
MA20075	**SDP**	Wheelers Trucking	Van and light truck outfitting and upgrading facility with new 25K sq. ft. industrial buildilng	Wheelers Trucking	Rex Wheeler	Southeast of Rubidoux and Market St.	178-330-018, 024,025	25,000 industrial bldg.	15.4 acres	Rocio Lopez	0	0	PC approved 11/10/20
MA20224	**SDP20093**	Pallet manufacturing	Establish use of Building 7 in Caterpillar business park for indoor pallet manufacturer	Western Pallet Supply		1894 Caterpillar Court Bldg. 7		existing building 41664 SF	175-160-044	Andrea Hoff	0	0	approved
MA20200	**SDP**	Commercial Center	Develop 4.53 acre site into a Tractor Supply Company store and 2 separate drive-thru restaurants (Starbucks and Carl's Jr.) -	Woodcrest Development	same	SWC of Sierra and Armstrong	APN: 174-340-042 & 044	18,800 sq.ft. Tractor Supply Company store; 2,680 sq.ft. drive-thru restaurant; 3,230 sq.ft. drive-thru restaurant	4.53 acres	Rocio Lopez	0	0	PAR only
MA20269	**PAR20064**	Self Storage				12120 68th ST				Miguel Del Rio	0	0	Pre-application review completed
MA20274	**PAR**	**26,000 sf industrial Bldg.**				2285 Via Cerro				R. Aquino	0	0	Completed
MA20209	**SDP20087**	**Guerrero Auto Shop**	legalize existing structure to be auto shop	Armondo Guerrero	Armondo Guerrero	4075 Riverview				Andrea Hoff	0	0	withdrawn

City of Jurupa Valley Cumulative Projects List - *Inactive or Completed* - last update: 05/20/21													
Master Application (MA) No.	**Related Entitlement Case Nos.**	**Project Name**	**Project Description**	**Developer**	**Applicant Rep**	**Project Location**	**APNS of Project Site**	**Total Building Square-footage / units**	**Size of Project Site**	**Project Manager**	**Projected Completion date**	**Total Single-Family Units**	**Total Multi-family Units**
MA21112	**PAR**	**First Choice Ready Mix**	Concrete Block Manufacturer	First Choice Ready Mix	Ashley Barth	6515 Clay Street	163-400-047	development of parking lot with indistrual storage and gate		E. Yee	0	0	PAR only
MA21083	**PROS**	**Rexco**	110- unit MFR			Clay and Linares				Rocio Lopez	0	110	4/21/21 PC had Study Session (PAR only)
MA20001	**PAR**	Gasoline Service Station with C-Store, Carwash, and Restaurant	Gasoline Service Station with C-Store, Carwash, and Restaurant			9253 Mission Blvd	170-212-020	9,794 Square feet		Miguel Del Rio	0	0	Pre-application review completed
MA20036	**CUP20002**	**West Coast Cold Storage**	Construct new 122,000 sf cold storage facility with parking, landscaping, and street improvements.	Icde Box Storage	Kevin Sacalas	South of 26th street between Rubidoux Blvd. and Avalon St.	178-140-018	122,000 sf	303,059 sf	Andrea Hoff	0	0	approved

CITY OF EASTVALE

Major Projects Summary

March 16, 2022

City of Eastvale Planning Division

CITY OF EASTVALE
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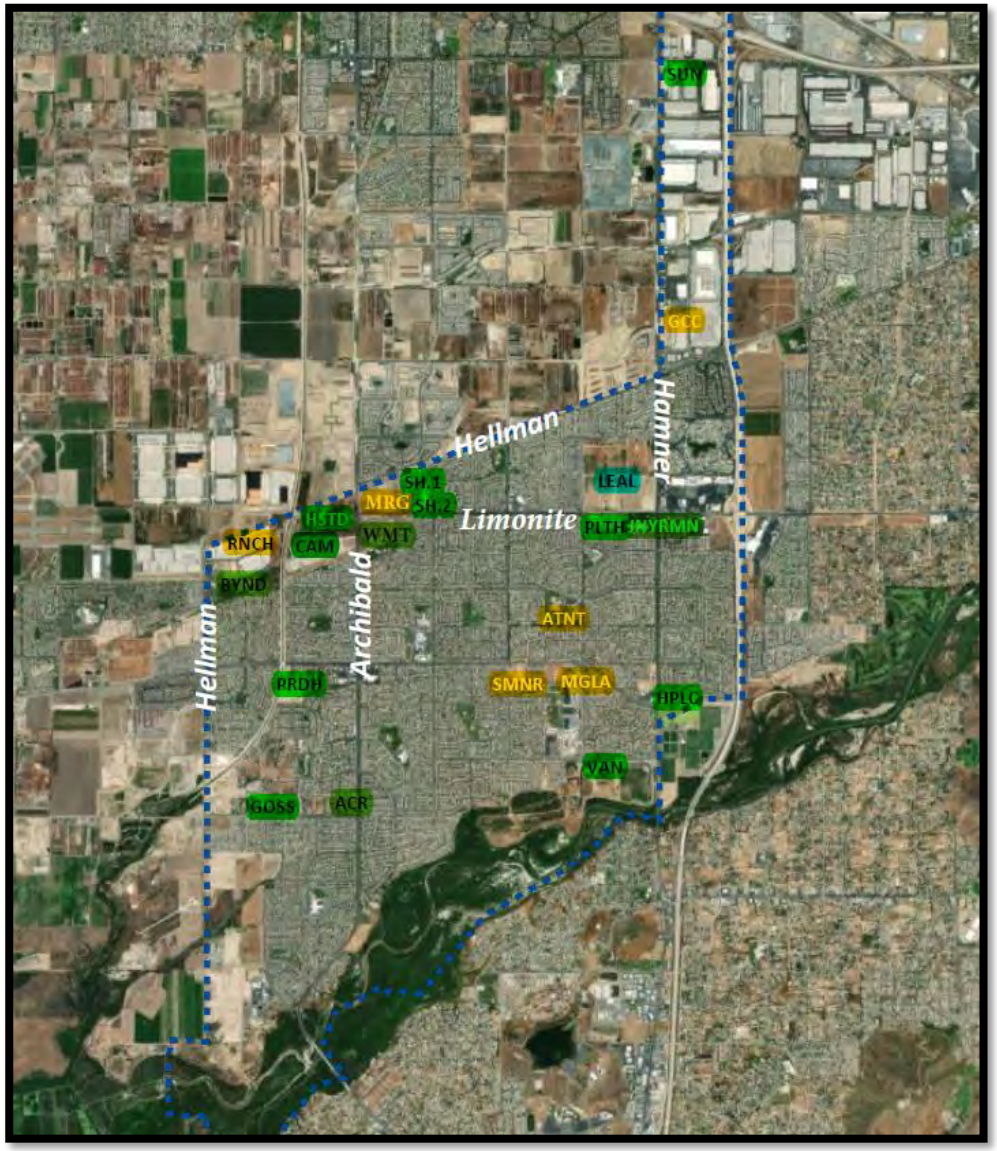
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Planning Department Major Projects Summary
March 16, 2022



1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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In-Process/Review

Sumner Place Mixed-Use Development (MAP ID: SMNR)

Project:	Sumner Place Mixed-Use Development
Project No.	PLN20-20063_GPA_001, DR_002, COZ_001, TPM38031, TTM38032
Project Location:	Southeast corner of Sumner Ave. and Schleisman Rd.; (Assessor Parcel Number: 152-040-01)
Project Description:	**General Plan Amendment** to change the land use designation from Commercial Retail (CR 0.20-0.35 FAR) to Highest Density Residential (HHDR 20.1-40 du/ac). **Change of Zone** to change the zone from Heavy Agriculture (A-2) to General Residential (R-3). **Major Development Review** for the development of 216-unit apartment project on over 9.3 acres, consisting of seven two (2) to three (3) story type "V" apartment buildings with tuck under garages and surface parking, and a 5000 s.f. commercial building (located at the corner of Sumner Ave. and Schleisman Rd.). **Tentative Parcel Map** to create two (2) parcels one residential and one commercial. **Tentative Tract Map** for condominium purposes.
Planner:	Allen Lim/Gustavo Gonzalez

Notes:

- Received application on 11.5.20
- SB18 and AB52 notice provided.
- Comments provided to applicant 12.10.20
- On 5.19.21 the Planning Commission continued the item to June 16, 2021.

Project Map:



Current Status:

- On June 16, 2021, the Planning Commission PLN20-20063 continued the hearing item off calendar.

1. New projects are added to the bottom of the list as they are submitted.
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Magnolia Ranch Residential Development (MAP ID: MGLA)

Project:	Magnolia Ranch Residential Development
Project No.	PLN21-20024_DR_003_COZ_001_GPA_001_DA_002_TTM38187
Project Location:	13175 Orange Street, Eastvale; (Assessor Parcel Number: 152-040-003)
Project Description:	**Major Development Review (DR)**: Development of approximately 39 two-story motor court detached cluster homes and 89 three-story townhomes totally 128 homes on 6.2 net acres. The development will also include a linear park with a publicly accessible trail and various community amenities (pool, tot lot, picnic pavilion, etc) and off-site improvements along the frontages of Orange Street and Schleisman Road; **Change of Zone (COZ)**: To change the zoning from Heavy Agriculture (A-2) to Planned Residential Development (PRD); **General Plan Amendment (GPA)**: To change the General Plan land use designation from Medium Density Residential (MDR) to Very High Density Residential (VHDR); **Tentative Tract Map No. 38167**: For condominium purposes; **Development Agreement (DA).**
Planner:	Jamie K. Cerda
Notes:	
▪ Received application on 5.6.21.	

Project Map:



Current Status:

- Application currently under review. Awaiting technical studies.

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Dunkin Donuts and Carwash DR and CUP (MAP ID: DUNK)

Project:	Dunkin Donuts and Carwash DR and CUP
Project No.	PLN21-20030_DR_003_CUP_007 Dunkin Donuts and PLN21-20060_DR_006_CUP_011 American Express Carwash
Project Location:	Northwest corner of Schleisman and Hamner Ave.; Assessor Parcel Number (APN) 152-341-017
Project Description:	**Major Development Review (DR):** For the development of a 3,400 square foot multi-tenant building where 1,600 square feet will be for a Dunkin Donuts with a drive-through and outdoor patio and where 1,800 square feet will be for a bistro with an outdoor patio. (PLN21-20030) **Major Development Review (DR)**: for the development of a 5,113 square foot car/truck wash with 15 vacuum stalls. (PLN21-20060) **Conditional Use Permit (CUP):** To allow the operation of a drive-through for the restaurant use. (PLN21-20030) **Conditional Use Permit (CUP)**: To allow the operation of a drive-through for the car/truck wash use. (PLN21-20060)
Planner:	Jamie K. Cerda
Notes:	
▪ Received application on 5.26.21	

Project Map:



Current Status:

- Project is currently under review.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
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GCC CR-2 Alcohol CUP (MAP ID: GCC.12)

Project:	GCC CR-2 Alcohol CUP
Project No.	PLN21-20072_CUP_011
Project Location:	Southwest corner of Goodman Way and Cantu-Galleano Ranch Rd.; Assessor Parcel Number (APN) 160-510-022
Project Description:	**Conditional Use Permit** for the on-sale and consumption of beer, wine, and distilled spirits at a 7,757 square foot PAD building (CR-2) restaurant.
Planner:	Allen Lim

Notes:

- Received application on January 4, 2022

Project Map:



Current Status:

- On January 19, 2022, the Planning Commission continued project PLN21-20072 off calendar.

1. New projects are added to the bottom of the list as they are submitted.
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Dog Haus Alcohol CUP (MAP ID: MRG.7)

Project:	Dog Haus Alcohol CUP at The Merge
Project No.	PLN22-20006_CUP001
Project Location:	Northeast corner of Limonite Avenue and Archibald Avenue; Assessor Parcel Number (APN) 164-010-041
Project Description:	**Conditional Use Permit** for the on-sale and consumption of beer and wine at an existing tenant space in The Merge Retail Center.
Planner:	Allen Lim

Notes:

- Received application on February 7, 2022

Project Map:



Current Status:

- PLN22-20006 is scheduled for the March 16, 2022, Planning Commission.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
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Beyond Mart TPM No. 38114 (MAP ID: RNCH.6)

Project:	Beyond Mart TPM No. 38114
Project No.	PLN22-20009_TPM001
Project Location:	Northeast corner of Limonite Avenue and Hellman Avenue; Assessor Parcel Number (APN) 144-010-077
Project Description:	**Tentative Parcel Map** to subdivide one (1) 10.68 acres into four (4) individual parcels.
Planner:	Allen Lim

Notes:

- Received application on March 2, 2022

Project Map:



Current Status:

- The project is currently under review.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

GCC CR-1 Chili's Alcohol CUP and VAR (MAP ID: GCC.13)

Project:	GCC CR-1 Alcohol CUP and VAR
Project No.	PLN22-20012_CUP002_VAR001
Project Location:	Southeast corner of Hamner Avenue and Cantu-Galleano Ranch Rd.; Assessor Parcel Number (APN) 160-510-023
Project Description:	**Conditional Use Permit** for the on-sale and consumption of beer, wine, and distilled spirits at a 7,757 square foot PAD building (CR-1) restaurant (dba Chili's). **Variance** to request modification to the sign standards to allow four (4) additional tenant wall signs.
Planner:	Jamie K. Cerda

Notes:

- Received application on March 7, 2022

Project Map:



Current Status:

- The project is currently under review.

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Approved/ Entitled

Goodman Commerce Center (MAP ID: GCC)

Project:	Goodman Commerce Center (formally Lewis Eastvale Commerce Center)
Project No.	11-0271 **see related projects below
Project Location:	190 acres +/- fronting on Hamner Ave. north of Bellegrave Ave. and south of Cantu-Galleano Ranch Road
Project Description:	General Plan Amendment, Change of Zone, and Specific Plan to provide a mix of warehousing, light industrial, office, and retail uses. Major Development Review for the development of two industrial buildings of approximately 1,007,705 square feet and 1,033,192 square feet. CEQA: Environmental Impact Report (certified)
Planner:	Allen Lim

Notes:

- Approved by City Council on November 12, 2014
- See the following projects for more recent activity at the Goodman Commerce Center Development:
  - Project No. PLN17-20033: Retail Building CR-3 – Starbucks & other tenants (GCC.1)
  - Project No. PLN18-20014: Retail Building CR-12 – Quick Quack Carwash (GCC.2)
  - Project No. PLN18-20042: Retail Building CR-11 – Multi-Tenant (GCC.3)
  - Project No. PLN19-20006: Retail Building CR-10- Chick-fil-A (GCC.4)
  - Project No. PLN 19-20063 Retail Building CR-8 – Altura Credit Union (GCC.5)
  - Project No. PLN 19-20064 Retail Building CR-6 (GCC.6)

Project Map:



Current Status:

- Various buildings complete, operating and under construction.

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Retail Unit CR-12 (GCC.1)

Project:	Goodman Retail CR-12 – Quick Quack Car Wash
Project No.	PLN18-20014
Project Location:	West of Amazon off-site parking lot and south of Costco parking lot in the retail portion of Goodman Commerce Center
Project Description:	Major Development Review for a proposed self-serve car wash with a 3,571-square foot car-wash tunnel, vacuum canopy structure, and associated parking.
Planner:	Allen Lim

Notes:

- Received application on March 21, 2018.
- Planning Commission approval on June 20, 2018.
- Revised construction plans approved on May 30, 2019.

Project Map:



Current Status:

- Quick Quack Car Wash is completed and in operation

1. New projects are added to the bottom of the list as they are submitted.
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Retail Unit CR-3/SBUX (GCC.2)

Project:	Goodman Retail Building CR-3 and Starbucks Drive-Through DR & CUP
Project No.	PLN17-20033
Project Location:	Southeast corner of Hamner Avenue and Cantu-Galleano Ranch Road and west of Goodman Way; Goodman Commerce Center
Project Description:	Major Development Review for the development of CR-3, a 4,000 square-foot multi-tenant building and Conditional Use Permit for a drive-through located in the retail portion of the Goodman Commerce Center
Planner:	Allen Lim

Notes:

- Planning Commission approval on March 21, 2018.
- Starbucks in operation as of February 7, 2019.



Project Map:



Current Status:

- Starbucks is completed and in operation.

1. New projects are added to the bottom of the list as they are submitted.
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Multi-Tenant Unit CR-11 (GCC.3)

Project:	Goodman Commerce Center CR-11 – Multi-Tenant Building
Project No.	PLN18-20042
Project Location:	Southeast corner of Hamner Avenue and Cantu-Galleano Ranch Road and west of Goodman Way, Parcel 10 of Parcel Map 37208; (Assessor's Parcel Number 160-020-078)
Project Description:	Major Development Review for a new 6,000 square-foot multi-tenant retail building on a 37,250 square-foot site.
Planner:	Allen Lim

Notes:

- Received application on July 26, 2018.
- Building plans received November 20, 2018. Comments provided to applicant December 27, 2018.
- Approved by Planning Commission on October 17, 2018.
- Landscape plans approved on January 21, 2019.
- Revised construction plans approved on February 19, 2019.
- On 10.17.18 the Planning Commission approved the project subject to conditions of approval.

Project Map:



Current Status:

- Building is currently under construction.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
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Chick-fil-A (GCC.4)

Project:	Chick-fil-A at Goodman Commerce Center
Project No.	PLN19-20006
Project Location:	5080 Hamner Avenue (Assessor Parcel Numbers: 160-020-079) (Goodman CR-10)
Project Description:	Major Development Review and Conditional Use Permit for development and operation of a 4,833 sq. ft. restaurant with two drive-through lanes
Planner:	Allen Lim

Notes:

- Received application on February 19, 2019.
- Incompleteness letter sent on March 13, 2019.
- Comment letter sent on March 25, 2019.
- Meeting with applicant on April 3, 2019 to discuss comment letter.
- Revised plans received on April 12th and April 29th.
  - On 5.15.19 the Planning Commission approved the project subject to conditions of approval.



Project Map:



Current Status:

- Chick-fil-A is completed and in operation.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
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Altura Credit Union D.R (GCC.5)

Project:	Goodman Commerce Center CR-8 Altura Credit Union - Major Development Review (DR)
Project No.	PLN19-20063
Project Location:	Southeast corner of Hamner Avenue and Cantu-Galleano Ranch Road – West of Goodman Way Parcel 10 of Parcel Map 37208; (Assessor's Parcel Number: 160-020-082)
Project Description:	▪ Major Development Review for the development of a Credit Union Bank (CR-8) totaling approximately 5,000 square feet
Planner:	Allen Lim/Gina Gibson-Williams

Notes:

- Received application on December 12, 2019.
- Routed for department review on December 23, 2019.
- Planning and department comments provided to applicant on January 23, 2020.
- Resubmittal received on January 30, 2020.
  - On 2.19.20 the Planning Commission approved the project subject to conditions of approval.

Project Map:



Current Status:

- Building is currently under construction.

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Building CR-6 D.R (GCC.6)

Project:	Goodman Commerce Center CR-6– Major Development Review (DR)
Project No.	PLN19-20064
Project Location:	Southeast corner of Hamner Avenue and Cantu-Galleano Ranch Road – West of Goodman Way Parcel "A" of Lot Line Adjustment 2018-001; (Assessor's Parcel Number: 160-020-088)
Project Description:	▪ Major Development Review for the development of a multi-tenant retail building (CR-6) totaling approximately 4,800 square-feet
Planner:	Allen Lim/Gina Gibson-Williams

Notes:

- Received application on December 12, 2019.
- Routed for department review on December 23, 2019.
- Planning and department comments provided to applicant on January 23, 2020.

Project Map:



Current Status:

- The Planning Commission approved the project on February 19, 2020.

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2. Projects that have been completed for more than one year are removed from this list.
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"CR-6A, CR-A, CR-B (Tawa), and CR-C (Food Hall)" (GCC.7)

Project:	Goodman Commerce Center "The Station" Planning Area 4 CR-6A, CR-A, CR-B, CR-C
Project No.:	PLN20-20018_DR_001_TPM37936_CUP_002
Project Location:	Southeast corner of Hamner Avenue and Cantu-Galleano Ranch Road, west of Goodman Way; Assessor's Parcel Number (APN): 160-020-066, -068, -071, -084
Project Description:	▪ **Major Development Review**: o 6,000 sf. retail building (CR-6A) located on a building pad directly east of CR-6. o 21,500 square foot retail building (CR-A) locating directly north of the Costco Wholesale Store. o 35,000 square foot retail grocery building (CR-B) located adjacent to CR-A. This use is proposed to be a typical, full service, grocery retailer. o 16,000 square foot food hall (CR-C) located across from the grocery retailer, accessed through a shared courtyard entrance. ▪ **Tentative Parcel map** to create 11 commercial parcels and facilitate various site and circulation improvements would be made to connect the parking areas to the nearby roadways. ▪ **Conditional Use Permit t**o allow for the on-site consumption in association with bona-fide food sale/restaurant uses and the off-site sale for the grocery retail store.
Planner:	▪ Gustavo Gonzalez
Notes:	▪ Application submitted on May 14, 2020. ▪ Distributed to Development Review Committee on May 21, 2020 and received comments and draft conditions on June 11, 2020. ▪ Approved by the Planning Commission on July 15, 2020.

Project Map:



Current Status:

- Grading is currently in progress.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Zeppin Sushi DR and CUP (MAP ID: GCC.8)

Project:	Zeppin Sushi Alcohol CUP
Project No.:	PLN21-20036_CUP_008 Zeppin Sushi Alcohol CUP
Project Location:	4910 Hamner Avenue, Suite 170; Southeast corner of Hamner Avenue and Cantu-Galleano Ranch Road (The Station – Goodman Commerce Center) (APN) 160-510-019
Project Description:	**Conditional Use Permit (CUP)**: To allow the on-site sale/consumption of beer and wine in conjunction with a new sit-down restaurant (Zeppin Sushi)
Planner:	Allen Lim
Notes:	▪ Received application on 6.28.21

Project Map:



Current Status:

- On July 21, 2021, the Planning Commission approved PLN21-20036 subject to the conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

GCC Crying Tiger Bistro and Bar Alcohol CUP (MAP ID: GCC.9)

Project:	GCC Crying Tiger Bistro and Bar Alcohol Conditional Use Permit
Project No.:	PLN21-20057_CUP_010 – Crying Tiger Bistro and Bar Alcohol CUP
Project Location:	4916 Hamner Ave. Suite #120 at the Southeast corner of Cantu-Galleano Ranch Road and Limonite Avenue; (Assessor's Parcel Number: 160-510-017)
Project Description:	**Conditional Use Permit:** Full-service Thai restaurant and bar for sale of beer, wine, and distilled spirits for on-site consumption located at the Station located on the southeast corner of Cantu-Galleano Ranch Rd. and Limonite Ave. The CUP request is specific to one of the multi-tenant spaces for CR-6A
Planner:	Jamie K. Cerda
Notes:	▪ Received application on 9.8.21

Project Map:



Current Status:

- On October 20, 2021 the Planning Commission approved the project subject to conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

GCC CR-1 DR (MAP ID: GCC.10)

Project:	GCC CR-1 DR
Project No.:	PLN21-20063_DR_012
Project Location:	Southwest corner of Goodman Way and Cantu-Galleano Ranch Rd. ; Assessor Parcel Number (APN) 160-510-023
Project Description:	**Major Development Review** for the development of a 5,213 square foot PAD building (CR-1) and 575 square foot outdoor patio for a total of 5,788 square feet for a proposed restaurant building.
Planner:	Jamie K. Cerda
Notes:	▪ Received application on November 17, 2021.

Project Map:



Current Status:

- On January 19, 2022, PLN21-20063 was approved by the Planning Commission subject to conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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GCC CR-2 DR (MAP ID: GCC.11)

Project:	GCC CR-2 DR
Project No.:	PLN21-20068_DR_013
Project Location:	Southwest corner of Goodman Way and Cantu-Galleano Ranch Rd.; Assessor Parcel Number (APN) 160-510-022
Project Description:	**Major Development Review** including site planning and architecture for the development of a 7,757 square foot PAD building (CR-2) for a proposed restaurant building.
Planner:	Jamie K. Cerda
Notes:	▪ Received application on November 17, 2021

Project Map:



Current Status:

- On January 19, 2022, PLN21-20068 was approved by the Planning Commission subject to conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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The Campus (MAP ID: CAM)

Project:	The Campus (former Providence Business Park)
Project No.	12-0750
Project Location:	West of Archibald Avenue and approximately 750 ft. south of Limonite Avenue (APNs 144-010-002, -033, -037 & -038)
Project Description:	Change of Zone, Major Development Review, and Tentative Parcel Map for the development of a business park consisting of 11 new industrial buildings ranging from 12,850 square feet to 129,000 square feet (totaling approximately 694,770 square feet), one 2-story office building of 33,600 square feet, and two retail buildings totaling 10,600 square feet on 53.37 gross acres of vacant land (former Bircher's site). CEQA: EIR Addendum
Planner:	Allen Lim

Notes:

- Approved by City Council on April 9, 2014
- All industrial buildings are built and occupied.
- See the following projects for more recent activity at The Campus (former Providence Business Park) Development:
  - PLN19-20001 The Campus Self-Storage Facility DR, CUP (CAM.1)
  - PLN19-20008 The Campus 7-Eleven DR, CUP (CAM.2)
- Front land abutting Archibald has been entitled with The Campus Self-Storage and The Campus 7-Eleven.

Project Map:



Current Status:

- The Campus (industrial buildings) are constructed and in operation.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Self-Storage D.R & C.U.P (CAM.1)

Project:	The Campus Self-Storage Facility DR & CUP
Project No.	PLN19-20001
Project Location:	West side of Archibald Avenue and South of Providence Way; (Assessor Parcel Number: 144-010-063)
Project Description:	Major Development Review and Conditional Use Permit for development and operation of a 4-story, self-storage facility in the front portion of The Campus development.
Planner:	Allen Lim

Notes:

- Received application on January 22, 2019.
- This project would replace an earlier approval for a two-story office building at this location.
- Application incompleteness letter sent on February 11, 2019.
- Comment letter sent on February 25, 2019.
- Second resubmittal received on February 27, 2019.
- 2nd incomplete application letter sent on March 13, 2019.
- 3rd resubmittal received on May 23, 2019.
- 4th submittal received on June 7, 2019.
- On 7.17.19 the Planning Commission approved the project subject to conditions of approval.

Project Map:



Current Status:

- The self-storage facility is currently under construction.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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7-Eleven C.U.P (CAM.2A)

Project:	The Campus 7-Eleven Gas Station DR, CUP's
Project No.	PLN19-20008
Project Location:	The Campus (West side of Archibald and South of Providence Way); (Assessor Parcel Number: 144-010-063)
Project Description:	Major Development Review and Conditional Use Permit for development and operation of a convenience store, gas station and carwash.
Planner:	Allen Lim

Notes:

- Received application on February 26, 2019.
- Incomplete letter sent on March 14, 2019.
- Comment letter sent on March 22, 2019.
- 2nd resubmittal received on May 17, 2019.
- 3rd submittal received on June 7, 2019.
- On July 17, 2019, the Planning Commission approved the project subject to conditions of approval. (See **PLN19-20029**)

Project Map:



Current Status:

- Construction plans are currently under review.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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7-Eleven Appeal (CAM.2B)

Project:	The Campus 7-Eleven Gas Station DR Appeal
Project No.	PLN19-20029
Project Location:	The Campus (West side of Archibald and South of Providence Way); (Assessor Parcel Number: 144-010-063)
Project Description:	▪ Appeal Planning Commission's approval of a Major Development Review and Conditional Use Permit for development and operation of a convenience store, gas station and carwash.
Planner:	Allen Lim

Notes:

- Received application on July 29, 2019.

Project Map:



Current Status:

- City Council denied the appeal and recommended new conditions on August 28, 2019. See PLN19-20008 for current status.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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The Ranch (MAP ID: RNCH)

Project:	The Ranch
Project No.	15-0783
Project Location:	Northeast and southeast corners of Hellman and future Limonite (Kimball) Avenues, west of Cucamonga Creek Channel. Moons Site (APNs: 144-010-008-0, 144-101-013-4) and Rodriguez Site (APN: 144-010-009-1)
Project Description:	• Specific Plan Amendment to modify boundaries for Planning Areas 1 through 6, land use designation for Planning Area 5, and revisions to allowable uses. No revisions to Planning Areas 7 through 9. • Major Development Review for six (6) industrial buildings totaling 985,000 square feet on six (6) parcels. • Tentative Parcel Map No. 36787 to subdivide approximately 97 gross acres into 14 legal parcels. CEQA: EIR Addendum
Planner:	Allen Lim

Notes:

- Approved by City Council on December 9, 2015.
- February 19, 2016, a new owner purchased the six (6) industrial lots.
- Monument Sign approved on February 1, 2018.
- See the following projects for more recent activity at The Ranch:
  - Project No. PLN18-20007: Eastvale 88,000 square-foot Warehouse building in Planning Area 3. (RNCH.1)
  - Project No. PLN18-20050: Howard Industrial -Major Development Review, Tentative Map for Planning Areas 7, 8 and 9 (RNCH.2)
  - Project No. PLN19-20034: Transwestern – Major Development Review, Amendment to Tentative Parcel Map for Planning Areas 7, 8, and 9 (RNCH.3)
  - Project No. PLN19-20035: Summit Development – Major Development Review for Planning Area 6 (RNCH.4)

Project Map



Current Status:

- Approved.
- Continue discussing potential development for commercial portion.
- Construction of six industrial/warehouse buildings are completed.
- Final Cancellation of the Williamson Act Contract for the Rodriguez Site scheduled for City Council meeting on July 24, 2019.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

Warehouse/Industrial D.R (RNCH.1)

Project:	The Ranch Planning Area 3 Warehouse/Industrial Building
Project No.	PLN18-20007
Project Location:	Planning Area 3 of The Ranch at Eastvale
Project Description:	Major Development Review to construct an 88,000 square-foot industrial building on 5 acres in Planning Area 3 of The Ranch at Eastvale.
Planner:	Allen Lim

Notes:

- Received application on February 14, 2018.
- On May 16, 2018 Planning Commission approved Major Development Review
- Approved construction plans October 31, 2018.



Project Map:



Current Status:

- The building is completed and in operation.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Howard Industrial (RNCH.2)

Project:	Howard Industrial at The Ranch (Rodriguez Site)
Project No.	PLN18-20050
Project Location:	East end of Limonite Avenue (The Ranch Planning Area 7, 8 and 9); Assessor's Parcel Numbers: 144-010-009 and 144-010-004, and 144-010-005
Project Description:	▪ Major Development Review for development of a 21-acre site for light industrial uses located in Planning Areas 7 and 9 of The Ranch Specific Plan ▪ Tentative Parcel Map to subdivide the project site. ▪ Diminishment of Agricultural Preserve & Williamson Act Cancellation for the project site.
Planner:	Allen Lim

Notes:

- Agricultural Preservation & Williamson Act Cancellation submitted on September 4, 2018.
- Major Development Review and Tentative Parcel Map received on October 24, 2018.
- Approved by Planning Commission for Major Development Review and Tentative Parcel Map on December 19, 2018.
- Approved by City Council for diminishment of the agricultural preserve and tentative cancellation of the Williamson Act contract on February 13, 2019.
- Staff is in discussion with a new owner regarding design changes.
- Final Cancellation of Williamson Act Contract approved by City Council July 24, 2019.

Project Map:



Current Status:

- See **PLN19-20034** for current status with new owner.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

Rodriguez Site D.R (RNCH.3)

Project:	The Ranch by Transwestern (Rodriguez Site)
Project No.	PLN19-20034
Project Location:	East end of Limonite Avenue (The Ranch Planning Area 7, 8 and 9); (Assessor's Parcel Numbers: 144-010-009 and 144-010-004, and 144-010-005)
Project Description:	▪ Major Development Review (DR) and an Amendment to the Tentative Parcel Map (TPM) to construct 2 light industrial warehouses on the Rodriguez Site (Planning Area 7, 8, and 9) located on the southeast corner of Moon Place and Remington Avenue.
Planner:	Allen Lim

Notes:

- Received application on September 3, 2019.
- Routed to other departments for review.
  - Incompleteness letter provided to applicant on October 8, 2019.
  - Precise Grading Plans received 12/23/19; Precise Grading comments provided 1/13/20; Awaiting resubmittal of Major Development Review and Precise Grade.
  - Routed for comments from other departments on February 12, 2020.
  - Received comments on February 26, 2020.
  - Received Submittal 3 on April 8, 2020.
  - On 6.17.21 the Planning Commission approved the project subject to conditions of approval.

Project Map:



Current Status:

- The Ranch by Transwestern (Industrial Buildings 1 and 2) are currently under construction.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Summit Development (RNCH.4)

Project:	The Ranch by Summit Development (Parcel 14)
Project No.	PLN19-20035
Project Location:	East end of Limonite Avenue (The Ranch Planning Area 6); (Assessor's Parcel Number: 144-010-058)
Project Description:	▪ A Major Development Review for a 61,000 square foot light industrial building on 4.36 acres of Parcel 14 on The Ranch. The building will be located in Planning Area 6 of The Ranch Specific Plan. ▪
Planner:	Allen Lim

Notes:

- Received pre-application on September 12, 2019.
- Routed to other departments for review.
  - Comments provided to applicant 10/17/19.
  - Formal submittal received January 15, 2020 – Routed for department review.
  - On 2.19.20 the Planning Commission approved the project subject to conditions of approval.

Project Map:



Current Status:

- Construction documents currently under review.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Beyond Food Mart at The Ranch (MAP ID: RNCH.5)

Project:	Beyond Food Mart Major Development Review and Conditional Use Permit(s)
Project No.	PLN21-20014_DR_002_CUP_003
Project Location:	Northeast corner of Hellman Ave. and Limonite Ave. at The Ranch Specific Plan (Assessor Parcel Number: 144-010-077)
Project Description:	**Major Development Review,** for the construction of a new 7,150 square-foot Beyond Food Mart with a single lane drive-through operation, a 5,177 square-foot canopy, and a 2,312 square-foot drive-through carwash **Conditional Use Permit,** for the operation of automobile service station with concurrent off sale of beer and wine (Type 20) **Conditional Use Permit,** for the operation of a C-Store with a drive-through **Conditional Use Permit,** for the operation of a drive-through carwash
Planner:	Allen Lim

Notes:

- Received application on 3.17.21

Project Map:



Current Status:

- On November 17, 2021 the Planning Commission approved project PLN21-20014, subject to conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Hamner Place (MAP ID: HPLC)

Project:	Hamner Place (former Polopolus Property)
Project No.	PLN17-20015
Project Location:	7270 Hamner Avenue; North of Silver Lakes Sports Complex and east of Hamner Avenue. APNs: 152-060-002 and -003
Project Description:	General Plan Amendment, Change of Zone, Tentative Parcel Map, and Major Development Review for the development of a retail center, and four Conditional Use Permits for the operations of certain uses and sales of alcohols. CEQA: Environmental Impact Report (EIR)
Planner:	Gina Gibson-Williams/ Allen Lim

Notes:

- June 25, 2018, applicant withdrew two Conditional Use Permits (for a drive-through on Pads 2 and for alcohol sales in a future gas station convenience store).
- June 27, 2018: City Council certified the Final EIR and approved all applications. Notice of Determination recorded on June 28, 2018.
- See the following projects in the retail center:
- Project No. PLN18-20041: Chevron Gas Station and Convenience Store DR CUP
- Project No. PLN19-20023: Lewis Retail Suites Hotel DR CUP
- Project No. PLN19-20053: Retail Suites DR
- Project No. PLN19-20044: Appeal Chevron Gas Station and Convenience Store DR CUP
- Mass grading plan received on June 10, 2019; comments provided on June 12, 2019 requesting for documentations showing compliance with the conditions of approval for grading permit issuance.
- Rough grading plans received on June 24, 2019; Received documentation showing compliance to Conditions of Approval and approved July 2, 2019.
- Groundbreaking July 12, 2019

Project Map:



Current Status:

- Hamner Place is currently under construction.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Hotel Suites (HPLC.1)

Project:	Hotel - Staybridge Suites at Hamner Place
Project No.	PLN19-20023
Project Location:	Southeast corner of Hamner Avenue and Schleisman Road; (Assessor Parcel Number: 152-050-050)
Project Description:	**Major Development Review** for a hotel and a banquet facility and a **Conditional Use Permit** for the sale of alcohol for on-site consumption.
Planner:	Gina Gibson-Williams

Notes:

- Received application on June 6, 2019.

See the following project for more information:

- PLN17-20015: Hamner Place (former Polopolus Property)
- Approved by Planning Commission on June 19, 2019.
- Building plans received for review on January 30, 2020.

Project Map:



Current Status:

- The Staybridge Suites is currently under construction.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Hamner Place Chevron Appeal (HLPC.2A)

Project:	Appeal for Chevron Gas Station (Hamner Place) DR & CUP
Project No.	PLN19-20055 (see PLN18-20041)
Project Location:	7180 Hamner Avenue; northeast corner of Hamner Ave. and Schleisman Rd.; (Assessor's Parcel Number: 152-060-003)
Project Description:	Appeal Planning Commission's denial for the Major Development Review for a new Chevron gas station with a 3,018 square-foot convenience store, 3,472 square-foot canopy and a Conditional Use Permit, to allow the sales of beer and wine for off-site consumption (See Map ID: 19)
Planner:	Allen Lim

Notes:

- Received application on November 26, 2019

Project Map:



Current Status:

- City Council approved the project and recommended new conditions of approval on January 22, 2020. See PLN18-20041 for current status.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Hamner Place Chevron (HLPC.2B)

Project:	Chevron at Lewis Retail at the Hamner Place (former Polopolus Property)
Project No.	PLN18-20041
Project Location:	7180 Hamner Avenue; northeast corner of Hamner Ave. and Schleisman Rd.; (Assessor's Parcel Number: 152-060-003)
Project Description:	**Major Development Review** for a new Chevron gas station with a 3,018 square-foot convenience store, a 3,472 square-foot canopy with five (5) fueling dispensers, and associated site improvements. **Conditional Use Permit** for sales of beer and wine for off-site consumption.
Planner:	Allen Lim

Notes:

- Received application on July 24, 2018; has been routed to the other departments for a review.
- Incompleteness letter out to applicant on August 28, 2018.
- Comment letter provided to applicant on September 18, 2018.
- Second revised development plans received November 5, 2018.
- Second submittal comment letter provided to applicant on November 14, 2018.
- Third revised development plans received January 22, 2019.
- Incompleteness letter to applicant on February 12, 2019.
- Comment letter sent to applicant on February 20, 2019.
- Planning Commission denied the project on November 20, 2019.
- Applicant has applied to appeal the Planning Commission's decision on November 20, 2019 (See PLN19-20055)
- City Council approved the appeal and recommended new conditions of approval on January 22, 2020.

Project Map:



Current Status:

- Construction plans are currently under review.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

Hamner Place Retail Suites D.R (HPLC.3)

Project:	Hamner Place Retail Suites – Major Development Review (DR)
Project No.	PLN19-20053
Project Location:	Southeast corner of Hamner Avenue and Schleisman Road; (Assessor's Parcel Number: 152-060-003)
Project Description:	**Major Development Review** for a multi-tenant building to include retail suites and a potential restaurant. The restaurant is proposed to be 5,910 square feet and the shops portion of the building is 2,270 square feet for a total building floor area of 9,190 square feet.
Planner:	Gina Gibson-Williams

Notes:

- Received application on November 21, 2019.

Project Map:



Current Status:

- On December 18, 2019, the Planning Commission approved project PLN19-20053 subject to conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Hamner Place TPM No. 37955 (MAP ID: HPLC.4)

Project:	Hamner Place TPM No. 37955
Project No.	PLN21-20038 TPM No. 37955 Hamner Place Tentative Parcel Map
Project Location:	East of Hamner Avenue and south of Schleisman Road (Hamner Place); APN 152-060-060 and 152-060-047
Project Description:	**Tentative Parcel Map (TPM):** To subdivide approximately 4.2 acres consisting of two (2) parcels into four (4) parcels to accommodate a future building pads in the C-1/C-P)
Planner:	Allen Lim

Notes:

- Received application on 6.28.21
  - On July 21, 2021, the Planning Commission continued the item to the September 15th Planning Commission meeting.
  - On 9.15.21 the Planning Commission continued the item to the October 20th Planning Commission meeting.

Project Map:



Current Status:

- On October 20, 2021 the Planning Commission approved the project subject to conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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The Merge (MAP ID: MRG)

Project:	The Merge Retail and Industrial Center
Project No.	PLN18-20026
Project Location:	Northeast corner of Limonite Avenue and Archibald Avenue; APN: 164-010-019-6
Project Description:	**Major Development Review**, **Tentative Parcel Map**, and **Variance** for the development of a retail and light industrial center on an approximately 26-acre site, and various **Conditional Use Permits** for certain uses.
Planner:	Allen Lim

Notes:

- Received application on May 24, 2018; Development plans received on June 26, 2018.
- Draft Environmental Impact Report (EIR) available for a 45-day public review period from September 18, 2018, to November 2, 2018.
- Condition Use Permits application submitted on October 1, 2018.
- November 21, 2018, Planning Commission recommended approval of all applications, plus added new conditions for the Major Development Review application.
- December 12, 2018, City Council certified the EIR and approved all applications as recommended by the Planning Commission including the new conditions recommended by the Planning Commission, plus the Council added one new condition for the Major Development Review. January 9, 2019, City Council conducted second reading of ordinance for Change of Zone.
- Construction building plans for industrial buildings 1-6 approved by Planning 11.25.19
- Sprouts (Major 1) is completed and in operation 10.28.20

Project Map:



Current Status:

- The Merge is currently under construction (pending final sign off).

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Retail Minor D.R (MRG.1)

Project:	The Merge Retail (Major 2) Minor Development Review
Project No.	PLN19-20041
Project Location:	Northeast corner of Limonite Avenue and Archibald Avenue; (Assessor's Parcel Number: 164-010-019-6)
Project Description:	▪ Minor Development Review to replace the previously approved pharmacy with a drive through to two (2) retail buildings.
Planner:	Allen Lim

Notes:

- Received application on October 28, 2019.
  - Application has been deemed incomplete on December 23, 2019.
  - Received resubmittal on February 3, 2020.
- On February 26, 2020, the Planning Division approved the project subject to conditions of approval.

Project Map:



Current Status:

- The building is currently under construction.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Retail Major Shops 4 D.R (MRG.2)

Project:	The Merge Retail Major Development Review (DR) Shops 4
Project No.	PLN19-20049
Project Location:	Northeast corner of Limonite Avenue and Archibald Avenue; (Assessor's Parcel Number: 164-010-019-6)
Project Description:	▪ Major Development Review for the addition of one new building with a drive-through Shops 4 with drive-through is estimated to be 10,500 square feet.
Planner:	Gina Gibson-Williams/ Allen Lim

Notes:

- Received application on November 7, 2019.
- Application has been deemed incomplete November 7, 2019.
- On February 19, 2020, the Planning Commission approved PLN19-20049 subject to conditions of approval.

Project Map:



Current Status:

- The building is currently under construction.

1. New projects are added to the bottom of the list as they are submitted.
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Retail Shops 4 C.U.P (MRG.3)

Project:	The Merge Retail Shops 4 Drive-Through CUP
Project No.	PLN19-20050
Project Location:	Northeast corner of Limonite Avenue and Archibald Avenue; (Assessor's Parcel Number: 164-010-019-6)
Project Description:	▪ Conditional Use Permit for the operation of a Drive-Through at Shops 4 of the Merge.
Planner:	Gina Gibson-Williams/ Allen Lim

Notes:

- Received application on November 7, 2019.
- Application has been deemed incomplete November 7, 2019.
- On February 19, 2020, the Planning Commission approved CUP PLN19-20050 subject to conditions of approval.

Project Map:



Current Status:

- The building is currently under construction.

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Bushfire Kitchen Alcohol CUP (MAP ID: MRG.5)

Project:	Bushfire Kitchen Alcohol CUP
Project No.	PLN21-20028_CUP_006 Bushfire Kitchen Alcohol CUP
Project Location:	14134 Limonite Ave Suite 240 Eastvale at The Merge, CA 92880; Assessor Parcel Number (APN) 164-010-019
Project Description:	**Conditional Use Permit (CUP)**: to allow the sale and consumption of beer, wine, and distilled spirits on-site
Planner:	Allen Lim

Notes:

- Received application on 5.19.21

Project Map:



Current Status:

- On June 16, 2021 the Planning Commission approved the project subject to conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
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The Merge Pad 2 (MAP ID: MRG.6)

Project:	The Merge Pad 2 Major Development Review and Conditional Use Permit
Project No.	PLN21-20047_DR_005_CUP_009 The Merge – Pad 2
Project Location:	Northeast corner of Limonite Avenue and Archibald Avenue – Suite 400; (Assessor's Parcel Number: 164-010-019)
Project Description:	**Major Development Review (DR):** To allow the construction of one (1) commercial retail building (2,000 sf building with an outdoor seating area) with a shaded communal area in between a future proposed retail building
Planner:	Allen Lim

Notes:

- Received application on 8.2.21

Project Map:



Current Status:

- On October 20, 2021 the Planning Commission approved the project subject to conditions of approval.

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1. New projects are added to the bottom of the list as they are submitted.
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Walmart (MAP ID: WMT)

Project:	Walmart – Eastvale Crossings
Project No.	PLN12-0051
Project Location:	Southeast corner of Limonite and Archibald Avenues (APN 144-030-039)
Project Description:	General Plan Amendment, Change of Zone, Major Development Review, five Conditional Use Permits, Tentative Tract Map No. 35061, and Variance for the development of a 177,000 +/- sq. ft. retail store and several outparcels on 24.78 acres. CEQA: Environmental Impact Report (certified)
Planner:	Allen Lim

Notes:

- City Council approval on April 26, 2017.
- Project was reviewed by the Riverside County Airport Land Use Commission and received a conditional finding of conformance with the Chino Airport Land Use Compatibility Plan.
- Public review of DEIR available from September 27 to November 17, 2016.
- On March 15, 2017, the Planning Commission reviewed and recommended approval of the project to City Council.
- City Council public hearing on April 12, 2017, with a staff recommendation to continue the hearing to April 26, 2017.
- City Council approval on April 26, 2017. Notice of Determination recorded on April 27, 2017.
- Waiting for applicant to submit construction plans.
- Extension of Time (PLN19-20052) has been approved by the Planning Commission on 1.15.2020
- Extension of Time (PLN19-20052) has been approved by the Planning Commission on 1.15.2020

Project Map:



Current Status:

- Waiting for applicant to submit construction plans.
- Extension of Time and Revision to TTM No. 35061 received 4.15.21. See PLN21-20021 for current status.

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Walmart (MAP ID: WMT.1)

Project:	Walmart Revision to TTM No. 35061, Extension of Time, Major Development Review
Project No.	PLN21-20021_MDR_002_EOT_001 (Ref. PLN12-0051)
Project Location:	Southeast corner of Limonite and Archibald Avenues (Assessor Parcel Number: 144-030-039)
Project Description:	**Amendment/Revision to Approved Project**: Minor revision of TTM. No. 35061 and minor design review to accommodate updated proto and gas station design site plan for Walmart. **Extension of Time (EOT):** Tentative Tract Map (TTM No. 35061) Extension of Time – Expiring April 26, 2021. **Major Development Review** for the construction of a Walmart gasoline service station with an ancillary 1,620 square foot convenience store located on Parcel 2 of Tentative Tract Map No. 35061
Planner:	Allen Lim

Notes:

- Received application on 4.15.21
  - Extension of Time and Revision to TTM No. 35061 received 4.15.21

Project Map:



Current Status:

- On October 20, 2021, the Planning Commission approved project PLN21-20021, subject to conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
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Sendero Homes (MAP ID: SH.1)

Project:	Sendero Cluster Homes by Lennar
Project No.	PLN17-20043
Project Location:	West portion of Sendero (Tracts 36775-2, 36775-3, and 36775) at northwest corner of Limonite Avenue and Harrison Avenue.
Project Description:	Minor Development Review for Master Home Plan of the 6-Pack and 8-Pack at Sendero.
Planner:	Allen Lim

- Received application on December 19, 2017, plans provided on December 21, 2017.
- Final Site of Development plans are approved on May 1, 2018.
- Architectural elevation approved on August 14, 2018.
- On-site Subdivision Flags signage submitted on March 28, 2019 by Lennar and approved on April 30, 2019.





Project Map:



Current Status:

- Homes are currently under construction.

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Sendero Front Loaded Homes (MAP ID: SH.2)

Project:	Sendero Century Communities Front Loaded Homes
Project No.	PLN18-20032
Project Location:	Northeast corner of Archibald Avenue and Chandler Street; Tract Map 36775-1
Project Description:	Minor Development Review for architectural design and Final Site of Development for front loaded homes (eastern side of the SEC easement) at Sendero. This portion consists of 82 single-family homes.
Planner:	Allen Lim

Notes:

- Received application on June 27, 2018; has been routed to the other departments for a review.
- Architectural plans and enhancement map approved on August 15, 2018.
- Phase 1 and 2 of Precise Grading Plans approved September 9, 2018.
- Revised lot exhibits approved September 20, 2018.
  - Front load landscape plans are approved on December 11, 2018.
- Sendero Century Community Subdivision Sign application submitted on February 7, 2019.
- Applicant resubmitted On-site subdivision flags signage plans May 6, 2019.
- Received revised Final Site of Development (FSOD) map on May 7, 2019 and grading plans on May 22, 2019. Comments provided on May 23, 2019.
- On-site subdivision flags approved April 30, 2019.
- Applicant proposes house plotting changes.
  - Model homes are open.
  - Waiting for revised FSOD map.
  - Precise Grading Plans received December 23, 2019 – Planning approved Precise Grading on January 6, 2020

Project Map:



Current Status:

- Homes are currently under construction.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
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Prado Homes (MAP ID: PRDH)

Project:	Prado Residential Development by Lennar
Project No.	PLN18-20008
Project Location:	Southeast corner of Cucamonga Creek Channel and Schleisman Road
Project Description:	Major Development Review to develop a gated community of 243 attached and detached single-family homes on approximately 19 acres at Tract 35751 on Schleisman Road.
Planner:	Allen Lim

Notes:

- Received application on February 22, 2018.
- Planning Commission approval on June 20, 2018.
- Approved final site of development on December 10, 2018.
- Approved construction plans and fence and wall plan on March 7, 2019.
- HOA production landscaping plans approved on March 13, 2019.
- Temporary Use Permit (TUP) for model home complex and sales trailer approved on March 13, 2019.
- Revised HOA landscape plans approved May 16, 2019.

Project Map:



Current Status:

- Homes are currently under construction.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

Pulte Homes (MAP ID: PLTH)

Project:	Pulte Residential Development
Project No.	PLN18-20038
Project Location:	Southeast corner of Limonite Avenue and Scholar Way (west of Cloverdale Marketplace)
Project Description:	Minor Development Review for a Master Home Plan consisting of 79 residential units. This tract (Tract No. 28943) was approved and finalized by the County prior to cityhood.
Planner:	Allen Lim

Notes:

- Received application on July 9, 2018. This is a recorded subdivision; application is for the review of the design of the homes only.
- Approval letter sent on August 31, 2018.
- Revised architectural plans approved October 10, 2018.
- Construction building plans approved October 30, 2018.
  - Site is being graded consistent with the recorded subdivision map.
  - Approved construction fence and wall plans on March 7, 2019.
  - Temporary Use Permit (TUP) for sales office approved March 26, 2019.
  - On-site Subdivision Flags Signage approval letter sent on March 27, 2019.
  - Received revised elevations for Lot 54 on April 25, 2019 and comment provided on May 2, 2019.
  - Final revised elevation for lot 54 received on May 21, 2019; approved on May 22, 2019.
  - Model homes opened on March 9, 2019.

Project Map:



Current Status:

- Construction is complete.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
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Sunshine Growers (MAP ID: SUN)

Project:	Sunshine Growers Nursery
Project No.	PLN18-20040
Project Location:	North of Riverside Drive; south of SR 60, east of Milliken Avenue, west of I-15; (Assessor's Parcel Number 156-030-021, -023, -030, and -031)
Project Description:	Major and Minor Development Review for the installation of a 20,000 square-foot greenhouse for a plant nursery for Sunshine Growers Nursery located on Riverside Dr. and Hamner Ave.
Planner:	Allen Lim

Notes:

Major Development Review

- Applications received on July 25, 2018 and October 3, 2018.
- Approved by Planning Commission on October 17, 2018.
- Approval letter and development plans sent on November 5, 2018.
- Construction plans for the nursery, retail, and wall for the trash enclosure received on April 8, 2019. Comment provided on April 23, 2019.
- Waiting for submittal for installation of propane gas from applicant.
- Grading plans received April 3, 2019. Comments provided April 24, 2019.
- Landscape plans received May 15, 2019. Comments provided May 23, 2019.
  - Grading plans approved June 17, 2019
  - Landscape plans approved June 20, 2019
  - Construction plans approved July 17, 2019

Project Map:



Current Status:

- Sunshine Growers is complete and in operation.

1. New projects are added to the bottom of the list as they are submitted.
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Gossett Self-Storage (MAP ID: GOSS)

Project:	Gossett Development Self-Storage Major DR, CUP, CoZ, GPA
Project No.	PLN19-20047
Project Location:	14555, 14577, and 14587 Chandler Street; (Assessor's Parcel Number: 144-120-002, -003, -004)
Project Description:	▪ Major Development Review for the development of 142,839 square foot self-storage facility on 3 parcels totaling 4.1 acres ▪ Conditional Use Permit to permit the self-storage facility ▪ Change of Zone from A-1 Light Agriculture to C-1/C-P General Commercial ▪ General Plan Amendment from Low Density Residential to Commercial Retail
Planner:	Gustavo Gonzalez

Notes:

- Received pre-application on November 6, 2019
- Pre-application was routed out for comments from other departments on November 12, 2019
  - Received application for Major DR, CUP, CoZ, and GPA on January 27, 2020
  - Routed for comments from other departments on February 3, 2020.
  - Received comments on February 17, 2020
  - The Planning Commission approved the project on July 15, 2020.
- City Council approved the project on September 9,2020

Project Map:



Current Status:

- Construction documents currently under review.

1. New projects are added to the bottom of the list as they are submitted.
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Van Leeuwen GP Amendment (MAP ID: VAN)

Project:	Van Leeuwen COZ, GPA, ZCA
Project No.	PLN19-20021
Project Location:	13000 Citrus Street; (Assessor Parcel Number: 152-050-050)
Project Description:	General Plan Amendment from low density to high density and Change of Zone from A-2 to R-3 with a senior housing overlay and zone text amendment to create a senior housing overlay.
Planner:	Allen Lim

Notes:

- Received application on May 30, 2019.
- Project presented to Planning Commission for consideration and recommendation to City Council on July 17, 2019. Planning Commission voted 5-0 recommending approval to City Council.
  - July 17, 2019, Planning Commission recommended approval to City Council.

Project Map:



Current Status:

- Project presented to City Council for consideration on September 11, 2019. City Council voted 4-0 approving the project.

1. New projects are added to the bottom of the list as they are submitted.
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The Homestead (MAP ID: HSTD)

Project:	The Homestead
Project No.	PLN19-20026
Project Location:	West of Archibald Avenue at the westerly terminus of Limonite Avenue; (Assessor Parcel Numbers: 144-010-015, -018, -020, -023, -032)
Project Description:	▪ Major Development Review for construction of seven (7) light industrial/ warehouse buildings ▪ Change of Zone from A-2 to I-P ▪ Tentative Parcel Map for subdivision of the site into seven (7) parcels ▪ Variance from the standard landscape shading requirements.
Planner:	Gina Gibson-Williams/ Allen Lim

Notes:

- Received application on June 25, 2019.
- Submittal received July 2, 2019; routed to other departments for review.
- Request for proposal of an Environment Impact Report (EIR) sent on July 3, 2019. Proposals due on July 24, 2019.
- EIR screen check draft under review 1/8/20
- Planning Commission made a recommendation of approval for the project on March 18, 2020
- City Council approved the project on April 8th, 2020

Project Map:



Current Status

- Currently awaiting final approval for construction documents.

1. New projects are added to the bottom of the list as they are submitted.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

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Dutch Bros Coffee DR and CUP (MAP ID: DTCH)

Project:	Dutch Bros Coffee DR and CUP
Project No.:	PLN20-20012_DR_001_CUP_002
Project Location:	Eastvale Marketplace - Northeast corner of Limonite Ave. and Sumner Ave.; (Assessor Parcel Number: 164-030-037)
Project Description:	**Major Development Review**, for the development of an 862 square foot Dutch Bros Coffee Shop with a double drive-through lane. **Conditional Use Permit,** to allow the use of a drive-through.
Project Planner:	Gustavo Gonzalez/Allen Lim
Notes:	
	▪ Received application on 2.16.21 ▪ On 3.17.21 the Planning Commission approved the project subject to conditions of approval.

Project Map:



Status:

- The project is completed and in operation.

1. New projects are added to the bottom of the list as they are submitted.
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Wabi Sabi Japanese Restaurant Alcohol CUP (MAP ID: WABI)

Project:	Wabi Sabi Japanese Restaurant Alcohol CUP
Project No.:	PLN20-20006_CUP_001
Project Location:	The Market Place at The Enclave retail center – 14268 Schleisman Road, Suite 400.; (Assessor Parcel Number: 144-860-012)
Project Description:	**Conditional Use Permit,** to allow the sale and consumption of beer and wine on-site
Project Planner:	Allen Lim/Gustavo Gonzalez
Notes:	▪ Received application on 1.21.21

Project Map:



Current Status:

- On 3.17.21 the Planning Commission approved the project subject to conditions of approval.

1. New projects are added to the bottom of the list as they are submitted.
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Archibald and Chandler Retail (MAP ID: ACR)

Project:	Archibald and Chandler Retail Center
Project No.:	PLN19-20000 (PLN21-20016 CUP, PLN21-20017 CUP)
Project Location:	Northwest corner of Archibald and Chandler; (Assessor Parcel Numbers: 144-130-004, 144-130-011, 144-130-012, 144-130-013)
Project Description:	A 2.71-acre mixed use commercial development comprised of a convenience store/ gas station/ carwash, a drive-through restaurant, and an undeveloped pad to be submitted at a later date.
Project Planner:	Gustavo Gonzalez
Notes:	▪ Received application on January 3, 2019. ▪ Incompleteness letter mailed on January 17, 2019. ▪ Public information meeting was held at city hall on February 20, 2019. ▪ Comment letter sent out to applicant on February 21, 2019. ▪ Meeting with applicant occurred on March 14, 2019. ▪ Revised submittal received 2.3.21 – Routed for department review. ▪ On 4.21.21 the Planning Commission recommended City Council approval of the project with the exception of the gas station and off-sale beer and wine.

Project Map:



Current Status:

- On August 25, 2021, the City Council upheld the Planning Commission's recommendation and approved the project with the exception of the gas station and off-sale beer and wine.
- Second reading of the COZ was approved by the City Council on September 8, 2021.

1. New projects are added to the bottom of the list as they are submitted.
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Future

The Leal Plan (MAP ID: LEAL)

Project:	Leal Master Plan
Project No.	Special Project
Project Location:	160 acres ± at the northwest corner of Hamner and Limonite Avenue, east of Scholar Way, and south of 58th Street.
Project Description:	This Master Plan describes the community's vision for the project area, identifies appropriate land uses, and includes the development standards that are necessary to achieve the vision, defines the character of the project's development, lists the steps involved with the development process, and provides the project's implementation plan. CEQA: EIR
Planner:	Gina Gibson-Williams

Notes:

- In September 16, 2016, the Planning Commission reviewed and recommended approval to City Council. May 2017 – City has been asked by property owner's representative to postpone action on the project while issues related to the estate of Brad Leal are resolved August 30, 2017 – City met with Leal family and prospective developer to discuss processing and timing.
- City Council Approved Master Plan and Final Environmental Impact Report on December 13, 2017.

Project Map:



Current Status:

- Adopted by City Council on December 13, 2017.
- Staff continues to coordinate with the property owners as they seek a developer(s) for the site.
- Master Plan Amendment

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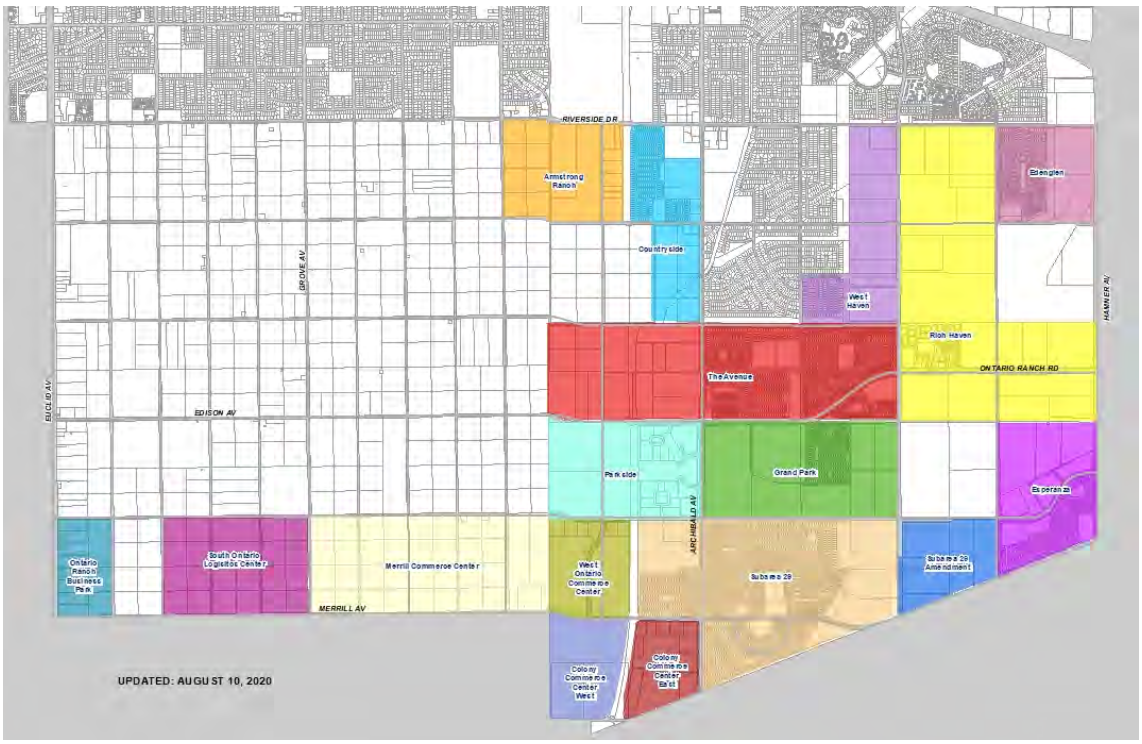
Current Planning

Development Process

Zoning Map

The Ontario Plan

Current Ontario Ranch Projects



OVERALL (approved)
Acreage—3,573 acres
Single Family Residences—11,505 units
Multi-Family Residences—8,790 units
Commercial—1.77 million s.f.
Industrial-6.94 million s.f.

Business Park—1.1 million s.f.

APPLICATIONS IN PROCESS
Acreage—517 acres
Single Family Residences—574 units
Industrial — 7.19 million s.f.

Business Park 1.6 million s.f.

Grand Park (Approved) 13
(https://www.ontarioca.gov/planning/maps/specific-plan-land-use-maps-documents/grand-park)

Project Overview:
- 320 Acres
- 740 single family units
- 587 multi-family units

Project Applicant(s):
- Distinguished Homes (714) 637-4405
- Richland Communities (949) 261-7101

The Avenue (Approved)
(https://www.ontarioca.gov/planning/m plan-land-use-maps-documents/avenue)

Project Overview:
- 568 acres
- 2,277 single family units
- 598 multi-family units
- 130,680 s.f. commercial

Project Applicant(s):
- Brookfield Homes (714) 200-1533
- Richland Comm. (949) 261-7010
- Distinguished Homes (714) 637-4405
- Lewis Companies (909) 949-6727
- Parentex Enterprises (909) 947-3538

Subarea 29 (Approved) 12
(https://www.ontarioca.gov/planning/maps/specific-plan-land-use-maps-documents/subarea-29)

Project Overview:
- 539 acres
- 2,293 single family units
- 87,000 s.f. commercial

Project Applicant(s):
- SL Ontario Dev. (949) 833-1554
- Richland Comm. (949) 261-7010
- Brookfield Homes (714) 200-1533

Rich Haven (Approved) 14
(https://www.ontarioca.gov/planning/m plan-land-use-maps-documents/rich-haver

Project Overview:
- 584 acres
- 1,833 single family units
- 3,033 multi-family units
- 1.04 million s.f. commercial

Project Applicant(s):
- Richland Comm. (949) 261-7010
- Brookfield Homes (714) 200-1533
- GDCI-RCCD, GDC Investments (714) 637-

Parkside (Approved)
(https://www.ontarioca.gov/planning/maps/specific-plan-land-use-maps-documents/parkside)

Project Overview:
- 250 acres
- 437 single family units
- 1,510 multi-family units
- 115,000 s.f. commercial

Project Applicant(s):
- SC Ontario Dev. (909) 949-6727

Esperanza (Approved) 10
(https://www.ontarioca.gov/planning/m
plan-land-use-maps-documents/esperanz

Project Overview:
- 233 acres
- 914 single family units
- 496 multi-family units

Project Applicant(s):
- GDCI-RCCD, GDC Investments (714) 637-

West Haven (Approved)
(https://www.ontarioca.gov/planning/maps/specific-plan-land-use-maps-documents/west-haven)

Project Overview:
- 199 acres
- 753 single family units
- 87,000 s.f. commercial

Project Applicant(s):
- Stratham Homes (949) 833-1554
- Richland Comm. (949) 261-7010
- Lewis Companies (909) 949-6727

Edenglen (Approved)
(https://www.ontarioca.gov/planning/m
plan-land-use-maps-documents/edenglen)

Project Overview:
- 160 acres
- 310 single family units
- 274 multi-family units
- 217,520 s.f. commercial
- 550,000 s.f. business park

Project Applicant(s):
- Brookfield Homes (714) 200-1533

Countryside (Approved)
(https://www.ontarioca.gov/planning/maps/specific-plan-land-use-maps-documents/countryside)

Project Overview:
- 178 acres
- 819 single family units

Project Applicant(s):
- Foremost Communities (949) 748-6714

Armstrong Ranch (Approved)
(https://www.ontarioca.gov/planning/maps/spe
land-use-maps-documents/armstrong-ranch-0)

Project Overview:
- 190 Acres
- 891 single family units

Project Applicant(s):
- CVRC Ontario Investments (949) 258-753

Colony Commerce Center West (Approved)
(https://www.ontarioca.gov/planning/maps/specific-plan-land-use-maps-documents/colony-commerce-center-west-0)

Project Overview:
- 123 Acres
- 2.95 million s.f. industrial

Project Applicant:
- CDFI Remington (949) 342-8000

West Ontario Commerce Center (Approved)
(https://www.ontarioca.gov/planning/maps/spe
land-use-maps-documents/west-ontario-commerc

Project Overview:
- 125 acres
- 2.35 million s.f. industrial
- 555,500 s.f. business park

Project Applicant:
- REDA, OLV (949) 954-3087

Colony Commerce Center East (Approved)
(https://www.ontarioca.gov/planning/maps/specific-plan-land-use-maps-documents/colony-commerce-center-east-specific-plan)

Project Overview

- 95 acres
- 1.42 million s.f. industrial
- 919,725 s.f. Business Park

Project Applicant:

- CapRock Partners, LLC (949) 342-8000

Subarea 29 Amendment (In Process) 11

Project Overview:

- 125 Acres
- 574 single family units

Project Applicant:

- SL Ontario Dev Corp. (949) 833-1554

Merrill Commerce Center (In Process)

Project Overview:

- 376 acres
- 7 million s.f. industrial
- 1.4 million s.f. business park

Project Applicant:

- Merrill Commerce Center East, LLC (909) 673-8727

Ontario Ranch Business Park (In process)

Project Overview

- 86 acres
- 1.45 million s.f. industrial
- 457,900 s.f. business park

Project Applicant:

- REDA, OLV (949) 954-3087

PLANNING

Advanced Planning (Https://Www.ontarioca.gov/Node/9395)

Applications And Documents (Https://Www.ontarioca.gov/Node/9387)

Current Planning (Https://Www.ontarioca.gov/Node/198)

Environmental Impact Reports (Https://Www.ontarioca.gov/Node/9397)

Healthy Ontario (Https://Www.ontarioca.gov/Node/24424)

Historic Preservation (Https://Www.ontarioca.gov/Node/9392)

Landscape Planning (Https://Www.ontarioca.gov/Node/9393)

Monthly Activity Reports (Https://Www.ontarioca.gov/Node/13795)

Ontario Great Park (Https://Www.ontarioca.gov/Node/23629)

Ontario Plan (Http://Www.ontarioplan.org/)

ONT-IAC (Https://Www.ontarioca.gov/Node/24425)

Planning Boards & Members (Https://Www.ontarioca.gov/Node/9394)

Specific Plans (Https://Www.ontarioca.gov/Node/9390)

UPCOMING EVENTS

Appendix F

Traffic Signal Warrant Worksheets

Appendix F-1

Existing Conditions (2022)

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	471	505	2
2	457	490	2
3	447	480	2
4	419	449	2
5	372	399	2
6	367	394	2
7	363	389	2
8	330	354	1
9	325	348	1
10	320	343	1
11	278	298	1
12	259	278	1
13	254	273	1
14	188	202	1
15	188	202	1
16	132	141	1
17	75	81	0
18	75	81	0
19	42	45	0
20	24	25	0
21	14	15	0
22	5	5	0
23	5	5	0
24	5	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	976	2	2	No	No	No	No	No	No	No	No	No	No
2	2	947	2	2	No	No	No	No	No	No	No	No	No	No
3	2	927	2	2	No	No	No	No	No	No	No	No	No	No
4	2	868	2	2	No	No	No	No	No	No	No	No	No	No
5	2	771	2	2	No	No	No	No	No	No	No	No	No	No
6	2	761	2	2	No	No	No	No	No	No	No	No	No	No
7	2	752	2	2	No	No	No	No	No	No	No	No	No	No
8	2	684	2	1	No	No	No	No	No	No	No	No	No	No
9	2	673	2	1	No	No	No	No	No	No	No	No	No	No
10	2	663	2	1	No	No	No	No	No	No	No	No	No	No
11	2	576	2	1	No	No	No	No	No	No	No	No	No	No
12	2	537	2	1	No	No	No	No	No	No	No	No	No	No
13	2	527	2	1	No	No	No	No	No	No	No	No	No	No
14	2	390	2	1	No	No	No	No	No	No	No	No	No	No
15	2	390	2	1	No	No	No	No	No	No	No	No	No	No
16	2	273	2	1	No	No	No	No	No	No	No	No	No	No
17	2	156	2	0	No	No	No	No	No	No	No	No	No	No
18	2	156	2	0	No	No	No	No	No	No	No	No	No	No
19	2	87	2	0	No	No	No	No	No	No	No	No	No	No
20	2	49	2	0	No	No	No	No	No	No	No	No	No	No
21	2	29	2	0	No	No	No	No	No	No	No	No	No	No
22	2	10	2	0	No	No	No	No	No	No	No	No	No	No
23	2	10	2	0	No	No	No	No	No	No	No	No	No	No
24	2	10	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.2
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	978
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	41	18	0
2	40	17	0
3	39	17	0
4	36	16	0
5	32	14	0
6	32	14	0
7	32	14	0
8	29	13	0
9	28	12	0
10	28	12	0
11	24	11	0
12	23	10	0
13	22	10	0
14	16	7	0
15	16	7	0
16	11	5	0
17	7	3	0
18	7	3	0
19	4	2	0
20	2	1	0
21	1	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	59	1	0	No	No	No	No	No	No	No	No	No	No
2	1	57	1	0	No	No	No	No	No	No	No	No	No	No
3	1	56	1	0	No	No	No	No	No	No	No	No	No	No
4	1	52	1	0	No	No	No	No	No	No	No	No	No	No
5	1	46	1	0	No	No	No	No	No	No	No	No	No	No
6	1	46	1	0	No	No	No	No	No	No	No	No	No	No
7	1	46	1	0	No	No	No	No	No	No	No	No	No	No
8	1	42	1	0	No	No	No	No	No	No	No	No	No	No
9	1	40	1	0	No	No	No	No	No	No	No	No	No	No
10	1	40	1	0	No	No	No	No	No	No	No	No	No	No
11	1	35	1	0	No	No	No	No	No	No	No	No	No	No
12	1	33	1	0	No	No	No	No	No	No	No	No	No	No
13	1	32	1	0	No	No	No	No	No	No	No	No	No	No
14	1	23	1	0	No	No	No	No	No	No	No	No	No	No
15	1	23	1	0	No	No	No	No	No	No	No	No	No	No
16	1	16	1	0	No	No	No	No	No	No	No	No	No	No
17	1	10	1	0	No	No	No	No	No	No	No	No	No	No
18	1	10	1	0	No	No	No	No	No	No	No	No	No	No
19	1	6	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	2	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	59
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	336	220	40
2	326	213	39
3	319	209	38
4	299	196	36
5	265	174	32
6	262	172	31
7	259	169	31
8	235	154	28
9	232	152	28
10	228	150	27
11	198	130	24
12	185	121	22
13	181	119	22
14	134	88	16
15	134	88	16
16	94	62	11
17	54	35	6
18	54	35	6
19	30	20	4
20	17	11	2
21	10	7	1
22	3	2	0
23	3	2	0
24	3	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	556	1	40	No	No	No	No	No	No	No	No	No	No
2	3	539	1	39	No	No	No	No	No	No	No	No	No	No
3	3	528	1	38	No	No	No	No	No	No	No	No	No	No
4	3	495	1	36	No	No	No	No	No	No	No	No	No	No
5	3	439	1	32	No	No	No	No	No	No	No	No	No	No
6	3	434	1	31	No	No	No	No	No	No	No	No	No	No
7	3	428	1	31	No	No	No	No	No	No	No	No	No	No
8	3	389	1	28	No	No	No	No	No	No	No	No	No	No
9	3	384	1	28	No	No	No	No	No	No	No	No	No	No
10	3	378	1	27	No	No	No	No	No	No	No	No	No	No
11	3	328	1	24	No	No	No	No	No	No	No	No	No	No
12	3	306	1	22	No	No	No	No	No	No	No	No	No	No
13	3	300	1	22	No	No	No	No	No	No	No	No	No	No
14	3	222	1	16	No	No	No	No	No	No	No	No	No	No
15	3	222	1	16	No	No	No	No	No	No	No	No	No	No
16	3	156	1	11	No	No	No	No	No	No	No	No	No	No
17	3	89	1	6	No	No	No	No	No	No	No	No	No	No
18	3	89	1	6	No	No	No	No	No	No	No	No	No	No
19	3	50	1	4	No	No	No	No	No	No	No	No	No	No
20	3	28	1	2	No	No	No	No	No	No	No	No	No	No
21	3	17	1	1	No	No	No	No	No	No	No	No	No	No
22	3	5	1	0	No	No	No	No	No	No	No	No	No	No
23	3	5	1	0	No	No	No	No	No	No	No	No	No	No
24	3	5	1	0	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	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	40
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	596
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	55	36	61
2	53	35	59
3	52	34	58
4	49	32	54
5	43	28	48
6	43	28	48
7	42	28	47
8	39	25	43
9	38	25	42
10	37	24	41
11	32	21	36
12	30	20	34
13	30	19	33
14	22	14	24
15	22	14	24
16	15	10	17
17	9	6	10
18	9	6	10
19	5	3	5
20	3	2	3
21	2	1	2
22	1	0	1
23	1	0	1
24	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	91	1	61	No	No	No	No	No	No	No	No	No	No
2	1	88	1	59	No	No	No	No	No	No	No	No	No	No
3	1	86	1	58	No	No	No	No	No	No	No	No	No	No
4	1	81	1	54	No	No	No	No	No	No	No	No	No	No
5	1	71	1	48	No	No	No	No	No	No	No	No	No	No
6	1	71	1	48	No	No	No	No	No	No	No	No	No	No
7	1	70	1	47	No	No	No	No	No	No	No	No	No	No
8	1	64	1	43	No	No	No	No	No	No	No	No	No	No
9	1	63	1	42	No	No	No	No	No	No	No	No	No	No
10	1	61	1	41	No	No	No	No	No	No	No	No	No	No
11	1	53	1	36	No	No	No	No	No	No	No	No	No	No
12	1	50	1	34	No	No	No	No	No	No	No	No	No	No
13	1	49	1	33	No	No	No	No	No	No	No	No	No	No
14	1	36	1	24	No	No	No	No	No	No	No	No	No	No
15	1	36	1	24	No	No	No	No	No	No	No	No	No	No
16	1	25	1	17	No	No	No	No	No	No	No	No	No	No
17	1	15	1	10	No	No	No	No	No	No	No	No	No	No
18	1	15	1	10	No	No	No	No	No	No	No	No	No	No
19	1	8	1	5	No	No	No	No	No	No	No	No	No	No
20	1	5	1	3	No	No	No	No	No	No	No	No	No	No
21	1	3	1	2	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	61
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	152
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	97	67	35
2	94	65	34
3	92	64	33
4	86	60	31
5	77	53	28
6	76	52	27
7	75	52	27
8	68	47	25
9	67	46	24
10	66	46	24
11	57	40	21
12	53	37	19
13	52	36	19
14	39	27	14
15	39	27	14
16	27	19	10
17	16	11	6
18	16	11	6
19	9	6	3
20	5	3	2
21	3	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	164	1	35	No	No	No	No	No	No	No	No	No	No
2	1	159	1	34	No	No	No	No	No	No	No	No	No	No
3	1	156	1	33	No	No	No	No	No	No	No	No	No	No
4	1	146	1	31	No	No	No	No	No	No	No	No	No	No
5	1	130	1	28	No	No	No	No	No	No	No	No	No	No
6	1	128	1	27	No	No	No	No	No	No	No	No	No	No
7	1	127	1	27	No	No	No	No	No	No	No	No	No	No
8	1	115	1	25	No	No	No	No	No	No	No	No	No	No
9	1	113	1	24	No	No	No	No	No	No	No	No	No	No
10	1	112	1	24	No	No	No	No	No	No	No	No	No	No
11	1	97	1	21	No	No	No	No	No	No	No	No	No	No
12	1	90	1	19	No	No	No	No	No	No	No	No	No	No
13	1	88	1	19	No	No	No	No	No	No	No	No	No	No
14	1	66	1	14	No	No	No	No	No	No	No	No	No	No
15	1	66	1	14	No	No	No	No	No	No	No	No	No	No
16	1	46	1	10	No	No	No	No	No	No	No	No	No	No
17	1	27	1	6	No	No	No	No	No	No	No	No	No	No
18	1	27	1	6	No	No	No	No	No	No	No	No	No	No
19	1	15	1	3	No	No	No	No	No	No	No	No	No	No
20	1	8	1	2	No	No	No	No	No	No	No	No	No	No
21	1	5	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	35
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	199
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	573	555	8
2	556	538	8
3	544	527	8
4	510	494	7
5	453	438	6
6	447	433	6
7	441	427	6
8	401	389	6
9	395	383	6
10	390	377	5
11	338	327	5
12	315	305	4
13	309	300	4
14	229	222	3
15	229	222	3
16	160	155	2
17	92	89	1
18	92	89	1
19	52	50	1
20	29	28	0
21	17	17	0
22	6	6	0
23	6	6	0
24	6	6	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1128	2	8	No	No	No	No	No	No	No	No	No	No
2	2	1094	2	8	No	No	No	No	No	No	No	No	No	No
3	2	1071	2	8	No	No	No	No	No	No	No	No	No	No
4	2	1004	2	7	No	No	No	No	No	No	No	No	No	No
5	2	891	2	6	No	No	No	No	No	No	No	No	No	No
6	2	880	2	6	No	No	No	No	No	No	No	No	No	No
7	2	868	2	6	No	No	No	No	No	No	No	No	No	No
8	2	790	2	6	No	No	No	No	No	No	No	No	No	No
9	2	778	2	6	No	No	No	No	No	No	No	No	No	No
10	2	767	2	5	No	No	No	No	No	No	No	No	No	No
11	2	665	2	5	No	No	No	No	No	No	No	No	No	No
12	2	620	2	4	No	No	No	No	No	No	No	No	No	No
13	2	609	2	4	No	No	No	No	No	No	No	No	No	No
14	2	451	2	3	No	No	No	No	No	No	No	No	No	No
15	2	451	2	3	No	No	No	No	No	No	No	No	No	No
16	2	315	2	2	No	No	No	No	No	No	No	No	No	No
17	2	181	2	1	No	No	No	No	No	No	No	No	No	No
18	2	181	2	1	No	No	No	No	No	No	No	No	No	No
19	2	102	2	1	No	No	No	No	No	No	No	No	No	No
20	2	57	2	0	No	No	No	No	No	No	No	No	No	No
21	2	34	2	0	No	No	No	No	No	No	No	No	No	No
22	2	12	2	0	No	No	No	No	No	No	No	No	No	No
23	2	12	2	0	No	No	No	No	No	No	No	No	No	No
24	2	12	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	17.6
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	8
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1136
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	68	50	0
2	66	49	0
3	65	48	0
4	61	45	0
5	54	40	0
6	53	39	0
7	52	39	0
8	48	35	0
9	47	35	0
10	46	34	0
11	40	30	0
12	37	28	0
13	37	27	0
14	27	20	0
15	27	20	0
16	19	14	0
17	11	8	0
18	11	8	0
19	6	5	0
20	3	3	0
21	2	2	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	118	1	0	No	No	No	No	No	No	No	No	No	No
2	1	115	1	0	No	No	No	No	No	No	No	No	No	No
3	1	113	1	0	No	No	No	No	No	No	No	No	No	No
4	1	106	1	0	No	No	No	No	No	No	No	No	No	No
5	1	94	1	0	No	No	No	No	No	No	No	No	No	No
6	1	92	1	0	No	No	No	No	No	No	No	No	No	No
7	1	91	1	0	No	No	No	No	No	No	No	No	No	No
8	1	83	1	0	No	No	No	No	No	No	No	No	No	No
9	1	82	1	0	No	No	No	No	No	No	No	No	No	No
10	1	80	1	0	No	No	No	No	No	No	No	No	No	No
11	1	70	1	0	No	No	No	No	No	No	No	No	No	No
12	1	65	1	0	No	No	No	No	No	No	No	No	No	No
13	1	64	1	0	No	No	No	No	No	No	No	No	No	No
14	1	47	1	0	No	No	No	No	No	No	No	No	No	No
15	1	47	1	0	No	No	No	No	No	No	No	No	No	No
16	1	33	1	0	No	No	No	No	No	No	No	No	No	No
17	1	19	1	0	No	No	No	No	No	No	No	No	No	No
18	1	19	1	0	No	No	No	No	No	No	No	No	No	No
19	1	11	1	0	No	No	No	No	No	No	No	No	No	No
20	1	6	1	0	No	No	No	No	No	No	No	No	No	No
21	1	4	1	0	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	118
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	249	490	53
2	242	475	51
3	237	466	50
4	222	436	47
5	197	387	42
6	194	382	41
7	192	377	41
8	174	343	37
9	172	338	37
10	169	333	36
11	147	289	31
12	137	270	29
13	134	265	29
14	100	196	21
15	100	196	21
16	70	137	15
17	40	78	8
18	40	78	8
19	22	44	5
20	12	25	3
21	7	15	2
22	2	5	1
23	2	5	1
24	2	5	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	739	1	53	No	No	No	No	No	No	Yes	Yes	No	No
2	3	717	1	51	No	No	No	No	No	No	No	Yes	No	No
3	3	703	1	50	No	No	No	No	No	No	No	Yes	No	No
4	3	658	1	47	No	No	No	No	No	No	No	Yes	No	No
5	3	584	1	42	No	No	No	No	No	No	No	Yes	No	No
6	3	576	1	41	No	No	No	No	No	No	No	No	No	No
7	3	569	1	41	No	No	No	No	No	No	No	No	No	No
8	3	517	1	37	No	No	No	No	No	No	No	No	No	No
9	3	510	1	37	No	No	No	No	No	No	No	No	No	No
10	3	502	1	36	No	No	No	No	No	No	No	No	No	No
11	3	436	1	31	No	No	No	No	No	No	No	No	No	No
12	3	407	1	29	No	No	No	No	No	No	No	No	No	No
13	3	399	1	29	No	No	No	No	No	No	No	No	No	No
14	3	296	1	21	No	No	No	No	No	No	No	No	No	No
15	3	296	1	21	No	No	No	No	No	No	No	No	No	No
16	3	207	1	15	No	No	No	No	No	No	No	No	No	No
17	3	118	1	8	No	No	No	No	No	No	No	No	No	No
18	3	118	1	8	No	No	No	No	No	No	No	No	No	No
19	3	66	1	5	No	No	No	No	No	No	No	No	No	No
20	3	37	1	3	No	No	No	No	No	No	No	No	No	No
21	3	22	1	2	No	No	No	No	No	No	No	No	No	No
22	3	7	1	1	No	No	No	No	No	No	No	No	No	No
23	3	7	1	1	No	No	No	No	No	No	No	No	No	No
24	3	7	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	53
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	792
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 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	113	52	47
2	110	50	46
3	107	49	45
4	101	46	42
5	89	41	37
6	88	41	37
7	87	40	36
8	79	36	33
9	78	36	32
10	77	35	32
11	67	31	28
12	62	29	26
13	61	28	25
14	45	21	19
15	45	21	19
16	32	15	13
17	18	8	8
18	18	8	8
19	10	5	4
20	6	3	2
21	3	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	165	1	47	No	No	No	No	No	No	No	No	No	No
2	1	160	1	46	No	No	No	No	No	No	No	No	No	No
3	1	156	1	45	No	No	No	No	No	No	No	No	No	No
4	1	147	1	42	No	No	No	No	No	No	No	No	No	No
5	1	130	1	37	No	No	No	No	No	No	No	No	No	No
6	1	129	1	37	No	No	No	No	No	No	No	No	No	No
7	1	127	1	36	No	No	No	No	No	No	No	No	No	No
8	1	115	1	33	No	No	No	No	No	No	No	No	No	No
9	1	114	1	32	No	No	No	No	No	No	No	No	No	No
10	1	112	1	32	No	No	No	No	No	No	No	No	No	No
11	1	98	1	28	No	No	No	No	No	No	No	No	No	No
12	1	91	1	26	No	No	No	No	No	No	No	No	No	No
13	1	89	1	25	No	No	No	No	No	No	No	No	No	No
14	1	66	1	19	No	No	No	No	No	No	No	No	No	No
15	1	66	1	19	No	No	No	No	No	No	No	No	No	No
16	1	47	1	13	No	No	No	No	No	No	No	No	No	No
17	1	26	1	8	No	No	No	No	No	No	No	No	No	No
18	1	26	1	8	No	No	No	No	No	No	No	No	No	No
19	1	15	1	4	No	No	No	No	No	No	No	No	No	No
20	1	9	1	2	No	No	No	No	No	No	No	No	No	No
21	1	5	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	47
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	212
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	94	136	24
2	91	132	23
3	89	129	23
4	84	121	21
5	74	107	19
6	73	106	19
7	72	105	18
8	66	95	17
9	65	94	17
10	64	92	16
11	55	80	14
12	52	75	13
13	51	73	13
14	38	54	10
15	38	54	10
16	26	38	7
17	15	22	4
18	15	22	4
19	8	12	2
20	5	7	1
21	3	4	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	230	1	24	No	No	No	No	No	No	No	No	No	No
2	1	223	1	23	No	No	No	No	No	No	No	No	No	No
3	1	218	1	23	No	No	No	No	No	No	No	No	No	No
4	1	205	1	21	No	No	No	No	No	No	No	No	No	No
5	1	181	1	19	No	No	No	No	No	No	No	No	No	No
6	1	179	1	19	No	No	No	No	No	No	No	No	No	No
7	1	177	1	18	No	No	No	No	No	No	No	No	No	No
8	1	161	1	17	No	No	No	No	No	No	No	No	No	No
9	1	159	1	17	No	No	No	No	No	No	No	No	No	No
10	1	156	1	16	No	No	No	No	No	No	No	No	No	No
11	1	135	1	14	No	No	No	No	No	No	No	No	No	No
12	1	127	1	13	No	No	No	No	No	No	No	No	No	No
13	1	124	1	13	No	No	No	No	No	No	No	No	No	No
14	1	92	1	10	No	No	No	No	No	No	No	No	No	No
15	1	92	1	10	No	No	No	No	No	No	No	No	No	No
16	1	64	1	7	No	No	No	No	No	No	No	No	No	No
17	1	37	1	4	No	No	No	No	No	No	No	No	No	No
18	1	37	1	4	No	No	No	No	No	No	No	No	No	No
19	1	20	1	2	No	No	No	No	No	No	No	No	No	No
20	1	12	1	1	No	No	No	No	No	No	No	No	No	No
21	1	7	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	24
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	254
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-2

Phase 1 without Project (2027)

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	486	525	2
2	471	509	2
3	462	499	2
4	433	467	2
5	384	415	2
6	379	410	2
7	374	404	2
8	340	368	1
9	335	362	1
10	330	357	1
11	287	310	1
12	267	289	1
13	262	284	1
14	194	210	1
15	194	210	1
16	136	147	1
17	78	84	0
18	78	84	0
19	44	47	0
20	24	26	0
21	15	16	0
22	5	5	0
23	5	5	0
24	5	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1011	2	2	No	No	No	No	No	No	No	No	No	No
2	2	980	2	2	No	No	No	No	No	No	No	No	No	No
3	2	961	2	2	No	No	No	No	No	No	No	No	No	No
4	2	900	2	2	No	No	No	No	No	No	No	No	No	No
5	2	799	2	2	No	No	No	No	No	No	No	No	No	No
6	2	789	2	2	No	No	No	No	No	No	No	No	No	No
7	2	778	2	2	No	No	No	No	No	No	No	No	No	No
8	2	708	2	1	No	No	No	No	No	No	No	No	No	No
9	2	697	2	1	No	No	No	No	No	No	No	No	No	No
10	2	687	2	1	No	No	No	No	No	No	No	No	No	No
11	2	597	2	1	No	No	No	No	No	No	No	No	No	No
12	2	556	2	1	No	No	No	No	No	No	No	No	No	No
13	2	546	2	1	No	No	No	No	No	No	No	No	No	No
14	2	404	2	1	No	No	No	No	No	No	No	No	No	No
15	2	404	2	1	No	No	No	No	No	No	No	No	No	No
16	2	283	2	1	No	No	No	No	No	No	No	No	No	No
17	2	162	2	0	No	No	No	No	No	No	No	No	No	No
18	2	162	2	0	No	No	No	No	No	No	No	No	No	No
19	2	91	2	0	No	No	No	No	No	No	No	No	No	No
20	2	50	2	0	No	No	No	No	No	No	No	No	No	No
21	2	31	2	0	No	No	No	No	No	No	No	No	No	No
22	2	10	2	0	No	No	No	No	No	No	No	No	No	No
23	2	10	2	0	No	No	No	No	No	No	No	No	No	No
24	2	10	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.4
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1013
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	41	18	0
2	40	17	0
3	39	17	0
4	36	16	0
5	32	14	0
6	32	14	0
7	32	14	0
8	29	13	0
9	28	12	0
10	28	12	0
11	24	11	0
12	23	10	0
13	22	10	0
14	16	7	0
15	16	7	0
16	11	5	0
17	7	3	0
18	7	3	0
19	4	2	0
20	2	1	0
21	1	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	59	1	0	No	No	No	No	No	No	No	No	No	No
2	1	57	1	0	No	No	No	No	No	No	No	No	No	No
3	1	56	1	0	No	No	No	No	No	No	No	No	No	No
4	1	52	1	0	No	No	No	No	No	No	No	No	No	No
5	1	46	1	0	No	No	No	No	No	No	No	No	No	No
6	1	46	1	0	No	No	No	No	No	No	No	No	No	No
7	1	46	1	0	No	No	No	No	No	No	No	No	No	No
8	1	42	1	0	No	No	No	No	No	No	No	No	No	No
9	1	40	1	0	No	No	No	No	No	No	No	No	No	No
10	1	40	1	0	No	No	No	No	No	No	No	No	No	No
11	1	35	1	0	No	No	No	No	No	No	No	No	No	No
12	1	33	1	0	No	No	No	No	No	No	No	No	No	No
13	1	32	1	0	No	No	No	No	No	No	No	No	No	No
14	1	23	1	0	No	No	No	No	No	No	No	No	No	No
15	1	23	1	0	No	No	No	No	No	No	No	No	No	No
16	1	16	1	0	No	No	No	No	No	No	No	No	No	No
17	1	10	1	0	No	No	No	No	No	No	No	No	No	No
18	1	10	1	0	No	No	No	No	No	No	No	No	No	No
19	1	6	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	2	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	59
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	340	224	40
2	330	217	39
3	323	213	38
4	303	199	36
5	269	177	32
6	265	175	31
7	262	172	31
8	238	157	28
9	235	155	28
10	231	152	27
11	201	132	24
12	187	123	22
13	184	121	22
14	136	90	16
15	136	90	16
16	95	63	11
17	54	36	6
18	54	36	6
19	31	20	4
20	17	11	2
21	10	7	1
22	3	2	0
23	3	2	0
24	3	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	564	1	40	No	No	No	No	No	No	No	No	No	No
2	3	547	1	39	No	No	No	No	No	No	No	No	No	No
3	3	536	1	38	No	No	No	No	No	No	No	No	No	No
4	3	502	1	36	No	No	No	No	No	No	No	No	No	No
5	3	446	1	32	No	No	No	No	No	No	No	No	No	No
6	3	440	1	31	No	No	No	No	No	No	No	No	No	No
7	3	434	1	31	No	No	No	No	No	No	No	No	No	No
8	3	395	1	28	No	No	No	No	No	No	No	No	No	No
9	3	390	1	28	No	No	No	No	No	No	No	No	No	No
10	3	383	1	27	No	No	No	No	No	No	No	No	No	No
11	3	333	1	24	No	No	No	No	No	No	No	No	No	No
12	3	310	1	22	No	No	No	No	No	No	No	No	No	No
13	3	305	1	22	No	No	No	No	No	No	No	No	No	No
14	3	226	1	16	No	No	No	No	No	No	No	No	No	No
15	3	226	1	16	No	No	No	No	No	No	No	No	No	No
16	3	158	1	11	No	No	No	No	No	No	No	No	No	No
17	3	90	1	6	No	No	No	No	No	No	No	No	No	No
18	3	90	1	6	No	No	No	No	No	No	No	No	No	No
19	3	51	1	4	No	No	No	No	No	No	No	No	No	No
20	3	28	1	2	No	No	No	No	No	No	No	No	No	No
21	3	17	1	1	No	No	No	No	No	No	No	No	No	No
22	3	5	1	0	No	No	No	No	No	No	No	No	No	No
23	3	5	1	0	No	No	No	No	No	No	No	No	No	No
24	3	5	1	0	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	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	40
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	604
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	55	36	61
2	53	35	59
3	52	34	58
4	49	32	54
5	43	28	48
6	43	28	48
7	42	28	47
8	39	25	43
9	38	25	42
10	37	24	41
11	32	21	36
12	30	20	34
13	30	19	33
14	22	14	24
15	22	14	24
16	15	10	17
17	9	6	10
18	9	6	10
19	5	3	5
20	3	2	3
21	2	1	2
22	1	0	1
23	1	0	1
24	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	91	1	61	No	No	No	No	No	No	No	No	No	No
2	1	88	1	59	No	No	No	No	No	No	No	No	No	No
3	1	86	1	58	No	No	No	No	No	No	No	No	No	No
4	1	81	1	54	No	No	No	No	No	No	No	No	No	No
5	1	71	1	48	No	No	No	No	No	No	No	No	No	No
6	1	71	1	48	No	No	No	No	No	No	No	No	No	No
7	1	70	1	47	No	No	No	No	No	No	No	No	No	No
8	1	64	1	43	No	No	No	No	No	No	No	No	No	No
9	1	63	1	42	No	No	No	No	No	No	No	No	No	No
10	1	61	1	41	No	No	No	No	No	No	No	No	No	No
11	1	53	1	36	No	No	No	No	No	No	No	No	No	No
12	1	50	1	34	No	No	No	No	No	No	No	No	No	No
13	1	49	1	33	No	No	No	No	No	No	No	No	No	No
14	1	36	1	24	No	No	No	No	No	No	No	No	No	No
15	1	36	1	24	No	No	No	No	No	No	No	No	No	No
16	1	25	1	17	No	No	No	No	No	No	No	No	No	No
17	1	15	1	10	No	No	No	No	No	No	No	No	No	No
18	1	15	1	10	No	No	No	No	No	No	No	No	No	No
19	1	8	1	5	No	No	No	No	No	No	No	No	No	No
20	1	5	1	3	No	No	No	No	No	No	No	No	No	No
21	1	3	1	2	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	61
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	152
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	97	67	35
2	94	65	34
3	92	64	33
4	86	60	31
5	77	53	28
6	76	52	27
7	75	52	27
8	68	47	25
9	67	46	24
10	66	46	24
11	57	40	21
12	53	37	19
13	52	36	19
14	39	27	14
15	39	27	14
16	27	19	10
17	16	11	6
18	16	11	6
19	9	6	3
20	5	3	2
21	3	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	164	1	35	No	No	No	No	No	No	No	No	No	No
2	2	159	1	34	No	No	No	No	No	No	No	No	No	No
3	2	156	1	33	No	No	No	No	No	No	No	No	No	No
4	2	146	1	31	No	No	No	No	No	No	No	No	No	No
5	2	130	1	28	No	No	No	No	No	No	No	No	No	No
6	2	128	1	27	No	No	No	No	No	No	No	No	No	No
7	2	127	1	27	No	No	No	No	No	No	No	No	No	No
8	2	115	1	25	No	No	No	No	No	No	No	No	No	No
9	2	113	1	24	No	No	No	No	No	No	No	No	No	No
10	2	112	1	24	No	No	No	No	No	No	No	No	No	No
11	2	97	1	21	No	No	No	No	No	No	No	No	No	No
12	2	90	1	19	No	No	No	No	No	No	No	No	No	No
13	2	88	1	19	No	No	No	No	No	No	No	No	No	No
14	2	66	1	14	No	No	No	No	No	No	No	No	No	No
15	2	66	1	14	No	No	No	No	No	No	No	No	No	No
16	2	46	1	10	No	No	No	No	No	No	No	No	No	No
17	2	27	1	6	No	No	No	No	No	No	No	No	No	No
18	2	27	1	6	No	No	No	No	No	No	No	No	No	No
19	2	15	1	3	No	No	No	No	No	No	No	No	No	No
20	2	8	1	2	No	No	No	No	No	No	No	No	No	No
21	2	5	1	1	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	35
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	199
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	598	577	8
2	580	560	8
3	568	548	8
4	532	514	7
5	472	456	6
6	466	450	6
7	460	444	6
8	419	404	6
9	413	398	6
10	407	392	5
11	353	340	5
12	329	317	4
13	323	312	4
14	239	231	3
15	239	231	3
16	167	162	2
17	96	92	1
18	96	92	1
19	54	52	1
20	30	29	0
21	18	17	0
22	6	6	0
23	6	6	0
24	6	6	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1175	2	8	No	No	No	No	No	No	No	No	No	No
2	2	1140	2	8	No	No	No	No	No	No	No	No	No	No
3	2	1116	2	8	No	No	No	No	No	No	No	No	No	No
4	2	1046	2	7	No	No	No	No	No	No	No	No	No	No
5	2	928	2	6	No	No	No	No	No	No	No	No	No	No
6	2	916	2	6	No	No	No	No	No	No	No	No	No	No
7	2	904	2	6	No	No	No	No	No	No	No	No	No	No
8	2	823	2	6	No	No	No	No	No	No	No	No	No	No
9	2	811	2	6	No	No	No	No	No	No	No	No	No	No
10	2	799	2	5	No	No	No	No	No	No	No	No	No	No
11	2	693	2	5	No	No	No	No	No	No	No	No	No	No
12	2	646	2	4	No	No	No	No	No	No	No	No	No	No
13	2	635	2	4	No	No	No	No	No	No	No	No	No	No
14	2	470	2	3	No	No	No	No	No	No	No	No	No	No
15	2	470	2	3	No	No	No	No	No	No	No	No	No	No
16	2	329	2	2	No	No	No	No	No	No	No	No	No	No
17	2	188	2	1	No	No	No	No	No	No	No	No	No	No
18	2	188	2	1	No	No	No	No	No	No	No	No	No	No
19	2	106	2	1	No	No	No	No	No	No	No	No	No	No
20	2	59	2	0	No	No	No	No	No	No	No	No	No	No
21	2	35	2	0	No	No	No	No	No	No	No	No	No	No
22	2	12	2	0	No	No	No	No	No	No	No	No	No	No
23	2	12	2	0	No	No	No	No	No	No	No	No	No	No
24	2	12	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	18.4
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	8
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1183
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	68	50	0
2	66	49	0
3	65	48	0
4	61	45	0
5	54	40	0
6	53	39	0
7	52	39	0
8	48	35	0
9	47	35	0
10	46	34	0
11	40	30	0
12	37	28	0
13	37	27	0
14	27	20	0
15	27	20	0
16	19	14	0
17	11	8	0
18	11	8	0
19	6	5	0
20	3	3	0
21	2	2	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	118	1	0	No	No	No	No	No	No	No	No	No	No
2	1	115	1	0	No	No	No	No	No	No	No	No	No	No
3	1	113	1	0	No	No	No	No	No	No	No	No	No	No
4	1	106	1	0	No	No	No	No	No	No	No	No	No	No
5	1	94	1	0	No	No	No	No	No	No	No	No	No	No
6	1	92	1	0	No	No	No	No	No	No	No	No	No	No
7	1	91	1	0	No	No	No	No	No	No	No	No	No	No
8	1	83	1	0	No	No	No	No	No	No	No	No	No	No
9	1	82	1	0	No	No	No	No	No	No	No	No	No	No
10	1	80	1	0	No	No	No	No	No	No	No	No	No	No
11	1	70	1	0	No	No	No	No	No	No	No	No	No	No
12	1	65	1	0	No	No	No	No	No	No	No	No	No	No
13	1	64	1	0	No	No	No	No	No	No	No	No	No	No
14	1	47	1	0	No	No	No	No	No	No	No	No	No	No
15	1	47	1	0	No	No	No	No	No	No	No	No	No	No
16	1	33	1	0	No	No	No	No	No	No	No	No	No	No
17	1	19	1	0	No	No	No	No	No	No	No	No	No	No
18	1	19	1	0	No	No	No	No	No	No	No	No	No	No
19	1	11	1	0	No	No	No	No	No	No	No	No	No	No
20	1	6	1	0	No	No	No	No	No	No	No	No	No	No
21	1	4	1	0	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	118
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	255	495	53
2	247	480	51
3	242	470	50
4	227	441	47
5	201	391	42
6	199	386	41
7	196	381	41
8	179	347	37
9	176	342	37
10	173	337	36
11	150	292	31
12	140	272	29
13	138	267	29
14	102	198	21
15	102	198	21
16	71	139	15
17	41	79	8
18	41	79	8
19	23	45	5
20	13	25	3
21	8	15	2
22	3	5	1
23	3	5	1
24	3	5	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	750	1	53	No	No	No	No	No	No	Yes	Yes	No	No
2	3	727	1	51	No	No	No	No	No	No	No	Yes	No	No
3	3	712	1	50	No	No	No	No	No	No	No	Yes	No	No
4	3	668	1	47	No	No	No	No	No	No	No	Yes	No	No
5	3	592	1	42	No	No	No	No	No	No	No	Yes	No	No
6	3	585	1	41	No	No	No	No	No	No	No	No	No	No
7	3	577	1	41	No	No	No	No	No	No	No	No	No	No
8	3	526	1	37	No	No	No	No	No	No	No	No	No	No
9	3	518	1	37	No	No	No	No	No	No	No	No	No	No
10	3	510	1	36	No	No	No	No	No	No	No	No	No	No
11	3	442	1	31	No	No	No	No	No	No	No	No	No	No
12	3	412	1	29	No	No	No	No	No	No	No	No	No	No
13	3	405	1	29	No	No	No	No	No	No	No	No	No	No
14	3	300	1	21	No	No	No	No	No	No	No	No	No	No
15	3	300	1	21	No	No	No	No	No	No	No	No	No	No
16	3	210	1	15	No	No	No	No	No	No	No	No	No	No
17	3	120	1	8	No	No	No	No	No	No	No	No	No	No
18	3	120	1	8	No	No	No	No	No	No	No	No	No	No
19	3	68	1	5	No	No	No	No	No	No	No	No	No	No
20	3	38	1	3	No	No	No	No	No	No	No	No	No	No
21	3	23	1	2	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	53
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	803
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 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	113	52	47
2	110	50	46
3	107	49	45
4	101	46	42
5	89	41	37
6	88	41	37
7	87	40	36
8	79	36	33
9	78	36	32
10	77	35	32
11	67	31	28
12	62	29	26
13	61	28	25
14	45	21	19
15	45	21	19
16	32	15	13
17	18	8	8
18	18	8	8
19	10	5	4
20	6	3	2
21	3	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	165	1	47	No	No	No	No	No	No	No	No	No	No
2	1	160	1	46	No	No	No	No	No	No	No	No	No	No
3	1	156	1	45	No	No	No	No	No	No	No	No	No	No
4	1	147	1	42	No	No	No	No	No	No	No	No	No	No
5	1	130	1	37	No	No	No	No	No	No	No	No	No	No
6	1	129	1	37	No	No	No	No	No	No	No	No	No	No
7	1	127	1	36	No	No	No	No	No	No	No	No	No	No
8	1	115	1	33	No	No	No	No	No	No	No	No	No	No
9	1	114	1	32	No	No	No	No	No	No	No	No	No	No
10	1	112	1	32	No	No	No	No	No	No	No	No	No	No
11	1	98	1	28	No	No	No	No	No	No	No	No	No	No
12	1	91	1	26	No	No	No	No	No	No	No	No	No	No
13	1	89	1	25	No	No	No	No	No	No	No	No	No	No
14	1	66	1	19	No	No	No	No	No	No	No	No	No	No
15	1	66	1	19	No	No	No	No	No	No	No	No	No	No
16	1	47	1	13	No	No	No	No	No	No	No	No	No	No
17	1	26	1	8	No	No	No	No	No	No	No	No	No	No
18	1	26	1	8	No	No	No	No	No	No	No	No	No	No
19	1	15	1	4	No	No	No	No	No	No	No	No	No	No
20	1	9	1	2	No	No	No	No	No	No	No	No	No	No
21	1	5	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	47
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	212
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	94	136	24
2	91	132	23
3	89	129	23
4	84	121	21
5	74	107	19
6	73	106	19
7	72	105	18
8	66	95	17
9	65	94	17
10	64	92	16
11	55	80	14
12	52	75	13
13	51	73	13
14	38	54	10
15	38	54	10
16	26	38	7
17	15	22	4
18	15	22	4
19	8	12	2
20	5	7	1
21	3	4	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	230	1	24	No	No	No	No	No	No	No	No	No	No
2	2	223	1	23	No	No	No	No	No	No	No	No	No	No
3	2	218	1	23	No	No	No	No	No	No	No	No	No	No
4	2	205	1	21	No	No	No	No	No	No	No	No	No	No
5	2	181	1	19	No	No	No	No	No	No	No	No	No	No
6	2	179	1	19	No	No	No	No	No	No	No	No	No	No
7	2	177	1	18	No	No	No	No	No	No	No	No	No	No
8	2	161	1	17	No	No	No	No	No	No	No	No	No	No
9	2	159	1	17	No	No	No	No	No	No	No	No	No	No
10	2	156	1	16	No	No	No	No	No	No	No	No	No	No
11	2	135	1	14	No	No	No	No	No	No	No	No	No	No
12	2	127	1	13	No	No	No	No	No	No	No	No	No	No
13	2	124	1	13	No	No	No	No	No	No	No	No	No	No
14	2	92	1	10	No	No	No	No	No	No	No	No	No	No
15	2	92	1	10	No	No	No	No	No	No	No	No	No	No
16	2	64	1	7	No	No	No	No	No	No	No	No	No	No
17	2	37	1	4	No	No	No	No	No	No	No	No	No	No
18	2	37	1	4	No	No	No	No	No	No	No	No	No	No
19	2	20	1	2	No	No	No	No	No	No	No	No	No	No
20	2	12	1	1	No	No	No	No	No	No	No	No	No	No
21	2	7	1	1	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	24
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	254
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-3

Phase 1 with Project (2027)

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	527	540	2
2	511	524	2
3	501	513	2
4	469	481	2
5	416	427	2
6	411	421	2
7	406	416	2
8	369	378	1
9	364	373	1
10	358	367	1
11	311	319	1
12	290	297	1
13	285	292	1
14	211	216	1
15	211	216	1
16	148	151	1
17	84	86	0
18	84	86	0
19	47	49	0
20	26	27	0
21	16	16	0
22	5	5	0
23	5	5	0
24	5	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1067	2	2	No	No	No	No	No	No	No	No	No	No
2	2	1035	2	2	No	No	No	No	No	No	No	No	No	No
3	2	1014	2	2	No	No	No	No	No	No	No	No	No	No
4	2	950	2	2	No	No	No	No	No	No	No	No	No	No
5	2	843	2	2	No	No	No	No	No	No	No	No	No	No
6	2	832	2	2	No	No	No	No	No	No	No	No	No	No
7	2	822	2	2	No	No	No	No	No	No	No	No	No	No
8	2	747	2	1	No	No	No	No	No	No	No	No	No	No
9	2	737	2	1	No	No	No	No	No	No	No	No	No	No
10	2	725	2	1	No	No	No	No	No	No	No	No	No	No
11	2	630	2	1	No	No	No	No	No	No	No	No	No	No
12	2	587	2	1	No	No	No	No	No	No	No	No	No	No
13	2	577	2	1	No	No	No	No	No	No	No	No	No	No
14	2	427	2	1	No	No	No	No	No	No	No	No	No	No
15	2	427	2	1	No	No	No	No	No	No	No	No	No	No
16	2	299	2	1	No	No	No	No	No	No	No	No	No	No
17	2	170	2	0	No	No	No	No	No	No	No	No	No	No
18	2	170	2	0	No	No	No	No	No	No	No	No	No	No
19	2	96	2	0	No	No	No	No	No	No	No	No	No	No
20	2	53	2	0	No	No	No	No	No	No	No	No	No	No
21	2	32	2	0	No	No	No	No	No	No	No	No	No	No
22	2	10	2	0	No	No	No	No	No	No	No	No	No	No
23	2	10	2	0	No	No	No	No	No	No	No	No	No	No
24	2	10	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.6
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1069
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	41	18	0
2	40	17	0
3	39	17	0
4	36	16	0
5	32	14	0
6	32	14	0
7	32	14	0
8	29	13	0
9	28	12	0
10	28	12	0
11	24	11	0
12	23	10	0
13	22	10	0
14	16	7	0
15	16	7	0
16	11	5	0
17	7	3	0
18	7	3	0
19	4	2	0
20	2	1	0
21	1	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	59	1	0	No	No	No	No	No	No	No	No	No	No
2	1	57	1	0	No	No	No	No	No	No	No	No	No	No
3	1	56	1	0	No	No	No	No	No	No	No	No	No	No
4	1	52	1	0	No	No	No	No	No	No	No	No	No	No
5	1	46	1	0	No	No	No	No	No	No	No	No	No	No
6	1	46	1	0	No	No	No	No	No	No	No	No	No	No
7	1	46	1	0	No	No	No	No	No	No	No	No	No	No
8	1	42	1	0	No	No	No	No	No	No	No	No	No	No
9	1	40	1	0	No	No	No	No	No	No	No	No	No	No
10	1	40	1	0	No	No	No	No	No	No	No	No	No	No
11	1	35	1	0	No	No	No	No	No	No	No	No	No	No
12	1	33	1	0	No	No	No	No	No	No	No	No	No	No
13	1	32	1	0	No	No	No	No	No	No	No	No	No	No
14	1	23	1	0	No	No	No	No	No	No	No	No	No	No
15	1	23	1	0	No	No	No	No	No	No	No	No	No	No
16	1	16	1	0	No	No	No	No	No	No	No	No	No	No
17	1	10	1	0	No	No	No	No	No	No	No	No	No	No
18	1	10	1	0	No	No	No	No	No	No	No	No	No	No
19	1	6	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	2	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	59
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	451	265	40
2	437	257	39
3	428	252	38
4	401	236	36
5	356	209	32
6	352	207	31
7	347	204	31
8	316	186	28
9	311	183	28
10	307	180	27
11	266	156	24
12	248	146	22
13	244	143	22
14	180	106	16
15	180	106	16
16	126	74	11
17	72	42	6
18	72	42	6
19	41	24	4
20	23	13	2
21	14	8	1
22	5	3	0
23	5	3	0
24	5	3	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	716	1	40	No	No	No	No	No	No	No	No	No	No
2	3	694	1	39	No	No	No	No	No	No	No	No	No	No
3	3	680	1	38	No	No	No	No	No	No	No	No	No	No
4	3	637	1	36	No	No	No	No	No	No	No	No	No	No
5	3	565	1	32	No	No	No	No	No	No	No	No	No	No
6	3	559	1	31	No	No	No	No	No	No	No	No	No	No
7	3	551	1	31	No	No	No	No	No	No	No	No	No	No
8	3	502	1	28	No	No	No	No	No	No	No	No	No	No
9	3	494	1	28	No	No	No	No	No	No	No	No	No	No
10	3	487	1	27	No	No	No	No	No	No	No	No	No	No
11	3	422	1	24	No	No	No	No	No	No	No	No	No	No
12	3	394	1	22	No	No	No	No	No	No	No	No	No	No
13	3	387	1	22	No	No	No	No	No	No	No	No	No	No
14	3	286	1	16	No	No	No	No	No	No	No	No	No	No
15	3	286	1	16	No	No	No	No	No	No	No	No	No	No
16	3	200	1	11	No	No	No	No	No	No	No	No	No	No
17	3	114	1	6	No	No	No	No	No	No	No	No	No	No
18	3	114	1	6	No	No	No	No	No	No	No	No	No	No
19	3	65	1	4	No	No	No	No	No	No	No	No	No	No
20	3	36	1	2	No	No	No	No	No	No	No	No	No	No
21	3	22	1	1	No	No	No	No	No	No	No	No	No	No
22	3	8	1	0	No	No	No	No	No	No	No	No	No	No
23	3	8	1	0	No	No	No	No	No	No	No	No	No	No
24	3	8	1	0	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	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.4
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	40
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	756
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	196	313	184
2	190	304	178
3	186	297	175
4	174	279	164
5	155	247	145
6	153	244	144
7	151	241	142
8	137	219	129
9	135	216	127
10	133	213	125
11	116	185	109
12	108	172	101
13	106	169	99
14	78	125	74
15	78	125	74
16	55	88	52
17	31	50	29
18	31	50	29
19	18	28	17
20	10	16	9
21	6	9	6
22	2	3	2
23	2	3	2
24	2	3	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	509	1	184	No	Yes	Yes	Yes	No	No	No	Yes	No	No
2	3	494	1	178	No	Yes	Yes	Yes	No	No	No	No	No	No
3	3	483	1	175	No	Yes	Yes	Yes	No	No	No	No	No	No
4	3	453	1	164	No	No	Yes	Yes	No	No	No	No	No	No
5	3	402	1	145	No	No	No	Yes	No	No	No	No	No	No
6	3	397	1	144	No	No	No	Yes	No	No	No	No	No	No
7	3	392	1	142	No	No	No	Yes	No	No	No	No	No	No
8	3	356	1	129	No	No	No	Yes	No	No	No	No	No	No
9	3	351	1	127	No	No	No	Yes	No	No	No	No	No	No
10	3	346	1	125	No	No	No	Yes	No	No	No	No	No	No
11	3	301	1	109	No	No	No	No	No	No	No	No	No	No
12	3	280	1	101	No	No	No	No	No	No	No	No	No	No
13	3	275	1	99	No	No	No	No	No	No	No	No	No	No
14	3	203	1	74	No	No	No	No	No	No	No	No	No	No
15	3	203	1	74	No	No	No	No	No	No	No	No	No	No
16	3	143	1	52	No	No	No	No	No	No	No	No	No	No
17	3	81	1	29	No	No	No	No	No	No	No	No	No	No
18	3	81	1	29	No	No	No	No	No	No	No	No	No	No
19	3	46	1	17	No	No	No	No	No	No	No	No	No	No
20	3	26	1	9	No	No	No	No	No	No	No	No	No	No
21	3	15	1	6	No	No	No	No	No	No	No	No	No	No
22	3	5	1	2	No	No	No	No	No	No	No	No	No	No
23	3	5	1	2	No	No	No	No	No	No	No	No	No	No
24	3	5	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	3	4	10	0	0	0	1	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:36
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	184
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	693
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 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	625	621	8
2	606	602	8
3	594	590	8
4	556	553	7
5	494	491	6
6	488	484	6
7	481	478	6
8	438	435	6
9	431	428	6
10	425	422	5
11	369	366	5
12	344	342	4
13	338	335	4
14	250	248	3
15	250	248	3
16	175	174	2
17	100	99	1
18	100	99	1
19	56	56	1
20	31	31	0
21	19	19	0
22	6	6	0
23	6	6	0
24	6	6	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1246	2	8	No	No	No	No	No	No	No	No	No	No
2	2	1208	2	8	No	No	No	No	No	No	No	No	No	No
3	2	1184	2	8	No	No	No	No	No	No	No	No	No	No
4	2	1109	2	7	No	No	No	No	No	No	No	No	No	No
5	2	985	2	6	No	No	No	No	No	No	No	No	No	No
6	2	972	2	6	No	No	No	No	No	No	No	No	No	No
7	2	959	2	6	No	No	No	No	No	No	No	No	No	No
8	2	873	2	6	No	No	No	No	No	No	No	No	No	No
9	2	859	2	6	No	No	No	No	No	No	No	No	No	No
10	2	847	2	5	No	No	No	No	No	No	No	No	No	No
11	2	735	2	5	No	No	No	No	No	No	No	No	No	No
12	2	686	2	4	No	No	No	No	No	No	No	No	No	No
13	2	673	2	4	No	No	No	No	No	No	No	No	No	No
14	2	498	2	3	No	No	No	No	No	No	No	No	No	No
15	2	498	2	3	No	No	No	No	No	No	No	No	No	No
16	2	349	2	2	No	No	No	No	No	No	No	No	No	No
17	2	199	2	1	No	No	No	No	No	No	No	No	No	No
18	2	199	2	1	No	No	No	No	No	No	No	No	No	No
19	2	112	2	1	No	No	No	No	No	No	No	No	No	No
20	2	62	2	0	No	No	No	No	No	No	No	No	No	No
21	2	38	2	0	No	No	No	No	No	No	No	No	No	No
22	2	12	2	0	No	No	No	No	No	No	No	No	No	No
23	2	12	2	0	No	No	No	No	No	No	No	No	No	No
24	2	12	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	19.7
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	8
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1254
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	68	50	0
2	66	49	0
3	65	48	0
4	61	45	0
5	54	40	0
6	53	39	0
7	52	39	0
8	48	35	0
9	47	35	0
10	46	34	0
11	40	30	0
12	37	28	0
13	37	27	0
14	27	20	0
15	27	20	0
16	19	14	0
17	11	8	0
18	11	8	0
19	6	5	0
20	3	3	0
21	2	2	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	118	1	0	No	No	No	No	No	No	No	No	No	No
2	1	115	1	0	No	No	No	No	No	No	No	No	No	No
3	1	113	1	0	No	No	No	No	No	No	No	No	No	No
4	1	106	1	0	No	No	No	No	No	No	No	No	No	No
5	1	94	1	0	No	No	No	No	No	No	No	No	No	No
6	1	92	1	0	No	No	No	No	No	No	No	No	No	No
7	1	91	1	0	No	No	No	No	No	No	No	No	No	No
8	1	83	1	0	No	No	No	No	No	No	No	No	No	No
9	1	82	1	0	No	No	No	No	No	No	No	No	No	No
10	1	80	1	0	No	No	No	No	No	No	No	No	No	No
11	1	70	1	0	No	No	No	No	No	No	No	No	No	No
12	1	65	1	0	No	No	No	No	No	No	No	No	No	No
13	1	64	1	0	No	No	No	No	No	No	No	No	No	No
14	1	47	1	0	No	No	No	No	No	No	No	No	No	No
15	1	47	1	0	No	No	No	No	No	No	No	No	No	No
16	1	33	1	0	No	No	No	No	No	No	No	No	No	No
17	1	19	1	0	No	No	No	No	No	No	No	No	No	No
18	1	19	1	0	No	No	No	No	No	No	No	No	No	No
19	1	11	1	0	No	No	No	No	No	No	No	No	No	No
20	1	6	1	0	No	No	No	No	No	No	No	No	No	No
21	1	4	1	0	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	118
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	329	612	53
2	319	594	51
3	313	581	50
4	293	545	47
5	260	483	42
6	257	477	41
7	253	471	41
8	230	428	37
9	227	422	37
10	224	416	36
11	194	361	31
12	181	337	29
13	178	330	29
14	132	245	21
15	132	245	21
16	92	171	15
17	53	98	8
18	53	98	8
19	30	55	5
20	16	31	3
21	10	18	2
22	3	6	1
23	3	6	1
24	3	6	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	941	1	53	No	No	No	No	No	No	Yes	Yes	No	No
2	3	913	1	51	No	No	No	No	No	No	No	Yes	No	No
3	3	894	1	50	No	No	No	No	No	No	No	Yes	No	No
4	3	838	1	47	No	No	No	No	No	No	No	Yes	No	No
5	3	743	1	42	No	No	No	No	No	No	No	Yes	No	No
6	3	734	1	41	No	No	No	No	No	No	No	No	No	No
7	3	724	1	41	No	No	No	No	No	No	No	No	No	No
8	3	658	1	37	No	No	No	No	No	No	No	No	No	No
9	3	649	1	37	No	No	No	No	No	No	No	No	No	No
10	3	640	1	36	No	No	No	No	No	No	No	No	No	No
11	3	555	1	31	No	No	No	No	No	No	No	No	No	No
12	3	518	1	29	No	No	No	No	No	No	No	No	No	No
13	3	508	1	29	No	No	No	No	No	No	No	No	No	No
14	3	377	1	21	No	No	No	No	No	No	No	No	No	No
15	3	377	1	21	No	No	No	No	No	No	No	No	No	No
16	3	263	1	15	No	No	No	No	No	No	No	No	No	No
17	3	151	1	8	No	No	No	No	No	No	No	No	No	No
18	3	151	1	8	No	No	No	No	No	No	No	No	No	No
19	3	85	1	5	No	No	No	No	No	No	No	No	No	No
20	3	47	1	3	No	No	No	No	No	No	No	No	No	No
21	3	28	1	2	No	No	No	No	No	No	No	No	No	No
22	3	9	1	1	No	No	No	No	No	No	No	No	No	No
23	3	9	1	1	No	No	No	No	No	No	No	No	No	No
24	3	9	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	18.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:16
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	53
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	994
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	475	290	114
2	461	281	111
3	451	276	108
4	423	258	101
5	375	229	90
6	371	226	89
7	366	223	88
8	333	203	80
9	328	200	79
10	323	197	78
11	280	171	67
12	261	160	63
13	257	157	62
14	190	116	46
15	190	116	46
16	133	81	32
17	76	46	18
18	76	46	18
19	43	26	10
20	24	15	6
21	14	9	3
22	5	3	1
23	5	3	1
24	5	3	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	765	1	114	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No
2	3	742	1	111	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No
3	3	727	1	108	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No
4	3	681	1	101	No	No	No	Yes	No	No	Yes	Yes	No	No
5	3	604	1	90	No	No	No	Yes	No	No	No	Yes	No	No
6	3	597	1	89	No	No	No	Yes	No	No	No	Yes	No	No
7	3	589	1	88	No	No	No	Yes	No	No	No	Yes	No	No
8	3	536	1	80	No	No	No	No	No	No	No	Yes	No	No
9	3	528	1	79	No	No	No	No	No	No	No	Yes	No	No
10	3	520	1	78	No	No	No	No	No	No	No	Yes	No	No
11	3	451	1	67	No	No	No	No	No	No	No	No	No	No
12	3	421	1	63	No	No	No	No	No	No	No	No	No	No
13	3	414	1	62	No	No	No	No	No	No	No	No	No	No
14	3	306	1	46	No	No	No	No	No	No	No	No	No	No
15	3	306	1	46	No	No	No	No	No	No	No	No	No	No
16	3	214	1	32	No	No	No	No	No	No	No	No	No	No
17	3	122	1	18	No	No	No	No	No	No	No	No	No	No
18	3	122	1	18	No	No	No	No	No	No	No	No	No	No
19	3	69	1	10	No	No	No	No	No	No	No	No	No	No
20	3	39	1	6	No	No	No	No	No	No	No	No	No	No
21	3	23	1	3	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	7	0	3	4	10	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:24
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	114
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	879
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-4

Phase 1 with Project plus

Other Cumulative Projects (2027)

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	561	621	2
2	544	602	2
3	533	590	2
4	499	553	2
5	443	491	2
6	438	484	2
7	432	478	2
8	393	435	1
9	387	428	1
10	381	422	1
11	331	366	1
12	309	342	1
13	303	335	1
14	224	248	1
15	224	248	1
16	157	174	1
17	90	99	0
18	90	99	0
19	50	56	0
20	28	31	0
21	17	19	0
22	6	6	0
23	6	6	0
24	6	6	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1182	2	2	No	No	No	No	No	No	No	No	No	No
2	2	1146	2	2	No	No	No	No	No	No	No	No	No	No
3	2	1123	2	2	No	No	No	No	No	No	No	No	No	No
4	2	1052	2	2	No	No	No	No	No	No	No	No	No	No
5	2	934	2	2	No	No	No	No	No	No	No	No	No	No
6	2	922	2	2	No	No	No	No	No	No	No	No	No	No
7	2	910	2	2	No	No	No	No	No	No	No	No	No	No
8	2	828	2	1	No	No	No	No	No	No	No	No	No	No
9	2	815	2	1	No	No	No	No	No	No	No	No	No	No
10	2	803	2	1	No	No	No	No	No	No	No	No	No	No
11	2	697	2	1	No	No	No	No	No	No	No	No	No	No
12	2	651	2	1	No	No	No	No	No	No	No	No	No	No
13	2	638	2	1	No	No	No	No	No	No	No	No	No	No
14	2	472	2	1	No	No	No	No	No	No	No	No	No	No
15	2	472	2	1	No	No	No	No	No	No	No	No	No	No
16	2	331	2	1	No	No	No	No	No	No	No	No	No	No
17	2	189	2	0	No	No	No	No	No	No	No	No	No	No
18	2	189	2	0	No	No	No	No	No	No	No	No	No	No
19	2	106	2	0	No	No	No	No	No	No	No	No	No	No
20	2	59	2	0	No	No	No	No	No	No	No	No	No	No
21	2	36	2	0	No	No	No	No	No	No	No	No	No	No
22	2	12	2	0	No	No	No	No	No	No	No	No	No	No
23	2	12	2	0	No	No	No	No	No	No	No	No	No	No
24	2	12	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.6
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1184
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	41	18	0
2	40	17	0
3	39	17	0
4	36	16	0
5	32	14	0
6	32	14	0
7	32	14	0
8	29	13	0
9	28	12	0
10	28	12	0
11	24	11	0
12	23	10	0
13	22	10	0
14	16	7	0
15	16	7	0
16	11	5	0
17	7	3	0
18	7	3	0
19	4	2	0
20	2	1	0
21	1	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	59	1	0	No	No	No	No	No	No	No	No	No	No
2	1	57	1	0	No	No	No	No	No	No	No	No	No	No
3	1	56	1	0	No	No	No	No	No	No	No	No	No	No
4	1	52	1	0	No	No	No	No	No	No	No	No	No	No
5	1	46	1	0	No	No	No	No	No	No	No	No	No	No
6	1	46	1	0	No	No	No	No	No	No	No	No	No	No
7	1	46	1	0	No	No	No	No	No	No	No	No	No	No
8	1	42	1	0	No	No	No	No	No	No	No	No	No	No
9	1	40	1	0	No	No	No	No	No	No	No	No	No	No
10	1	40	1	0	No	No	No	No	No	No	No	No	No	No
11	1	35	1	0	No	No	No	No	No	No	No	No	No	No
12	1	33	1	0	No	No	No	No	No	No	No	No	No	No
13	1	32	1	0	No	No	No	No	No	No	No	No	No	No
14	1	23	1	0	No	No	No	No	No	No	No	No	No	No
15	1	23	1	0	No	No	No	No	No	No	No	No	No	No
16	1	16	1	0	No	No	No	No	No	No	No	No	No	No
17	1	10	1	0	No	No	No	No	No	No	No	No	No	No
18	1	10	1	0	No	No	No	No	No	No	No	No	No	No
19	1	6	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	2	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	59
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	454	267	40
2	440	259	39
3	431	254	38
4	404	238	36
5	359	211	32
6	354	208	31
7	350	206	31
8	318	187	28
9	313	184	28
10	309	182	27
11	268	158	24
12	250	147	22
13	245	144	22
14	182	107	16
15	182	107	16
16	127	75	11
17	73	43	6
18	73	43	6
19	41	24	4
20	23	13	2
21	14	8	1
22	5	3	0
23	5	3	0
24	5	3	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	721	1	40	No	No	No	No	No	No	No	No	No	No
2	3	699	1	39	No	No	No	No	No	No	No	No	No	No
3	3	685	1	38	No	No	No	No	No	No	No	No	No	No
4	3	642	1	36	No	No	No	No	No	No	No	No	No	No
5	3	570	1	32	No	No	No	No	No	No	No	No	No	No
6	3	562	1	31	No	No	No	No	No	No	No	No	No	No
7	3	556	1	31	No	No	No	No	No	No	No	No	No	No
8	3	505	1	28	No	No	No	No	No	No	No	No	No	No
9	3	497	1	28	No	No	No	No	No	No	No	No	No	No
10	3	491	1	27	No	No	No	No	No	No	No	No	No	No
11	3	426	1	24	No	No	No	No	No	No	No	No	No	No
12	3	397	1	22	No	No	No	No	No	No	No	No	No	No
13	3	389	1	22	No	No	No	No	No	No	No	No	No	No
14	3	289	1	16	No	No	No	No	No	No	No	No	No	No
15	3	289	1	16	No	No	No	No	No	No	No	No	No	No
16	3	202	1	11	No	No	No	No	No	No	No	No	No	No
17	3	116	1	6	No	No	No	No	No	No	No	No	No	No
18	3	116	1	6	No	No	No	No	No	No	No	No	No	No
19	3	65	1	4	No	No	No	No	No	No	No	No	No	No
20	3	36	1	2	No	No	No	No	No	No	No	No	No	No
21	3	22	1	1	No	No	No	No	No	No	No	No	No	No
22	3	8	1	0	No	No	No	No	No	No	No	No	No	No
23	3	8	1	0	No	No	No	No	No	No	No	No	No	No
24	3	8	1	0	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	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.4
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	40
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	761
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	196	313	184
2	190	304	178
3	186	297	175
4	174	279	164
5	155	247	145
6	153	244	144
7	151	241	142
8	137	219	129
9	135	216	127
10	133	213	125
11	116	185	109
12	108	172	101
13	106	169	99
14	78	125	74
15	78	125	74
16	55	88	52
17	31	50	29
18	31	50	29
19	18	28	17
20	10	16	9
21	6	9	6
22	2	3	2
23	2	3	2
24	2	3	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	509	1	184	No	Yes	Yes	Yes	No	No	No	Yes	No	No
2	3	494	1	178	No	Yes	Yes	Yes	No	No	No	No	No	No
3	3	483	1	175	No	Yes	Yes	Yes	No	No	No	No	No	No
4	3	453	1	164	No	No	Yes	Yes	No	No	No	No	No	No
5	3	402	1	145	No	No	No	Yes	No	No	No	No	No	No
6	3	397	1	144	No	No	No	Yes	No	No	No	No	No	No
7	3	392	1	142	No	No	No	Yes	No	No	No	No	No	No
8	3	356	1	129	No	No	No	Yes	No	No	No	No	No	No
9	3	351	1	127	No	No	No	Yes	No	No	No	No	No	No
10	3	346	1	125	No	No	No	Yes	No	No	No	No	No	No
11	3	301	1	109	No	No	No	No	No	No	No	No	No	No
12	3	280	1	101	No	No	No	No	No	No	No	No	No	No
13	3	275	1	99	No	No	No	No	No	No	No	No	No	No
14	3	203	1	74	No	No	No	No	No	No	No	No	No	No
15	3	203	1	74	No	No	No	No	No	No	No	No	No	No
16	3	143	1	52	No	No	No	No	No	No	No	No	No	No
17	3	81	1	29	No	No	No	No	No	No	No	No	No	No
18	3	81	1	29	No	No	No	No	No	No	No	No	No	No
19	3	46	1	17	No	No	No	No	No	No	No	No	No	No
20	3	26	1	9	No	No	No	No	No	No	No	No	No	No
21	3	15	1	6	No	No	No	No	No	No	No	No	No	No
22	3	5	1	2	No	No	No	No	No	No	No	No	No	No
23	3	5	1	2	No	No	No	No	No	No	No	No	No	No
24	3	5	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	3	4	10	0	0	0	1	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:36
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	184
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	693
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 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	720	683	8
2	698	663	8
3	684	649	8
4	641	608	7
5	569	540	6
6	562	533	6
7	554	526	6
8	504	478	6
9	497	471	6
10	490	464	5
11	425	403	5
12	396	376	4
13	389	369	4
14	288	273	3
15	288	273	3
16	202	191	2
17	115	109	1
18	115	109	1
19	65	61	1
20	36	34	0
21	22	20	0
22	7	7	0
23	7	7	0
24	7	7	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1403	2	8	No	No	No	No	No	No	No	No	No	No
2	2	1361	2	8	No	No	No	No	No	No	No	No	No	No
3	2	1333	2	8	No	No	No	No	No	No	No	No	No	No
4	2	1249	2	7	No	No	No	No	No	No	No	No	No	No
5	2	1109	2	6	No	No	No	No	No	No	No	No	No	No
6	2	1095	2	6	No	No	No	No	No	No	No	No	No	No
7	2	1080	2	6	No	No	No	No	No	No	No	No	No	No
8	2	982	2	6	No	No	No	No	No	No	No	No	No	No
9	2	968	2	6	No	No	No	No	No	No	No	No	No	No
10	2	954	2	5	No	No	No	No	No	No	No	No	No	No
11	2	828	2	5	No	No	No	No	No	No	No	No	No	No
12	2	772	2	4	No	No	No	No	No	No	No	No	No	No
13	2	758	2	4	No	No	No	No	No	No	No	No	No	No
14	2	561	2	3	No	No	No	No	No	No	No	No	No	No
15	2	561	2	3	No	No	No	No	No	No	No	No	No	No
16	2	393	2	2	No	No	No	No	No	No	No	No	No	No
17	2	224	2	1	No	No	No	No	No	No	No	No	No	No
18	2	224	2	1	No	No	No	No	No	No	No	No	No	No
19	2	126	2	1	No	No	No	No	No	No	No	No	No	No
20	2	70	2	0	No	No	No	No	No	No	No	No	No	No
21	2	42	2	0	No	No	No	No	No	No	No	No	No	No
22	2	14	2	0	No	No	No	No	No	No	No	No	No	No
23	2	14	2	0	No	No	No	No	No	No	No	No	No	No
24	2	14	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	23
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	8
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1411
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	68	50	0
2	66	49	0
3	65	48	0
4	61	45	0
5	54	40	0
6	53	39	0
7	52	39	0
8	48	35	0
9	47	35	0
10	46	34	0
11	40	30	0
12	37	28	0
13	37	27	0
14	27	20	0
15	27	20	0
16	19	14	0
17	11	8	0
18	11	8	0
19	6	5	0
20	3	3	0
21	2	2	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	118	1	0	No	No	No	No	No	No	No	No	No	No
2	1	115	1	0	No	No	No	No	No	No	No	No	No	No
3	1	113	1	0	No	No	No	No	No	No	No	No	No	No
4	1	106	1	0	No	No	No	No	No	No	No	No	No	No
5	1	94	1	0	No	No	No	No	No	No	No	No	No	No
6	1	92	1	0	No	No	No	No	No	No	No	No	No	No
7	1	91	1	0	No	No	No	No	No	No	No	No	No	No
8	1	83	1	0	No	No	No	No	No	No	No	No	No	No
9	1	82	1	0	No	No	No	No	No	No	No	No	No	No
10	1	80	1	0	No	No	No	No	No	No	No	No	No	No
11	1	70	1	0	No	No	No	No	No	No	No	No	No	No
12	1	65	1	0	No	No	No	No	No	No	No	No	No	No
13	1	64	1	0	No	No	No	No	No	No	No	No	No	No
14	1	47	1	0	No	No	No	No	No	No	No	No	No	No
15	1	47	1	0	No	No	No	No	No	No	No	No	No	No
16	1	33	1	0	No	No	No	No	No	No	No	No	No	No
17	1	19	1	0	No	No	No	No	No	No	No	No	No	No
18	1	19	1	0	No	No	No	No	No	No	No	No	No	No
19	1	11	1	0	No	No	No	No	No	No	No	No	No	No
20	1	6	1	0	No	No	No	No	No	No	No	No	No	No
21	1	4	1	0	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	118
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	333	615	53
2	323	597	51
3	316	584	50
4	296	547	47
5	263	486	42
6	260	480	41
7	256	474	41
8	233	431	37
9	230	424	37
10	226	418	36
11	196	363	31
12	183	338	29
13	180	332	29
14	133	246	21
15	133	246	21
16	93	172	15
17	53	98	8
18	53	98	8
19	30	55	5
20	17	31	3
21	10	18	2
22	3	6	1
23	3	6	1
24	3	6	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	948	1	53	No	No	No	No	No	No	Yes	Yes	No	No
2	3	920	1	51	No	No	No	No	No	No	No	Yes	No	No
3	3	900	1	50	No	No	No	No	No	No	No	Yes	No	No
4	3	843	1	47	No	No	No	No	No	No	No	Yes	No	No
5	3	749	1	42	No	No	No	No	No	No	No	Yes	No	No
6	3	740	1	41	No	No	No	No	No	No	No	No	No	No
7	3	730	1	41	No	No	No	No	No	No	No	No	No	No
8	3	664	1	37	No	No	No	No	No	No	No	No	No	No
9	3	654	1	37	No	No	No	No	No	No	No	No	No	No
10	3	644	1	36	No	No	No	No	No	No	No	No	No	No
11	3	559	1	31	No	No	No	No	No	No	No	No	No	No
12	3	521	1	29	No	No	No	No	No	No	No	No	No	No
13	3	512	1	29	No	No	No	No	No	No	No	No	No	No
14	3	379	1	21	No	No	No	No	No	No	No	No	No	No
15	3	379	1	21	No	No	No	No	No	No	No	No	No	No
16	3	265	1	15	No	No	No	No	No	No	No	No	No	No
17	3	151	1	8	No	No	No	No	No	No	No	No	No	No
18	3	151	1	8	No	No	No	No	No	No	No	No	No	No
19	3	85	1	5	No	No	No	No	No	No	No	No	No	No
20	3	48	1	3	No	No	No	No	No	No	No	No	No	No
21	3	28	1	2	No	No	No	No	No	No	No	No	No	No
22	3	9	1	1	No	No	No	No	No	No	No	No	No	No
23	3	9	1	1	No	No	No	No	No	No	No	No	No	No
24	3	9	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	18.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:16
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	53
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1001
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	475	290	114
2	461	281	111
3	451	276	108
4	423	258	101
5	375	229	90
6	371	226	89
7	366	223	88
8	333	203	80
9	328	200	79
10	323	197	78
11	280	171	67
12	261	160	63
13	257	157	62
14	190	116	46
15	190	116	46
16	133	81	32
17	76	46	18
18	76	46	18
19	43	26	10
20	24	15	6
21	14	9	3
22	5	3	1
23	5	3	1
24	5	3	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	765	1	114	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No
2	3	742	1	111	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No
3	3	727	1	108	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No
4	3	681	1	101	No	No	No	Yes	No	No	Yes	Yes	No	No
5	3	604	1	90	No	No	No	Yes	No	No	No	Yes	No	No
6	3	597	1	89	No	No	No	Yes	No	No	No	Yes	No	No
7	3	589	1	88	No	No	No	Yes	No	No	No	Yes	No	No
8	3	536	1	80	No	No	No	No	No	No	No	Yes	No	No
9	3	528	1	79	No	No	No	No	No	No	No	Yes	No	No
10	3	520	1	78	No	No	No	No	No	No	No	Yes	No	No
11	3	451	1	67	No	No	No	No	No	No	No	No	No	No
12	3	421	1	63	No	No	No	No	No	No	No	No	No	No
13	3	414	1	62	No	No	No	No	No	No	No	No	No	No
14	3	306	1	46	No	No	No	No	No	No	No	No	No	No
15	3	306	1	46	No	No	No	No	No	No	No	No	No	No
16	3	214	1	32	No	No	No	No	No	No	No	No	No	No
17	3	122	1	18	No	No	No	No	No	No	No	No	No	No
18	3	122	1	18	No	No	No	No	No	No	No	No	No	No
19	3	69	1	10	No	No	No	No	No	No	No	No	No	No
20	3	39	1	6	No	No	No	No	No	No	No	No	No	No
21	3	23	1	3	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	7	0	3	4	10	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:24
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	114
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	879
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-5

Phase 1+2 without Project (2029)

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	491	532	2
2	476	516	2
3	466	505	2
4	437	473	2
5	388	420	2
6	383	415	2
7	378	410	2
8	344	372	1
9	339	367	1
10	334	362	1
11	290	314	1
12	270	293	1
13	265	287	1
14	196	213	1
15	196	213	1
16	137	149	1
17	79	85	0
18	79	85	0
19	44	48	0
20	25	27	0
21	15	16	0
22	5	5	0
23	5	5	0
24	5	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1023	2	2	No	No	No	No	No	No	No	No	No	No
2	2	992	2	2	No	No	No	No	No	No	No	No	No	No
3	2	971	2	2	No	No	No	No	No	No	No	No	No	No
4	2	910	2	2	No	No	No	No	No	No	No	No	No	No
5	2	808	2	2	No	No	No	No	No	No	No	No	No	No
6	2	798	2	2	No	No	No	No	No	No	No	No	No	No
7	2	788	2	2	No	No	No	No	No	No	No	No	No	No
8	2	716	2	1	No	No	No	No	No	No	No	No	No	No
9	2	706	2	1	No	No	No	No	No	No	No	No	No	No
10	2	696	2	1	No	No	No	No	No	No	No	No	No	No
11	2	604	2	1	No	No	No	No	No	No	No	No	No	No
12	2	563	2	1	No	No	No	No	No	No	No	No	No	No
13	2	552	2	1	No	No	No	No	No	No	No	No	No	No
14	2	409	2	1	No	No	No	No	No	No	No	No	No	No
15	2	409	2	1	No	No	No	No	No	No	No	No	No	No
16	2	286	2	1	No	No	No	No	No	No	No	No	No	No
17	2	164	2	0	No	No	No	No	No	No	No	No	No	No
18	2	164	2	0	No	No	No	No	No	No	No	No	No	No
19	2	92	2	0	No	No	No	No	No	No	No	No	No	No
20	2	52	2	0	No	No	No	No	No	No	No	No	No	No
21	2	31	2	0	No	No	No	No	No	No	No	No	No	No
22	2	10	2	0	No	No	No	No	No	No	No	No	No	No
23	2	10	2	0	No	No	No	No	No	No	No	No	No	No
24	2	10	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.5
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1025
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	41	18	0
2	40	17	0
3	39	17	0
4	36	16	0
5	32	14	0
6	32	14	0
7	32	14	0
8	29	13	0
9	28	12	0
10	28	12	0
11	24	11	0
12	23	10	0
13	22	10	0
14	16	7	0
15	16	7	0
16	11	5	0
17	7	3	0
18	7	3	0
19	4	2	0
20	2	1	0
21	1	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	59	1	0	No	No	No	No	No	No	No	No	No	No
2	1	57	1	0	No	No	No	No	No	No	No	No	No	No
3	1	56	1	0	No	No	No	No	No	No	No	No	No	No
4	1	52	1	0	No	No	No	No	No	No	No	No	No	No
5	1	46	1	0	No	No	No	No	No	No	No	No	No	No
6	1	46	1	0	No	No	No	No	No	No	No	No	No	No
7	1	46	1	0	No	No	No	No	No	No	No	No	No	No
8	1	42	1	0	No	No	No	No	No	No	No	No	No	No
9	1	40	1	0	No	No	No	No	No	No	No	No	No	No
10	1	40	1	0	No	No	No	No	No	No	No	No	No	No
11	1	35	1	0	No	No	No	No	No	No	No	No	No	No
12	1	33	1	0	No	No	No	No	No	No	No	No	No	No
13	1	32	1	0	No	No	No	No	No	No	No	No	No	No
14	1	23	1	0	No	No	No	No	No	No	No	No	No	No
15	1	23	1	0	No	No	No	No	No	No	No	No	No	No
16	1	16	1	0	No	No	No	No	No	No	No	No	No	No
17	1	10	1	0	No	No	No	No	No	No	No	No	No	No
18	1	10	1	0	No	No	No	No	No	No	No	No	No	No
19	1	6	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	2	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	59
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	341	225	40
2	331	218	39
3	324	214	38
4	303	200	36
5	269	178	32
6	266	176	31
7	263	173	31
8	239	158	28
9	235	155	28
10	232	153	27
11	201	133	24
12	188	124	22
13	184	122	22
14	136	90	16
15	136	90	16
16	95	63	11
17	55	36	6
18	55	36	6
19	31	20	4
20	17	11	2
21	10	7	1
22	3	2	0
23	3	2	0
24	3	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	566	1	40	No	No	No	No	No	No	No	No	No	No
2	3	549	1	39	No	No	No	No	No	No	No	No	No	No
3	3	538	1	38	No	No	No	No	No	No	No	No	No	No
4	3	503	1	36	No	No	No	No	No	No	No	No	No	No
5	3	447	1	32	No	No	No	No	No	No	No	No	No	No
6	3	442	1	31	No	No	No	No	No	No	No	No	No	No
7	3	436	1	31	No	No	No	No	No	No	No	No	No	No
8	3	397	1	28	No	No	No	No	No	No	No	No	No	No
9	3	390	1	28	No	No	No	No	No	No	No	No	No	No
10	3	385	1	27	No	No	No	No	No	No	No	No	No	No
11	3	334	1	24	No	No	No	No	No	No	No	No	No	No
12	3	312	1	22	No	No	No	No	No	No	No	No	No	No
13	3	306	1	22	No	No	No	No	No	No	No	No	No	No
14	3	226	1	16	No	No	No	No	No	No	No	No	No	No
15	3	226	1	16	No	No	No	No	No	No	No	No	No	No
16	3	158	1	11	No	No	No	No	No	No	No	No	No	No
17	3	91	1	6	No	No	No	No	No	No	No	No	No	No
18	3	91	1	6	No	No	No	No	No	No	No	No	No	No
19	3	51	1	4	No	No	No	No	No	No	No	No	No	No
20	3	28	1	2	No	No	No	No	No	No	No	No	No	No
21	3	17	1	1	No	No	No	No	No	No	No	No	No	No
22	3	5	1	0	No	No	No	No	No	No	No	No	No	No
23	3	5	1	0	No	No	No	No	No	No	No	No	No	No
24	3	5	1	0	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	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	40
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	606
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	55	36	61
2	53	35	59
3	52	34	58
4	49	32	54
5	43	28	48
6	43	28	48
7	42	28	47
8	39	25	43
9	38	25	42
10	37	24	41
11	32	21	36
12	30	20	34
13	30	19	33
14	22	14	24
15	22	14	24
16	15	10	17
17	9	6	10
18	9	6	10
19	5	3	5
20	3	2	3
21	2	1	2
22	1	0	1
23	1	0	1
24	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	91	1	61	No	No	No	No	No	No	No	No	No	No
2	1	88	1	59	No	No	No	No	No	No	No	No	No	No
3	1	86	1	58	No	No	No	No	No	No	No	No	No	No
4	1	81	1	54	No	No	No	No	No	No	No	No	No	No
5	1	71	1	48	No	No	No	No	No	No	No	No	No	No
6	1	71	1	48	No	No	No	No	No	No	No	No	No	No
7	1	70	1	47	No	No	No	No	No	No	No	No	No	No
8	1	64	1	43	No	No	No	No	No	No	No	No	No	No
9	1	63	1	42	No	No	No	No	No	No	No	No	No	No
10	1	61	1	41	No	No	No	No	No	No	No	No	No	No
11	1	53	1	36	No	No	No	No	No	No	No	No	No	No
12	1	50	1	34	No	No	No	No	No	No	No	No	No	No
13	1	49	1	33	No	No	No	No	No	No	No	No	No	No
14	1	36	1	24	No	No	No	No	No	No	No	No	No	No
15	1	36	1	24	No	No	No	No	No	No	No	No	No	No
16	1	25	1	17	No	No	No	No	No	No	No	No	No	No
17	1	15	1	10	No	No	No	No	No	No	No	No	No	No
18	1	15	1	10	No	No	No	No	No	No	No	No	No	No
19	1	8	1	5	No	No	No	No	No	No	No	No	No	No
20	1	5	1	3	No	No	No	No	No	No	No	No	No	No
21	1	3	1	2	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	61
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	152
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	97	67	35
2	94	65	34
3	92	64	33
4	86	60	31
5	77	53	28
6	76	52	27
7	75	52	27
8	68	47	25
9	67	46	24
10	66	46	24
11	57	40	21
12	53	37	19
13	52	36	19
14	39	27	14
15	39	27	14
16	27	19	10
17	16	11	6
18	16	11	6
19	9	6	3
20	5	3	2
21	3	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	164	1	35	No	No	No	No	No	No	No	No	No	No
2	2	159	1	34	No	No	No	No	No	No	No	No	No	No
3	2	156	1	33	No	No	No	No	No	No	No	No	No	No
4	2	146	1	31	No	No	No	No	No	No	No	No	No	No
5	2	130	1	28	No	No	No	No	No	No	No	No	No	No
6	2	128	1	27	No	No	No	No	No	No	No	No	No	No
7	2	127	1	27	No	No	No	No	No	No	No	No	No	No
8	2	115	1	25	No	No	No	No	No	No	No	No	No	No
9	2	113	1	24	No	No	No	No	No	No	No	No	No	No
10	2	112	1	24	No	No	No	No	No	No	No	No	No	No
11	2	97	1	21	No	No	No	No	No	No	No	No	No	No
12	2	90	1	19	No	No	No	No	No	No	No	No	No	No
13	2	88	1	19	No	No	No	No	No	No	No	No	No	No
14	2	66	1	14	No	No	No	No	No	No	No	No	No	No
15	2	66	1	14	No	No	No	No	No	No	No	No	No	No
16	2	46	1	10	No	No	No	No	No	No	No	No	No	No
17	2	27	1	6	No	No	No	No	No	No	No	No	No	No
18	2	27	1	6	No	No	No	No	No	No	No	No	No	No
19	2	15	1	3	No	No	No	No	No	No	No	No	No	No
20	2	8	1	2	No	No	No	No	No	No	No	No	No	No
21	2	5	1	1	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	35
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	199
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	607	586	8
2	589	568	8
3	577	557	8
4	540	522	7
5	480	463	6
6	473	457	6
7	467	451	6
8	425	410	6
9	419	404	6
10	413	398	5
11	358	346	5
12	334	322	4
13	328	316	4
14	243	234	3
15	243	234	3
16	170	164	2
17	97	94	1
18	97	94	1
19	55	53	1
20	30	29	0
21	18	18	0
22	6	6	0
23	6	6	0
24	6	6	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1193	2	8	No	No	No	No	No	No	No	No	No	No
2	2	1157	2	8	No	No	No	No	No	No	No	No	No	No
3	2	1134	2	8	No	No	No	No	No	No	No	No	No	No
4	2	1062	2	7	No	No	No	No	No	No	No	No	No	No
5	2	943	2	6	No	No	No	No	No	No	No	No	No	No
6	2	930	2	6	No	No	No	No	No	No	No	No	No	No
7	2	918	2	6	No	No	No	No	No	No	No	No	No	No
8	2	835	2	6	No	No	No	No	No	No	No	No	No	No
9	2	823	2	6	No	No	No	No	No	No	No	No	No	No
10	2	811	2	5	No	No	No	No	No	No	No	No	No	No
11	2	704	2	5	No	No	No	No	No	No	No	No	No	No
12	2	656	2	4	No	No	No	No	No	No	No	No	No	No
13	2	644	2	4	No	No	No	No	No	No	No	No	No	No
14	2	477	2	3	No	No	No	No	No	No	No	No	No	No
15	2	477	2	3	No	No	No	No	No	No	No	No	No	No
16	2	334	2	2	No	No	No	No	No	No	No	No	No	No
17	2	191	2	1	No	No	No	No	No	No	No	No	No	No
18	2	191	2	1	No	No	No	No	No	No	No	No	No	No
19	2	108	2	1	No	No	No	No	No	No	No	No	No	No
20	2	59	2	0	No	No	No	No	No	No	No	No	No	No
21	2	36	2	0	No	No	No	No	No	No	No	No	No	No
22	2	12	2	0	No	No	No	No	No	No	No	No	No	No
23	2	12	2	0	No	No	No	No	No	No	No	No	No	No
24	2	12	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	18.7
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	8
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1201
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	68	50	0
2	66	49	0
3	65	48	0
4	61	45	0
5	54	40	0
6	53	39	0
7	52	39	0
8	48	35	0
9	47	35	0
10	46	34	0
11	40	30	0
12	37	28	0
13	37	27	0
14	27	20	0
15	27	20	0
16	19	14	0
17	11	8	0
18	11	8	0
19	6	5	0
20	3	3	0
21	2	2	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	118	1	0	No	No	No	No	No	No	No	No	No	No
2	1	115	1	0	No	No	No	No	No	No	No	No	No	No
3	1	113	1	0	No	No	No	No	No	No	No	No	No	No
4	1	106	1	0	No	No	No	No	No	No	No	No	No	No
5	1	94	1	0	No	No	No	No	No	No	No	No	No	No
6	1	92	1	0	No	No	No	No	No	No	No	No	No	No
7	1	91	1	0	No	No	No	No	No	No	No	No	No	No
8	1	83	1	0	No	No	No	No	No	No	No	No	No	No
9	1	82	1	0	No	No	No	No	No	No	No	No	No	No
10	1	80	1	0	No	No	No	No	No	No	No	No	No	No
11	1	70	1	0	No	No	No	No	No	No	No	No	No	No
12	1	65	1	0	No	No	No	No	No	No	No	No	No	No
13	1	64	1	0	No	No	No	No	No	No	No	No	No	No
14	1	47	1	0	No	No	No	No	No	No	No	No	No	No
15	1	47	1	0	No	No	No	No	No	No	No	No	No	No
16	1	33	1	0	No	No	No	No	No	No	No	No	No	No
17	1	19	1	0	No	No	No	No	No	No	No	No	No	No
18	1	19	1	0	No	No	No	No	No	No	No	No	No	No
19	1	11	1	0	No	No	No	No	No	No	No	No	No	No
20	1	6	1	0	No	No	No	No	No	No	No	No	No	No
21	1	4	1	0	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	118
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	256	497	53
2	248	482	51
3	243	472	50
4	228	442	47
5	202	393	42
6	200	388	41
7	197	383	41
8	179	348	37
9	177	343	37
10	174	338	36
11	151	293	31
12	141	273	29
13	138	268	29
14	102	199	21
15	102	199	21
16	72	139	15
17	41	80	8
18	41	80	8
19	23	45	5
20	13	25	3
21	8	15	2
22	3	5	1
23	3	5	1
24	3	5	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	753	1	53	No	No	No	No	No	No	Yes	Yes	No	No
2	3	730	1	51	No	No	No	No	No	No	No	Yes	No	No
3	3	715	1	50	No	No	No	No	No	No	No	Yes	No	No
4	3	670	1	47	No	No	No	No	No	No	No	Yes	No	No
5	3	595	1	42	No	No	No	No	No	No	No	Yes	No	No
6	3	588	1	41	No	No	No	No	No	No	No	No	No	No
7	3	580	1	41	No	No	No	No	No	No	No	No	No	No
8	3	527	1	37	No	No	No	No	No	No	No	No	No	No
9	3	520	1	37	No	No	No	No	No	No	No	No	No	No
10	3	512	1	36	No	No	No	No	No	No	No	No	No	No
11	3	444	1	31	No	No	No	No	No	No	No	No	No	No
12	3	414	1	29	No	No	No	No	No	No	No	No	No	No
13	3	406	1	29	No	No	No	No	No	No	No	No	No	No
14	3	301	1	21	No	No	No	No	No	No	No	No	No	No
15	3	301	1	21	No	No	No	No	No	No	No	No	No	No
16	3	211	1	15	No	No	No	No	No	No	No	No	No	No
17	3	121	1	8	No	No	No	No	No	No	No	No	No	No
18	3	121	1	8	No	No	No	No	No	No	No	No	No	No
19	3	68	1	5	No	No	No	No	No	No	No	No	No	No
20	3	38	1	3	No	No	No	No	No	No	No	No	No	No
21	3	23	1	2	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	53
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	806
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 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	113	52	47
2	110	50	46
3	107	49	45
4	101	46	42
5	89	41	37
6	88	41	37
7	87	40	36
8	79	36	33
9	78	36	32
10	77	35	32
11	67	31	28
12	62	29	26
13	61	28	25
14	45	21	19
15	45	21	19
16	32	15	13
17	18	8	8
18	18	8	8
19	10	5	4
20	6	3	2
21	3	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	165	1	47	No	No	No	No	No	No	No	No	No	No
2	1	160	1	46	No	No	No	No	No	No	No	No	No	No
3	1	156	1	45	No	No	No	No	No	No	No	No	No	No
4	1	147	1	42	No	No	No	No	No	No	No	No	No	No
5	1	130	1	37	No	No	No	No	No	No	No	No	No	No
6	1	129	1	37	No	No	No	No	No	No	No	No	No	No
7	1	127	1	36	No	No	No	No	No	No	No	No	No	No
8	1	115	1	33	No	No	No	No	No	No	No	No	No	No
9	1	114	1	32	No	No	No	No	No	No	No	No	No	No
10	1	112	1	32	No	No	No	No	No	No	No	No	No	No
11	1	98	1	28	No	No	No	No	No	No	No	No	No	No
12	1	91	1	26	No	No	No	No	No	No	No	No	No	No
13	1	89	1	25	No	No	No	No	No	No	No	No	No	No
14	1	66	1	19	No	No	No	No	No	No	No	No	No	No
15	1	66	1	19	No	No	No	No	No	No	No	No	No	No
16	1	47	1	13	No	No	No	No	No	No	No	No	No	No
17	1	26	1	8	No	No	No	No	No	No	No	No	No	No
18	1	26	1	8	No	No	No	No	No	No	No	No	No	No
19	1	15	1	4	No	No	No	No	No	No	No	No	No	No
20	1	9	1	2	No	No	No	No	No	No	No	No	No	No
21	1	5	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	47
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	212
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	94	136	24
2	91	132	23
3	89	129	23
4	84	121	21
5	74	107	19
6	73	106	19
7	72	105	18
8	66	95	17
9	65	94	17
10	64	92	16
11	55	80	14
12	52	75	13
13	51	73	13
14	38	54	10
15	38	54	10
16	26	38	7
17	15	22	4
18	15	22	4
19	8	12	2
20	5	7	1
21	3	4	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	230	1	24	No	No	No	No	No	No	No	No	No	No
2	2	223	1	23	No	No	No	No	No	No	No	No	No	No
3	2	218	1	23	No	No	No	No	No	No	No	No	No	No
4	2	205	1	21	No	No	No	No	No	No	No	No	No	No
5	2	181	1	19	No	No	No	No	No	No	No	No	No	No
6	2	179	1	19	No	No	No	No	No	No	No	No	No	No
7	2	177	1	18	No	No	No	No	No	No	No	No	No	No
8	2	161	1	17	No	No	No	No	No	No	No	No	No	No
9	2	159	1	17	No	No	No	No	No	No	No	No	No	No
10	2	156	1	16	No	No	No	No	No	No	No	No	No	No
11	2	135	1	14	No	No	No	No	No	No	No	No	No	No
12	2	127	1	13	No	No	No	No	No	No	No	No	No	No
13	2	124	1	13	No	No	No	No	No	No	No	No	No	No
14	2	92	1	10	No	No	No	No	No	No	No	No	No	No
15	2	92	1	10	No	No	No	No	No	No	No	No	No	No
16	2	64	1	7	No	No	No	No	No	No	No	No	No	No
17	2	37	1	4	No	No	No	No	No	No	No	No	No	No
18	2	37	1	4	No	No	No	No	No	No	No	No	No	No
19	2	20	1	2	No	No	No	No	No	No	No	No	No	No
20	2	12	1	1	No	No	No	No	No	No	No	No	No	No
21	2	7	1	1	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	24
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	254
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-6

Phase 1+2 with Project (2029)

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	510	538	2
2	495	522	2
3	485	511	2
4	454	479	2
5	403	425	2
6	398	420	2
7	393	414	2
8	357	377	1
9	352	371	1
10	347	366	1
11	301	317	1
12	281	296	1
13	275	291	1
14	204	215	1
15	204	215	1
16	143	151	1
17	82	86	0
18	82	86	0
19	46	48	0
20	26	27	0
21	15	16	0
22	5	5	0
23	5	5	0
24	5	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1048	2	2	No	No	No	No	No	No	No	No	No	No
2	2	1017	2	2	No	No	No	No	No	No	No	No	No	No
3	2	996	2	2	No	No	No	No	No	No	No	No	No	No
4	2	933	2	2	No	No	No	No	No	No	No	No	No	No
5	2	828	2	2	No	No	No	No	No	No	No	No	No	No
6	2	818	2	2	No	No	No	No	No	No	No	No	No	No
7	2	807	2	2	No	No	No	No	No	No	No	No	No	No
8	2	734	2	1	No	No	No	No	No	No	No	No	No	No
9	2	723	2	1	No	No	No	No	No	No	No	No	No	No
10	2	713	2	1	No	No	No	No	No	No	No	No	No	No
11	2	618	2	1	No	No	No	No	No	No	No	No	No	No
12	2	577	2	1	No	No	No	No	No	No	No	No	No	No
13	2	566	2	1	No	No	No	No	No	No	No	No	No	No
14	2	419	2	1	No	No	No	No	No	No	No	No	No	No
15	2	419	2	1	No	No	No	No	No	No	No	No	No	No
16	2	294	2	1	No	No	No	No	No	No	No	No	No	No
17	2	168	2	0	No	No	No	No	No	No	No	No	No	No
18	2	168	2	0	No	No	No	No	No	No	No	No	No	No
19	2	94	2	0	No	No	No	No	No	No	No	No	No	No
20	2	53	2	0	No	No	No	No	No	No	No	No	No	No
21	2	31	2	0	No	No	No	No	No	No	No	No	No	No
22	2	10	2	0	No	No	No	No	No	No	No	No	No	No
23	2	10	2	0	No	No	No	No	No	No	No	No	No	No
24	2	10	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.3
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1050
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 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	444	267	53
2	431	259	51
3	422	254	50
4	395	238	47
5	351	211	42
6	346	208	41
7	342	206	41
8	311	187	37
9	306	184	37
10	302	182	36
11	262	158	31
12	244	147	29
13	240	144	29
14	178	107	21
15	178	107	21
16	124	75	15
17	71	43	8
18	71	43	8
19	40	24	5
20	22	13	3
21	13	8	2
22	4	3	1
23	4	3	1
24	4	3	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	711	1	53	No	No	No	No	No	No	Yes	Yes	No	No
2	3	690	1	51	No	No	No	No	No	No	No	Yes	No	No
3	3	676	1	50	No	No	No	No	No	No	No	Yes	No	No
4	3	633	1	47	No	No	No	No	No	No	No	Yes	No	No
5	3	562	1	42	No	No	No	No	No	No	No	Yes	No	No
6	3	554	1	41	No	No	No	No	No	No	No	No	No	No
7	3	548	1	41	No	No	No	No	No	No	No	No	No	No
8	3	498	1	37	No	No	No	No	No	No	No	No	No	No
9	3	490	1	37	No	No	No	No	No	No	No	No	No	No
10	3	484	1	36	No	No	No	No	No	No	No	No	No	No
11	3	420	1	31	No	No	No	No	No	No	No	No	No	No
12	3	391	1	29	No	No	No	No	No	No	No	No	No	No
13	3	384	1	29	No	No	No	No	No	No	No	No	No	No
14	3	285	1	21	No	No	No	No	No	No	No	No	No	No
15	3	285	1	21	No	No	No	No	No	No	No	No	No	No
16	3	199	1	15	No	No	No	No	No	No	No	No	No	No
17	3	114	1	8	No	No	No	No	No	No	No	No	No	No
18	3	114	1	8	No	No	No	No	No	No	No	No	No	No
19	3	64	1	5	No	No	No	No	No	No	No	No	No	No
20	3	35	1	3	No	No	No	No	No	No	No	No	No	No
21	3	21	1	2	No	No	No	No	No	No	No	No	No	No
22	3	7	1	1	No	No	No	No	No	No	No	No	No	No
23	3	7	1	1	No	No	No	No	No	No	No	No	No	No
24	3	7	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:11
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	53
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	764
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	242	431	184
2	235	418	178
3	230	409	175
4	215	384	164
5	191	340	145
6	189	336	144
7	186	332	142
8	169	302	129
9	167	297	127
10	165	293	125
11	143	254	109
12	133	237	101
13	131	233	99
14	97	172	74
15	97	172	74
16	68	121	52
17	39	69	29
18	39	69	29
19	22	39	17
20	12	22	9
21	7	13	6
22	2	4	2
23	2	4	2
24	2	4	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	673	1	184	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
2	3	653	1	178	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
3	3	639	1	175	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
4	3	599	1	164	No	Yes	Yes	Yes	No	No	No	Yes	No	No
5	3	531	1	145	No	Yes	Yes	Yes	No	No	No	Yes	No	No
6	3	525	1	144	No	Yes	Yes	Yes	No	No	No	Yes	No	No
7	3	518	1	142	No	Yes	Yes	Yes	No	No	No	Yes	No	No
8	3	471	1	129	No	No	Yes	Yes	No	No	No	No	No	No
9	3	464	1	127	No	No	Yes	Yes	No	No	No	No	No	No
10	3	458	1	125	No	No	Yes	Yes	No	No	No	No	No	No
11	3	397	1	109	No	No	No	Yes	No	No	No	No	No	No
12	3	370	1	101	No	No	No	Yes	No	No	No	No	No	No
13	3	364	1	99	No	No	No	Yes	No	No	No	No	No	No
14	3	269	1	74	No	No	No	No	No	No	No	No	No	No
15	3	269	1	74	No	No	No	No	No	No	No	No	No	No
16	3	189	1	52	No	No	No	No	No	No	No	No	No	No
17	3	108	1	29	No	No	No	No	No	No	No	No	No	No
18	3	108	1	29	No	No	No	No	No	No	No	No	No	No
19	3	61	1	17	No	No	No	No	No	No	No	No	No	No
20	3	34	1	9	No	No	No	No	No	No	No	No	No	No
21	3	20	1	6	No	No	No	No	No	No	No	No	No	No
22	3	6	1	2	No	No	No	No	No	No	No	No	No	No
23	3	6	1	2	No	No	No	No	No	No	No	No	No	No
24	3	6	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					3	7	10	13	0	0	3	7	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:41
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	184
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	857
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 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	646	646	8
2	627	627	8
3	614	614	8
4	575	575	7
5	510	510	6
6	504	504	6
7	497	497	6
8	452	452	6
9	446	446	6
10	439	439	5
11	381	381	5
12	355	355	4
13	349	349	4
14	258	258	3
15	258	258	3
16	181	181	2
17	103	103	1
18	103	103	1
19	58	58	1
20	32	32	0
21	19	19	0
22	6	6	0
23	6	6	0
24	6	6	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1292	2	8	No	No	No	No	No	No	No	No	No	No
2	2	1254	2	8	No	No	No	No	No	No	No	No	No	No
3	2	1228	2	8	No	No	No	No	No	No	No	No	No	No
4	2	1150	2	7	No	No	No	No	No	No	No	No	No	No
5	2	1020	2	6	No	No	No	No	No	No	No	No	No	No
6	2	1008	2	6	No	No	No	No	No	No	No	No	No	No
7	2	994	2	6	No	No	No	No	No	No	No	No	No	No
8	2	904	2	6	No	No	No	No	No	No	No	No	No	No
9	2	892	2	6	No	No	No	No	No	No	No	No	No	No
10	2	878	2	5	No	No	No	No	No	No	No	No	No	No
11	2	762	2	5	No	No	No	No	No	No	No	No	No	No
12	2	710	2	4	No	No	No	No	No	No	No	No	No	No
13	2	698	2	4	No	No	No	No	No	No	No	No	No	No
14	2	516	2	3	No	No	No	No	No	No	No	No	No	No
15	2	516	2	3	No	No	No	No	No	No	No	No	No	No
16	2	362	2	2	No	No	No	No	No	No	No	No	No	No
17	2	206	2	1	No	No	No	No	No	No	No	No	No	No
18	2	206	2	1	No	No	No	No	No	No	No	No	No	No
19	2	116	2	1	No	No	No	No	No	No	No	No	No	No
20	2	64	2	0	No	No	No	No	No	No	No	No	No	No
21	2	38	2	0	No	No	No	No	No	No	No	No	No	No
22	2	12	2	0	No	No	No	No	No	No	No	No	No	No
23	2	12	2	0	No	No	No	No	No	No	No	No	No	No
24	2	12	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	16.2
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	8
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1300
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 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	347	660	68
2	337	640	66
3	330	627	65
4	309	587	61
5	274	521	54
6	271	515	53
7	267	508	52
8	243	462	48
9	239	455	47
10	236	449	46
11	205	389	40
12	191	363	37
13	187	356	37
14	139	264	27
15	139	264	27
16	97	185	19
17	56	106	11
18	56	106	11
19	31	59	6
20	17	33	3
21	10	20	2
22	3	7	1
23	3	7	1
24	3	7	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1007	1	68	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	977	1	66	No	No	No	No	No	Yes	Yes	Yes	No	No
3	3	957	1	65	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	896	1	61	No	No	No	No	No	Yes	Yes	Yes	No	No
5	3	795	1	54	No	No	No	No	No	No	Yes	Yes	No	No
6	3	786	1	53	No	No	No	No	No	No	Yes	Yes	No	No
7	3	775	1	52	No	No	No	No	No	No	Yes	Yes	No	No
8	3	705	1	48	No	No	No	No	No	No	No	Yes	No	No
9	3	694	1	47	No	No	No	No	No	No	No	Yes	No	No
10	3	685	1	46	No	No	No	No	No	No	No	Yes	No	No
11	3	594	1	40	No	No	No	No	No	No	No	No	No	No
12	3	554	1	37	No	No	No	No	No	No	No	No	No	No
13	3	543	1	37	No	No	No	No	No	No	No	No	No	No
14	3	403	1	27	No	No	No	No	No	No	No	No	No	No
15	3	403	1	27	No	No	No	No	No	No	No	No	No	No
16	3	282	1	19	No	No	No	No	No	No	No	No	No	No
17	3	162	1	11	No	No	No	No	No	No	No	No	No	No
18	3	162	1	11	No	No	No	No	No	No	No	No	No	No
19	3	90	1	6	No	No	No	No	No	No	No	No	No	No
20	3	50	1	3	No	No	No	No	No	No	No	No	No	No
21	3	30	1	2	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	4	7	10	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	20.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:23
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	68
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1075
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	601	373	114
2	583	362	111
3	571	354	108
4	535	332	101
5	475	295	90
6	469	291	89
7	463	287	88
8	421	261	80
9	415	257	79
10	409	254	78
11	355	220	67
12	331	205	63
13	325	201	62
14	240	149	46
15	240	149	46
16	168	104	32
17	96	60	18
18	96	60	18
19	54	34	10
20	30	19	6
21	18	11	3
22	6	4	1
23	6	4	1
24	6	4	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	974	1	114	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
2	3	945	1	111	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
3	3	925	1	108	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
4	3	867	1	101	No	No	No	Yes	No	Yes	Yes	Yes	No	No
5	3	770	1	90	No	No	No	Yes	No	Yes	Yes	Yes	No	No
6	3	760	1	89	No	No	No	Yes	No	Yes	Yes	Yes	No	No
7	3	750	1	88	No	No	No	Yes	No	Yes	Yes	Yes	No	No
8	3	682	1	80	No	No	No	No	No	No	Yes	Yes	No	No
9	3	672	1	79	No	No	No	No	No	No	Yes	Yes	No	No
10	3	663	1	78	No	No	No	No	No	No	Yes	Yes	No	No
11	3	575	1	67	No	No	No	No	No	No	No	Yes	No	No
12	3	536	1	63	No	No	No	No	No	No	No	Yes	No	No
13	3	526	1	62	No	No	No	No	No	No	No	Yes	No	No
14	3	389	1	46	No	No	No	No	No	No	No	No	No	No
15	3	389	1	46	No	No	No	No	No	No	No	No	No	No
16	3	272	1	32	No	No	No	No	No	No	No	No	No	No
17	3	156	1	18	No	No	No	No	No	No	No	No	No	No
18	3	156	1	18	No	No	No	No	No	No	No	No	No	No
19	3	88	1	10	No	No	No	No	No	No	No	No	No	No
20	3	49	1	6	No	No	No	No	No	No	No	No	No	No
21	3	29	1	3	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	7	3	7	10	13	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:27
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	114
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1088
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-7

Phase 1+2 with Project plus

Other Cumulative Projects (2029)

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	577	627	2
2	560	608	2
3	548	596	2
4	514	558	2
5	456	495	2
6	450	489	2
7	444	483	2
8	404	439	1
9	398	433	1
10	392	426	1
11	340	370	1
12	317	345	1
13	312	339	1
14	231	251	1
15	231	251	1
16	162	176	1
17	92	100	0
18	92	100	0
19	52	56	0
20	29	31	0
21	17	19	0
22	6	6	0
23	6	6	0
24	6	6	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1204	2	2	No	No	No	No	No	No	No	No	No	No
2	2	1168	2	2	No	No	No	No	No	No	No	No	No	No
3	2	1144	2	2	No	No	No	No	No	No	No	No	No	No
4	2	1072	2	2	No	No	No	No	No	No	No	No	No	No
5	2	951	2	2	No	No	No	No	No	No	No	No	No	No
6	2	939	2	2	No	No	No	No	No	No	No	No	No	No
7	2	927	2	2	No	No	No	No	No	No	No	No	No	No
8	2	843	2	1	No	No	No	No	No	No	No	No	No	No
9	2	831	2	1	No	No	No	No	No	No	No	No	No	No
10	2	818	2	1	No	No	No	No	No	No	No	No	No	No
11	2	710	2	1	No	No	No	No	No	No	No	No	No	No
12	2	662	2	1	No	No	No	No	No	No	No	No	No	No
13	2	651	2	1	No	No	No	No	No	No	No	No	No	No
14	2	482	2	1	No	No	No	No	No	No	No	No	No	No
15	2	482	2	1	No	No	No	No	No	No	No	No	No	No
16	2	338	2	1	No	No	No	No	No	No	No	No	No	No
17	2	192	2	0	No	No	No	No	No	No	No	No	No	No
18	2	192	2	0	No	No	No	No	No	No	No	No	No	No
19	2	108	2	0	No	No	No	No	No	No	No	No	No	No
20	2	60	2	0	No	No	No	No	No	No	No	No	No	No
21	2	36	2	0	No	No	No	No	No	No	No	No	No	No
22	2	12	2	0	No	No	No	No	No	No	No	No	No	No
23	2	12	2	0	No	No	No	No	No	No	No	No	No	No
24	2	12	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.7
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1206
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 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	476	284	61
2	462	275	59
3	452	270	58
4	424	253	54
5	376	224	48
6	371	222	48
7	367	219	47
8	333	199	43
9	328	196	42
10	324	193	41
11	281	168	36
12	262	156	34
13	257	153	33
14	190	114	24
15	190	114	24
16	133	80	17
17	76	45	10
18	76	45	10
19	43	26	5
20	24	14	3
21	14	9	2
22	5	3	1
23	5	3	1
24	5	3	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	760	1	61	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	737	1	59	No	No	No	No	No	No	Yes	Yes	No	No
3	3	722	1	58	No	No	No	No	No	No	Yes	Yes	No	No
4	3	677	1	54	No	No	No	No	No	No	Yes	Yes	No	No
5	3	600	1	48	No	No	No	No	No	No	No	Yes	No	No
6	3	593	1	48	No	No	No	No	No	No	No	Yes	No	No
7	3	586	1	47	No	No	No	No	No	No	No	Yes	No	No
8	3	532	1	43	No	No	No	No	No	No	No	Yes	No	No
9	3	524	1	42	No	No	No	No	No	No	No	Yes	No	No
10	3	517	1	41	No	No	No	No	No	No	No	No	No	No
11	3	449	1	36	No	No	No	No	No	No	No	No	No	No
12	3	418	1	34	No	No	No	No	No	No	No	No	No	No
13	3	410	1	33	No	No	No	No	No	No	No	No	No	No
14	3	304	1	24	No	No	No	No	No	No	No	No	No	No
15	3	304	1	24	No	No	No	No	No	No	No	No	No	No
16	3	213	1	17	No	No	No	No	No	No	No	No	No	No
17	3	121	1	10	No	No	No	No	No	No	No	No	No	No
18	3	121	1	10	No	No	No	No	No	No	No	No	No	No
19	3	69	1	5	No	No	No	No	No	No	No	No	No	No
20	3	38	1	3	No	No	No	No	No	No	No	No	No	No
21	3	23	1	2	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	1	4	9	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:14
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	61
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	821
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	242	431	184
2	235	418	178
3	230	409	175
4	215	384	164
5	191	340	145
6	189	336	144
7	186	332	142
8	169	302	129
9	167	297	127
10	165	293	125
11	143	254	109
12	133	237	101
13	131	233	99
14	97	172	74
15	97	172	74
16	68	121	52
17	39	69	29
18	39	69	29
19	22	39	17
20	12	22	9
21	7	13	6
22	2	4	2
23	2	4	2
24	2	4	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	673	1	184	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
2	3	653	1	178	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
3	3	639	1	175	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
4	3	599	1	164	No	Yes	Yes	Yes	No	No	No	Yes	No	No
5	3	531	1	145	No	Yes	Yes	Yes	No	No	No	Yes	No	No
6	3	525	1	144	No	Yes	Yes	Yes	No	No	No	Yes	No	No
7	3	518	1	142	No	Yes	Yes	Yes	No	No	No	Yes	No	No
8	3	471	1	129	No	No	Yes	Yes	No	No	No	No	No	No
9	3	464	1	127	No	No	Yes	Yes	No	No	No	No	No	No
10	3	458	1	125	No	No	Yes	Yes	No	No	No	No	No	No
11	3	397	1	109	No	No	No	Yes	No	No	No	No	No	No
12	3	370	1	101	No	No	No	Yes	No	No	No	No	No	No
13	3	364	1	99	No	No	No	Yes	No	No	No	No	No	No
14	3	269	1	74	No	No	No	No	No	No	No	No	No	No
15	3	269	1	74	No	No	No	No	No	No	No	No	No	No
16	3	189	1	52	No	No	No	No	No	No	No	No	No	No
17	3	108	1	29	No	No	No	No	No	No	No	No	No	No
18	3	108	1	29	No	No	No	No	No	No	No	No	No	No
19	3	61	1	17	No	No	No	No	No	No	No	No	No	No
20	3	34	1	9	No	No	No	No	No	No	No	No	No	No
21	3	20	1	6	No	No	No	No	No	No	No	No	No	No
22	3	6	1	2	No	No	No	No	No	No	No	No	No	No
23	3	6	1	2	No	No	No	No	No	No	No	No	No	No
24	3	6	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					3	7	10	13	0	0	3	7	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:41
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	184
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	857
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 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	731	700	8
2	709	679	8
3	694	665	8
4	651	623	7
5	577	553	6
6	570	546	6
7	563	539	6
8	512	490	6
9	504	483	6
10	497	476	5
11	431	413	5
12	402	385	4
13	395	378	4
14	292	280	3
15	292	280	3
16	205	196	2
17	117	112	1
18	117	112	1
19	66	63	1
20	37	35	0
21	22	21	0
22	7	7	0
23	7	7	0
24	7	7	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1431	2	8	No	No	No	No	No	No	No	No	No	No
2	2	1388	2	8	No	No	No	No	No	No	No	No	No	No
3	2	1359	2	8	No	No	No	No	No	No	No	No	No	No
4	2	1274	2	7	No	No	No	No	No	No	No	No	No	No
5	2	1130	2	6	No	No	No	No	No	No	No	No	No	No
6	2	1116	2	6	No	No	No	No	No	No	No	No	No	No
7	2	1102	2	6	No	No	No	No	No	No	No	No	No	No
8	2	1002	2	6	No	No	No	No	No	No	No	No	No	No
9	2	987	2	6	No	No	No	No	No	No	No	No	No	No
10	2	973	2	5	No	No	No	No	No	No	No	No	No	No
11	2	844	2	5	No	No	No	No	No	No	No	No	No	No
12	2	787	2	4	No	No	No	No	No	No	No	No	No	No
13	2	773	2	4	No	No	No	No	No	No	No	No	No	No
14	2	572	2	3	No	No	No	No	No	No	No	No	No	No
15	2	572	2	3	No	No	No	No	No	No	No	No	No	No
16	2	401	2	2	No	No	No	No	No	No	No	No	No	No
17	2	229	2	1	No	No	No	No	No	No	No	No	No	No
18	2	229	2	1	No	No	No	No	No	No	No	No	No	No
19	2	129	2	1	No	No	No	No	No	No	No	No	No	No
20	2	72	2	0	No	No	No	No	No	No	No	No	No	No
21	2	43	2	0	No	No	No	No	No	No	No	No	No	No
22	2	14	2	0	No	No	No	No	No	No	No	No	No	No
23	2	14	2	0	No	No	No	No	No	No	No	No	No	No
24	2	14	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	17.7
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	8
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1439
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 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	349	662	68
2	339	642	66
3	332	629	65
4	311	589	61
5	276	523	54
6	272	516	53
7	269	510	52
8	244	463	48
9	241	457	47
10	237	450	46
11	206	391	40
12	192	364	37
13	188	357	37
14	140	265	27
15	140	265	27
16	98	185	19
17	56	106	11
18	56	106	11
19	31	60	6
20	17	33	3
21	10	20	2
22	3	7	1
23	3	7	1
24	3	7	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1011	1	68	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	981	1	66	No	No	No	No	No	Yes	Yes	Yes	No	No
3	3	961	1	65	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	900	1	61	No	No	No	No	No	Yes	Yes	Yes	No	No
5	3	799	1	54	No	No	No	No	No	No	Yes	Yes	No	No
6	3	788	1	53	No	No	No	No	No	No	Yes	Yes	No	No
7	3	779	1	52	No	No	No	No	No	No	Yes	Yes	No	No
8	3	707	1	48	No	No	No	No	No	No	No	Yes	No	No
9	3	698	1	47	No	No	No	No	No	No	No	Yes	No	No
10	3	687	1	46	No	No	No	No	No	No	No	Yes	No	No
11	3	597	1	40	No	No	No	No	No	No	No	No	No	No
12	3	556	1	37	No	No	No	No	No	No	No	No	No	No
13	3	545	1	37	No	No	No	No	No	No	No	No	No	No
14	3	405	1	27	No	No	No	No	No	No	No	No	No	No
15	3	405	1	27	No	No	No	No	No	No	No	No	No	No
16	3	283	1	19	No	No	No	No	No	No	No	No	No	No
17	3	162	1	11	No	No	No	No	No	No	No	No	No	No
18	3	162	1	11	No	No	No	No	No	No	No	No	No	No
19	3	91	1	6	No	No	No	No	No	No	No	No	No	No
20	3	50	1	3	No	No	No	No	No	No	No	No	No	No
21	3	30	1	2	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	4	7	10	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	20.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:23
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	68
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1079
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	601	373	114
2	583	362	111
3	571	354	108
4	535	332	101
5	475	295	90
6	469	291	89
7	463	287	88
8	421	261	80
9	415	257	79
10	409	254	78
11	355	220	67
12	331	205	63
13	325	201	62
14	240	149	46
15	240	149	46
16	168	104	32
17	96	60	18
18	96	60	18
19	54	34	10
20	30	19	6
21	18	11	3
22	6	4	1
23	6	4	1
24	6	4	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	974	1	114	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
2	3	945	1	111	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
3	3	925	1	108	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
4	3	867	1	101	No	No	No	Yes	No	Yes	Yes	Yes	No	No
5	3	770	1	90	No	No	No	Yes	No	Yes	Yes	Yes	No	No
6	3	760	1	89	No	No	No	Yes	No	Yes	Yes	Yes	No	No
7	3	750	1	88	No	No	No	Yes	No	Yes	Yes	Yes	No	No
8	3	682	1	80	No	No	No	No	No	No	Yes	Yes	No	No
9	3	672	1	79	No	No	No	No	No	No	Yes	Yes	No	No
10	3	663	1	78	No	No	No	No	No	No	Yes	Yes	No	No
11	3	575	1	67	No	No	No	No	No	No	No	Yes	No	No
12	3	536	1	63	No	No	No	No	No	No	No	Yes	No	No
13	3	526	1	62	No	No	No	No	No	No	No	Yes	No	No
14	3	389	1	46	No	No	No	No	No	No	No	No	No	No
15	3	389	1	46	No	No	No	No	No	No	No	No	No	No
16	3	272	1	32	No	No	No	No	No	No	No	No	No	No
17	3	156	1	18	No	No	No	No	No	No	No	No	No	No
18	3	156	1	18	No	No	No	No	No	No	No	No	No	No
19	3	88	1	10	No	No	No	No	No	No	No	No	No	No
20	3	49	1	6	No	No	No	No	No	No	No	No	No	No
21	3	29	1	3	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	7	3	7	10	13	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:27
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	114
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1088
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-8

Phase 1+2+3 without Project (2031)

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	497	540	2
2	482	524	2
3	472	513	2
4	442	481	2
5	393	427	2
6	388	421	2
7	383	416	2
8	348	378	1
9	343	373	1
10	338	367	1
11	293	319	1
12	273	297	1
13	268	292	1
14	199	216	1
15	199	216	1
16	139	151	1
17	80	86	0
18	80	86	0
19	45	49	0
20	25	27	0
21	15	16	0
22	5	5	0
23	5	5	0
24	5	5	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1037	2	2	No	No	No	No	No	No	No	No	No	No
2	2	1006	2	2	No	No	No	No	No	No	No	No	No	No
3	2	985	2	2	No	No	No	No	No	No	No	No	No	No
4	2	923	2	2	No	No	No	No	No	No	No	No	No	No
5	2	820	2	2	No	No	No	No	No	No	No	No	No	No
6	2	809	2	2	No	No	No	No	No	No	No	No	No	No
7	2	799	2	2	No	No	No	No	No	No	No	No	No	No
8	2	726	2	1	No	No	No	No	No	No	No	No	No	No
9	2	716	2	1	No	No	No	No	No	No	No	No	No	No
10	2	705	2	1	No	No	No	No	No	No	No	No	No	No
11	2	612	2	1	No	No	No	No	No	No	No	No	No	No
12	2	570	2	1	No	No	No	No	No	No	No	No	No	No
13	2	560	2	1	No	No	No	No	No	No	No	No	No	No
14	2	415	2	1	No	No	No	No	No	No	No	No	No	No
15	2	415	2	1	No	No	No	No	No	No	No	No	No	No
16	2	290	2	1	No	No	No	No	No	No	No	No	No	No
17	2	166	2	0	No	No	No	No	No	No	No	No	No	No
18	2	166	2	0	No	No	No	No	No	No	No	No	No	No
19	2	94	2	0	No	No	No	No	No	No	No	No	No	No
20	2	52	2	0	No	No	No	No	No	No	No	No	No	No
21	2	31	2	0	No	No	No	No	No	No	No	No	No	No
22	2	10	2	0	No	No	No	No	No	No	No	No	No	No
23	2	10	2	0	No	No	No	No	No	No	No	No	No	No
24	2	10	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.6
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1039
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	41	18	0
2	40	17	0
3	39	17	0
4	36	16	0
5	32	14	0
6	32	14	0
7	32	14	0
8	29	13	0
9	28	12	0
10	28	12	0
11	24	11	0
12	23	10	0
13	22	10	0
14	16	7	0
15	16	7	0
16	11	5	0
17	7	3	0
18	7	3	0
19	4	2	0
20	2	1	0
21	1	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	59	1	0	No	No	No	No	No	No	No	No	No	No
2	1	57	1	0	No	No	No	No	No	No	No	No	No	No
3	1	56	1	0	No	No	No	No	No	No	No	No	No	No
4	1	52	1	0	No	No	No	No	No	No	No	No	No	No
5	1	46	1	0	No	No	No	No	No	No	No	No	No	No
6	1	46	1	0	No	No	No	No	No	No	No	No	No	No
7	1	46	1	0	No	No	No	No	No	No	No	No	No	No
8	1	42	1	0	No	No	No	No	No	No	No	No	No	No
9	1	40	1	0	No	No	No	No	No	No	No	No	No	No
10	1	40	1	0	No	No	No	No	No	No	No	No	No	No
11	1	35	1	0	No	No	No	No	No	No	No	No	No	No
12	1	33	1	0	No	No	No	No	No	No	No	No	No	No
13	1	32	1	0	No	No	No	No	No	No	No	No	No	No
14	1	23	1	0	No	No	No	No	No	No	No	No	No	No
15	1	23	1	0	No	No	No	No	No	No	No	No	No	No
16	1	16	1	0	No	No	No	No	No	No	No	No	No	No
17	1	10	1	0	No	No	No	No	No	No	No	No	No	No
18	1	10	1	0	No	No	No	No	No	No	No	No	No	No
19	1	6	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	2	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	59
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	342	227	40
2	332	220	39
3	325	216	38
4	304	202	36
5	270	179	32
6	267	177	31
7	263	175	31
8	239	159	28
9	236	157	28
10	233	154	27
11	202	134	24
12	188	125	22
13	185	123	22
14	137	91	16
15	137	91	16
16	96	64	11
17	55	36	6
18	55	36	6
19	31	20	4
20	17	11	2
21	10	7	1
22	3	2	0
23	3	2	0
24	3	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	569	1	40	No	No	No	No	No	No	No	No	No	No
2	3	552	1	39	No	No	No	No	No	No	No	No	No	No
3	3	541	1	38	No	No	No	No	No	No	No	No	No	No
4	3	506	1	36	No	No	No	No	No	No	No	No	No	No
5	3	449	1	32	No	No	No	No	No	No	No	No	No	No
6	3	444	1	31	No	No	No	No	No	No	No	No	No	No
7	3	438	1	31	No	No	No	No	No	No	No	No	No	No
8	3	398	1	28	No	No	No	No	No	No	No	No	No	No
9	3	393	1	28	No	No	No	No	No	No	No	No	No	No
10	3	387	1	27	No	No	No	No	No	No	No	No	No	No
11	3	336	1	24	No	No	No	No	No	No	No	No	No	No
12	3	313	1	22	No	No	No	No	No	No	No	No	No	No
13	3	308	1	22	No	No	No	No	No	No	No	No	No	No
14	3	228	1	16	No	No	No	No	No	No	No	No	No	No
15	3	228	1	16	No	No	No	No	No	No	No	No	No	No
16	3	160	1	11	No	No	No	No	No	No	No	No	No	No
17	3	91	1	6	No	No	No	No	No	No	No	No	No	No
18	3	91	1	6	No	No	No	No	No	No	No	No	No	No
19	3	51	1	4	No	No	No	No	No	No	No	No	No	No
20	3	28	1	2	No	No	No	No	No	No	No	No	No	No
21	3	17	1	1	No	No	No	No	No	No	No	No	No	No
22	3	5	1	0	No	No	No	No	No	No	No	No	No	No
23	3	5	1	0	No	No	No	No	No	No	No	No	No	No
24	3	5	1	0	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	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	40
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	609
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	55	36	61
2	53	35	59
3	52	34	58
4	49	32	54
5	43	28	48
6	43	28	48
7	42	28	47
8	39	25	43
9	38	25	42
10	37	24	41
11	32	21	36
12	30	20	34
13	30	19	33
14	22	14	24
15	22	14	24
16	15	10	17
17	9	6	10
18	9	6	10
19	5	3	5
20	3	2	3
21	2	1	2
22	1	0	1
23	1	0	1
24	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	91	1	61	No	No	No	No	No	No	No	No	No	No
2	1	88	1	59	No	No	No	No	No	No	No	No	No	No
3	1	86	1	58	No	No	No	No	No	No	No	No	No	No
4	1	81	1	54	No	No	No	No	No	No	No	No	No	No
5	1	71	1	48	No	No	No	No	No	No	No	No	No	No
6	1	71	1	48	No	No	No	No	No	No	No	No	No	No
7	1	70	1	47	No	No	No	No	No	No	No	No	No	No
8	1	64	1	43	No	No	No	No	No	No	No	No	No	No
9	1	63	1	42	No	No	No	No	No	No	No	No	No	No
10	1	61	1	41	No	No	No	No	No	No	No	No	No	No
11	1	53	1	36	No	No	No	No	No	No	No	No	No	No
12	1	50	1	34	No	No	No	No	No	No	No	No	No	No
13	1	49	1	33	No	No	No	No	No	No	No	No	No	No
14	1	36	1	24	No	No	No	No	No	No	No	No	No	No
15	1	36	1	24	No	No	No	No	No	No	No	No	No	No
16	1	25	1	17	No	No	No	No	No	No	No	No	No	No
17	1	15	1	10	No	No	No	No	No	No	No	No	No	No
18	1	15	1	10	No	No	No	No	No	No	No	No	No	No
19	1	8	1	5	No	No	No	No	No	No	No	No	No	No
20	1	5	1	3	No	No	No	No	No	No	No	No	No	No
21	1	3	1	2	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	61
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	152
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	97	67	35
2	94	65	34
3	92	64	33
4	86	60	31
5	77	53	28
6	76	52	27
7	75	52	27
8	68	47	25
9	67	46	24
10	66	46	24
11	57	40	21
12	53	37	19
13	52	36	19
14	39	27	14
15	39	27	14
16	27	19	10
17	16	11	6
18	16	11	6
19	9	6	3
20	5	3	2
21	3	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	164	1	35	No	No	No	No	No	No	No	No	No	No
2	2	159	1	34	No	No	No	No	No	No	No	No	No	No
3	2	156	1	33	No	No	No	No	No	No	No	No	No	No
4	2	146	1	31	No	No	No	No	No	No	No	No	No	No
5	2	130	1	28	No	No	No	No	No	No	No	No	No	No
6	2	128	1	27	No	No	No	No	No	No	No	No	No	No
7	2	127	1	27	No	No	No	No	No	No	No	No	No	No
8	2	115	1	25	No	No	No	No	No	No	No	No	No	No
9	2	113	1	24	No	No	No	No	No	No	No	No	No	No
10	2	112	1	24	No	No	No	No	No	No	No	No	No	No
11	2	97	1	21	No	No	No	No	No	No	No	No	No	No
12	2	90	1	19	No	No	No	No	No	No	No	No	No	No
13	2	88	1	19	No	No	No	No	No	No	No	No	No	No
14	2	66	1	14	No	No	No	No	No	No	No	No	No	No
15	2	66	1	14	No	No	No	No	No	No	No	No	No	No
16	2	46	1	10	No	No	No	No	No	No	No	No	No	No
17	2	27	1	6	No	No	No	No	No	No	No	No	No	No
18	2	27	1	6	No	No	No	No	No	No	No	No	No	No
19	2	15	1	3	No	No	No	No	No	No	No	No	No	No
20	2	8	1	2	No	No	No	No	No	No	No	No	No	No
21	2	5	1	1	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	35
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	199
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	617	594	8
2	598	576	8
3	586	564	8
4	549	529	7
5	487	469	6
6	481	463	6
7	475	457	6
8	432	416	6
9	426	410	6
10	420	404	5
11	364	350	5
12	339	327	4
13	333	321	4
14	247	238	3
15	247	238	3
16	173	166	2
17	99	95	1
18	99	95	1
19	56	53	1
20	31	30	0
21	19	18	0
22	6	6	0
23	6	6	0
24	6	6	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1211	2	8	No	No	No	No	No	No	No	No	No	No
2	2	1174	2	8	No	No	No	No	No	No	No	No	No	No
3	2	1150	2	8	No	No	No	No	No	No	No	No	No	No
4	2	1078	2	7	No	No	No	No	No	No	No	No	No	No
5	2	956	2	6	No	No	No	No	No	No	No	No	No	No
6	2	944	2	6	No	No	No	No	No	No	No	No	No	No
7	2	932	2	6	No	No	No	No	No	No	No	No	No	No
8	2	848	2	6	No	No	No	No	No	No	No	No	No	No
9	2	836	2	6	No	No	No	No	No	No	No	No	No	No
10	2	824	2	5	No	No	No	No	No	No	No	No	No	No
11	2	714	2	5	No	No	No	No	No	No	No	No	No	No
12	2	666	2	4	No	No	No	No	No	No	No	No	No	No
13	2	654	2	4	No	No	No	No	No	No	No	No	No	No
14	2	485	2	3	No	No	No	No	No	No	No	No	No	No
15	2	485	2	3	No	No	No	No	No	No	No	No	No	No
16	2	339	2	2	No	No	No	No	No	No	No	No	No	No
17	2	194	2	1	No	No	No	No	No	No	No	No	No	No
18	2	194	2	1	No	No	No	No	No	No	No	No	No	No
19	2	109	2	1	No	No	No	No	No	No	No	No	No	No
20	2	61	2	0	No	No	No	No	No	No	No	No	No	No
21	2	37	2	0	No	No	No	No	No	No	No	No	No	No
22	2	12	2	0	No	No	No	No	No	No	No	No	No	No
23	2	12	2	0	No	No	No	No	No	No	No	No	No	No
24	2	12	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	19
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:02
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	8
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1219
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	68	50	0
2	66	49	0
3	65	48	0
4	61	45	0
5	54	40	0
6	53	39	0
7	52	39	0
8	48	35	0
9	47	35	0
10	46	34	0
11	40	30	0
12	37	28	0
13	37	27	0
14	27	20	0
15	27	20	0
16	19	14	0
17	11	8	0
18	11	8	0
19	6	5	0
20	3	3	0
21	2	2	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	118	1	0	No	No	No	No	No	No	No	No	No	No
2	1	115	1	0	No	No	No	No	No	No	No	No	No	No
3	1	113	1	0	No	No	No	No	No	No	No	No	No	No
4	1	106	1	0	No	No	No	No	No	No	No	No	No	No
5	1	94	1	0	No	No	No	No	No	No	No	No	No	No
6	1	92	1	0	No	No	No	No	No	No	No	No	No	No
7	1	91	1	0	No	No	No	No	No	No	No	No	No	No
8	1	83	1	0	No	No	No	No	No	No	No	No	No	No
9	1	82	1	0	No	No	No	No	No	No	No	No	No	No
10	1	80	1	0	No	No	No	No	No	No	No	No	No	No
11	1	70	1	0	No	No	No	No	No	No	No	No	No	No
12	1	65	1	0	No	No	No	No	No	No	No	No	No	No
13	1	64	1	0	No	No	No	No	No	No	No	No	No	No
14	1	47	1	0	No	No	No	No	No	No	No	No	No	No
15	1	47	1	0	No	No	No	No	No	No	No	No	No	No
16	1	33	1	0	No	No	No	No	No	No	No	No	No	No
17	1	19	1	0	No	No	No	No	No	No	No	No	No	No
18	1	19	1	0	No	No	No	No	No	No	No	No	No	No
19	1	11	1	0	No	No	No	No	No	No	No	No	No	No
20	1	6	1	0	No	No	No	No	No	No	No	No	No	No
21	1	4	1	0	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	118
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	258	498	53
2	250	483	51
3	245	473	50
4	230	443	47
5	204	393	42
6	201	388	41
7	199	383	41
8	181	349	37
9	178	344	37
10	175	339	36
11	152	294	31
12	142	274	29
13	139	269	29
14	103	199	21
15	103	199	21
16	72	139	15
17	41	80	8
18	41	80	8
19	23	45	5
20	13	25	3
21	8	15	2
22	3	5	1
23	3	5	1
24	3	5	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	756	1	53	No	No	No	No	No	No	Yes	Yes	No	No
2	3	733	1	51	No	No	No	No	No	No	No	Yes	No	No
3	3	718	1	50	No	No	No	No	No	No	No	Yes	No	No
4	3	673	1	47	No	No	No	No	No	No	No	Yes	No	No
5	3	597	1	42	No	No	No	No	No	No	No	Yes	No	No
6	3	589	1	41	No	No	No	No	No	No	No	No	No	No
7	3	582	1	41	No	No	No	No	No	No	No	No	No	No
8	3	530	1	37	No	No	No	No	No	No	No	No	No	No
9	3	522	1	37	No	No	No	No	No	No	No	No	No	No
10	3	514	1	36	No	No	No	No	No	No	No	No	No	No
11	3	446	1	31	No	No	No	No	No	No	No	No	No	No
12	3	416	1	29	No	No	No	No	No	No	No	No	No	No
13	3	408	1	29	No	No	No	No	No	No	No	No	No	No
14	3	302	1	21	No	No	No	No	No	No	No	No	No	No
15	3	302	1	21	No	No	No	No	No	No	No	No	No	No
16	3	211	1	15	No	No	No	No	No	No	No	No	No	No
17	3	121	1	8	No	No	No	No	No	No	No	No	No	No
18	3	121	1	8	No	No	No	No	No	No	No	No	No	No
19	3	68	1	5	No	No	No	No	No	No	No	No	No	No
20	3	38	1	3	No	No	No	No	No	No	No	No	No	No
21	3	23	1	2	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	53
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	809
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 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	113	52	47
2	110	50	46
3	107	49	45
4	101	46	42
5	89	41	37
6	88	41	37
7	87	40	36
8	79	36	33
9	78	36	32
10	77	35	32
11	67	31	28
12	62	29	26
13	61	28	25
14	45	21	19
15	45	21	19
16	32	15	13
17	18	8	8
18	18	8	8
19	10	5	4
20	6	3	2
21	3	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	165	1	47	No	No	No	No	No	No	No	No	No	No
2	1	160	1	46	No	No	No	No	No	No	No	No	No	No
3	1	156	1	45	No	No	No	No	No	No	No	No	No	No
4	1	147	1	42	No	No	No	No	No	No	No	No	No	No
5	1	130	1	37	No	No	No	No	No	No	No	No	No	No
6	1	129	1	37	No	No	No	No	No	No	No	No	No	No
7	1	127	1	36	No	No	No	No	No	No	No	No	No	No
8	1	115	1	33	No	No	No	No	No	No	No	No	No	No
9	1	114	1	32	No	No	No	No	No	No	No	No	No	No
10	1	112	1	32	No	No	No	No	No	No	No	No	No	No
11	1	98	1	28	No	No	No	No	No	No	No	No	No	No
12	1	91	1	26	No	No	No	No	No	No	No	No	No	No
13	1	89	1	25	No	No	No	No	No	No	No	No	No	No
14	1	66	1	19	No	No	No	No	No	No	No	No	No	No
15	1	66	1	19	No	No	No	No	No	No	No	No	No	No
16	1	47	1	13	No	No	No	No	No	No	No	No	No	No
17	1	26	1	8	No	No	No	No	No	No	No	No	No	No
18	1	26	1	8	No	No	No	No	No	No	No	No	No	No
19	1	15	1	4	No	No	No	No	No	No	No	No	No	No
20	1	9	1	2	No	No	No	No	No	No	No	No	No	No
21	1	5	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	47
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	212
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	94	136	24
2	91	132	23
3	89	129	23
4	84	121	21
5	74	107	19
6	73	106	19
7	72	105	18
8	66	95	17
9	65	94	17
10	64	92	16
11	55	80	14
12	52	75	13
13	51	73	13
14	38	54	10
15	38	54	10
16	26	38	7
17	15	22	4
18	15	22	4
19	8	12	2
20	5	7	1
21	3	4	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	230	1	24	No	No	No	No	No	No	No	No	No	No
2	2	223	1	23	No	No	No	No	No	No	No	No	No	No
3	2	218	1	23	No	No	No	No	No	No	No	No	No	No
4	2	205	1	21	No	No	No	No	No	No	No	No	No	No
5	2	181	1	19	No	No	No	No	No	No	No	No	No	No
6	2	179	1	19	No	No	No	No	No	No	No	No	No	No
7	2	177	1	18	No	No	No	No	No	No	No	No	No	No
8	2	161	1	17	No	No	No	No	No	No	No	No	No	No
9	2	159	1	17	No	No	No	No	No	No	No	No	No	No
10	2	156	1	16	No	No	No	No	No	No	No	No	No	No
11	2	135	1	14	No	No	No	No	No	No	No	No	No	No
12	2	127	1	13	No	No	No	No	No	No	No	No	No	No
13	2	124	1	13	No	No	No	No	No	No	No	No	No	No
14	2	92	1	10	No	No	No	No	No	No	No	No	No	No
15	2	92	1	10	No	No	No	No	No	No	No	No	No	No
16	2	64	1	7	No	No	No	No	No	No	No	No	No	No
17	2	37	1	4	No	No	No	No	No	No	No	No	No	No
18	2	37	1	4	No	No	No	No	No	No	No	No	No	No
19	2	20	1	2	No	No	No	No	No	No	No	No	No	No
20	2	12	1	1	No	No	No	No	No	No	No	No	No	No
21	2	7	1	1	No	No	No	No	No	No	No	No	No	No
22	2	2	1	0	No	No	No	No	No	No	No	No	No	No
23	2	2	1	0	No	No	No	No	No	No	No	No	No	No
24	2	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	24
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	254
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-9

Phase 1+2+3 with Project (2031)

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	342	227	40
2	332	220	39
3	325	216	38
4	304	202	36
5	270	179	32
6	267	177	31
7	263	175	31
8	239	159	28
9	236	157	28
10	233	154	27
11	202	134	24
12	188	125	22
13	185	123	22
14	137	91	16
15	137	91	16
16	96	64	11
17	55	36	6
18	55	36	6
19	31	20	4
20	17	11	2
21	10	7	1
22	3	2	0
23	3	2	0
24	3	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	569	1	40	No	No	No	No	No	No	No	No	No	No
2	3	552	1	39	No	No	No	No	No	No	No	No	No	No
3	3	541	1	38	No	No	No	No	No	No	No	No	No	No
4	3	506	1	36	No	No	No	No	No	No	No	No	No	No
5	3	449	1	32	No	No	No	No	No	No	No	No	No	No
6	3	444	1	31	No	No	No	No	No	No	No	No	No	No
7	3	438	1	31	No	No	No	No	No	No	No	No	No	No
8	3	398	1	28	No	No	No	No	No	No	No	No	No	No
9	3	393	1	28	No	No	No	No	No	No	No	No	No	No
10	3	387	1	27	No	No	No	No	No	No	No	No	No	No
11	3	336	1	24	No	No	No	No	No	No	No	No	No	No
12	3	313	1	22	No	No	No	No	No	No	No	No	No	No
13	3	308	1	22	No	No	No	No	No	No	No	No	No	No
14	3	228	1	16	No	No	No	No	No	No	No	No	No	No
15	3	228	1	16	No	No	No	No	No	No	No	No	No	No
16	3	160	1	11	No	No	No	No	No	No	No	No	No	No
17	3	91	1	6	No	No	No	No	No	No	No	No	No	No
18	3	91	1	6	No	No	No	No	No	No	No	No	No	No
19	3	51	1	4	No	No	No	No	No	No	No	No	No	No
20	3	28	1	2	No	No	No	No	No	No	No	No	No	No
21	3	17	1	1	No	No	No	No	No	No	No	No	No	No
22	3	5	1	0	No	No	No	No	No	No	No	No	No	No
23	3	5	1	0	No	No	No	No	No	No	No	No	No	No
24	3	5	1	0	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	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	40
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	609
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	287	478	195
2	278	464	189
3	273	454	185
4	255	425	174
5	227	378	154
6	224	373	152
7	221	368	150
8	201	335	137
9	198	330	135
10	195	325	133
11	169	282	115
12	158	263	107
13	155	258	105
14	115	191	78
15	115	191	78
16	80	134	55
17	46	76	31
18	46	76	31
19	26	43	18
20	14	24	10
21	9	14	6
22	3	5	2
23	3	5	2
24	3	5	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	765	1	195	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
2	3	742	1	189	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
3	3	727	1	185	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
4	3	680	1	174	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
5	3	605	1	154	Yes	Yes	Yes	Yes	No	No	No	Yes	No	No
6	3	597	1	152	No	Yes	Yes	Yes	No	No	No	Yes	No	No
7	3	589	1	150	No	Yes	Yes	Yes	No	No	No	Yes	No	No
8	3	536	1	137	No	Yes	Yes	Yes	No	No	No	Yes	No	No
9	3	528	1	135	No	Yes	Yes	Yes	No	No	No	Yes	No	No
10	3	520	1	133	No	Yes	Yes	Yes	No	No	No	Yes	No	No
11	3	451	1	115	No	No	Yes	Yes	No	No	No	No	No	No
12	3	421	1	107	No	No	Yes	Yes	No	No	No	No	No	No
13	3	413	1	105	No	No	No	Yes	No	No	No	No	No	No
14	3	306	1	78	No	No	No	No	No	No	No	No	No	No
15	3	306	1	78	No	No	No	No	No	No	No	No	No	No
16	3	214	1	55	No	No	No	No	No	No	No	No	No	No
17	3	122	1	31	No	No	No	No	No	No	No	No	No	No
18	3	122	1	31	No	No	No	No	No	No	No	No	No	No
19	3	69	1	18	No	No	No	No	No	No	No	No	No	No
20	3	38	1	10	No	No	No	No	No	No	No	No	No	No
21	3	23	1	6	No	No	No	No	No	No	No	No	No	No
22	3	8	1	2	No	No	No	No	No	No	No	No	No	No
23	3	8	1	2	No	No	No	No	No	No	No	No	No	No
24	3	8	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					5	10	12	13	0	3	4	10	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:49
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	195
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	960
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 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	258	498	53
2	250	483	51
3	245	473	50
4	230	443	47
5	204	393	42
6	201	388	41
7	199	383	41
8	181	349	37
9	178	344	37
10	175	339	36
11	152	294	31
12	142	274	29
13	139	269	29
14	103	199	21
15	103	199	21
16	72	139	15
17	41	80	8
18	41	80	8
19	23	45	5
20	13	25	3
21	8	15	2
22	3	5	1
23	3	5	1
24	3	5	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	756	1	53	No	No	No	No	No	No	Yes	Yes	No	No
2	3	733	1	51	No	No	No	No	No	No	No	Yes	No	No
3	3	718	1	50	No	No	No	No	No	No	No	Yes	No	No
4	3	673	1	47	No	No	No	No	No	No	No	Yes	No	No
5	3	597	1	42	No	No	No	No	No	No	No	Yes	No	No
6	3	589	1	41	No	No	No	No	No	No	No	No	No	No
7	3	582	1	41	No	No	No	No	No	No	No	No	No	No
8	3	530	1	37	No	No	No	No	No	No	No	No	No	No
9	3	522	1	37	No	No	No	No	No	No	No	No	No	No
10	3	514	1	36	No	No	No	No	No	No	No	No	No	No
11	3	446	1	31	No	No	No	No	No	No	No	No	No	No
12	3	416	1	29	No	No	No	No	No	No	No	No	No	No
13	3	408	1	29	No	No	No	No	No	No	No	No	No	No
14	3	302	1	21	No	No	No	No	No	No	No	No	No	No
15	3	302	1	21	No	No	No	No	No	No	No	No	No	No
16	3	211	1	15	No	No	No	No	No	No	No	No	No	No
17	3	121	1	8	No	No	No	No	No	No	No	No	No	No
18	3	121	1	8	No	No	No	No	No	No	No	No	No	No
19	3	68	1	5	No	No	No	No	No	No	No	No	No	No
20	3	38	1	3	No	No	No	No	No	No	No	No	No	No
21	3	23	1	2	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	53
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	809
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	610	386	116
2	592	374	113
3	580	367	110
4	543	344	103
5	482	305	92
6	476	301	90
7	470	297	89
8	427	270	81
9	421	266	80
10	415	262	79
11	360	228	68
12	336	212	64
13	329	208	63
14	244	154	46
15	244	154	46
16	171	108	32
17	98	62	19
18	98	62	19
19	55	35	10
20	31	19	6
21	18	12	3
22	6	4	1
23	6	4	1
24	6	4	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	996	1	116	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
2	3	966	1	113	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
3	3	947	1	110	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
4	3	887	1	103	No	No	No	Yes	No	Yes	Yes	Yes	No	No
5	3	787	1	92	No	No	No	Yes	No	Yes	Yes	Yes	No	No
6	3	777	1	90	No	No	No	Yes	No	Yes	Yes	Yes	No	No
7	3	767	1	89	No	No	No	Yes	No	Yes	Yes	Yes	No	No
8	3	697	1	81	No	No	No	No	No	No	Yes	Yes	No	No
9	3	687	1	80	No	No	No	No	No	No	Yes	Yes	No	No
10	3	677	1	79	No	No	No	No	No	No	Yes	Yes	No	No
11	3	588	1	68	No	No	No	No	No	No	No	Yes	No	No
12	3	548	1	64	No	No	No	No	No	No	No	Yes	No	No
13	3	537	1	63	No	No	No	No	No	No	No	Yes	No	No
14	3	398	1	46	No	No	No	No	No	No	No	No	No	No
15	3	398	1	46	No	No	No	No	No	No	No	No	No	No
16	3	279	1	32	No	No	No	No	No	No	No	No	No	No
17	3	160	1	19	No	No	No	No	No	No	No	No	No	No
18	3	160	1	19	No	No	No	No	No	No	No	No	No	No
19	3	90	1	10	No	No	No	No	No	No	No	No	No	No
20	3	50	1	6	No	No	No	No	No	No	No	No	No	No
21	3	30	1	3	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	7	3	7	10	13	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:29
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	116
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1112
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-10

Phase 1+2+3 with Project plus

Other Cumulative Projects (2031)

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	342	227	40
2	332	220	39
3	325	216	38
4	304	202	36
5	270	179	32
6	267	177	31
7	263	175	31
8	239	159	28
9	236	157	28
10	233	154	27
11	202	134	24
12	188	125	22
13	185	123	22
14	137	91	16
15	137	91	16
16	96	64	11
17	55	36	6
18	55	36	6
19	31	20	4
20	17	11	2
21	10	7	1
22	3	2	0
23	3	2	0
24	3	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	569	1	40	No	No	No	No	No	No	No	No	No	No
2	3	552	1	39	No	No	No	No	No	No	No	No	No	No
3	3	541	1	38	No	No	No	No	No	No	No	No	No	No
4	3	506	1	36	No	No	No	No	No	No	No	No	No	No
5	3	449	1	32	No	No	No	No	No	No	No	No	No	No
6	3	444	1	31	No	No	No	No	No	No	No	No	No	No
7	3	438	1	31	No	No	No	No	No	No	No	No	No	No
8	3	398	1	28	No	No	No	No	No	No	No	No	No	No
9	3	393	1	28	No	No	No	No	No	No	No	No	No	No
10	3	387	1	27	No	No	No	No	No	No	No	No	No	No
11	3	336	1	24	No	No	No	No	No	No	No	No	No	No
12	3	313	1	22	No	No	No	No	No	No	No	No	No	No
13	3	308	1	22	No	No	No	No	No	No	No	No	No	No
14	3	228	1	16	No	No	No	No	No	No	No	No	No	No
15	3	228	1	16	No	No	No	No	No	No	No	No	No	No
16	3	160	1	11	No	No	No	No	No	No	No	No	No	No
17	3	91	1	6	No	No	No	No	No	No	No	No	No	No
18	3	91	1	6	No	No	No	No	No	No	No	No	No	No
19	3	51	1	4	No	No	No	No	No	No	No	No	No	No
20	3	28	1	2	No	No	No	No	No	No	No	No	No	No
21	3	17	1	1	No	No	No	No	No	No	No	No	No	No
22	3	5	1	0	No	No	No	No	No	No	No	No	No	No
23	3	5	1	0	No	No	No	No	No	No	No	No	No	No
24	3	5	1	0	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	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	40
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	609
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	287	478	195
2	278	464	189
3	273	454	185
4	255	425	174
5	227	378	154
6	224	373	152
7	221	368	150
8	201	335	137
9	198	330	135
10	195	325	133
11	169	282	115
12	158	263	107
13	155	258	105
14	115	191	78
15	115	191	78
16	80	134	55
17	46	76	31
18	46	76	31
19	26	43	18
20	14	24	10
21	9	14	6
22	3	5	2
23	3	5	2
24	3	5	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	765	1	195	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
2	3	742	1	189	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
3	3	727	1	185	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
4	3	680	1	174	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
5	3	605	1	154	Yes	Yes	Yes	Yes	No	No	No	Yes	No	No
6	3	597	1	152	No	Yes	Yes	Yes	No	No	No	Yes	No	No
7	3	589	1	150	No	Yes	Yes	Yes	No	No	No	Yes	No	No
8	3	536	1	137	No	Yes	Yes	Yes	No	No	No	Yes	No	No
9	3	528	1	135	No	Yes	Yes	Yes	No	No	No	Yes	No	No
10	3	520	1	133	No	Yes	Yes	Yes	No	No	No	Yes	No	No
11	3	451	1	115	No	No	Yes	Yes	No	No	No	No	No	No
12	3	421	1	107	No	No	Yes	Yes	No	No	No	No	No	No
13	3	413	1	105	No	No	No	Yes	No	No	No	No	No	No
14	3	306	1	78	No	No	No	No	No	No	No	No	No	No
15	3	306	1	78	No	No	No	No	No	No	No	No	No	No
16	3	214	1	55	No	No	No	No	No	No	No	No	No	No
17	3	122	1	31	No	No	No	No	No	No	No	No	No	No
18	3	122	1	31	No	No	No	No	No	No	No	No	No	No
19	3	69	1	18	No	No	No	No	No	No	No	No	No	No
20	3	38	1	10	No	No	No	No	No	No	No	No	No	No
21	3	23	1	6	No	No	No	No	No	No	No	No	No	No
22	3	8	1	2	No	No	No	No	No	No	No	No	No	No
23	3	8	1	2	No	No	No	No	No	No	No	No	No	No
24	3	8	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					5	10	12	13	0	3	4	10	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:49
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	195
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	960
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 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	258	498	53
2	250	483	51
3	245	473	50
4	230	443	47
5	204	393	42
6	201	388	41
7	199	383	41
8	181	349	37
9	178	344	37
10	175	339	36
11	152	294	31
12	142	274	29
13	139	269	29
14	103	199	21
15	103	199	21
16	72	139	15
17	41	80	8
18	41	80	8
19	23	45	5
20	13	25	3
21	8	15	2
22	3	5	1
23	3	5	1
24	3	5	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	756	1	53	No	No	No	No	No	No	Yes	Yes	No	No
2	3	733	1	51	No	No	No	No	No	No	No	Yes	No	No
3	3	718	1	50	No	No	No	No	No	No	No	Yes	No	No
4	3	673	1	47	No	No	No	No	No	No	No	Yes	No	No
5	3	597	1	42	No	No	No	No	No	No	No	Yes	No	No
6	3	589	1	41	No	No	No	No	No	No	No	No	No	No
7	3	582	1	41	No	No	No	No	No	No	No	No	No	No
8	3	530	1	37	No	No	No	No	No	No	No	No	No	No
9	3	522	1	37	No	No	No	No	No	No	No	No	No	No
10	3	514	1	36	No	No	No	No	No	No	No	No	No	No
11	3	446	1	31	No	No	No	No	No	No	No	No	No	No
12	3	416	1	29	No	No	No	No	No	No	No	No	No	No
13	3	408	1	29	No	No	No	No	No	No	No	No	No	No
14	3	302	1	21	No	No	No	No	No	No	No	No	No	No
15	3	302	1	21	No	No	No	No	No	No	No	No	No	No
16	3	211	1	15	No	No	No	No	No	No	No	No	No	No
17	3	121	1	8	No	No	No	No	No	No	No	No	No	No
18	3	121	1	8	No	No	No	No	No	No	No	No	No	No
19	3	68	1	5	No	No	No	No	No	No	No	No	No	No
20	3	38	1	3	No	No	No	No	No	No	No	No	No	No
21	3	23	1	2	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	1	5	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.3
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	53
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	809
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 16: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	610	386	116
2	592	374	113
3	580	367	110
4	543	344	103
5	482	305	92
6	476	301	90
7	470	297	89
8	427	270	81
9	421	266	80
10	415	262	79
11	360	228	68
12	336	212	64
13	329	208	63
14	244	154	46
15	244	154	46
16	171	108	32
17	98	62	19
18	98	62	19
19	55	35	10
20	31	19	6
21	18	12	3
22	6	4	1
23	6	4	1
24	6	4	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	996	1	116	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
2	3	966	1	113	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
3	3	947	1	110	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
4	3	887	1	103	No	No	No	Yes	No	Yes	Yes	Yes	No	No
5	3	787	1	92	No	No	No	Yes	No	Yes	Yes	Yes	No	No
6	3	777	1	90	No	No	No	Yes	No	Yes	Yes	Yes	No	No
7	3	767	1	89	No	No	No	Yes	No	Yes	Yes	Yes	No	No
8	3	697	1	81	No	No	No	No	No	No	Yes	Yes	No	No
9	3	687	1	80	No	No	No	No	No	No	Yes	Yes	No	No
10	3	677	1	79	No	No	No	No	No	No	Yes	Yes	No	No
11	3	588	1	68	No	No	No	No	No	No	No	Yes	No	No
12	3	548	1	64	No	No	No	No	No	No	No	Yes	No	No
13	3	537	1	63	No	No	No	No	No	No	No	Yes	No	No
14	3	398	1	46	No	No	No	No	No	No	No	No	No	No
15	3	398	1	46	No	No	No	No	No	No	No	No	No	No
16	3	279	1	32	No	No	No	No	No	No	No	No	No	No
17	3	160	1	19	No	No	No	No	No	No	No	No	No	No
18	3	160	1	19	No	No	No	No	No	No	No	No	No	No
19	3	90	1	10	No	No	No	No	No	No	No	No	No	No
20	3	50	1	6	No	No	No	No	No	No	No	No	No	No
21	3	30	1	3	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	7	3	7	10	13	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:29
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	116
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1112
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-11

Future Buildout without Project (2040)

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	657	705	3
2	637	684	3
3	624	670	3
4	585	627	3
5	519	557	2
6	512	550	2
7	506	543	2
8	460	493	2
9	453	486	2
10	447	479	2
11	388	416	2
12	361	388	2
13	355	381	2
14	263	282	1
15	263	282	1
16	184	197	1
17	105	113	0
18	105	113	0
19	59	63	0
20	33	35	0
21	20	21	0
22	7	7	0
23	7	7	0
24	7	7	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1362	2	3	No	No	No	No	No	No	No	No	No	No
2	2	1321	2	3	No	No	No	No	No	No	No	No	No	No
3	2	1294	2	3	No	No	No	No	No	No	No	No	No	No
4	2	1212	2	3	No	No	No	No	No	No	No	No	No	No
5	2	1076	2	2	No	No	No	No	No	No	No	No	No	No
6	2	1062	2	2	No	No	No	No	No	No	No	No	No	No
7	2	1049	2	2	No	No	No	No	No	No	No	No	No	No
8	2	953	2	2	No	No	No	No	No	No	No	No	No	No
9	2	939	2	2	No	No	No	No	No	No	No	No	No	No
10	2	926	2	2	No	No	No	No	No	No	No	No	No	No
11	2	804	2	2	No	No	No	No	No	No	No	No	No	No
12	2	749	2	2	No	No	No	No	No	No	No	No	No	No
13	2	736	2	2	No	No	No	No	No	No	No	No	No	No
14	2	545	2	1	No	No	No	No	No	No	No	No	No	No
15	2	545	2	1	No	No	No	No	No	No	No	No	No	No
16	2	381	2	1	No	No	No	No	No	No	No	No	No	No
17	2	218	2	0	No	No	No	No	No	No	No	No	No	No
18	2	218	2	0	No	No	No	No	No	No	No	No	No	No
19	2	122	2	0	No	No	No	No	No	No	No	No	No	No
20	2	68	2	0	No	No	No	No	No	No	No	No	No	No
21	2	41	2	0	No	No	No	No	No	No	No	No	No	No
22	2	14	2	0	No	No	No	No	No	No	No	No	No	No
23	2	14	2	0	No	No	No	No	No	No	No	No	No	No
24	2	14	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.7
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	3
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1365
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	57	25	0
2	55	24	0
3	54	24	0
4	51	22	0
5	45	20	0
6	44	20	0
7	44	19	0
8	40	18	0
9	39	17	0
10	39	17	0
11	34	15	0
12	31	14	0
13	31	14	0
14	23	10	0
15	23	10	0
16	16	7	0
17	9	4	0
18	9	4	0
19	5	2	0
20	3	1	0
21	2	1	0
22	1	0	0
23	1	0	0
24	1	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	82	1	0	No	No	No	No	No	No	No	No	No	No
2	1	79	1	0	No	No	No	No	No	No	No	No	No	No
3	1	78	1	0	No	No	No	No	No	No	No	No	No	No
4	1	73	1	0	No	No	No	No	No	No	No	No	No	No
5	1	65	1	0	No	No	No	No	No	No	No	No	No	No
6	1	64	1	0	No	No	No	No	No	No	No	No	No	No
7	1	63	1	0	No	No	No	No	No	No	No	No	No	No
8	1	58	1	0	No	No	No	No	No	No	No	No	No	No
9	1	56	1	0	No	No	No	No	No	No	No	No	No	No
10	1	56	1	0	No	No	No	No	No	No	No	No	No	No
11	1	49	1	0	No	No	No	No	No	No	No	No	No	No
12	1	45	1	0	No	No	No	No	No	No	No	No	No	No
13	1	45	1	0	No	No	No	No	No	No	No	No	No	No
14	1	33	1	0	No	No	No	No	No	No	No	No	No	No
15	1	33	1	0	No	No	No	No	No	No	No	No	No	No
16	1	23	1	0	No	No	No	No	No	No	No	No	No	No
17	1	13	1	0	No	No	No	No	No	No	No	No	No	No
18	1	13	1	0	No	No	No	No	No	No	No	No	No	No
19	1	7	1	0	No	No	No	No	No	No	No	No	No	No
20	1	4	1	0	No	No	No	No	No	No	No	No	No	No
21	1	3	1	0	No	No	No	No	No	No	No	No	No	No
22	1	1	1	0	No	No	No	No	No	No	No	No	No	No
23	1	1	1	0	No	No	No	No	No	No	No	No	No	No
24	1	1	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	82
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	469	308	56
2	455	299	54
3	446	293	53
4	417	274	50
5	371	243	44
6	366	240	44
7	361	237	43
8	328	216	39
9	324	213	39
10	319	209	38
11	277	182	33
12	258	169	31
13	253	166	30
14	188	123	22
15	188	123	22
16	131	86	16
17	75	49	9
18	75	49	9
19	42	28	5
20	23	15	3
21	14	9	2
22	5	3	1
23	5	3	1
24	5	3	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	777	1	56	No	No	No	No	No	No	Yes	Yes	No	No
2	3	754	1	54	No	No	No	No	No	No	Yes	Yes	No	No
3	3	739	1	53	No	No	No	No	No	No	Yes	Yes	No	No
4	3	691	1	50	No	No	No	No	No	No	No	Yes	No	No
5	3	614	1	44	No	No	No	No	No	No	No	Yes	No	No
6	3	606	1	44	No	No	No	No	No	No	No	Yes	No	No
7	3	598	1	43	No	No	No	No	No	No	No	Yes	No	No
8	3	544	1	39	No	No	No	No	No	No	No	No	No	No
9	3	537	1	39	No	No	No	No	No	No	No	No	No	No
10	3	528	1	38	No	No	No	No	No	No	No	No	No	No
11	3	459	1	33	No	No	No	No	No	No	No	No	No	No
12	3	427	1	31	No	No	No	No	No	No	No	No	No	No
13	3	419	1	30	No	No	No	No	No	No	No	No	No	No
14	3	311	1	22	No	No	No	No	No	No	No	No	No	No
15	3	311	1	22	No	No	No	No	No	No	No	No	No	No
16	3	217	1	16	No	No	No	No	No	No	No	No	No	No
17	3	124	1	9	No	No	No	No	No	No	No	No	No	No
18	3	124	1	9	No	No	No	No	No	No	No	No	No	No
19	3	70	1	5	No	No	No	No	No	No	No	No	No	No
20	3	38	1	3	No	No	No	No	No	No	No	No	No	No
21	3	23	1	2	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	3	7	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:12
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	56
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	833
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 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	77	50	85
2	75	49	82
3	73	48	81
4	69	45	76
5	61	40	67
6	60	39	66
7	59	39	65
8	54	35	59
9	53	35	59
10	52	34	58
11	45	30	50
12	42	28	47
13	42	27	46
14	31	20	34
15	31	20	34
16	22	14	24
17	12	8	14
18	12	8	14
19	7	5	8
20	4	3	4
21	2	2	3
22	1	1	1
23	1	1	1
24	1	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	127	1	85	No	No	No	No	No	No	No	No	No	No
2	1	124	1	82	No	No	No	No	No	No	No	No	No	No
3	1	121	1	81	No	No	No	No	No	No	No	No	No	No
4	1	114	1	76	No	No	No	No	No	No	No	No	No	No
5	1	101	1	67	No	No	No	No	No	No	No	No	No	No
6	1	99	1	66	No	No	No	No	No	No	No	No	No	No
7	1	98	1	65	No	No	No	No	No	No	No	No	No	No
8	1	89	1	59	No	No	No	No	No	No	No	No	No	No
9	1	88	1	59	No	No	No	No	No	No	No	No	No	No
10	1	86	1	58	No	No	No	No	No	No	No	No	No	No
11	1	75	1	50	No	No	No	No	No	No	No	No	No	No
12	1	70	1	47	No	No	No	No	No	No	No	No	No	No
13	1	69	1	46	No	No	No	No	No	No	No	No	No	No
14	1	51	1	34	No	No	No	No	No	No	No	No	No	No
15	1	51	1	34	No	No	No	No	No	No	No	No	No	No
16	1	36	1	24	No	No	No	No	No	No	No	No	No	No
17	1	20	1	14	No	No	No	No	No	No	No	No	No	No
18	1	20	1	14	No	No	No	No	No	No	No	No	No	No
19	1	12	1	8	No	No	No	No	No	No	No	No	No	No
20	1	7	1	4	No	No	No	No	No	No	No	No	No	No
21	1	4	1	3	No	No	No	No	No	No	No	No	No	No
22	1	2	1	1	No	No	No	No	No	No	No	No	No	No
23	1	2	1	1	No	No	No	No	No	No	No	No	No	No
24	1	2	1	1	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:13
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	85
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	212
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	135	94	48
2	131	91	47
3	128	89	46
4	120	84	43
5	107	74	38
6	105	73	37
7	104	72	37
8	95	66	34
9	93	65	33
10	92	64	33
11	80	55	28
12	74	52	26
13	73	51	26
14	54	38	19
15	54	38	19
16	38	26	13
17	22	15	8
18	22	15	8
19	12	8	4
20	7	5	2
21	4	3	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	229	1	48	No	No	No	No	No	No	No	No	No	No
2	1	222	1	47	No	No	No	No	No	No	No	No	No	No
3	1	217	1	46	No	No	No	No	No	No	No	No	No	No
4	1	204	1	43	No	No	No	No	No	No	No	No	No	No
5	1	181	1	38	No	No	No	No	No	No	No	No	No	No
6	1	178	1	37	No	No	No	No	No	No	No	No	No	No
7	1	176	1	37	No	No	No	No	No	No	No	No	No	No
8	1	161	1	34	No	No	No	No	No	No	No	No	No	No
9	1	158	1	33	No	No	No	No	No	No	No	No	No	No
10	1	156	1	33	No	No	No	No	No	No	No	No	No	No
11	1	135	1	28	No	No	No	No	No	No	No	No	No	No
12	1	126	1	26	No	No	No	No	No	No	No	No	No	No
13	1	124	1	26	No	No	No	No	No	No	No	No	No	No
14	1	92	1	19	No	No	No	No	No	No	No	No	No	No
15	1	92	1	19	No	No	No	No	No	No	No	No	No	No
16	1	64	1	13	No	No	No	No	No	No	No	No	No	No
17	1	37	1	8	No	No	No	No	No	No	No	No	No	No
18	1	37	1	8	No	No	No	No	No	No	No	No	No	No
19	1	20	1	4	No	No	No	No	No	No	No	No	No	No
20	1	12	1	2	No	No	No	No	No	No	No	No	No	No
21	1	7	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	48
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	277
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 2: Bellegrave Ave @ Pats Ranch Rd

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	S
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	S
1	800	775	12
2	776	752	12
3	760	736	11
4	712	690	11
5	632	612	9
6	624	605	9
7	616	597	9
8	560	543	8
9	552	535	8
10	544	527	8
11	472	457	7
12	440	426	7
13	432	419	6
14	320	310	5
15	320	310	5
16	224	217	3
17	128	124	2
18	128	124	2
19	72	70	1
20	40	39	1
21	24	23	0
22	8	8	0
23	8	8	0
24	8	8	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	2	1575	2	12	No	No	No	No	No	No	No	No	No	No
2	2	1528	2	12	No	No	No	No	No	No	No	No	No	No
3	2	1496	2	11	No	No	No	No	No	No	No	No	No	No
4	2	1402	2	11	No	No	No	No	No	No	No	No	No	No
5	2	1244	2	9	No	No	No	No	No	No	No	No	No	No
6	2	1229	2	9	No	No	No	No	No	No	No	No	No	No
7	2	1213	2	9	No	No	No	No	No	No	No	No	No	No
8	2	1103	2	8	No	No	No	No	No	No	No	No	No	No
9	2	1087	2	8	No	No	No	No	No	No	No	No	No	No
10	2	1071	2	8	No	No	No	No	No	No	No	No	No	No
11	2	929	2	7	No	No	No	No	No	No	No	No	No	No
12	2	866	2	7	No	No	No	No	No	No	No	No	No	No
13	2	851	2	6	No	No	No	No	No	No	No	No	No	No
14	2	630	2	5	No	No	No	No	No	No	No	No	No	No
15	2	630	2	5	No	No	No	No	No	No	No	No	No	No
16	2	441	2	3	No	No	No	No	No	No	No	No	No	No
17	2	252	2	2	No	No	No	No	No	No	No	No	No	No
18	2	252	2	2	No	No	No	No	No	No	No	No	No	No
19	2	142	2	1	No	No	No	No	No	No	No	No	No	No
20	2	79	2	1	No	No	No	No	No	No	No	No	No	No
21	2	47	2	0	No	No	No	No	No	No	No	No	No	No
22	2	16	2	0	No	No	No	No	No	No	No	No	No	No
23	2	16	2	0	No	No	No	No	No	No	No	No	No	No
24	2	16	2	0	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	S
Total Stopped Delay Per Vehicle on Minor Approach (s)	29.2
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	12
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1587
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 6: Shearwater Dr @ Pats Ranch Rd

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	S, E
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	E	N
1	95	70	0
2	92	68	0
3	90	67	0
4	85	62	0
5	75	55	0
6	74	55	0
7	73	54	0
8	67	49	0
9	66	48	0
10	65	48	0
11	56	41	0
12	52	39	0
13	51	38	0
14	38	28	0
15	38	28	0
16	27	20	0
17	15	11	0
18	15	11	0
19	9	6	0
20	5	4	0
21	3	2	0
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	165	1	0	No	No	No	No	No	No	No	No	No	No
2	1	160	1	0	No	No	No	No	No	No	No	No	No	No
3	1	157	1	0	No	No	No	No	No	No	No	No	No	No
4	1	147	1	0	No	No	No	No	No	No	No	No	No	No
5	1	130	1	0	No	No	No	No	No	No	No	No	No	No
6	1	129	1	0	No	No	No	No	No	No	No	No	No	No
7	1	127	1	0	No	No	No	No	No	No	No	No	No	No
8	1	116	1	0	No	No	No	No	No	No	No	No	No	No
9	1	114	1	0	No	No	No	No	No	No	No	No	No	No
10	1	113	1	0	No	No	No	No	No	No	No	No	No	No
11	1	97	1	0	No	No	No	No	No	No	No	No	No	No
12	1	91	1	0	No	No	No	No	No	No	No	No	No	No
13	1	89	1	0	No	No	No	No	No	No	No	No	No	No
14	1	66	1	0	No	No	No	No	No	No	No	No	No	No
15	1	66	1	0	No	No	No	No	No	No	No	No	No	No
16	1	47	1	0	No	No	No	No	No	No	No	No	No	No
17	1	26	1	0	No	No	No	No	No	No	No	No	No	No
18	1	26	1	0	No	No	No	No	No	No	No	No	No	No
19	1	15	1	0	No	No	No	No	No	No	No	No	No	No
20	1	9	1	0	No	No	No	No	No	No	No	No	No	No
21	1	5	1	0	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.4
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	165
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	348	684	74
2	338	663	72
3	331	650	70
4	310	609	66
5	275	540	58
6	271	534	58
7	268	527	57
8	244	479	52
9	240	472	51
10	237	465	50
11	205	404	44
12	191	376	41
13	188	369	40
14	139	274	30
15	139	274	30
16	97	192	21
17	56	109	12
18	56	109	12
19	31	62	7
20	17	34	4
21	10	21	2
22	3	7	1
23	3	7	1
24	3	7	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1032	1	74	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	1001	1	72	No	No	No	No	No	Yes	Yes	Yes	No	No
3	3	981	1	70	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	919	1	66	No	No	No	No	No	Yes	Yes	Yes	No	No
5	3	815	1	58	No	No	No	No	No	No	Yes	Yes	No	No
6	3	805	1	58	No	No	No	No	No	No	Yes	Yes	No	No
7	3	795	1	57	No	No	No	No	No	No	Yes	Yes	No	No
8	3	723	1	52	No	No	No	No	No	No	Yes	Yes	No	No
9	3	712	1	51	No	No	No	No	No	No	No	Yes	No	No
10	3	702	1	50	No	No	No	No	No	No	No	Yes	No	No
11	3	609	1	44	No	No	No	No	No	No	No	Yes	No	No
12	3	567	1	41	No	No	No	No	No	No	No	No	No	No
13	3	557	1	40	No	No	No	No	No	No	No	No	No	No
14	3	413	1	30	No	No	No	No	No	No	No	No	No	No
15	3	413	1	30	No	No	No	No	No	No	No	No	No	No
16	3	289	1	21	No	No	No	No	No	No	No	No	No	No
17	3	165	1	12	No	No	No	No	No	No	No	No	No	No
18	3	165	1	12	No	No	No	No	No	No	No	No	No	No
19	3	93	1	7	No	No	No	No	No	No	No	No	No	No
20	3	51	1	4	No	No	No	No	No	No	No	No	No	No
21	3	31	1	2	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	4	8	11	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	20.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:25
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	74
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1106
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 8: Park Center Dr @ Pats Ranch Rd

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	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	158	73	65
2	153	71	63
3	150	69	62
4	141	65	58
5	125	58	51
6	123	57	51
7	122	56	50
8	111	51	46
9	109	50	45
10	107	50	44
11	93	43	38
12	87	40	36
13	85	39	35
14	63	29	26
15	63	29	26
16	44	20	18
17	25	12	10
18	25	12	10
19	14	7	6
20	8	4	3
21	5	2	2
22	2	1	1
23	2	1	1
24	2	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	231	1	65	No	No	No	No	No	No	No	No	No	No
2	1	224	1	63	No	No	No	No	No	No	No	No	No	No
3	1	219	1	62	No	No	No	No	No	No	No	No	No	No
4	1	206	1	58	No	No	No	No	No	No	No	No	No	No
5	1	183	1	51	No	No	No	No	No	No	No	No	No	No
6	1	180	1	51	No	No	No	No	No	No	No	No	No	No
7	1	178	1	50	No	No	No	No	No	No	No	No	No	No
8	1	162	1	46	No	No	No	No	No	No	No	No	No	No
9	1	159	1	45	No	No	No	No	No	No	No	No	No	No
10	1	157	1	44	No	No	No	No	No	No	No	No	No	No
11	1	136	1	38	No	No	No	No	No	No	No	No	No	No
12	1	127	1	36	No	No	No	No	No	No	No	No	No	No
13	1	124	1	35	No	No	No	No	No	No	No	No	No	No
14	1	92	1	26	No	No	No	No	No	No	No	No	No	No
15	1	92	1	26	No	No	No	No	No	No	No	No	No	No
16	1	64	1	18	No	No	No	No	No	No	No	No	No	No
17	1	37	1	10	No	No	No	No	No	No	No	No	No	No
18	1	37	1	10	No	No	No	No	No	No	No	No	No	No
19	1	21	1	6	No	No	No	No	No	No	No	No	No	No
20	1	12	1	3	No	No	No	No	No	No	No	No	No	No
21	1	7	1	2	No	No	No	No	No	No	No	No	No	No
22	1	3	1	1	No	No	No	No	No	No	No	No	No	No
23	1	3	1	1	No	No	No	No	No	No	No	No	No	No
24	1	3	1	1	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	65
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	296
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: Boca Pl @ Pats Ranch Rd

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
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	E
1	131	190	34
2	127	184	33
3	124	181	32
4	117	169	30
5	103	150	27
6	102	148	27
7	101	146	26
8	92	133	24
9	90	131	23
10	89	129	23
11	77	112	20
12	72	105	19
13	71	103	18
14	52	76	14
15	52	76	14
16	37	53	10
17	21	30	5
18	21	30	5
19	12	17	3
20	7	10	2
21	4	6	1
22	1	2	0
23	1	2	0
24	1	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1	321	1	34	No	No	No	No	No	No	No	No	No	No
2	1	311	1	33	No	No	No	No	No	No	No	No	No	No
3	1	305	1	32	No	No	No	No	No	No	No	No	No	No
4	1	286	1	30	No	No	No	No	No	No	No	No	No	No
5	1	253	1	27	No	No	No	No	No	No	No	No	No	No
6	1	250	1	27	No	No	No	No	No	No	No	No	No	No
7	1	247	1	26	No	No	No	No	No	No	No	No	No	No
8	1	225	1	24	No	No	No	No	No	No	No	No	No	No
9	1	221	1	23	No	No	No	No	No	No	No	No	No	No
10	1	218	1	23	No	No	No	No	No	No	No	No	No	No
11	1	189	1	20	No	No	No	No	No	No	No	No	No	No
12	1	177	1	19	No	No	No	No	No	No	No	No	No	No
13	1	174	1	18	No	No	No	No	No	No	No	No	No	No
14	1	128	1	14	No	No	No	No	No	No	No	No	No	No
15	1	128	1	14	No	No	No	No	No	No	No	No	No	No
16	1	90	1	10	No	No	No	No	No	No	No	No	No	No
17	1	51	1	5	No	No	No	No	No	No	No	No	No	No
18	1	51	1	5	No	No	No	No	No	No	No	No	No	No
19	1	29	1	3	No	No	No	No	No	No	No	No	No	No
20	1	17	1	2	No	No	No	No	No	No	No	No	No	No
21	1	10	1	1	No	No	No	No	No	No	No	No	No	No
22	1	3	1	0	No	No	No	No	No	No	No	No	No	No
23	1	3	1	0	No	No	No	No	No	No	No	No	No	No
24	1	3	1	0	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
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	34
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	355
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Appendix F-12

Future Buildout with Project (2040)

Signal Warrants Report For Intersection 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	469	308	56
2	455	299	54
3	446	293	53
4	417	274	50
5	371	243	44
6	366	240	44
7	361	237	43
8	328	216	39
9	324	213	39
10	319	209	38
11	277	182	33
12	258	169	31
13	253	166	30
14	188	123	22
15	188	123	22
16	131	86	16
17	75	49	9
18	75	49	9
19	42	28	5
20	23	15	3
21	14	9	2
22	5	3	1
23	5	3	1
24	5	3	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	777	1	56	No	No	No	No	No	No	Yes	Yes	No	No
2	3	754	1	54	No	No	No	No	No	No	Yes	Yes	No	No
3	3	739	1	53	No	No	No	No	No	No	Yes	Yes	No	No
4	3	691	1	50	No	No	No	No	No	No	No	Yes	No	No
5	3	614	1	44	No	No	No	No	No	No	No	Yes	No	No
6	3	606	1	44	No	No	No	No	No	No	No	Yes	No	No
7	3	598	1	43	No	No	No	No	No	No	No	Yes	No	No
8	3	544	1	39	No	No	No	No	No	No	No	No	No	No
9	3	537	1	39	No	No	No	No	No	No	No	No	No	No
10	3	528	1	38	No	No	No	No	No	No	No	No	No	No
11	3	459	1	33	No	No	No	No	No	No	No	No	No	No
12	3	427	1	31	No	No	No	No	No	No	No	No	No	No
13	3	419	1	30	No	No	No	No	No	No	No	No	No	No
14	3	311	1	22	No	No	No	No	No	No	No	No	No	No
15	3	311	1	22	No	No	No	No	No	No	No	No	No	No
16	3	217	1	16	No	No	No	No	No	No	No	No	No	No
17	3	124	1	9	No	No	No	No	No	No	No	No	No	No
18	3	124	1	9	No	No	No	No	No	No	No	No	No	No
19	3	70	1	5	No	No	No	No	No	No	No	No	No	No
20	3	38	1	3	No	No	No	No	No	No	No	No	No	No
21	3	23	1	2	No	No	No	No	No	No	No	No	No	No
22	3	8	1	1	No	No	No	No	No	No	No	No	No	No
23	3	8	1	1	No	No	No	No	No	No	No	No	No	No
24	3	8	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	3	7	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:12
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	56
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	833
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 15: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	295	530	195
2	286	514	189
3	280	504	185
4	263	472	174
5	233	419	154
6	230	413	152
7	227	408	150
8	207	371	137
9	204	366	135
10	201	360	133
11	174	313	115
12	162	292	107
13	159	286	105
14	118	212	78
15	118	212	78
16	83	148	55
17	47	85	31
18	47	85	31
19	27	48	18
20	15	27	10
21	9	16	6
22	3	5	2
23	3	5	2
24	3	5	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	825	1	195	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
2	3	800	1	189	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
3	3	784	1	185	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
4	3	735	1	174	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
5	3	652	1	154	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
6	3	643	1	152	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
7	3	635	1	150	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
8	3	578	1	137	No	Yes	Yes	Yes	No	No	No	Yes	No	No
9	3	570	1	135	No	Yes	Yes	Yes	No	No	No	Yes	No	No
10	3	561	1	133	No	Yes	Yes	Yes	No	No	No	Yes	No	No
11	3	487	1	115	No	No	Yes	Yes	No	No	No	No	No	No
12	3	454	1	107	No	No	Yes	Yes	No	No	No	No	No	No
13	3	445	1	105	No	No	Yes	Yes	No	No	No	No	No	No
14	3	330	1	78	No	No	No	No	No	No	No	No	No	No
15	3	330	1	78	No	No	No	No	No	No	No	No	No	No
16	3	231	1	55	No	No	No	No	No	No	No	No	No	No
17	3	132	1	31	No	No	No	No	No	No	No	No	No	No
18	3	132	1	31	No	No	No	No	No	No	No	No	No	No
19	3	75	1	18	No	No	No	No	No	No	No	No	No	No
20	3	42	1	10	No	No	No	No	No	No	No	No	No	No
21	3	25	1	6	No	No	No	No	No	No	No	No	No	No
22	3	8	1	2	No	No	No	No	No	No	No	No	No	No
23	3	8	1	2	No	No	No	No	No	No	No	No	No	No
24	3	8	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					7	10	13	13	0	4	7	10	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	16
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:51
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	195
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1020
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 7: Shearwater Dr @ Wineville Ave

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	348	684	74
2	338	663	72
3	331	650	70
4	310	609	66
5	275	540	58
6	271	534	58
7	268	527	57
8	244	479	52
9	240	472	51
10	237	465	50
11	205	404	44
12	191	376	41
13	188	369	40
14	139	274	30
15	139	274	30
16	97	192	21
17	56	109	12
18	56	109	12
19	31	62	7
20	17	34	4
21	10	21	2
22	3	7	1
23	3	7	1
24	3	7	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1032	1	74	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	1001	1	72	No	No	No	No	No	Yes	Yes	Yes	No	No
3	3	981	1	70	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	919	1	66	No	No	No	No	No	Yes	Yes	Yes	No	No
5	3	815	1	58	No	No	No	No	No	No	Yes	Yes	No	No
6	3	805	1	58	No	No	No	No	No	No	Yes	Yes	No	No
7	3	795	1	57	No	No	No	No	No	No	Yes	Yes	No	No
8	3	723	1	52	No	No	No	No	No	No	Yes	Yes	No	No
9	3	712	1	51	No	No	No	No	No	No	No	Yes	No	No
10	3	702	1	50	No	No	No	No	No	No	No	Yes	No	No
11	3	609	1	44	No	No	No	No	No	No	No	Yes	No	No
12	3	567	1	41	No	No	No	No	No	No	No	No	No	No
13	3	557	1	40	No	No	No	No	No	No	No	No	No	No
14	3	413	1	30	No	No	No	No	No	No	No	No	No	No
15	3	413	1	30	No	No	No	No	No	No	No	No	No	No
16	3	289	1	21	No	No	No	No	No	No	No	No	No	No
17	3	165	1	12	No	No	No	No	No	No	No	No	No	No
18	3	165	1	12	No	No	No	No	No	No	No	No	No	No
19	3	93	1	7	No	No	No	No	No	No	No	No	No	No
20	3	51	1	4	No	No	No	No	No	No	No	No	No	No
21	3	31	1	2	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	4	8	11	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	20.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:25
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	74
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1106
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 15: Pats Ranch Rd @ Apartments Dwy

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	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	641	431	116
2	622	418	113
3	609	409	110
4	570	384	103
5	506	340	92
6	500	336	90
7	494	332	89
8	449	302	81
9	442	297	80
10	436	293	79
11	378	254	68
12	353	237	64
13	346	233	63
14	256	172	46
15	256	172	46
16	179	121	32
17	103	69	19
18	103	69	19
19	58	39	10
20	32	22	6
21	19	13	3
22	6	4	1
23	6	4	1
24	6	4	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		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	1072	1	116	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
2	3	1040	1	113	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
3	3	1018	1	110	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
4	3	954	1	103	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
5	3	846	1	92	No	No	No	Yes	No	Yes	Yes	Yes	No	No
6	3	836	1	90	No	No	No	Yes	No	Yes	Yes	Yes	No	No
7	3	826	1	89	No	No	No	Yes	No	Yes	Yes	Yes	No	No
8	3	751	1	81	No	No	No	No	No	Yes	Yes	Yes	No	No
9	3	739	1	80	No	No	No	No	No	Yes	Yes	Yes	No	No
10	3	729	1	79	No	No	No	No	No	Yes	Yes	Yes	No	No
11	3	632	1	68	No	No	No	No	No	No	Yes	Yes	No	No
12	3	590	1	64	No	No	No	No	No	No	No	Yes	No	No
13	3	579	1	63	No	No	No	No	No	No	No	Yes	No	No
14	3	428	1	46	No	No	No	No	No	No	No	No	No	No
15	3	428	1	46	No	No	No	No	No	No	No	No	No	No
16	3	300	1	32	No	No	No	No	No	No	No	No	No	No
17	3	172	1	19	No	No	No	No	No	No	No	No	No	No
18	3	172	1	19	No	No	No	No	No	No	No	No	No	No
19	3	97	1	10	No	No	No	No	No	No	No	No	No	No
20	3	54	1	6	No	No	No	No	No	No	No	No	No	No
21	3	32	1	3	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	7	4	10	11	13	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:30
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	116
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1188
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**