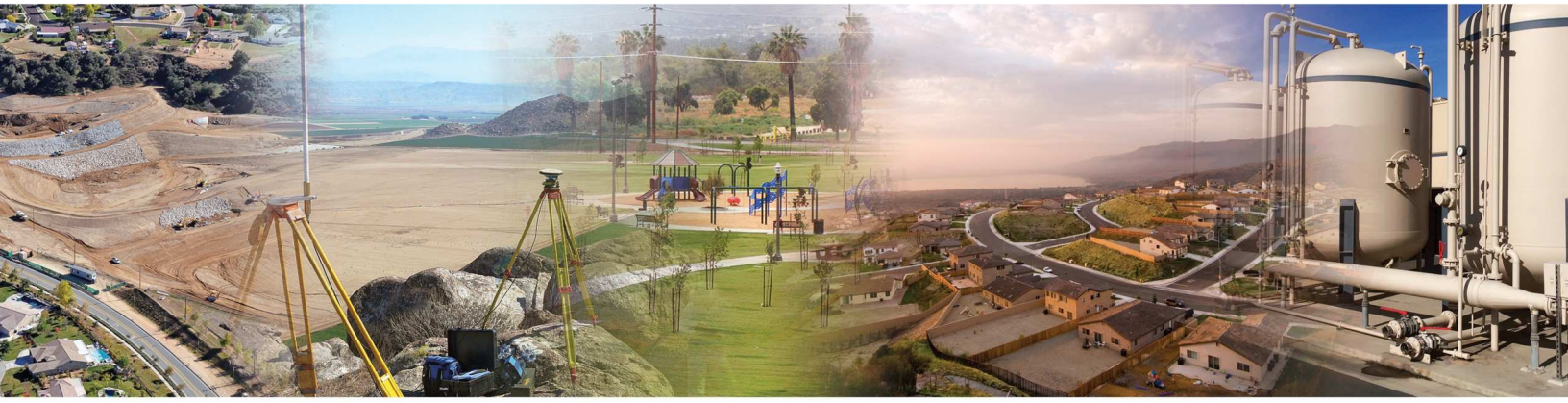
ALBERT A. WEBB ASSOCIATES



Vernola Market Place Apartment Community Traffic Impact Analysis

September 2021

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September 16, 2021

Rick Bondar
Vernola Trust
PO Box 217
Upland, CA 91785-0217

RE: Traffic Impact Analysis Report for Proposed Vernola Marketplace Apartment Community in the City of Jurupa Valley

Dear Rick,

We are pleased to submit our Traffic Impact Analysis report for the proposed Vernola Marketplace Apartment Community project, which we have prepared at your request. The analysis and report have been prepared in accordance with the City of Jurupa Valley General Plan and Traffic Impact Analysis Guidelines as well as a scope of study previously approved by the City.

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

Sincerely,

ALBERT A. WEBB ASSOCIATES



Nicholas Lowe, PE
Senior Engineer

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I. EXECUTIVE SUMMARY

Study Objectives

This study evaluates the potential effects on traffic operation from the proposed Vernola residential development east of the I-15 freeway at 65th Street west of Pats Ranch Road in the City of Jurupa Valley, California. The study objectives include:

- Document or extrapolate existing traffic conditions (2021) in the vicinity of the proposed development (study area);
- Determine the expected project traffic generation;
- Evaluate opening-day traffic scenarios for intersection levels of service (LOS), including ambient growth and cumulative projects;
- Evaluate horizon year traffic scenarios for intersection levels of service (LOS);
- Determine if the LOS required by the City of Jurupa Valley and California Department of Transportation (Caltrans) will be maintained within the study area, and
    - if not, determine the mitigation measures needed to maintain the required LOS.

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

Project Description

The project includes 3-story multifamily housing community with 210 units totaling approximately 8.3 acres in a vacant parcel east of I-15 freeway between Limonite Avenue and 68th Street, west of Pats Ranch Road. The proposed project site is currently zoned as light industrial land use. The project proposes to change the land use in general plan to highest density residential (HHDR). Project main access is proposed via one driveway on 65th Street west of Pats Ranch Road. There is a secondary evacuation access north of 65th Street. Per the proposed site plan, the project will provide 372 parking spaces.

Project Trip Generation

Based on the proposed site plan and trip generation rates from the *Institute of Transportation Engineers (ITE) 10th Edition*, the project is expected to generate a total of 1,537 daily vehicle trips, with 97 AM peak hour trips (22 inbound trips and 75 outbound trips) and 118 PM peak hour trips (74 inbound trips and 44 outbound trips). Since the project consists of residential units, no vehicle trips are expected to be large trucks.

Analysis and Findings

Acceptable Level of Service Standards

Per the City of Jurupa Valley Traffic Impact Analysis Preparation 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 on state highways and at freeway ramps is **LOS D**. **LOS E** may be deemed acceptable by the City Council in designated planning areas and for multimodal mobility corridors that include facilities for at least three transportation modes in addition to motor vehicles, and that support transit-oriented development and walkable communities. **LOS F** is not

considered an acceptable level of service for other than the horizon year unless previously adopted for that intersection in the City's General Plan.

Level of Service Findings

All study intersections are expected to operate at or above the minimum acceptable LOS standard in all peak hour study scenarios, including the addition of cumulative project traffic and the proposed project. The following table provides a summary of the intersection LOS analysis results.

Table: Intersection LOS Analysis Summary

Intersection		Control Type*	Existing (2021)		Opening Day (2023)		Opening Day W Cumulative		Cumulative Horizon (2035)	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Limonite Ave @ Pats Ranch Rd	Signal	B	C	B	C	B	C	C	C
2	I-15 NB Ramps @ Limonite Ave	Signal	A	B	B	B	B	B	D	B
3	I-15 SB Ramps @ Limonite Ave	Signal	B	B	B	B	B	B	B	B
4	Pats Ranch Rd @ 68th St	Signal	B	B	B	B	B	B	B	C
5	Pats Ranch Rd @ 65th St (Project Driveway)	Signal	A	A	A	A	A	A	A	B

Note: Level of service (LOS) rankings are based on average control delay (sec/veh) per Highway Capacity Manual
*Signal = Traffic signal

Proposed Improvements

Traffic Impact Mitigation Measures

As detailed above, all study intersections are expected to operate at or above the minimum acceptable LOS standard in all peak hour study scenarios. Therefore, no further intersection improvements are recommended.

II. INTRODUCTION

Study Objectives

This study evaluates the potential effects on traffic operation from the proposed Vernola residential development east of I-15 freeway between Limonite Avenue and 68th Street, and west of Pats Ranch Road in the City of Jurupa Valley, California. The study objectives include:

- Document or extrapolate existing traffic conditions (2021) in the vicinity of the proposed development (study area);
- Determine the expected project traffic generation;
- Evaluate opening-day traffic scenarios for intersection levels of service (LOS), including ambient growth and cumulative projects;
- Evaluate horizon year traffic scenarios for intersection levels of service (LOS);
- Determine if the LOS required by the City of Jurupa Valley and California Department of Transportation (Caltrans) will be maintained within the study area, and
    - if not, determine the mitigation measures needed to maintain the required LOS.

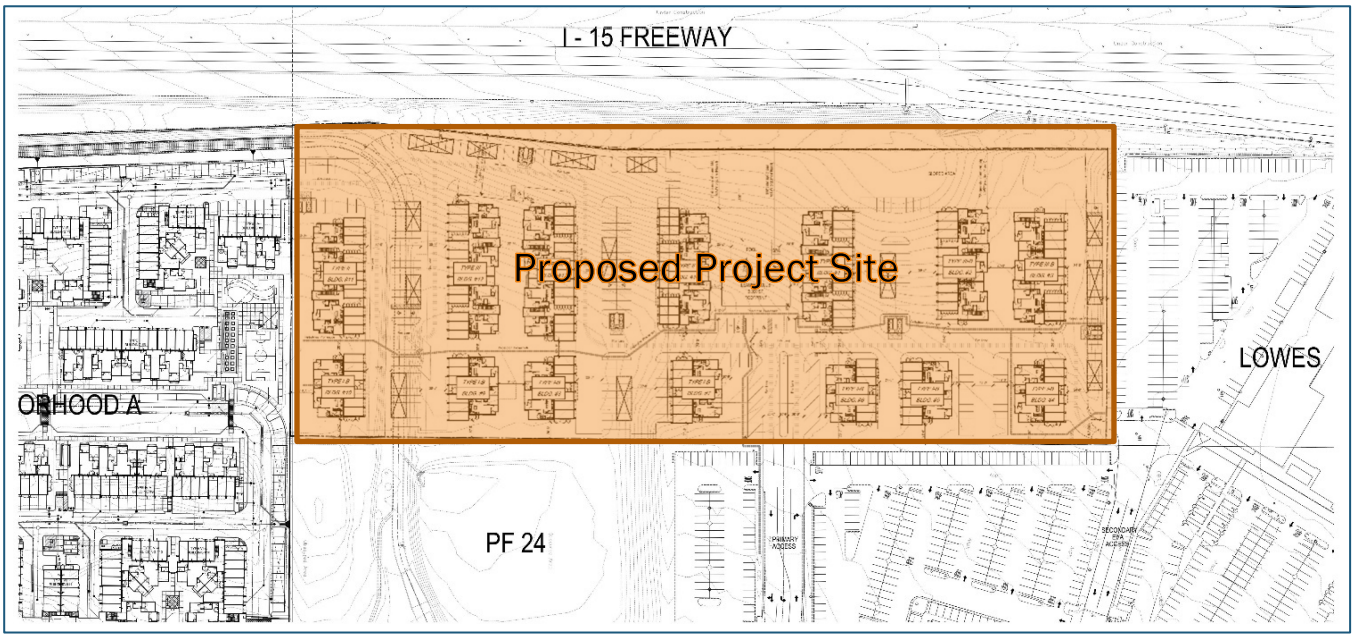
Prior to preparing this study, the City of Jurupa Valley approved the study scope (**Appendix A)**.

Project Location and Description

The proposed project site encompasses approximately 8.3 acres on the east side of the I-15 freeway, between Limonite Avenue and 68th Street in the City of Jurupa Valley along its border with the City of Eastvale in the County of Riverside. The project site is bounded by Limonite Avenue and Lowe's warehouse to the north, 68th Street to the south, Pats Ranch Road to the east, and I-15 to the west. The site is currently vacant and zoned as light industrial, which the project is proposing to change to highest density residential.

The project proposes to construct 3-story multifamily housing development with 210 units and 372 proposed parking spaces. (**Figure 1**, also **Appendix B**). Project main access is provided via one driveway at the end of 65th Street west of Pats Ranch Road. This study assumes that the project would be developed in one phase, to be completed in 2023.

Figure 1: **Proposed Project Site Plan**

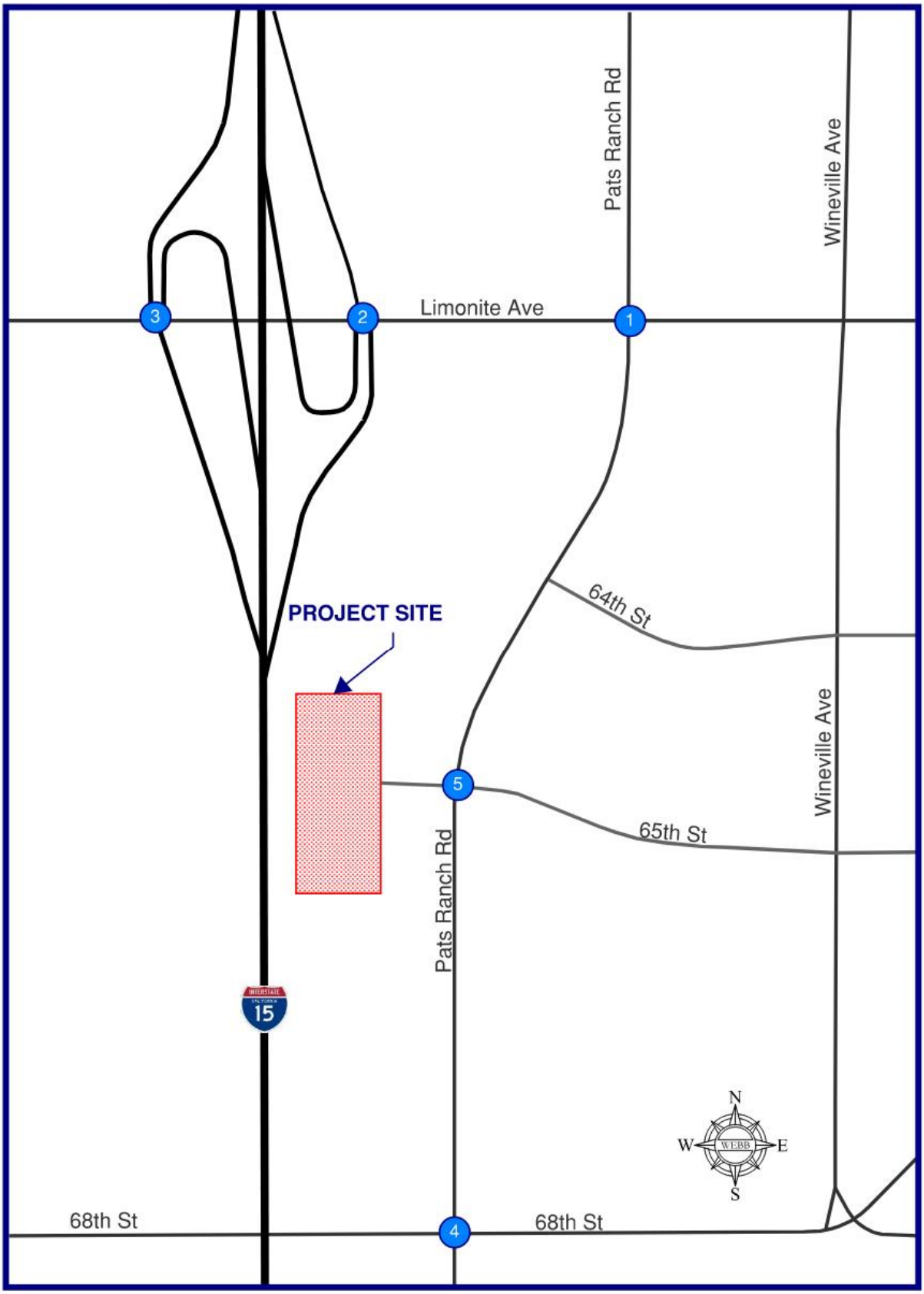


Study Intersections

Based on a review of the existing roadway network and anticipated project traffic, the following study intersections were selected for analysis in conjunction with the City of Jurupa Valley (**Figure 2**):

1. Pats Ranch Rd @ Limonite Ave
2. I-15 NB Ramps @ Limonite Ave
3. I-15 SB Ramps @ Limonite Ave
4. Pats Ranch Rd @ 68th St
5. Pats Ranch Rd @ 65th St (Project Driveway)

Figure 2: Study Intersections



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* to analyze traffic operations via Level of Service (LOS) rankings. Accordingly, the *Highway Capacity Manual* 6th Edition (HCM6, 2016) was used to perform intersection LOS analysis for the following scenarios:

- Existing conditions (2021)
- Opening year background conditions without project (2023)
- Opening year background conditions plus project (2023)
- Opening year background plus project plus cumulative project conditions (2023)
- Horizon year no project conditions (2035)
- Horizon year plus project conditions (2035)

LOS measures transportation quality of service from the traveler's perspective. Per the HCM6, LOS rankings at intersections use a letter-grade scale ranging from LOS A (optimal conditions) to LOS F (congested or overcrowded conditions) 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 before an intersection, waiting in queues, and stopping at the intersection. This study uses Vistro traffic modeling software to evaluate LOS at signalized intersections.

For signalized intersections, LOS rankings are based on the average control delay of all vehicles passing through the intersection (**Table 1**).

Table 1: 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)

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 on state highways and at freeway ramps is **LOS D**.

LOS E may be deemed acceptable by the City Council in designated planning areas and for multimodal mobility corridors that include facilities for at least three transportation modes in addition to motor vehicles, and that support transit-oriented development and walkable communities. **LOS F** is not considered an acceptable level of service for other than the horizon year unless previously adopted for that intersection in the City's General Plan.

Significant Impact and Mitigation Criteria

The project's potential traffic impacts are evaluated per the City of Jurupa Valley and Caltrans standards. Per the City of Jurupa Valley Traffic Impact Analysis Guidelines (2020), the expected project traffic impacts are considered significant and would require mitigation under the following conditions:

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.

III. PROPOSED PROJECT TRAFFIC

This study uses a multi-step process to estimate project traffic. First, project trip generation estimates the total arriving and departing traffic during a typical weekday and the weekday peak hours by applying the appropriate vehicle trip generation rates to the project development tabulation. Next, trip distribution identifies the origins and destinations of project traffic based on existing and expected future travel patterns. Finally, traffic assignment allocates the distributed project traffic to specific roadways and intersections.

Project Trip Generation

Trip Generation Rates

Trip generation represents the amount of traffic accessing a site, differentiated by inbound and outbound vehicle trip ends. The Institute of Transportation Engineers (ITE) *Trip Generation Manual* 10th Edition (2017) uses thousands of studies across the nation to determine common trip generation characteristics by land use. Using the *Manual*, the anticipated project trip generation was determined using trip generation rates given by ITE Land Use Codes #220 (Multifamily Housing). The project is not expected to generate large truck trips due to its residential use.

Trip Generation

The trip generation volumes are developed by multiplying the trip generation rates by the size of the proposed project. While it is common to deduct the trip generation for existing land uses to determine net new trips generated, the project site is currently vacant, so no existing trip credits were deducted in this study. Per the trip generation analysis, it is expected that the proposed project would generate 1,537 daily vehicle trips including 768 inbound vehicle trips and 769 outbound vehicle trips. In addition, the project would generate 22 inbound and 75 outbound vehicle trips during the AM peak hour (total of 97 AM peak hour trips) and 74 inbound and 44 outbound vehicle trips during the PM peak hour (total of 118 PM peak hour trips) (**Table 2**).

Table 2: Project Trip Generation

ITE Land Use Code		Units[1]		Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
220	Multifamily Housing (Low-Rise)	**ITE Trip Generation Rates[2]**								
		1	DU	7.32	0.106	0.354	0.46	0.353	0.207	0.56
		Project Trip Generation (vehicles)								
		210	DU	**1,537**	22	75	**97**	74	44	**118**

[1] DU = dwelling unit(s)
[2] ITE Trip Generation Manual 10th Ed, 2017

Project Trip Distribution and Assignment

Modal Split

Based on the residential nature of the project, no internal trip capture and pass-by trips are considered for this project. 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.

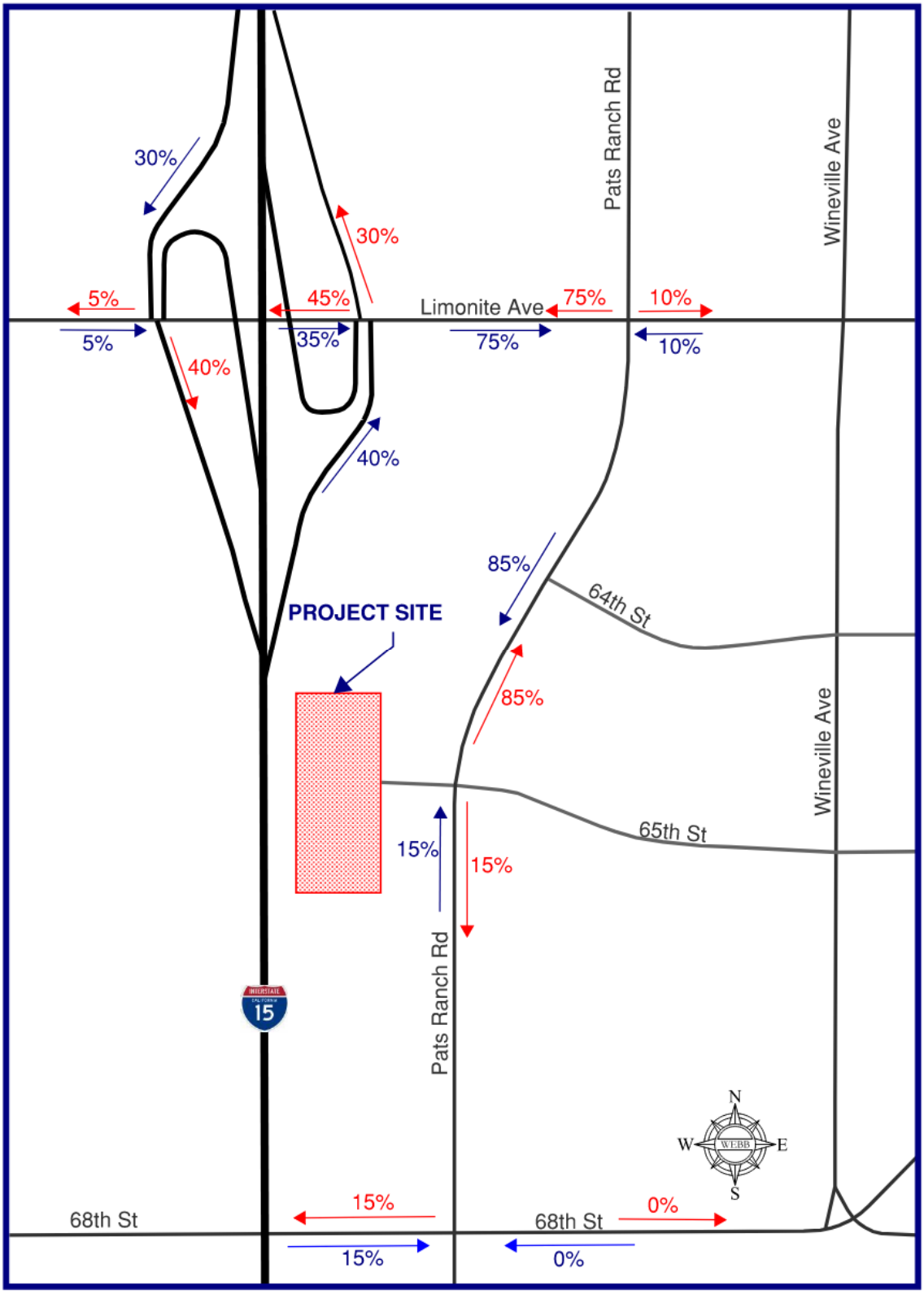
Trip Distribution

Trip distribution, or the directional orientation of traffic to and from the project, is based on the project's geographical location, nearby land uses, and proximity to the regional freeway system. The proposed project trip distribution is shown in **Figure 3**.

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 4 and 5** show the project trips at the study intersections for the AM and PM peak hours, respectively.

Figure 3: Directional Distribution of Project Traffic



Reference Map: Study Intersections

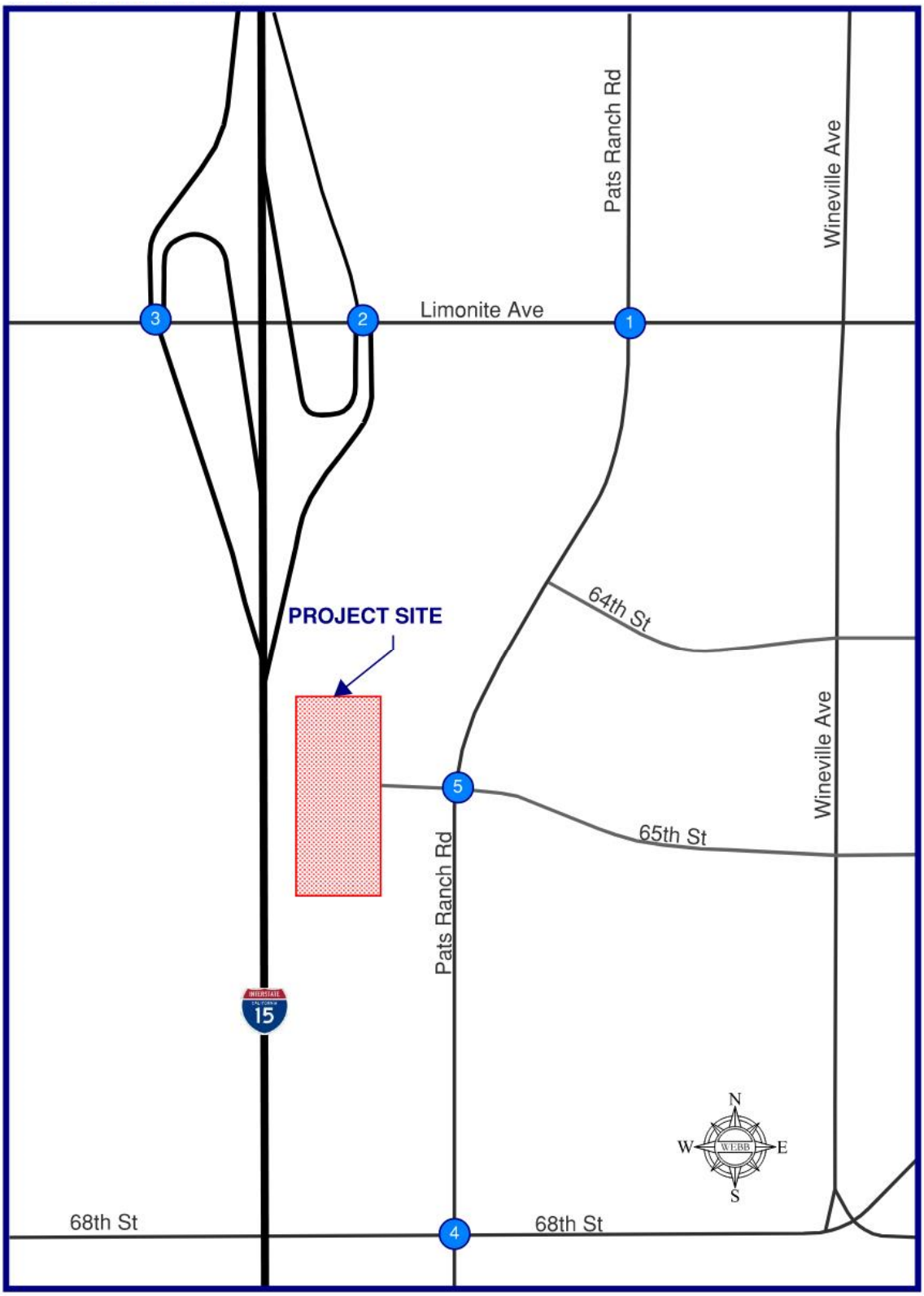


Figure 4: Project Traffic Volumes – AM Peak Hour

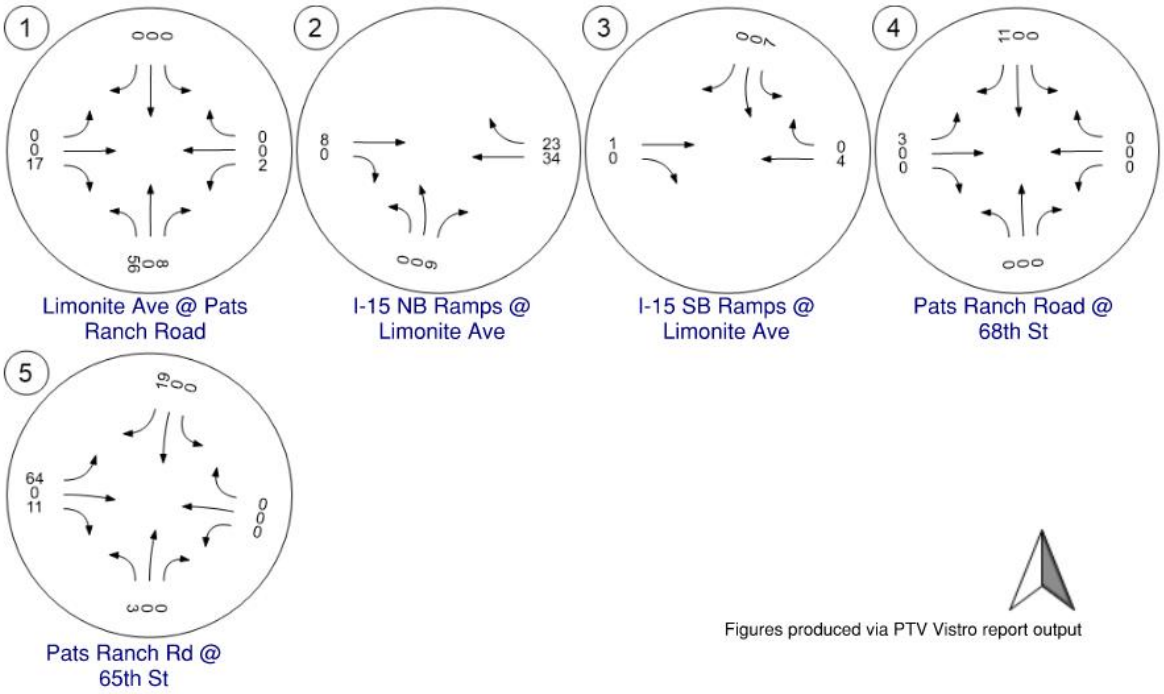
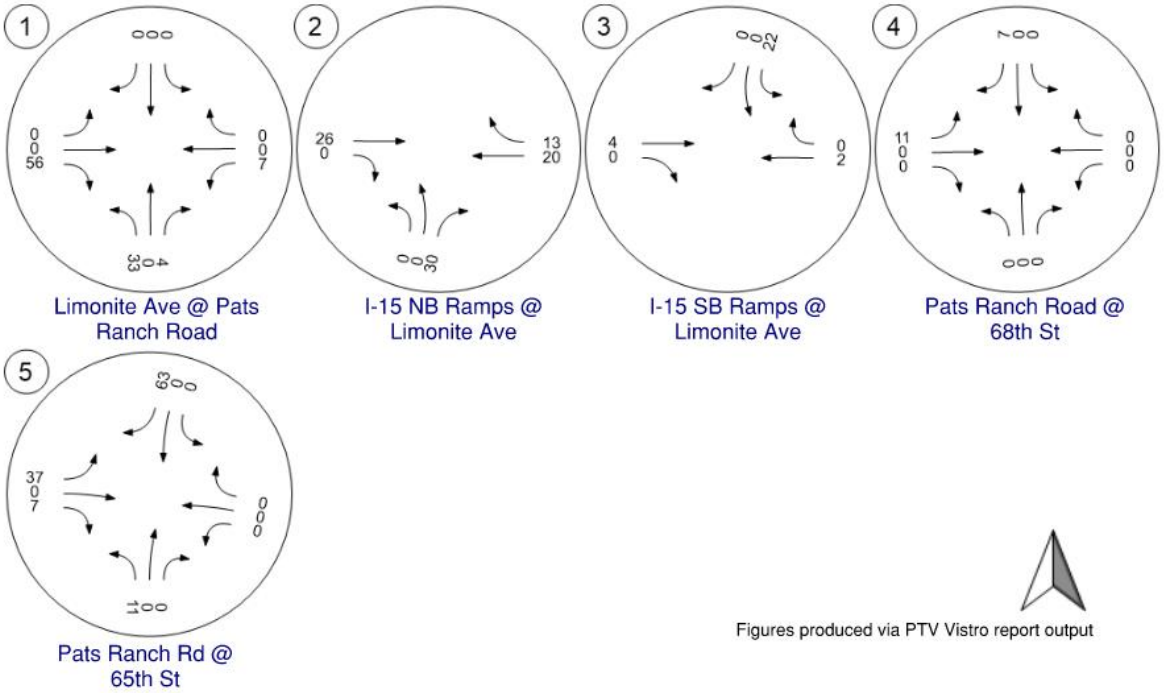


Figure 5: Project Traffic Volumes – PM Peak Hour



IV. EXISTING CONDITIONS (2021)

The proposed project site encompasses approximately 8.3 acres on the east side of the I-15 freeway, between Limonite Avenue and 68th Street in the City of Jurupa Valley along its border with the City of Eastvale in the County of Riverside. The project site is bounded by Limonite Avenue and Lowe's warehouse to the north, 68th Street to the south, Pats Ranch Road to the east, and I-15 freeway to the west.

Existing Roadway Network

I-15 Freeway is a six-lane regional freeway located along the border of City of Jurupa Valley and City of Eastvale, west of the project site. It has a north-south orientation and is one of the primary transportation corridors traversing the Jurupa Valley area.

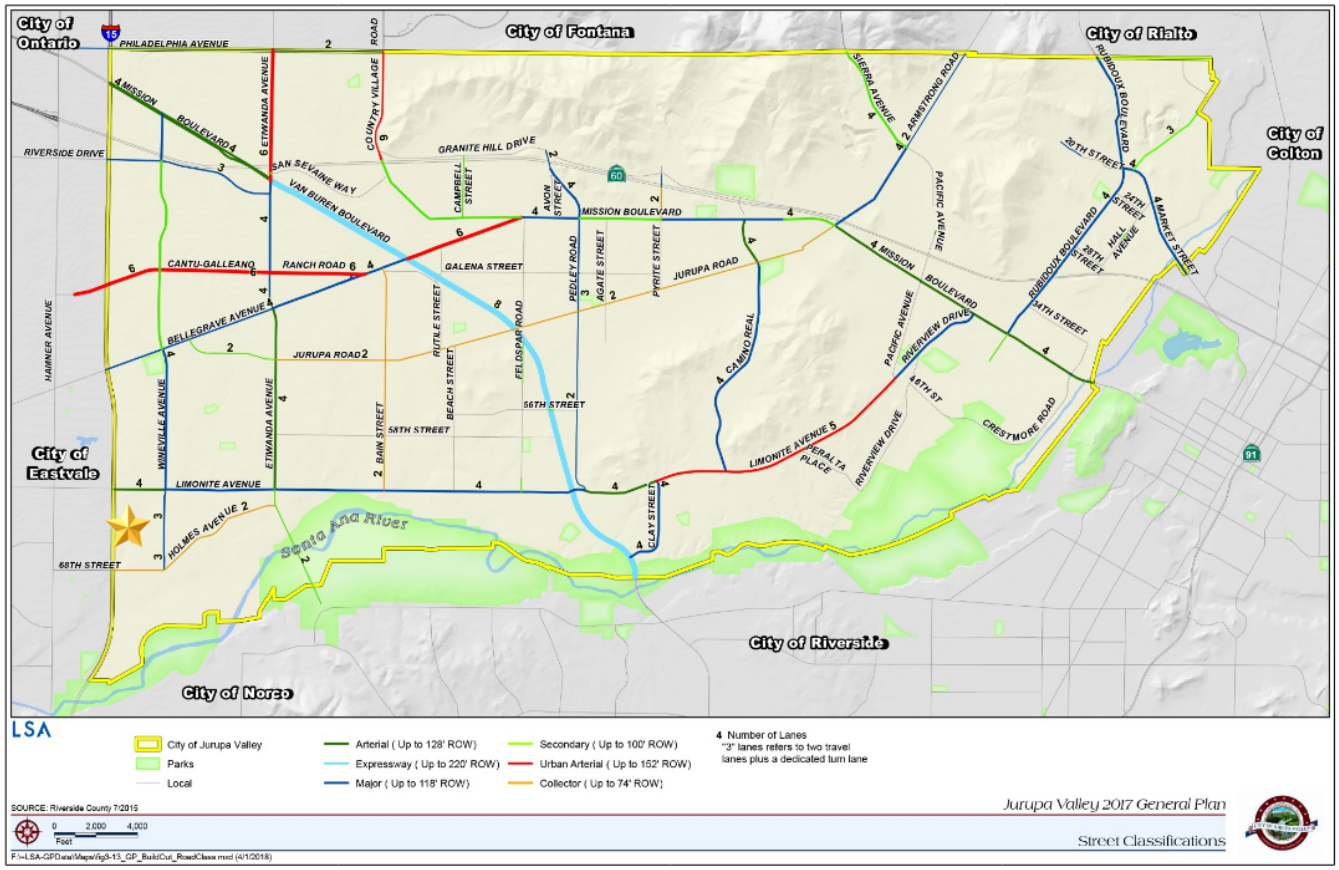
Limonite Avenue is a four-lane roadway located north of the project site providing access to the I-15 freeway. It has an east-west orientation. This roadway is primarily for through traffic and is classified as an Arterial west of Wineville Avenue and Major roadway east of it in the City of Jurupa Valley General Plan.

Pats Ranch Road is a two-lane collector roadway located east of the project site providing north-south access to Limonite Avenue and 68th Street. This roadway has four lanes in the segment between Limonite Avenue and 68th Street. It extends from Tributary Way in the south to Bellegrave Avenue in the north.

68th Street is a two-lane collector located south of the project site providing east-west access. It extends from Sumner Avenue in the west to Lucretia Avenue in the east.

Figure 6 shows the City of Jurupa Valley General Plan roadway system within the study area.

Figure 6: City of Jurupa Valley Street Classification



Source: Jurupa Valley 2017 General Plan

Existing Intersection Geometrics and Traffic Control

Figure 7 identifies the existing intersection traffic controls, intersection geometrics, and the number of vehicle lanes for each study intersection.

Reference Map: Study Intersections

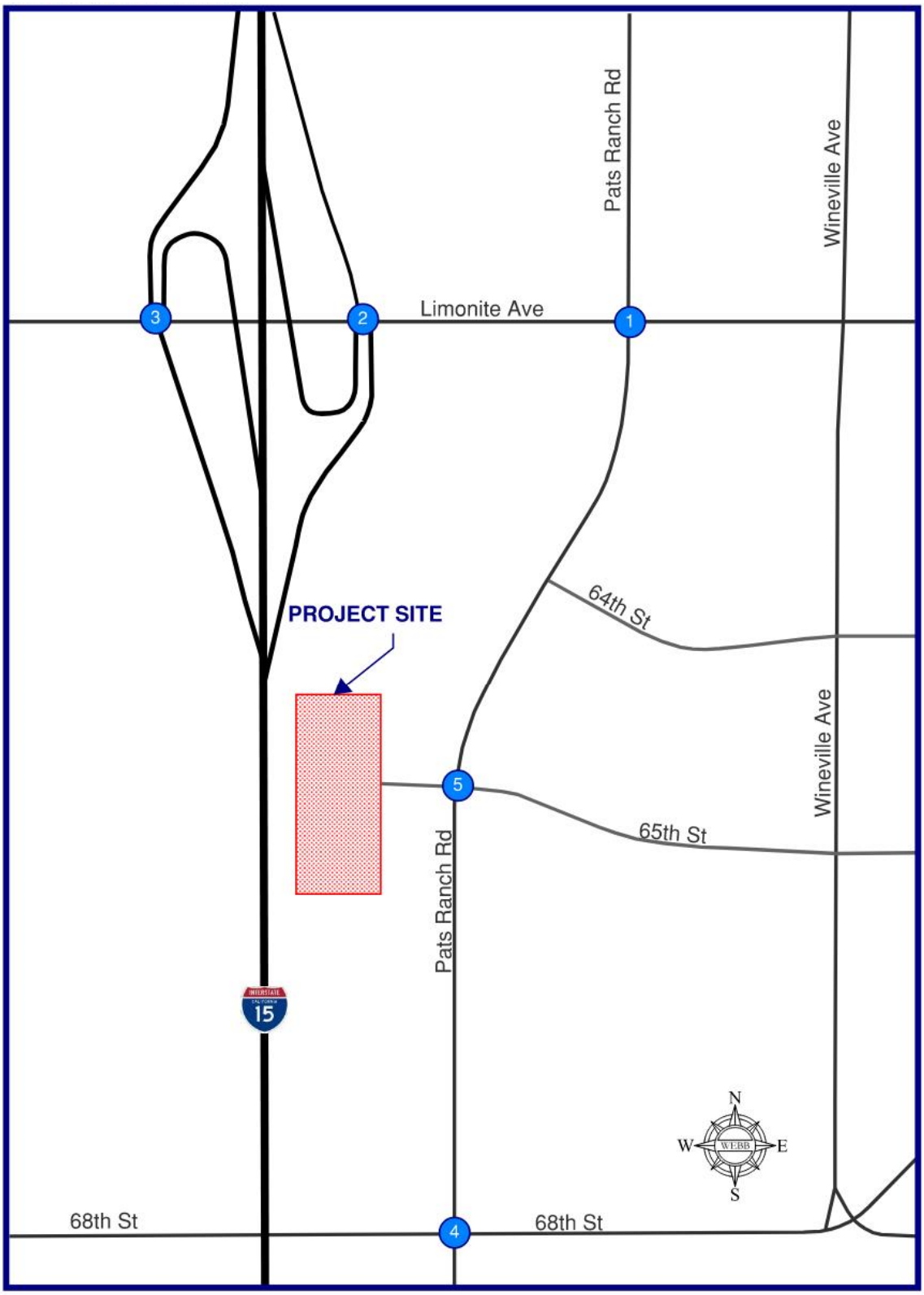
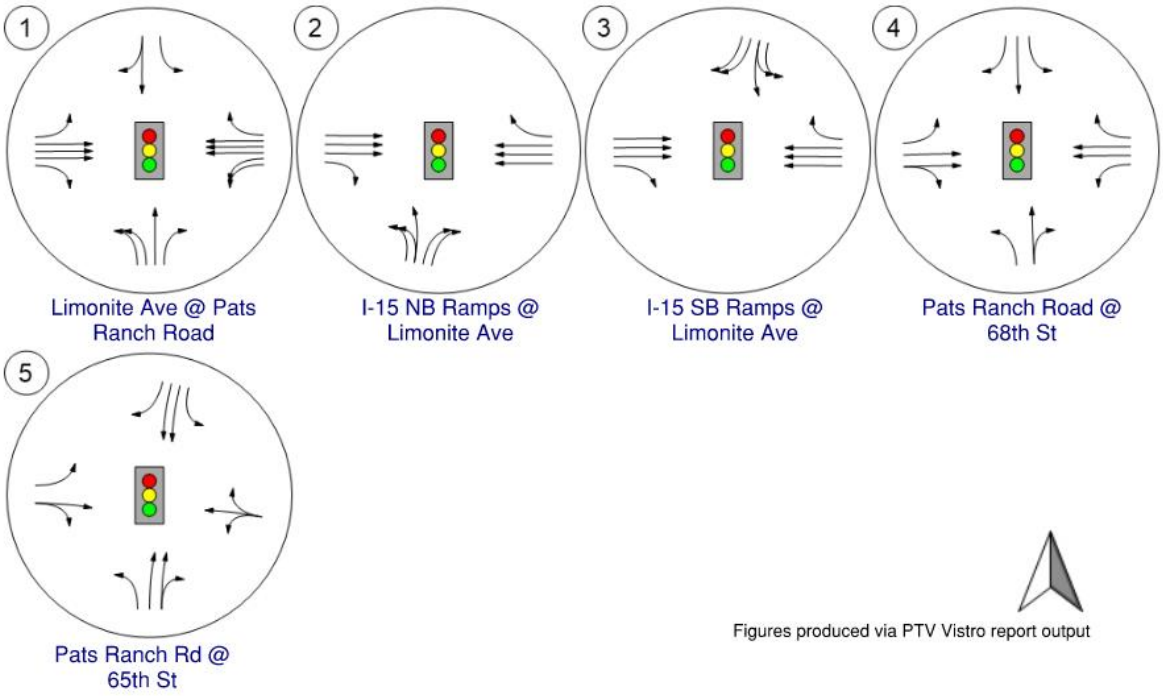


Figure 7: Existing Intersection Geometrics and Traffic Control



Existing Traffic Volumes

To establish a baseline analysis for existing conditions, intersection turning movement counts were conducted at the study intersections in August 2021, for the AM and PM peak periods (**Appendix C**). AM and PM peak-hour traffic volumes are shown in **Figures 8 and 9**, respectively.

Figure 8: Existing Traffic Volumes – AM Peak Hour

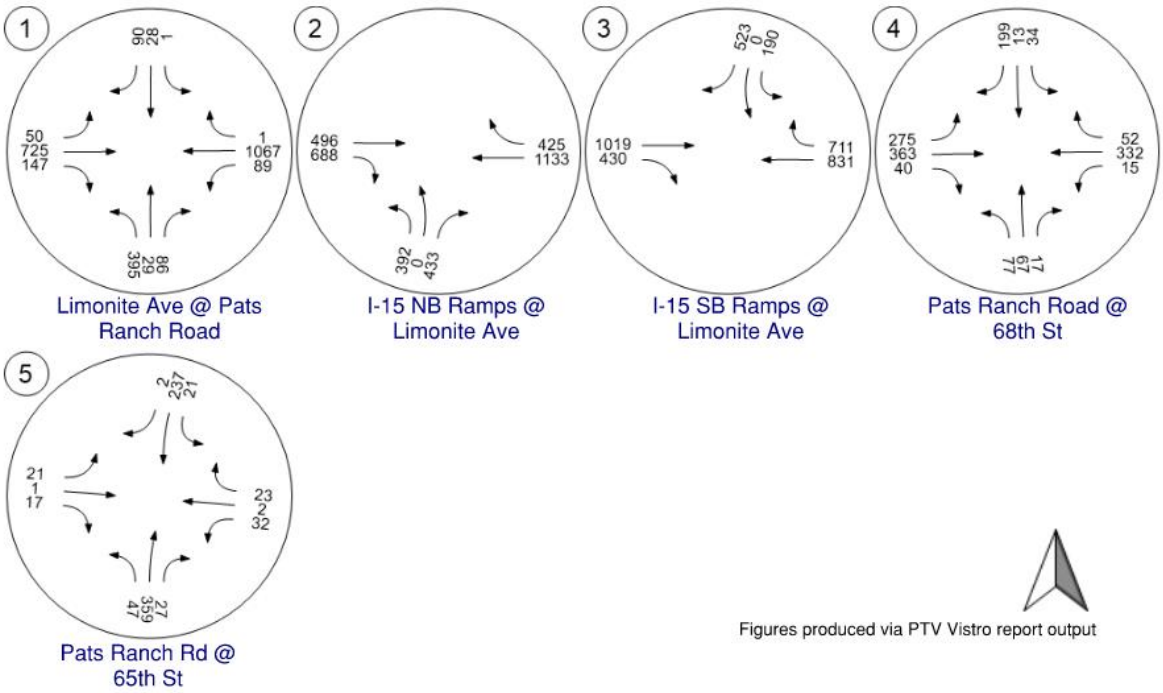
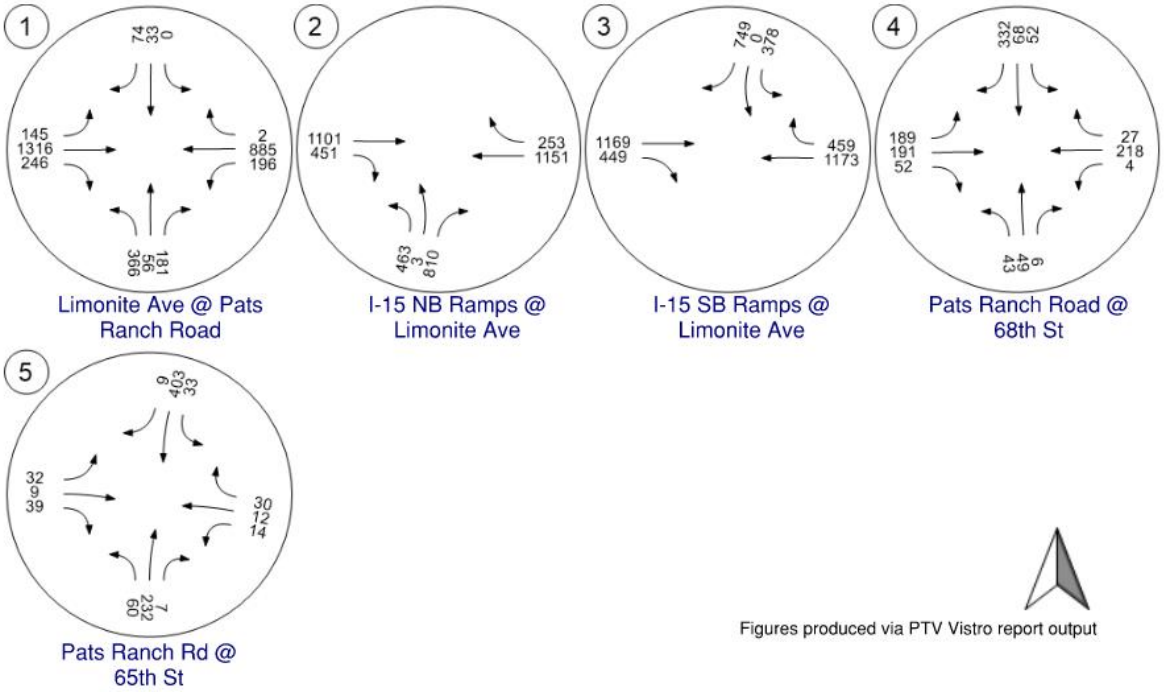


Figure 9: Existing Traffic Volumes – PM Peak Hour



Levels of Service – Existing Conditions (2021)

Based on the existing intersection geometrics and peak-hour traffic volumes, intersection LOS was analyzed for the AM and PM peak hours (**Table 3**, see **Appendix D** for details). Under existing conditions, all study intersections currently operate above the minimum acceptable LOS standard (D).

Table 3: Intersection LOS – Existing Conditions (2021)

Intersection		Traffic Control	AM Peak Hr		PM Peak Hr	
			Delay	LOS*	Delay	LOS*
1	Limonite Ave @ Pats Ranch Rd	Signal	18.4	**B**	20.9	**C**
2	I-15 NB Ramps @ Limonite Ave	Signal	9.6	**A**	11.9	**B**
3	I-15 SB Ramps @ Limonite Ave	Signal	10.4	**B**	11.5	**B**
4	Pats Ranch Rd @ 68th St	Signal	12.2	**B**	12.6	**B**
5	Pats Ranch Rd @ 65th St (Project Dwy)	Signal	2.7	**A**	9.0	**A**

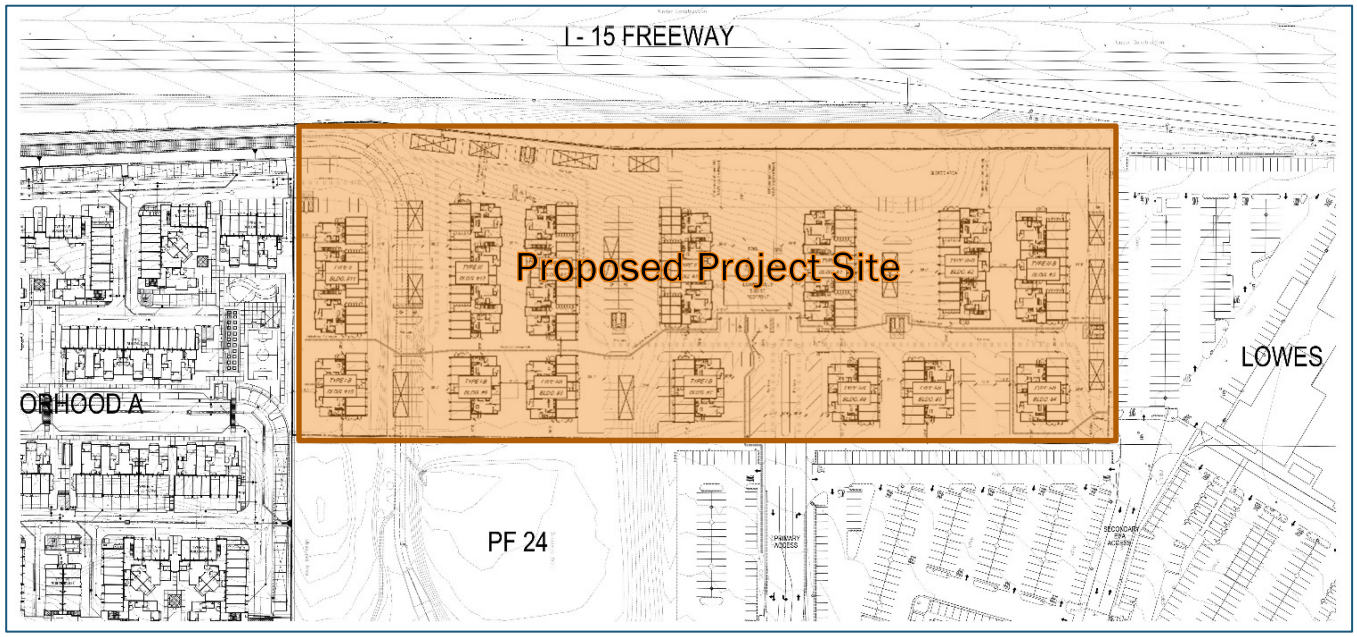
* Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

V. PROJECT OPENING DAY CONDITIONS (2023)

Proposed Project Driveways

The proposed project site plan includes one driveway on 65th Street west of Pats Ranch Road. In addition, there is a secondary evacuation access northward to the parking lot serving Lowe's and Fitness 19, to be used in emergencies only.

Reference Map: Proposed Site Plan



Ambient Area Growth

An ambient traffic growth factor is used in future traffic models to account for regular growth in traffic volumes due to the developments within the region. This study used a 2 percent annual ambient growth rate, for a total of 4% growth from 2021 to 2023.

Levels of Service – Opening Day Conditions (2023)

The expected project traffic is then added to the opening day AM and PM peak-hour traffic volumes (**Figures 10 and 11**, respectively). **Table 4** gives the LOS analysis for the "opening day" scenario, with detailed worksheets in **Appendix D**. With the addition of ambient area growth and the proposed project traffic, all study intersections are expected to operate above the minimum acceptable LOS standard (D).

Reference Map: Study Intersections

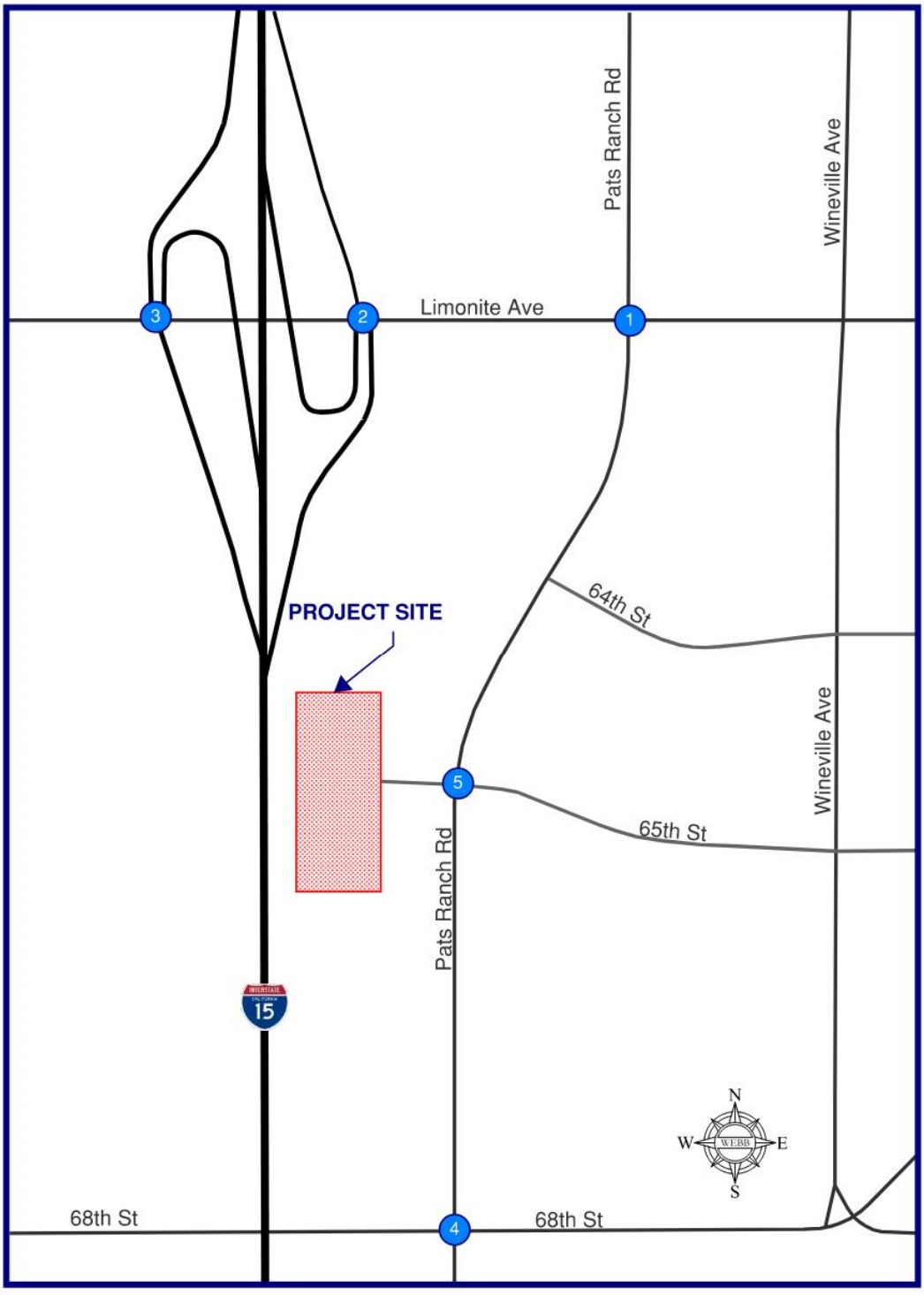


Figure 10: Opening Day Traffic Volumes – AM Peak Hour

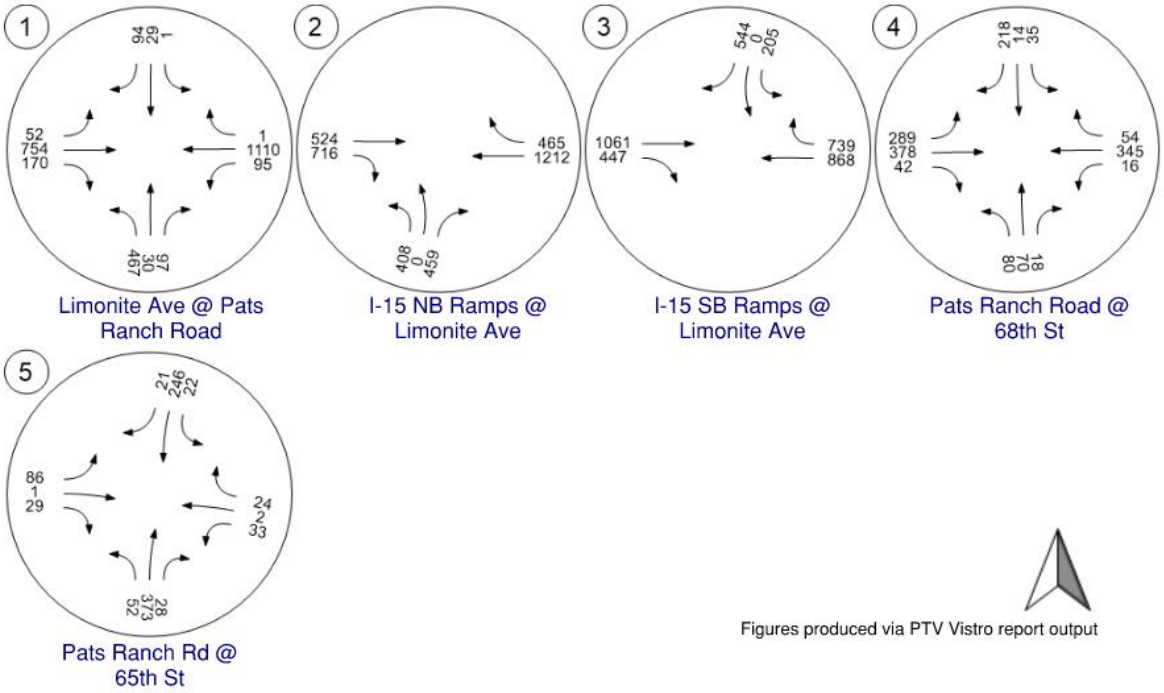


Figure 11: Opening Day Traffic Volumes – PM Peak Hour

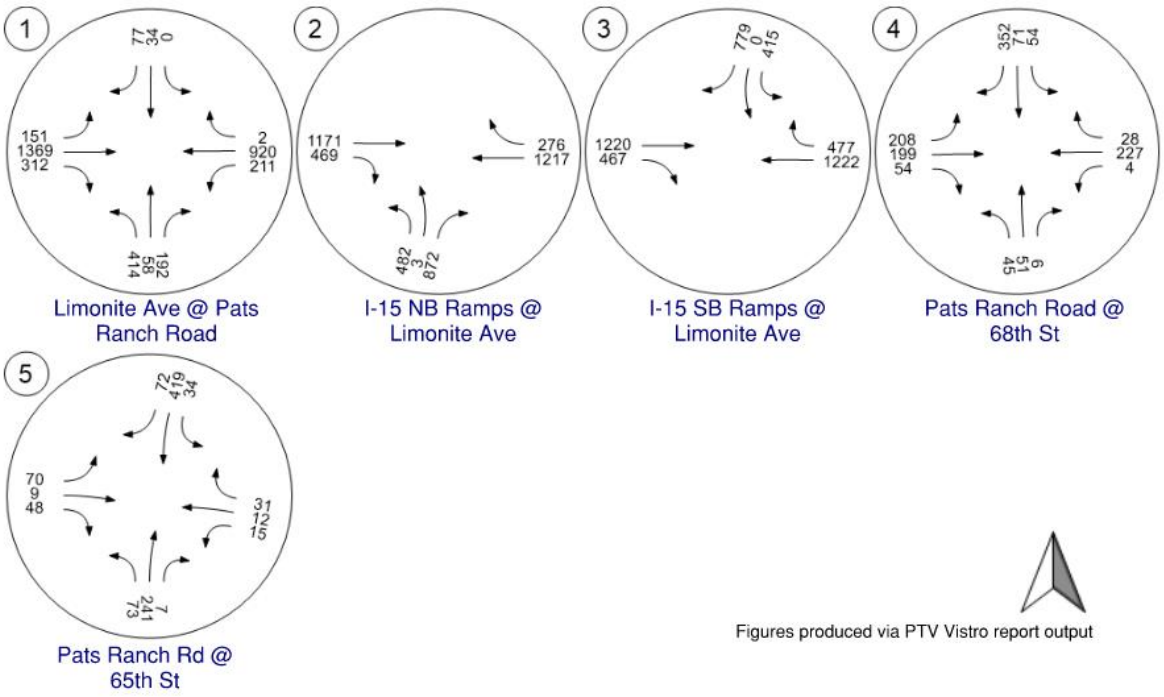


Table 4: Intersection LOS – Opening Day Conditions (2023)

	Intersection	Traffic Control	AM Peak Hr Delay	AM Peak Hr LOS*	PM Peak Hr Delay	PM Peak Hr LOS*
Opening Day Conditions (2023, no project)						
1	Limonite Ave @ Pats Ranch Rd	Signal	18.9	B	21.7	C
2	I-15 NB Ramps @ Limonite Ave	Signal	10.3	B	12.5	B
3	I-15 SB Ramps @ Limonite Ave	Signal	11.2	B	12.1	B
4	Pats Ranch Rd @ 68th St	Signal	12.5	B	12.8	B
5	Pats Ranch Rd @ 65th St (Project Dwy)	Signal	9.0	A	8.9	A
Opening Day Conditions with Project (2023)						
1	Limonite Ave @ Pats Ranch Rd	Signal	19.6	B	22.4	C
2	I-15 NB Ramps @ Limonite Ave	Signal	10.4	B	12.9	B
3	I-15 SB Ramps @ Limonite Ave	Signal	11.2	B	12.1	B
4	Pats Ranch Rd @ 68th St	Signal	12.7	B	13.0	B
5	Pats Ranch Rd @ 65th St (Project Dwy)	Signal	9.0	A	9.2	A

* Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

Cumulative Projects Analysis

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 (2023). Compiled from lists provided by the Cities of Jurupa Valley and Eastvale, the cumulative projects used in this study are shown in **Table 5** and **Figure 12** as well as **Appendix E**. The expected cumulative project trips are shown in **Figures 13 and 14** for the AM and PM peak hours, respectively. Based on the most recent status of these projects, it is assumed that not all of them will be fully completed by the project's opening year (2023).

Table 5: Related Projects within the Study Area

	Project	ITE Land Use Code[1]		Size[2]	Trip Generation AM	Trip Generation PM
City of Jurupa Valley						
1	Tacos More Restaurant	932	High-Turnover (Sit-Down) Restaurant	4.5 KSF	45	44
2	Wineville Marketplace	210	Single-Family Detached Housing	130 DU	96	129
		820	Shopping Center	37.6 KSF	35	143
3	Express Car Wash	948	Automated Car Wash	4.7 KSF	0	67
4	Mixed Use Land Development	820	Shopping Center	9.5 KSF	9	36
		220	Multifamily Housing	45 DU	21	25
City of Eastvale						
5	Summer Place Mixed Use Development	220	Multifamily Housing	216 DU	99	121
		820	Shopping Center	5 KSF	5	19
6	Hamner Place	944	Gasoline/Service Station	6.5 KSF	494	574
		932	High-Turnover (Sit-Down) Restaurant	5.9 KSF	59	58
		820	Shopping Center	2.3 KSF	2	9
		310	Hotel	96 KSF	87	116

[1] ITE Trip Generation Manual 10th Ed, 2017

[2] DU = dwelling unit; KSF = 1,000 square feet gross floor area

Figure 12: Related Projects

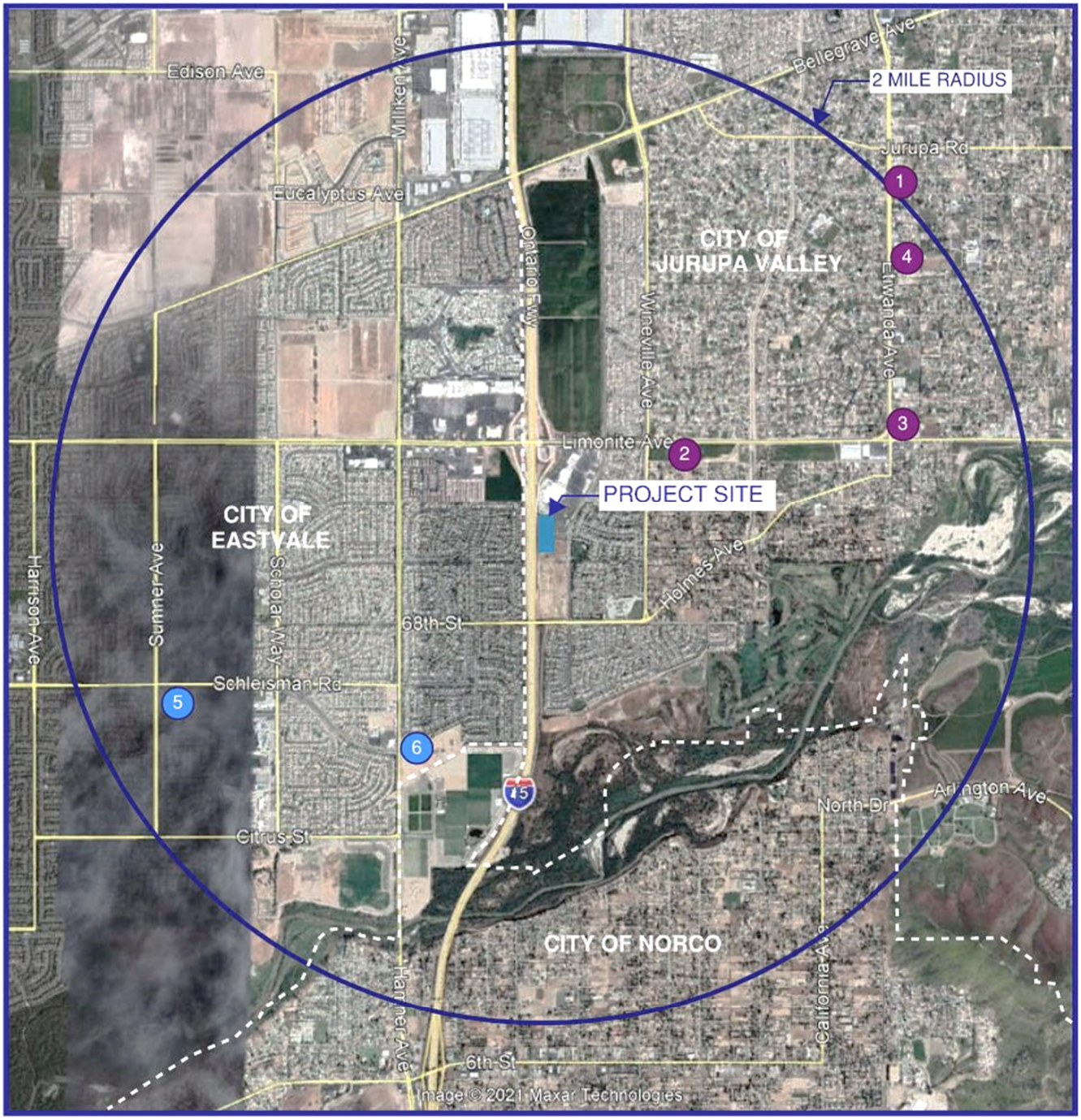


Figure 13: Cumulative Project Trips – AM Peak Hour

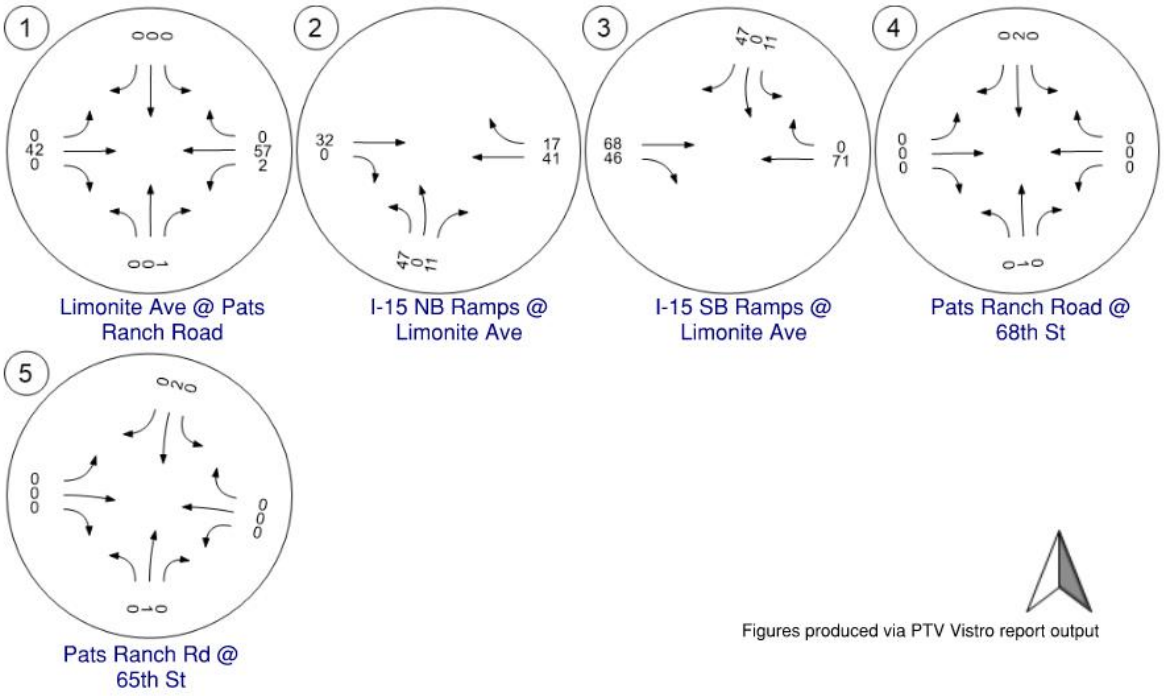
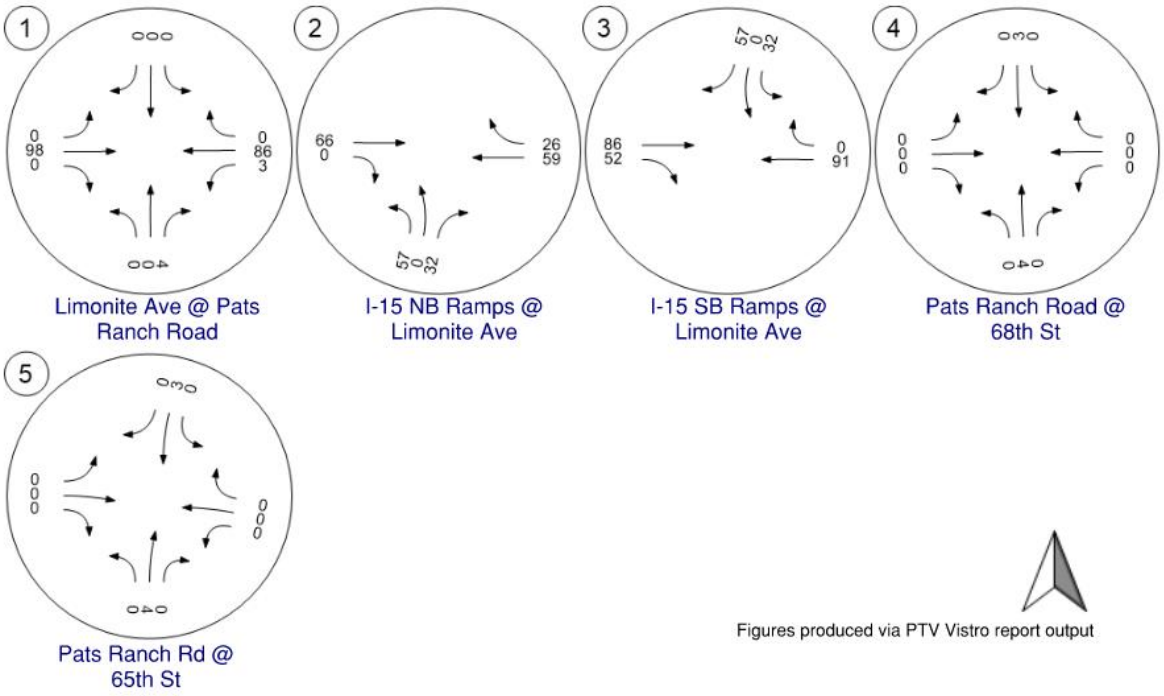


Figure 14: Cumulative Project Trips – PM Peak Hour



Levels of Service – Opening Day with Cumulative Projects

The cumulative projects traffic is added to the opening day traffic volumes (existing traffic + ambient growth + project). The AM and PM peak-hour traffic volumes for the "opening day with cumulative projects" scenario is shown on **Figures 15 and 16**, respectively.

Figure 15: Opening Day with Related Projects Traffic Volumes – AM Peak Hour

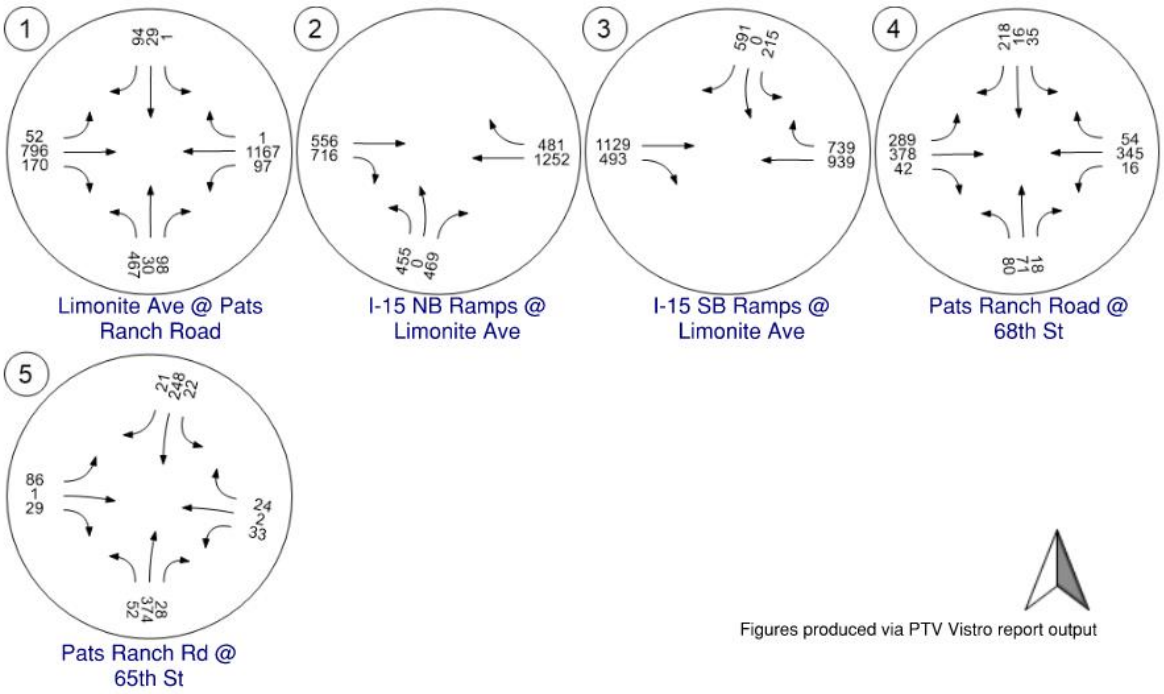


Figure 16: Opening Day with Related Projects Traffic Volumes – PM Peak Hour

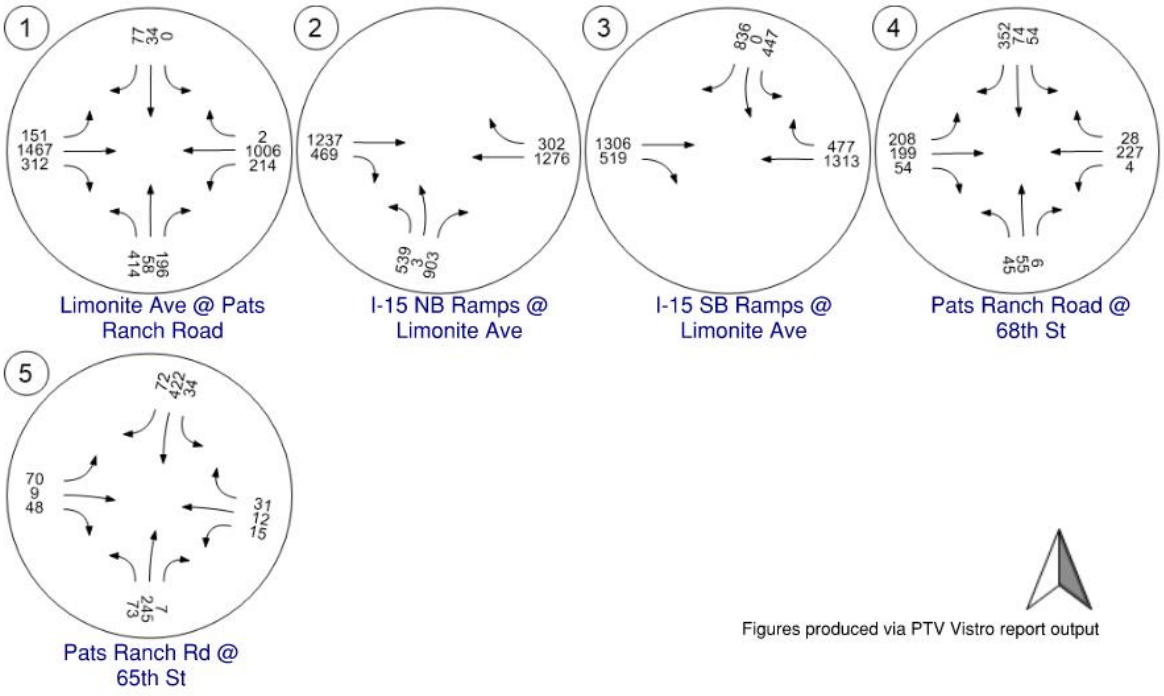


Table 6 summarizes the "opening day with cumulative projects" LOS analysis, with detailed worksheets in **Appendix D.** With the addition of traffic from ambient area growth, nearby cumulative projects, and the proposed project, all study intersections are expected to operate above the minimum acceptable LOS standard (D).

Table 6: Intersection LOS – Opening Day Conditions with Cumulative Projects (2023)

	Intersection	Traffic Control	AM Peak Hr		PM Peak Hr	
			Delay	LOS*	Delay	LOS*
Opening Day with Cumulative Projects (2023, no project)						
1	Limonite Ave @ Pats Ranch Rd	Signal	19.1	**B**	22.2	**C**
2	I-15 NB Ramps @ Limonite Ave	Signal	10.6	**B**	13.1	**B**
3	I-15 SB Ramps @ Limonite Ave	Signal	12	**B**	13.3	**B**
4	Pats Ranch Rd @ 68th St	Signal	12.5	**B**	12.8	**B**
5	Pats Ranch Rd @ 65th St (Project Dwy)	Signal	9.0	**A**	9	**A**
Opening Day with Cumulative Projects with Project (2023)						
1	Limonite Ave @ Pats Ranch Rd	Signal	19.9	**B**	22.9	**C**
2	I-15 NB Ramps @ Limonite Ave	Signal	10.6	**B**	13.5	**B**
3	I-15 SB Ramps @ Limonite Ave	Signal	12	**B**	13.3	**B**
4	Pats Ranch Rd @ 68th St	Signal	12.7	**B**	13.0	**B**
5	Pats Ranch Rd @ 65th St (Project Dwy)	Signal	9.0	**A**	9.2	**A**

* Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

VI. PROJECT HORIZON YEAR CONDITIONS (2035)

Horizon Year Growth

For horizon year conditions, the City of Jurupa Valley General Plan (2017) was used as reference. For the I-15 freeway interchange at Limonite Avenue, the buildout volumes from the General Plan were used. For the study intersections along Pats Ranch Road, the buildout volumes from adjacent intersections in the General Plan were used to calculate the growth factor. This study used the following growth rates from 2021 to 2035:

Table 7: Horizon Year Traffic Growth Rates

	Intersection	Traffic Control	AM Peak Hour	PM Peak Hour
1	Limonite Ave @ Pats Ranch Rd	Signal	43%	37%
2	I-15 NB Ramps @ Limonite Ave	Signal	General Plan buildout volumes	
3	I-15 SB Ramps @ Limonite Ave	Signal	General Plan buildout volumes	
4	Pats Ranch Rd @ 68th St	Signal	36%	80%
5	Pats Ranch Rd @ 65th St (Project Dwy)	Signal	36%	80%

Levels of Service – Horizon Year (2035)

The expected project traffic is then added to the cumulative horizon AM and PM peak-hour traffic volumes (**Figures 17 and 18**, respectively). **Table 7** gives the LOS analysis for the "cumulative horizon" scenario, with detailed worksheets in **Appendix D**. With the addition of the proposed project traffic, all study intersections are expected to operate at or above the minimum acceptable LOS standard (D).

Table 8: Intersection LOS – Horizon Year Conditions (2035)

	Intersection	Traffic Control	AM Peak Hr		PM Peak Hr	
			Delay	LOS*	Delay	LOS*
Horizon Year Conditions (2035, no project)						
1	Limonite Ave @ Pats Ranch Rd	Signal	25.7	C	32.0	C
2	I-15 NB Ramps @ Limonite Ave	Signal	51.3	D	15.3	B
3	I-15 SB Ramps @ Limonite Ave	Signal	14.4	B	14.4	B
4	Pats Ranch Rd @ 68th St	Signal	15.2	B	26.9	C
5	Pats Ranch Rd @ 65th St (Project Dwy)	Signal	9.1	A	10.3	B
Horizon Year Conditions with Project (2035)						
1	Limonite Ave @ Pats Ranch Rd	Signal	26.9	C	34.5	C
2	I-15 NB Ramps @ Limonite Ave	Signal	51.4	D	15.9	B
3	I-15 SB Ramps @ Limonite Ave	Signal	14.4	B	14.5	B
4	Pats Ranch Rd @ 68th St	Signal	15.5	B	28.2	C
5	Pats Ranch Rd @ 65th St (Project Dwy)	Signal	9.4	A	10.6	B

* Level of service (LOS) rankings based on average control delay (sec/veh) per Highway Control Manual.

Reference Map: Study Intersections

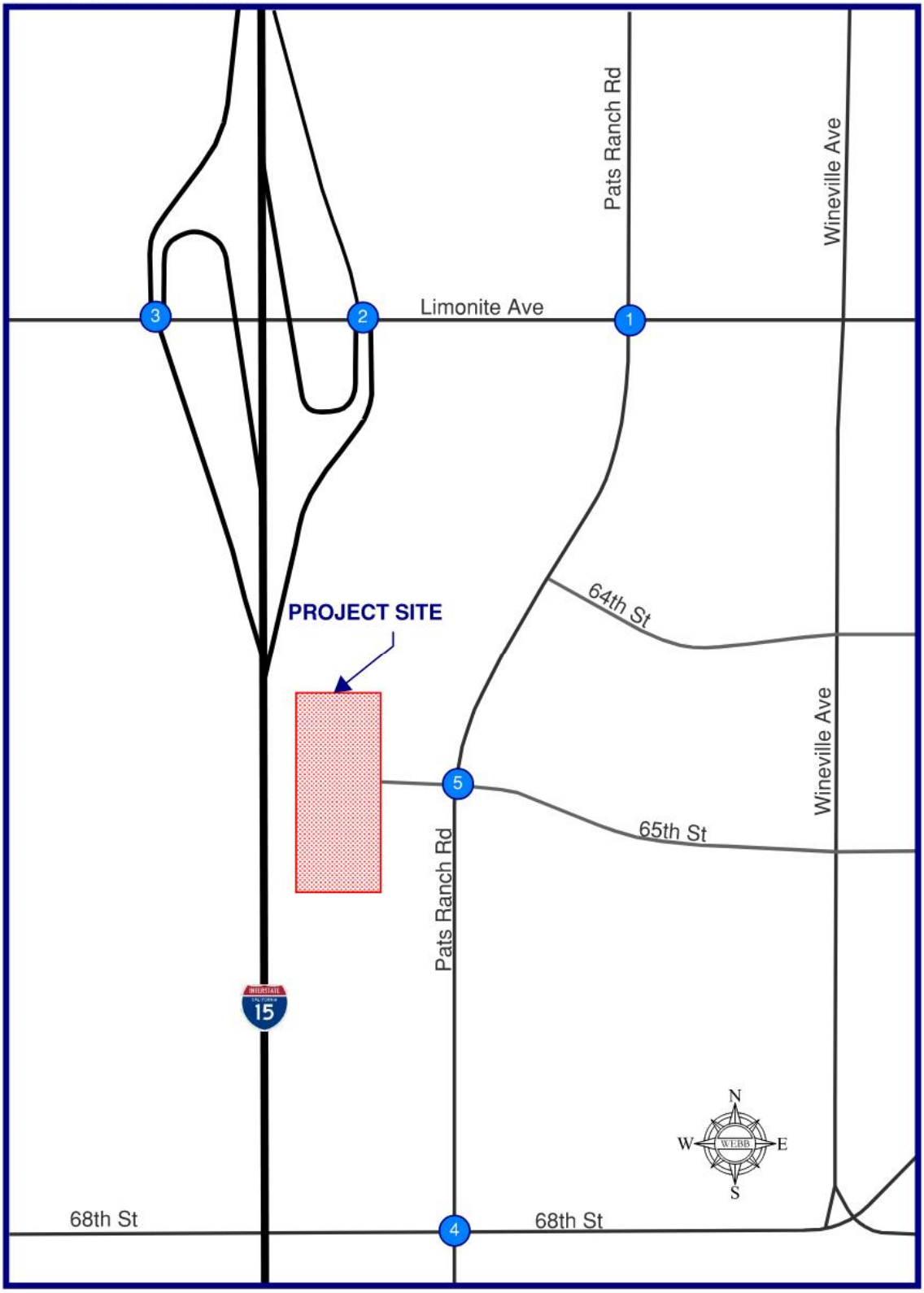


Figure 17: Horizon Year Traffic Volumes – AM Peak Hour

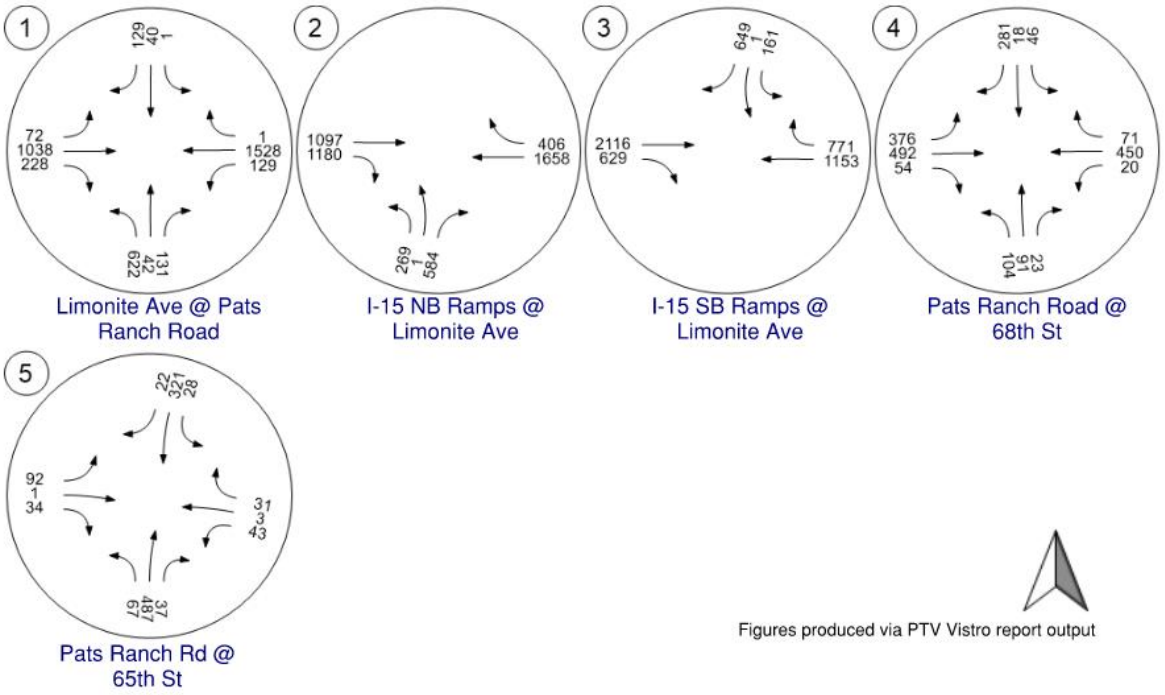
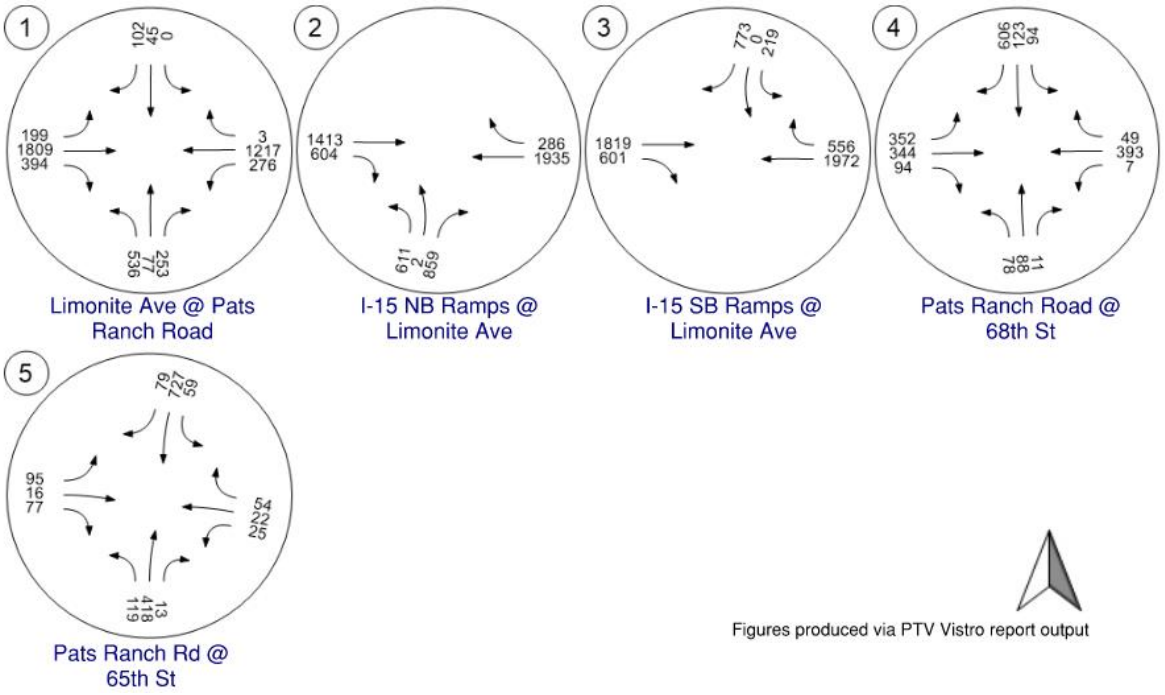


Figure 18: Horizon Year Traffic Volumes – PM Peak Hour



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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:	MA 21046 (PAR21002)
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Vernola Market Place Apartment Community
Project Address:	West of Pats Ranch Rd., South of Limonite Ave., North of 68th St., East of I-15
Project Opening Year:	2023
Project Description:	3-story multifamily housing with 210 units east of I-15 Freeway
	APN: 152-640-003

	Consultant:	**Developer:**
Name:	Albert A. Webb Associates	Vernola Trust
Address:	3788 McCray Street	P.O. Box 217
	Riverside, CA, 92506	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 Gen Manual,10th Edition, LU #220- Multifamily Housing (Low-Rise)

Current General Plan Land Use: Light Industrial

Proposed General Plan Land Use: Highest Density Residential (HHDR)

Current Zoning: Light Industrial

Proposed Zoning: Highest Density Residential (HHDR)

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	22	75	97
PM Trips	0	0	0	74	44	118

Note: See detailed trip generation table in the attachments.

Internal Trip Capture: ☐ Yes ☒ No (_____% Trip Discount)

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

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 would generate more than 100 PM peak hour trips, therefore a Traffic Impact Analysis (TIA) is required. In addition, as the proposed project land use includes multifamily housing with more than 150 units, full TIA study including LOS analysis is required.

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

VMT screening justification (see Pages 13-16 of the guidelines): Proposed project is not screened from VMT assessment because:
- It is not within the Transit Priority Area
- It is not within a low VMT generating TAZ based on Residential Home-Based VMT. The ~~jurisdictional average 2012 daily residential home-based VMT per capita is 12.60, but the project TAZ 2012 daily residential home-based VMT per capita is 14.01~~
- Proposed project type is not screened from VMT assessment

Level of Service Scoping

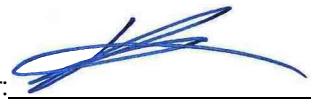
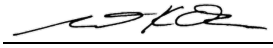
- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):
- Attach list of Approved and Pending Projects that need to be considered (provided by the Planning Department and adjacent agencies)
- Attach list of study intersections/roadway segments
- Attach site plan
- Other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other _____
- Date of Traffic Counts August 2021
- 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 RivTAM/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): 

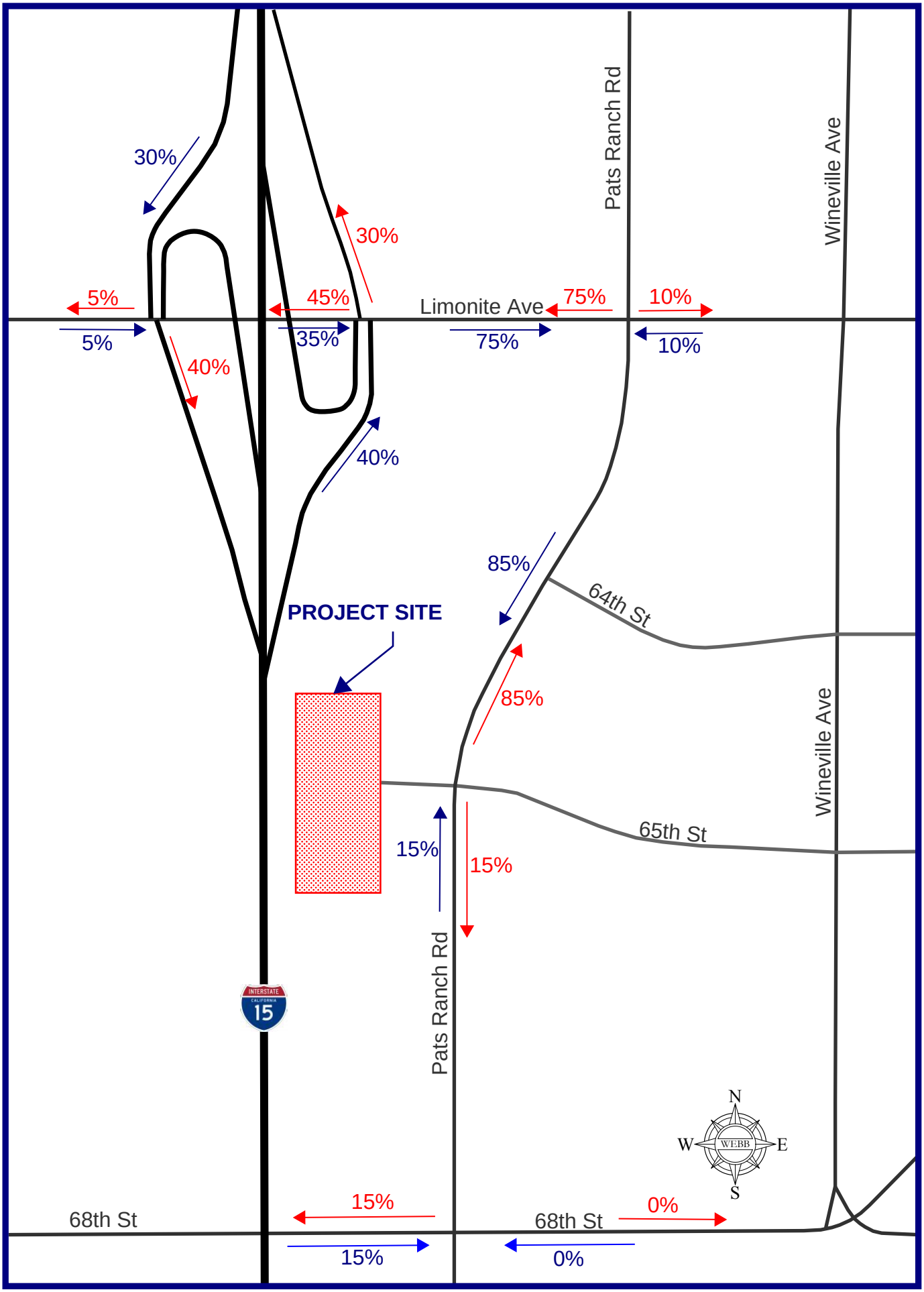
Date: 6/25/2021 Date: 6/25/21

Project Trip Generation

Land Use (ITE 10th Edition)	Unit	Daily				AM Peak Hour				PM Peak Hour			
		Average Rate	In	Out	Total	Average Rate	In	Out	Total	Average Rate	In	Out	Total
220 (Multifamily Housing)	210 du	7.32	768	769	1537	0.46	22	75	97	0.56	74	44	118

Proposed Trip Distribution

DISTRIBUTION MAP



List of Approved and Pending Projects
City of Jurupa Valley

City of Jurupa Valley Cumulative Projects List - *Pending* - last update 05.20.21								
Master Application (MA) Number	**Related Entitlement Case Number(s)**	**Project Name**	**Project Description**	**Developer**	**Applicant Rep**	**Project Location**	**APNS of Project Site**	**Total Square-footage of buildings or total number of units**
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
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
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	
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

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
MA17153	**SDP17069**	**Tacos More Restaurant**	4,500 sf restaurant and sports bar	Zalma Perez	Rogelio Sanchez	5322 Etiwanda	159-301-001	4,500 sf
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
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

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
MA19240	**CUP19009**	**Selva Tires**	Tire sales and repair	Selva	None	6102 Etiwanda	Multiple APN's	2078 SF
MA17280	**SDP**	**Neighborhood Commercial**	12,180 sq. ft. neighborhood commercial center			NEC of Mission and Wallace	Multiple APN's	12,180 sq. ft.
MA20004	**SDP and TPM**	**Space Center**	1.9 million sq. ft. warehouse buildings	Karcher		Manitou and "C" Street	Multiple APN's	
MA20090	**TTM37893, CZ20003**	**Montecito**	25 single-family lots	Hobbs	Robert Beers	SEC Mission and Agate	Multiple APN's	25 single-family lots
MA20095	**SDP**	**Mondragon Auto Repair**	New Café	Horacio Mondragon		6024 Mission	Multiple	2,400 SF
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
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
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.)
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

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
MA20132	**PAR**		Auto Repair and used car dealership			4170 Soto	174-272-001	3,165 square feet
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)
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
MA16161	**TTM37214,CZ17**	SLPR, Inc. Project	Subdivide 84.5 acres into 44 lo	SLPR, Inc.	Keith Christian	9640 Philadelp	173-020-020,0	44 single family lot subidvisio
MA20115	**SDP**	Legalization of RV Repair sl	RV Repair Shop	RV Repair Shop			178-213-006	6,500 square feet
MA20219	**SDP**	Mini Storage	74,322 sq. ft. mini storage	Platinum Stora	Platinum Stora	Van Buren and	NEC Clay and V	74,322 sq.ft.
MA20215	**SDP**	Metal Warehouse	5,000 sq, ft. prefab metal bldg.					
MA20241	**SDP**	Medical and commercial ce	Medical park with commercial a	ShahidRangoon	ShahidRangoon	10008 Limonit	APN: 162-220-	Four 2-Story Medical Office B
MA20251	**CZ, CUP**	Recycling Facility		Richard Boyd	Irma Flores	5190 Wilson	178-050-034, 178-050-046, 178-350-025	
MA20258	**SDP**	O'Reiley Auto Parts	8,000 sq. ft. store	O'Reilly's	TAIT & Associat	4210 Agate St.	171-101-071	approx. 8,000 sq. feet

MA20276	**SDP20110, CZ20015,**	Kingley Terrace	176 Multi-family units	Mike Koopman	Max Ahmadi	10001 Limonit	162-200-011	176 apartment units
MA20259	**PAR**	**RV Parking and Storage**		Balwinder Wraich		Pyrite, South of Mission		21,500 SF storage building and 11,000 SF RV parking
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
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
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
Specific Plan	**Agua Manza Commerce Park Specific Plan**		Industrial Business Park			1500 Rubidoux		4.4 million sq. ft. industrial business park
MA20154		**Havana**	Trucking Operation			2780 Rubidoux		
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	
MA21070	**SDP**	**Troy Industrial**	3 Industrial Buildings	Daniel karcher	Daniel Karcher	4725 -4795 Troy Court	167,110-035, 036,037	187,738 SF
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
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

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
MA21117	**SDP**	Cardenal Three Tilt-Up Building	17,387 square foot tilt-up manufacturing building				156310029	17,387 square feet
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
MA16107	**SDP**	Truck Repair Shop	Truck Repair Shop			2725 Hall	178-230-018, 178-230-019	7,659 square feet

City of Jurupa Valley Cumulative Projects List - *Inactive or Completed*

Master Application (MA) Number	Related Entitlement Case Number(s)	Project Name	Project Description	Developer	Applicant Rep	Project Location	APNS of Project Site
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
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
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
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
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
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
MA1496	**TTM36857, CUP15003, & SDP31423**	**Country Village Shopping Center**	145,000 square-foot shopping center	Torksadeh	Torksadeh	3150 Country Village	173-020-056

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
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
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
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
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;
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
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
MA14146	**SDP31445**	**Flabob's Hanger Village**	Installing 58 hangers for airplane storage at airport	Flabob Airport	Beth LaRock	4130 MENNES	181-190-010

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
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;
MA14173	**TPM30828, VAR16003, & SDP31488**	**San Sevaine**	3 industrial buildings on individual lots	Gonsalves & Santucci, Inc.	Building 1 – 23,000 sq. ft.; Building 2 – 243,114 sq. ft.; Building 3 – 5,374 sq. ft.	Van Buren & Bain	156-210-093
MA14180	**SDP31458**	**Galena Business Park Bldg. E**	47,500 sf industrial bldg	Boatman Development Company	Brad Boatman	Troy Court	167-110-034
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
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
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
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
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

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
MA15009	**TTM36572 & SDP**	**Fathi Manasrah**	Subdivide .84 acres into 6-unit residential condo project	Fathi Manasrah	same	9125 Bellegrave	169-060-005
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
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
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
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
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
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.

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
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
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
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
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
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
MA16144	**CZ16007 & SDP16002**	**Shops @ Bellegrave**	10,000 square-foot shopping center on 1.64 acres	Jennifer Moore	none	southeast corner of Bellegrave and Etiwanda	159-101-040, 159-101-035 through 037

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 Redevelopment, 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
MA16175	**SDP16014**	**Express Car Wash**	Drive-thru carwash with 17 vacuum stalls	Alan Smith	Alan Smith	6168 Etiwanda Ave	161-300-006
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
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
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
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
MA17078	**SDP17043 & TPM37005**	**Mira Loma Business Park**	169,443 square-foot business park on 10 acres (5 buildings); each building on a lot	Boatman Devleopment Company	none	northwest corner of De Forest and Nobel Ct.	156-360-027 and 156-360-028
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

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
MA17126	**CUP17003**	**None**	Mobile home park with 39 lots and open space area	Sun Kim	King Woods	9045 56th Street	165-040-019 & -018
MA17130	**PAR17007**	**Carnegie School**	New private school grades 6-12	Carnegie Schools	none	5200 Van Buren Blvd.	169-290-003
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
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
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)

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
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
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
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
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
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)
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.	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

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
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
MA18190	**PUP18001**	**Vernola Park Community Center**	42,132 square-foot community center, playground, and parking area	JARPD	none	Vernola Park	160-141-051
MA18056	**CUP18002 & LLA1719**	**Kiewit Infrastructure West**	Maintenance, repair and storage of equipment in yard.	Kiewit Infrastructure West Co.	Timothy Jeffrey	(SEC of Rubidoux Ave. and 24th Street)	178-330-005, 006 & 008
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
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
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

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
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
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
TR31644-1			206 single-family lots		None		multiple APNs
TR31768			189 single-family lots	Lyon Homes (Homebuilder)	None	Between Cantu-Galleano Ranch Rd. & Bellegrave Ave.	multiple APNs
TR31778		**Serrano Ranch**	111 single-family lots	Lyon Homes (Homebuilder)	None	northeast corner of Bellegrave Ave. and Landon Dr.	multiple APNs
TR33428		**Harvest Village**	337 single-family lots (TR33428-3: 93 units; TR33428-2: 106 units; TR33428-1: 138 units)	Lennar (Homebuilder)	None	Northwest corner of Wineville & Limonite	multiple APNs
TR33461	**CZ07185 & TR33461**		203 single-family lots; change zone from A-2-10 to R-1	Lennar (Homebuilder)	None	Between Cantu-Galleano Ranch Rd. & Bellegrave Ave. [east of TR31768]	multiple APNs
TR36144		**Rancho Del Sol**	217 single-family lots	DR Horton (homebuilder)	None		multiple APNs
MA19168	**PAR**	**Emerald Meadows**	office/commercial/warehouse	EM Owner, LLC		South of 60, north of rubidous, west of Santa Ana River	Multiple APN's
MA16161	**TTM37214**		44 single family lots			9640 Philadelphia	Multiple APN's
MA18161	**PAR**	**KUO**	56 single-family lots	Kuo		NWC of Pedley and 54th	Multiple APN's
MA19029	**GPA,CZ,TTM**	**Mancha**	54 single family lots		Mancha	End of Philadelphia	Multiple APN's

MA19029	**GPA,CZ,TTM**	**Mancha**	54 single family lots		Mancha	End of Philadelphia	Multiple APN's
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
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
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
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
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
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
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
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
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

MA19084	**PAR19003**	**None at this time**	26 single-family lots subdivision	RC Hobbs Companies	Craig Heads	Southeast corner of Mission & Agate	171-101-072
MA20082	**PAR20010**	**None at this time**	200 apartment units	Mike Koopman	none	10001 Limonite Ave.	162-200-011
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
MA18023	**SDP18013**	**None at this time**	6,980 sf commercial building	Solar Mai	Peter Huang	3685 Rubidoux Blvd.	179-122-020
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

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
MA20256	**PAR**	Auto Repair	1,200 SF auto repair	Pedro Castro	Pedro Castro	6301 Morton	163-151-016
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
MA20209 - PROJECT WITHDRAWN	**SDP20087**	**Guerrero Auto Shop**	legalize existing structure to be auto shop	Armondo Guerrero		4075 Riverview	
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
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
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
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
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

MA19041	**CUP19003**	**Van Buren Commerci**	96,638 square-foot Shopping Center. Phase 1: 4	Control Management, I	Heady Design Inc. – Ha	Southeast corner of Var	167-330-006; 167-330
MA20093	**PAR**	**None at this time**	**Drive thru Rest, gas staion/conv store**	Marwan Alabassi		5620 Market	Multiple
MA20099	**PAR**	**Andy Espinoza**	**Car Auto Auction House, 16K sf commercial**	Andy Esponoza	Sachin Parlikar	9577 Mission blvd	Multiple
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
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
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
MA20134	**SDP**		Outdoor use of Parking lot for commercial cannabis			9806 Mission	
MA16224	**GPA,CZ,TPM, SDP**	Mission Gateway Plaza	57 multi-family affordable housing with 29,540	Northtown Housing	same	NEC of Mission and Cre	179-330-002,003,004,
MA20075	**SDP**	Wheelers Trucking	Van and light truck outfitting and upgrading fac	Wheelers Trucking	Rex Wheeler	Southeast of Rubidoux	178-330-018, 024,025
MA20224	**SDP20093**	Pallet manufacturing	Establish use of Building 7 in Caterpillar busine	Western Pallet Supply		1894 Caterpillar Court Bldg. 7	
MA20200	**SDP**	Commercial Center	Develop 4.53 acre site into a Tractor Supply Cor	Woodcrest Developmen	same	SWC of Sierra and Arms	APN: 174-340-042 & 0
MA20269	**PAR20064**	Self Storage				12120 68th ST	
MA20274	**PAR**	**26,000 sf industrial Bldg.**				2285 Via Cerro	
MA20209	**SDP20087**	**Guerrero Auto Shop**	legalize existing structure to be auto shop	Armondo Guerrero	Armondo Guerrero	4075 Riverview	

MA21112	**PAR**	**First Choice Ready Mix**	Concrete Block Manufacturer	First Choice Ready Mix	Ashley Barth	6515 Clay Street	163-400-047
MA21083	**PROS**	**Rexco**	110- unit MFR			Clay and Linares	
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
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

List of Approved and Pending Projects
City of Eastvale

CITY OF EASTVALE

Major Projects Summary

December 9,2020

City of Eastvale Planning Department

CITY OF EASTVALE
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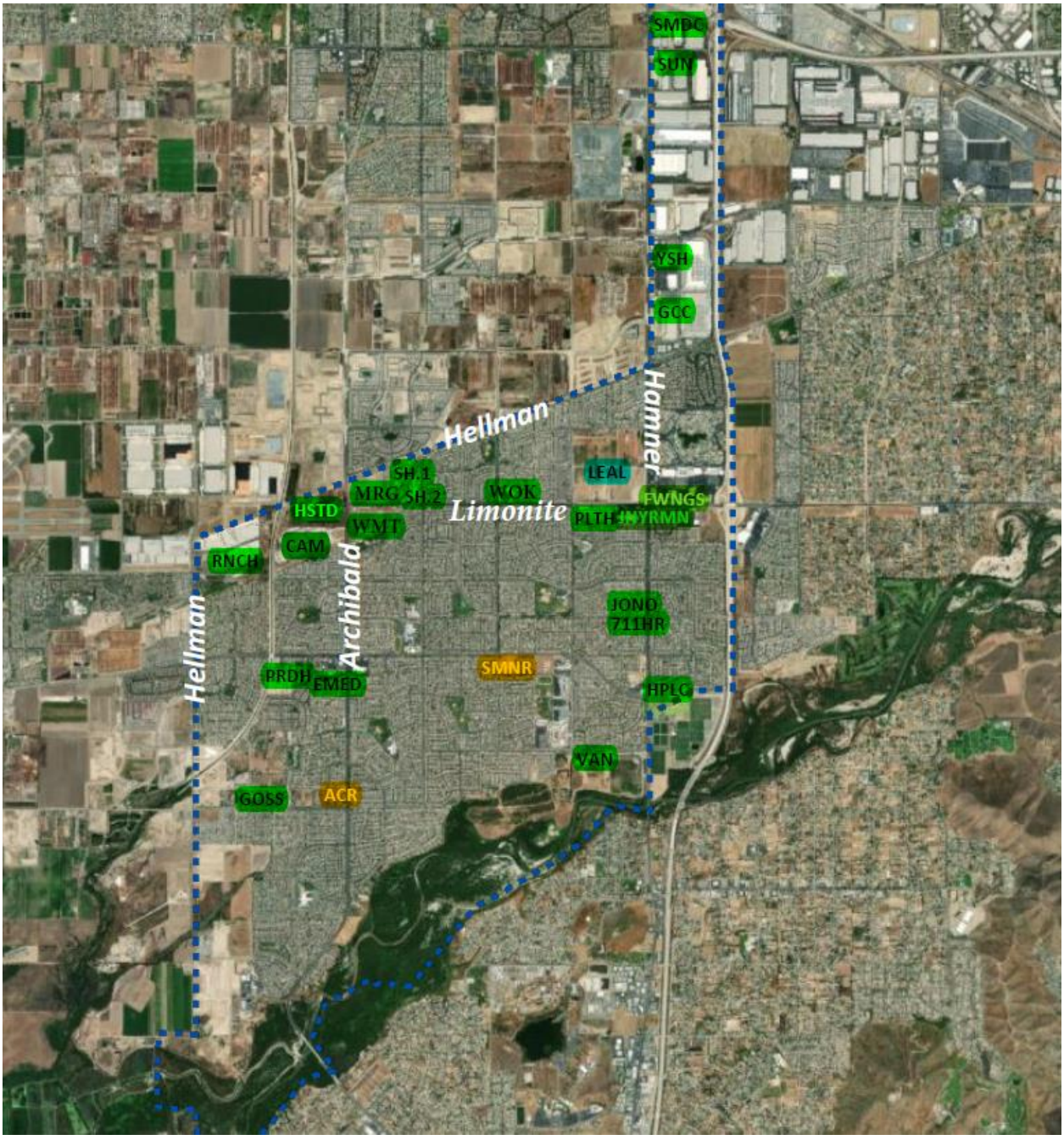
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In-Process/Review

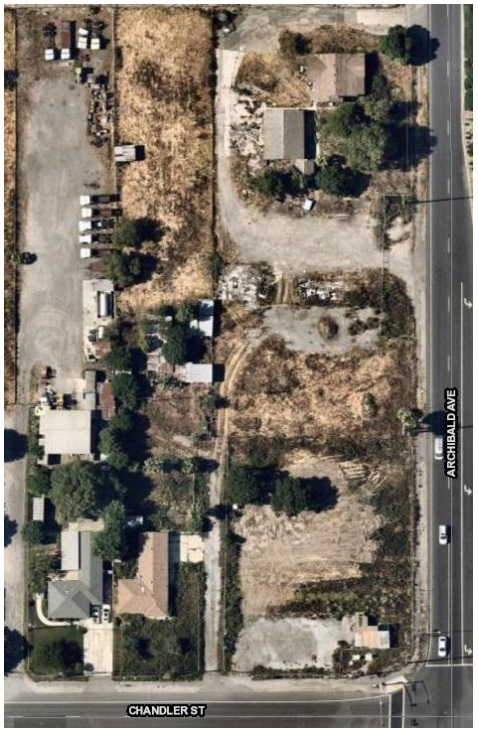
Archibald and Chandler Retail (MAP ID: ACR)

Project:	Retail Center Archibald and Chandler
Project No.	PLN19-20000
Project Location:	Northwest corner of Archibald and Chandler; (Accessor 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.
Planner:	Shawnika Johnson/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.
- Applicant is revising plan, not yet resubmitted.

Project Map:



Current Status:

- Waiting for revised submittal.

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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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.; (Accessor 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

Project Map:



Status:

- Project has been routed out for review. Awaiting comments 11.16.20.

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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 – Meet Fresh (GCC.6)

Project Map:



Current Status:

- Various buildings complete, operating and under construction.

1. New projects are added to the bottom of the list as they are submitted.
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Retail Unit CR-12 (GCC.1)

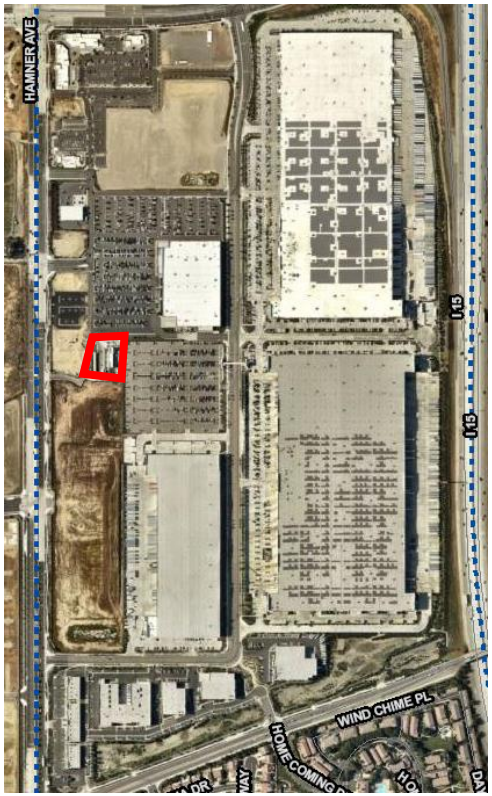
Project:	Goodman Retail CR-12 – Quick Quack Car Wash
Project No.	PLN18-20014
Project Location:	West of Amazon off-site parking lot and south of Costco parking lot in the retail portion of Goodman Commerce Center
Project Description:	Major Development Review for a proposed self-serve car wash with a 3,571-square 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:

- Reviewing Tenant Improvements Plans for other units.

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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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 November 8, 2018.
- Landscape plans approved on January 21, 2019.
- Revised construction plans approved on February 19, 2019.

Project Map:



Current Status:

- Approved by Planning Commission.
- Construction plans approved.

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 (Accessor 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.
- Planning Commission approved on May 15, 2019.
- Construction plans approved.

Project Map:



Current Status:

-

1. New projects are added to the bottom of the list as they are submitted.
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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
- Awaiting department comments to be returned to Planning
- Planning and department comments provided to applicant on January 23, 2020
- Resubmittal received on Janurary 30, 2020
- The Planning Commission approved the project on February 19, 2020

Project Map:



Current Status:

- Awaiting grading and building submittal

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

Meet Fresh D.R (GCC.6)	
Project:	Goodman Commerce Center CR-6 Meet Fresh – 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	

Project Map:



Current Status:

- Routed for department review on December 23, 2019
- Awaiting department comments to be returned to Planning
- Planning and department comments provided to applicant on January 23, 2020
- Resubmittal received on Janurary 30, 2020
- The Planning Commission approved the project on February 19, 2020

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"The Station" (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: ○ 6,000 sf. retail building (CR-6A) located on a building pad directly east of CR-6. This building proposes three retail tenant spaces with an outdoor plaza and casual seating area. ○ 21,500 square foot retail building (CR-A) locating directly north of the Costco Wholesale Store. ○ 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. This store would be accessed through a shared courtyard entrance, as well as an entrance to the parking lot. ○ 16,000 square foot food hall (CR-C) located across from the grocery retailer, accessed through a shared courtyard entrance. The food hall could support up to nine, individual quick service food tenants/units with shared casual seating indoors, outdoors, and within the courtyard area. The food hall would provide restrooms within the CR-C building.

Project Map:



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3. Highlighted Text =Updated Information

	• Tentative Parcel map: ○ Non-residential 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. In addition, pedestrian walkways are proposed to connect buildings within "The Station" to these new proposed uses. • Conditional Use Permit: ○ To 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.	**Current Status:** • 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 • Approved by the Planning Department on July 27, 2020
Planner:	• Gustavo Gonzalez	

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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:

- Approved

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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; (Accessor 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.
- Planning Commission consideration and approval on July 17, 2019.

Project Map:



Current Status:

- Approved by Planning Commission.
- Precise Grading Plans received January 2, 2020 for department review. Comments have been returned to applicant.
- Precise Grading Plans approved by Planning on January 16, 2020

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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); (Accessor 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.
- Planning Commission consideration and approval on July 17, 2019.

Project Map:



Current Status:

- Approved by Planning Commission.

1. New projects are added to the bottom of the list as they are submitted.
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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); (Accessor 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 consideration in August 28, 2019.
- City Council denied the appeal and recommended new conditions on August 28, 2019.

1. New projects are added to the bottom of the list as they are submitted.
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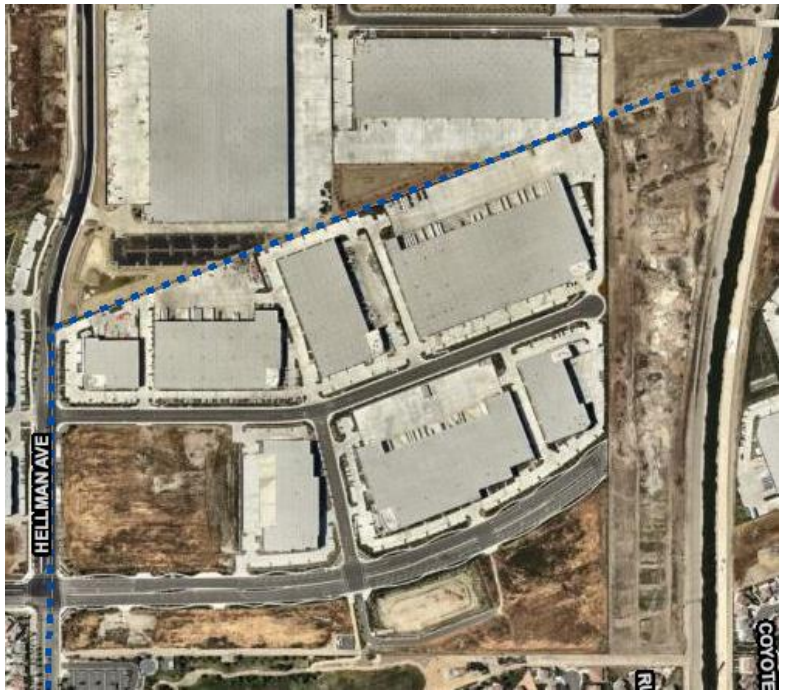
The Ranch (MAP ID: RNCH)

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.
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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





Project Map:



Current Status:

- Approved construction plans October 31, 2018.
- 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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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.

Project Map:



Current Status:

- Waiting for grading and construction plan submittal.
- Final Cancellation of Williamson Act Contract approved by City Council 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.
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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
- Will receive feedback and conditions of approval on May 4, 2020

Project Map:



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

Summit Development Pre-Application (RNCH.4)

Project:	The Ranch by Summit Development (Parcel 14) Pre-Application
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 Pre-Application 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 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
- Planning Commission approved the project on February 19, 2020

Project Map:



Current Status:

- Construction submittal 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 (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: Tony's Chophouse and 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.

Project Map:



Current Status:

- Approved by City Council
- Waiting for building construction plans
- Groundbreaking July 12, 2019
- Currently undergoing rough grading.
- Precise Grading plans received December 23, 2019; Comments provided January 6, 2020;
- Precise Grading Plans approved.

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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Hotel Suites (HPLC.1)

Project:	Hotel Suites at Hamner Place
Project No.	PLN19-20023
Project Location:	Southeast corner of Hamner Avenue and Schleisman Road; (Accessor Parcel Number: 152-050-050)
Project Description:	A 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 Janurary 30, 2020

Project Map:



Current Status:

- Provided comments back on February 27, 2020.
- Construction plans 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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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:

- Scheduled for City Council consideration on January 22, 2020
- City Council approved the project and recommended new conditions of approval on January 22, 2020

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 Initial (HPLC.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.

Project Map:



Current Status:

- Planning Commission denied the project on November 20, 2019.
- Applicant has submitted an application to appeal the Planning Commission's decision on November 20, 2019 (See PLN19-20055)

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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Tony's Chophouse and Retail Suites D.R (HPLC.3)

Project:	Tony's Chophouse and Retail Suites at Hamner Place – Major Development Review (DR)
Project No.	PLN19-20053
Project Location:	Southeast corner of Hamner Avenue and Schleisman Road; (Accessor'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:

- Planning Commission consideration and approval on December 18, 2019

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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.
- Construction building plans received April 2, 2019 for Sprouts and Starbucks. Comments provided on April 29, 2019.
- Construction building plans received April 24, 2019 for all industrial buildings (1 through 6). Comments provided on May 22, 2019.
- Construction building plans for Chevron received May 8, 2019; comments provided June 11, 2019.

Project Map:



Current Status:

- City Council approval on December 12, 2018.
- January 9, 2019, City Council conducted second reading of ordinance for Change of Zone.
- Received Industrial Precise Grading Plans 8/15
- Received Retail/Commercial Precise Grading Plans 8/20
- Construction building plan resubmittal received 9/17. Comments provided 9/26
- 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

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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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.

Project Map:



Current Status:

- Application has been deemed incomplete on December 23, 2019
- Received resubmittal on February 3, 2020
- The Planning Department approved the project on February 26, 2020

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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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

Project Map:



Current Status:

- Resubmittal 1 received on December 3, 2019
- Resubmittal 1 has been deemed incomplete on December 20, 2019.
- Received preliminary elevations on 1/14/20 for Planning review.
- Resubmittal 2 received on February 3, 2020
- The Planning Commission approved the project on February 19, 2020

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

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

Project Map:



Current Status:

- Resubmittal 1 received on December 3, 2019
- Resubmittal has been deemed incomplete on December 20, 2019.
- Resubmittal 2 received on on February 3, 2020
- The Planning Commission approved the project on February 19, 2020

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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Retail Pad 2 C.U.P (MRG.4)

Project:	The Merge Retail Pad 2 Drive-Through CUP
Project No.	PLN19-20051
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 Pad 2 of the Merge retail.
Planner:	Gina Gibson-Williams/ Allen Lim

Notes:

- Received application on November 7, 2019.
- Application has been deemed incomplete November 7, 2019

Project Map:



Current Status:

- Resubmittal 1 received on December 3, 2019
- Resubmittal has been deemed incomplete on December 20, 2019.
- Resubmittal 2 received on on February 3, 2020
- The Planning Commission did not approve the project on February 19, 2020 and the applicant will be resubmitting at a later date.

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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Walmart (MAP ID: WMT)

Project:	Walmart – Eastvale Crossings
Project No.	12-0051
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.

Project Map:



Current Status:

- Waiting for applicant to submit construction plans.
- Scheduled for January 15, 2020 Planning Commission consideration for Tentative Tract Map – Extension of Time (PLN19-20052)
- Extension of Time (PLN19-20052) has been approved by the Planning Commission on 1/15/2020

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 Enclave Medical Office (MAP ID: EMED)

Project:	Medical Office Building and Dialysis Center at The Marketplace at The Enclave
Project No.	PLN16-00038
Project Location:	14252/14260 Schleisman Rd; at The Marketplace at The Enclave shopping center (144-860-018 and 114-860-020)
Project Description:	Major Development Review for the construction of a 30,000-sq. ft. two story medical office building and 10,000-sq. ft. dialysis center on the empty area at the south end of the shopping center. CEQA: Previously certified EIR
Planner:	Allen Lim

Notes:

- Approved by Planning Commission on May 17, 2017.
- Approved Building Construction Plan for the 2-story medical office building.
- Landscape plans approved
- Construction Trailer Temporary Use Permit approval letter to applicant on February 12, 2019
- Crosswalk has been modified according to the conditions of approval.
- Revisions for the 2-story office building was received on May 29, 2019; comments provided June 3, 2019.



Project Map:



Current Status:

- DaVita Dialysis Center is completed
- 2-story medical office building is 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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South Milliken Distribution Center (MAP ID: SMDC)

Project:	South Milliken Distribution Center
Project No.	PLN17-20013
Project Location:	East of Milliken Avenue, north of the SR-60, 0.2-mile west of the I-15/SR-60 interchange, and 0.4 miles south of Mission Boulevard APNs: 156-030-001 & -002
Project Description:	▪ General Plan Amendment, Change of Zone, and Major Development Review for the development of a 273,636-square foot industrial warehouse building with 29 dock doors located on a 15.8-acre site. General Plan Amendment of the entire site from Commercial Retail to Light Industrial. Change of Zone for the northern 12.5-acre lot from "C-P-S" to "MM"; no changes to the 3.3-acre lot with "M-M" zoning at southeastern portion of the site. ▪ CEQA: Not Determined.
Planner:	Allen Lim

Notes:

- Received application on April 27, 2017.
- On February 7, 2018 Planning Commission recommended approval to City Council.
- March 14, 2018 City Council continued project to March 28, 2018 Public Hearing.
- On March 28, 2018 City Council approval
- Approval letter, final Conditions of Approval, stamped plans sent to applicant on April 10, 2018.
- Signed resolution sent to applicant on April 11, 2018.
- 2nd year fly survey completed; result is negative

Project Map:



Current Status:

- Approved

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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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:

- Model homes are open.
- 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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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.

Project Map:



Current Status:

- Under construction.
- Model homes are open.
- Waiting for revised FSOD map.
- Precise Grading Plans received December 23, 2019 – Planning approved Precise Grading on January 6, 2020

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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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.

Project Map:



Current Status:

- Project site is currently undergoing grading.
- Model homes are under construction.
- Revised HOA landscape plans approved May 16, 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

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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.

Project Map:



Current Status:

- Approved by Planning Director
- Models homes opened on March 9, 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

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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.

Project Map:



Current Status:

- Approved.
- Grading plans approved June 17, 2019
- Landscape plans approved June 20, 2019
- Construction plans approved July 17, 2019
- Awaiting submittal for freeway-oriented sign.

1. New projects are added to the bottom of the list as they are submitted.
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3. Highlighted Text =Updated Information

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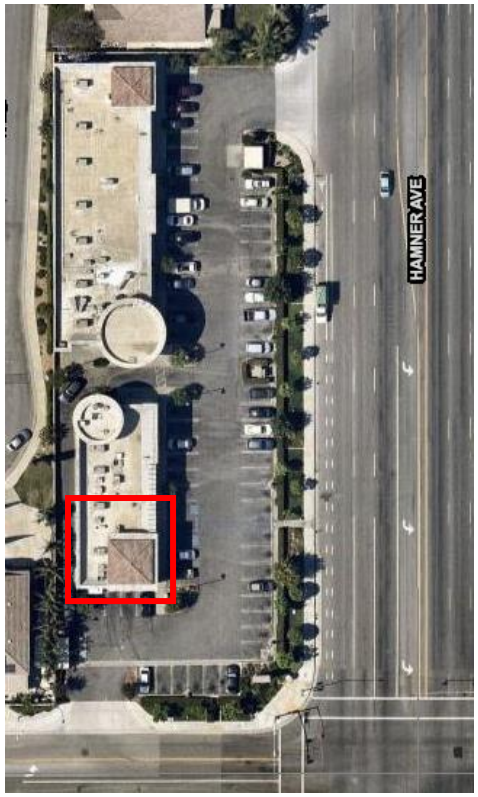
7-Eleven Hamner and Riverboat Appeal (MAP ID: 711HR)

Project:	Existing 7-Eleven on Hamner and Riverboat Alcohol CUP Amendment Appeal
Project No.	PLN19-20020
Project Location:	6993 Hamner Ave Suite B-1; (Accessor Parcel Number: 164-520-017)
Project Description:	Appeal Planning Commission's denial for an Amendment to Conditional Use permit No. CUP0340, to allow the sales of distilled spirts (hard liquor) in addition to beer and wine (Type 21) at the existing 7-11 convenience store.
Planner:	Allen Lim

Notes:

- Received application on May 28, 2019.
- On June 26, 2019 the City Council upheld the appeal.

Project Map:



Current Status:

- Approved

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

CITY OF EASTVALE
12363 Limonite Avenue | Suite 910 | Eastvale, CA 91752
951.361.0900

Yoshiharu C.U.P (MAP ID: YSH)

Project:	Yoshiharu Japanese Ramen Alcohol Conditional Use Permit (CUP)
Project No.	PLN20-20008_CUP_001
Project Location:	Southeast corner of Hamner Avenue and Cantu-Galleano Rancho Road 4910 Hamner Avenue, Suite 150 Assessor's Parcel Number (APN): 160-510-019
Project Description:	▪ Conditional Use Permit to allow the sale of beer and wine (Type 41) for on-site consumption within an existing building and would not authorize any physical changes to the building.
Planner:	Allen Lim

Notes:

- Received application and routed out for department review on March 04, 2020
- Received feedback on March 18, 2020
- Planning Commission approved the project on May 20, 2020
- Planning Department approved the project on June 01, 2020
- Applicant provided signed Conditions of Approval

Project Map:



Current Status:

- Approved

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

CITY OF EASTVALE
12363 Limonite Avenue | Suite 910 | Eastvale, CA 91752
951.361.0900

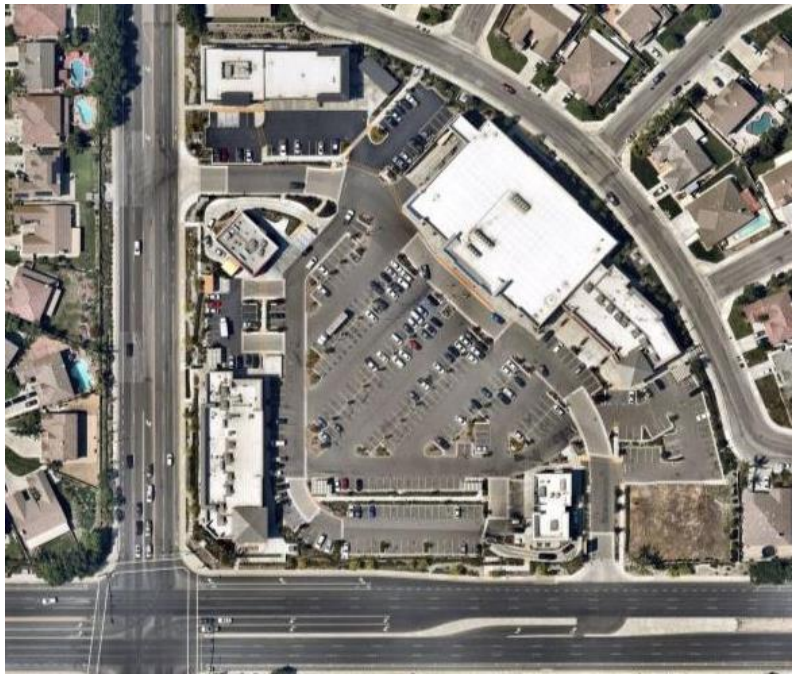
Big Wok C.U.P (MAP ID: WOK)

Project:	Eastvale Marketplace Big Wok Alcohol CUP
Project No.	PLN19-20018
Project Location:	Eastvale Marketplace 13394 Limonite Avenue Suite 100; (Accessor Parcel Number: 164-030-039)
Project Description:	Conditional Use Permit to allow the sales of beer and wine for on-site consumption.
Planner:	Allen Lim

Notes:

- Received application on May 15, 2019.
- Incompleteness letter sent to Applicant on June 10, 2019.
- Requested information received on July 8, 2019.
- Staff is in preparation of staff report and materials for Planning Commission meeting.
- Project presented to Planning Commission for consideration on September 18, 2019. Planning Commission voted 5-0 approving the project.

Project Map:



Current Status:

- Approval Letter and Conditions of Approval provided to applicant for signature on 10/1/2019 – Signature Received 10/2/2019
- Provided Signed Conditions of Approval to Alcohol Beverage Control.

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

CITY OF EASTVALE
12363 Limonite Avenue | Suite 910 | Eastvale, CA 91752
951.361.0900

Jono's C.U.P (MAP ID: JONO)

Project:	Jono's Simple Japanese Alcohol CUP
Project No.	PLN19-20042
Project Location:	6987 Hamner Ave Suite #7 (NWC of Riverboat Dr. and Hamner Ave.) ; (Assessor's Parcel Number: 164- 520-017)
Project Description:	▪ Conditional Use Permit for alcohol sales at Jono's Simple Japanese Food for on-site consumption.
Planner:	Allen Lim

Notes:

- Received application on October 23, 2019.
- Application incompleteness letter provided to applicant 10/30/19
- Requested information received on 10/30/19
- Routed to other departments for review on 10/31/19
- Department comments received 11/14/19
- Staff is in preparation of staff report and materials for Planning Commission meeting.

Project Map:



Current Status:

- Planning Commission consideration and approval on December 18, 2019
- Approval Letter, Conditions of Approval, and Public Convenience/Necessity Letter provided to applicant for signature on 12/31/2019
- Signed Conditions of Approval received 12/31/19

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

CITY OF EASTVALE
12363 Limonite Avenue | Suite 910 | Eastvale, CA 91752
951.361.0900

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

Project Map:



Current Status:

- 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

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

CITY OF EASTVALE
12363 Limonite Avenue | Suite 910 | Eastvale, CA 91752
951.361.0900

Van Leeuwen GP Amendment (MAP ID: VAN)

Project:	Van Leeuwen COZ, GPA, ZCA
Project No.	PLN19-20021
Project Location:	13000 Citrus Street; (Accessor 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.
2. Projects that have been completed for more than one year are removed from this list.
3. Highlighted Text =Updated Information

CITY OF EASTVALE
12363 Limonite Avenue | Suite 910 | Eastvale, CA 91752
951.361.0900

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; (Accessor 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
- Project Under Review
- Received resubmittal 2 on February 6, 2020
- Routed for comments on February 10, 2020
- Received comments on February 24, 2020
- Received resubmittal 3 on March 11, 2020

Project Map:



Current Status

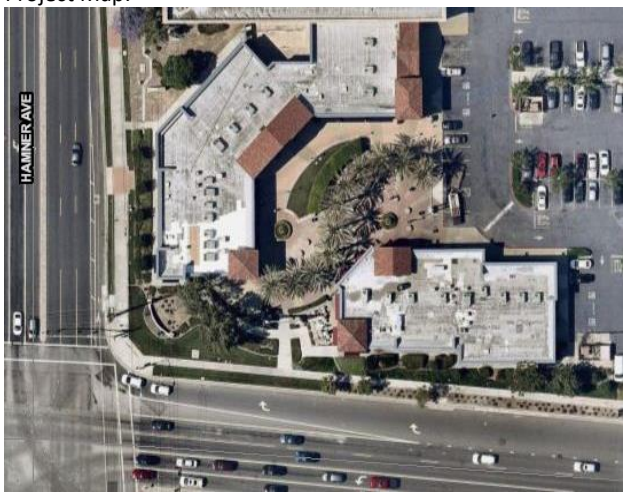
- City Council approved the project on April 8th, 2020
- Planning Commission approved the project on March 18, 2020

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

Fire Wings C.U.P (MAP ID: FWNGS)

Project:	• Fire Wings Alcohol CUP
Project No.:	• PLN20-20031_CUP_002
Project Location:	• Northeast corner of Hamner Avenue and Limonite Avenue at Eastvale Gateway North • Assessor's Parcel Number (APN): 160-230-019
Project Description:	• Conditional Use Permit: ○ To sell beer and wine (Type 41) for on-site consumption of alcohol at the new Fire Wings restaurant located in Eastvale Gateway North (previously Pick Up Stix)
Project Planner:	• Allen Lim
Notes:	• Application submitted on July 27, 2020 • Distributed to Development Review Committee; comments and draft conditions are expected by August 17, 2020

Project Map:



Current Status:

- Approved by the Planning Commission on September 16, 2020

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

Jinya Ramen C.U.P (MAP ID: FWNGS)

Project:	• Jinya Ramen Alcohol CUP
Project No.:	• PLN20-20045_CUP_003
Project Location:	• Southwest corner of Hamner Avenue and Limonite Avenue at Cloverdale Market Place • Assessor's Parcel Number (APN): 160-700-001
Project Description:	• Conditional Use Permit: ○ To authorize the sale of beer, wine and distilled spirits for consumption on and off the license premises (Type 47) which must operate in a genuine eatery for the proposed Jinya Ramen restaurant located in Cloverdale Market Place
Project Planner:	• Allen Lim
Notes:	• Application submitted on August 31, 2020

Project Map:



Current Status:

- Approved by the Planning Commission on October 21, 2020.

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

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/ Allen Lim

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.

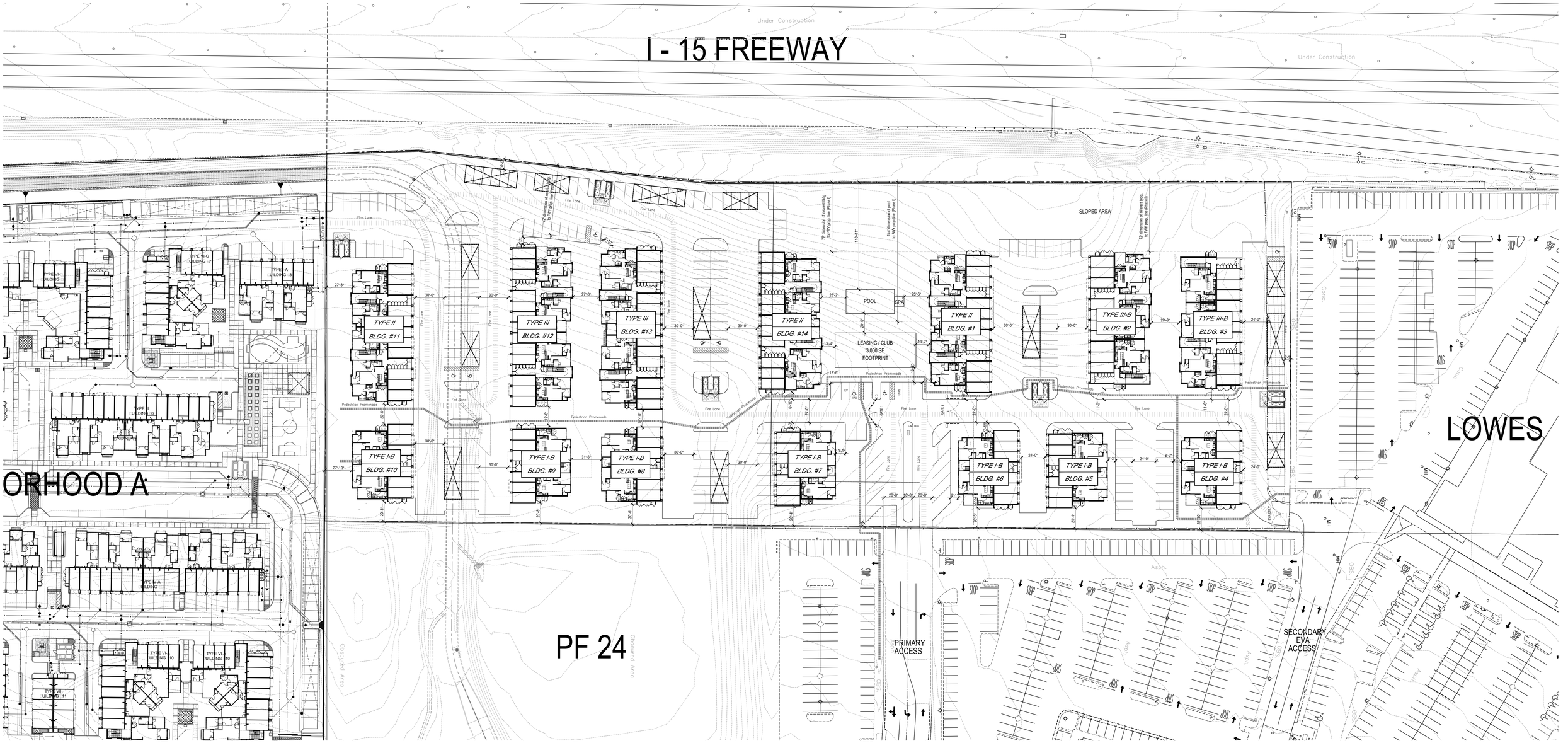
1. New projects are added to the bottom of the list as they are submitted.
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3. Highlighted Text =Updated Information

List of Study Intersections

List of Study Intersections:

- Pats Ranch Rd/Limonite Ave
- I-15 NB Ramp/ Limonite Ave
- I-15 SB Ramp/ Limonite Ave
- Pats Ranch Rd/ 68th St
- Pats Ranch Rd/ 65th St

Project Site Plan



Vernola Marketplace - Phase II Overview

Building Type

Building Type	Number Provided
TYPE I	7
TYPE II	4
TYPE III	2
TYPE III ALT	2

Note: An updated site plan is being prepared to add an additional 10 units for a total of 210 units. Project access shown will remain the same.

- 15 freeway adjacent
200 units
8 buildings
241 dwelling
200,044 gross NRSF
1,000 clubhouse NRSF
4,000 garage NRSF

MIX

A1	1 bedroom	1 bath	6	816 sq ft
A2	1 bedroom	1 bath	4	762 sq ft
			0	4	1 bedroom
B1	2 bedroom	2 bath	44	1,112 sq ft
B2	2 bedroom	2 bath	4	1,144 sq ft
			8	4	2 bedroom
C1	3 bedroom	2 bath	21	1,412 sq ft
			21	11	3 bedroom
TOTAL			200		

PARKING REQUIRED

0 1 bedroom	1.2 per dwelling	11
82 bedroom	2.2 per dwelling	201
21 bedroom	2.7 per dwelling	8
TOTAL		72 (1.86 per dwelling)

PARKING PROVIDED

1 car garage	121 (67 regular)
0 dandem	241
4 dandem	10
TOTAL	72 (1.86 per dwelling) (8 dandem)

NORTH

SCALE: 1" = 40'

Project Site Plan-Option A

A-1

DATE: 05-27-21
JOB NO.: 2020-530

VERNOLA MARKETPLACE APARTMENT COMMUNITY (Phase II)

VERNOLA FAMILY c/o McCUNE & ASSOCIATES, INC.

JURUPA VALLEY, CA

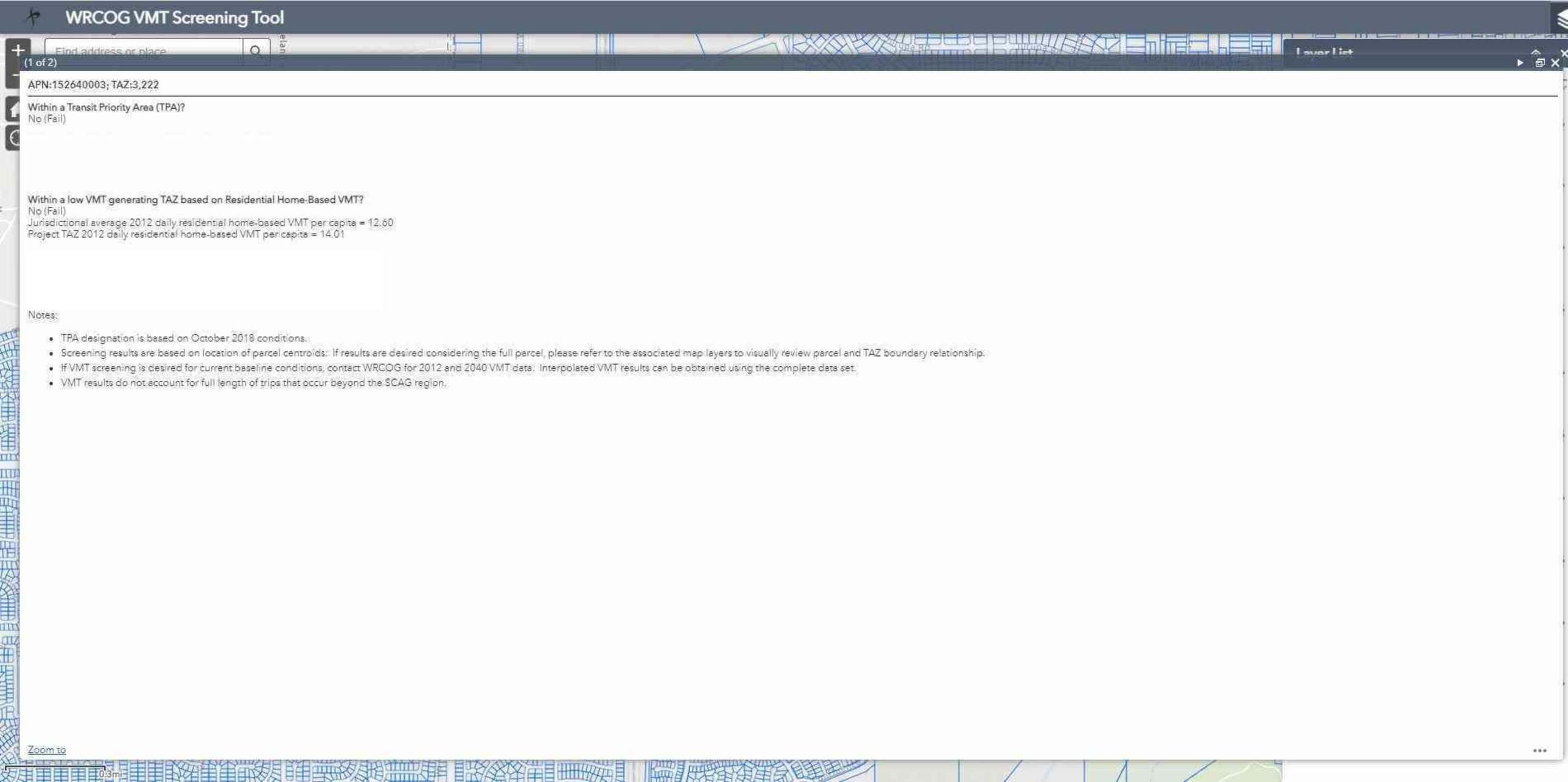
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Proposed Analysis Scenarios

Scenario Analysis:

- Existing Condition
- Opening Year Background Conditions without Project
- Opening Year Background Conditions Plus Project
- Opening Year Background Plus Project Plus Cumulative Project Conditions
- Cumulative Horizon Year No Project Conditions
- Cumulative Horizon Year Plus Project Conditions

WRCOG Screening VMT Assessment


WRCOG VMT Screening Tool
Find address or place
Layer List
(1 of 2)
APN:152640003; TAZ:3,222
Within a Transit Priority Area (TPA)?
No (Fail)
Within a low VMT generating TAZ based on Residential Home-Based VMT?
No (Fail)
Jurisdictional average 2012 daily residential home-based VMT per capita = 12.60
Project TAZ 2012 daily residential home-based VMT per capita = 14.01
Notes:
TPA designation is based on October 2018 conditions.
Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.
If VMT screening is desired for current baseline conditions, contact WRCOG for 2012 and 2040 VMT data. Interpolated VMT results can be obtained using the complete data set.
VMT results do not account for full length of trips that occur beyond the SCAG region.
Zoom to

VMT Evaluation Methodology

memorandum

DATE: June 16, 2021

TO:

FROM: Sandipan Bhattacharjee, PE, TE, AICP, ENV-SP

SUBJECT: Vernola Market Place Apartments (Phase II) – Assumptions for VMT Analysis

Translutions, Inc. (Translutions) is pleased to provide this memorandum discussing modeling assumptions for the Vehicle Miles Traveled (VMT) evaluation for the proposed Vernola Market Place Apartments Community (Phase II) in the City of Jurupa Valley. This modeling assumptions memorandum identifies the inputs and modeling methodology for the project. The VMT analysis will be conducted using Riverside Transportation Analysis Model (RIVTAM) as indicated in the City's SB 743 guidelines.

Project Location

The project includes 200 multifamily (MF) dwelling units (DUs) and is located on the southeast corner of Interstate I-15 and Limonite Ave interchange in the City of Jurupa Valley. Based on the site plan, the primary project access is to the east on Pats Ranch Road.The project is located in TAZ 3222 of the RIVTAM. RIVTAM contains spare TAZs/zones and so allows for zone splits. In order to isolate the project's effect, a new TAZ/zone will be created at the project site. Household data only for the project will be included in the new zone for the model runs. Outputs from the model runs will be used in the estimation of project VMT and its impacts.

Network Modifications

Based on the project site plan, the project primary access is onto Pats Ranch Road to the east of the project site. A single centroid connector connecting to Pats Ranch Road will be included for the new zone. The existing TAZ wherein the project is located is shown in Figure 1. No network modifications are proposed with the exception of the following:

- 2012: No network refinements are being proposed except the addition of centroid connector for the new zone.
- 2040: Similar to 2012, no network refinements are proposed for horizon year 2040 except the addition of centroid connector for the new zone.

Socioeconomic data

The project is a multifamily residential development. The travel model uses household characteristics such as household income, household size, household workers etc., to determine the travel patterns and estimate VMT for residential uses. The project information contains only the number of households and doesn't include information about all the other household characteristics. Also, variables like household income in the model represent income in the model base year dollars and not the current year.

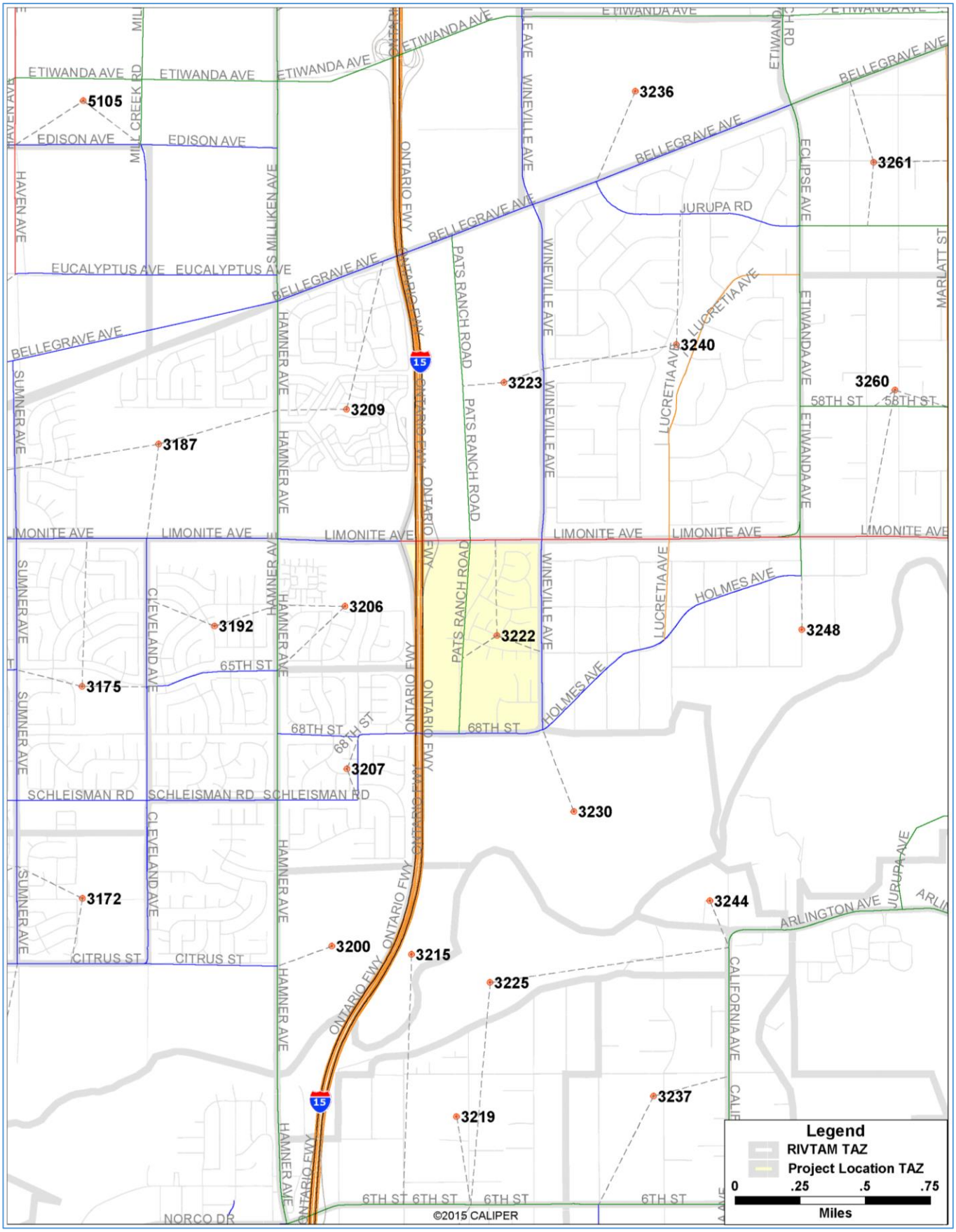
- Based on the review of existing conditions, it is determined that all of the existing residential development in the project location (parent) zone is single family. So it is being proposed to adopt the household characteristics from a neighboring zone (TAZ 3209) for the project. TAZ 3209 includes some multifamily dwelling units and the median household income and household size are lower than the project location zone (TAZ 3222). Since the parent zone is single family and proposed project is multifamily, the median income and average household size for the project would be lower than the parent TAZ. Following is the summary of primary household characteristics. Distribution of households for the project by various household sizes, incomes, and household workers will be similar to the neighboring zone (TAZ 3209).

2012	Number of Households	Household Population	Avg. Household Size	Median Income
Parent zone (TAZ 3222)	263	1,145	4.35	80,970
Neighboring zone (TAZ 3209)	1,424	4,808	3.38	69,641
Project	200	675	3.38	69,641
City of Jurupa Valley	25,033	96,303	3.85	57,329

- Socioeconomic data assumptions for the project will be consistent in both the base (2012) and horizon (2040) years.
- All other input files will be modified accordingly.

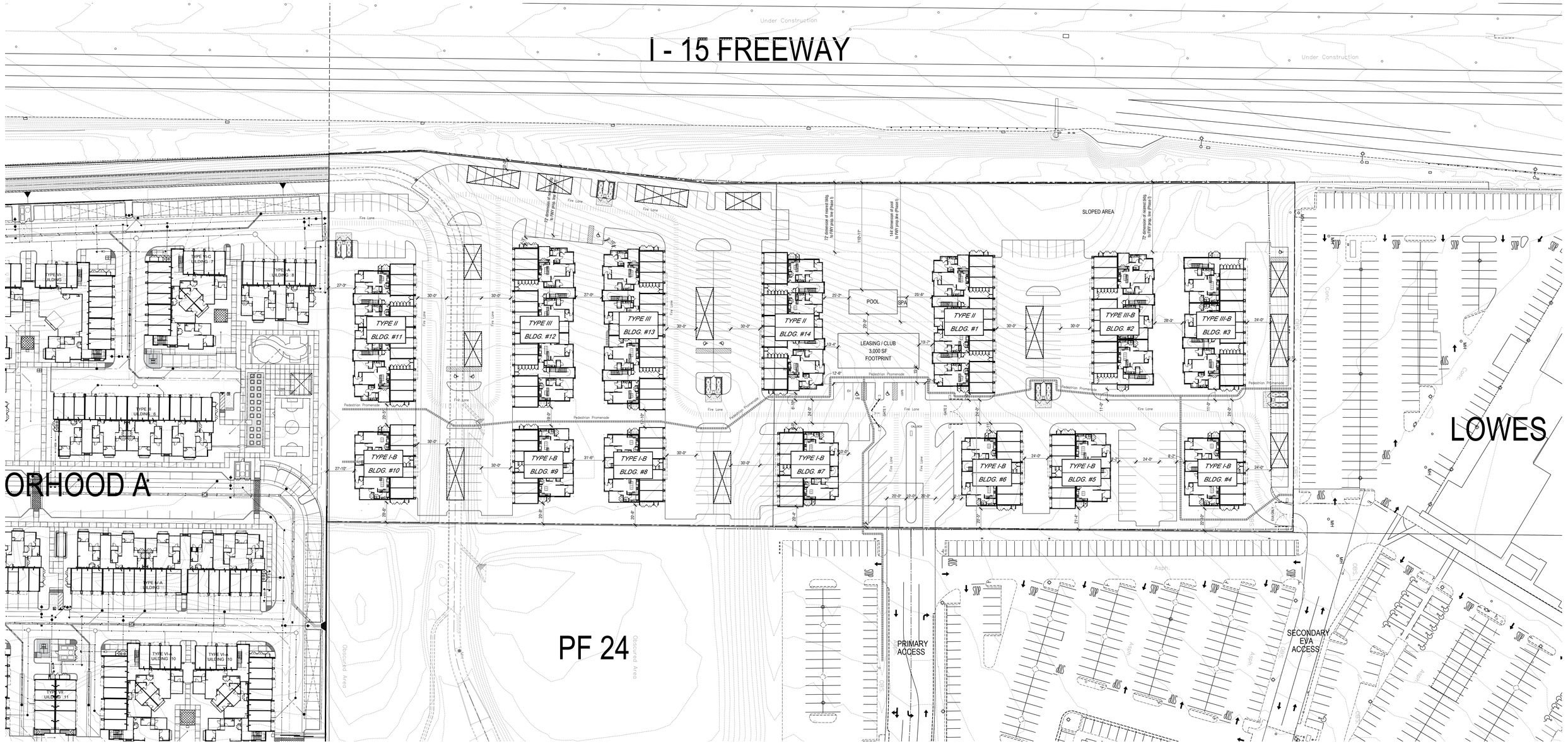
The entire project is proposed to be modeled in one new TAZ as the project consists of only single land use type.

Figure 1: Project Location Map



Appendix B

Proposed Project Site Plan



V□r□□□□ N□□□□□□r□□□d - P□□□□ II □□r□□□ V□□□□□CA

□□□d□□□ T□□□	N□□ □□r P□□□□□d
TYPE I□	7
TYPE II	□
TYPE III	2
TYPE III ALT□	2

□- □□□r□ □□□d□□□□ □ □□□ □□□r □□□□□□□r□□ □□d □□□□ □□d□r □□□□□□ □□r □□r□□□□
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MIX

A1	1 □□dr□□□ □1 □□□□	□6	816 □□□	□□rr□□□□ □□□□
A2	1 □□dr□□□ □1 □□□□	□4	7□2 □□□	□□□□□□d □□□
		□0	4□□ 1 □□dr□□□	
□1	2 □□dr□□□ □2 □□□□	44	1□112 □□□	□□rr□□□□ □□□□
□2	2 □□dr□□□ □2 □□□□	4□	1□144 □□□	□□□□□□d □□□
		8□	4□□ 2 □□dr□□□	
C1	□ □□dr□□□ □2 □□□□	21	1□412 □□□	□□□□□□d □□□
		21	11□ □ □□dr□□□	
TOTAL		200		

PARKING RE□UIRED

□0 1 □□dr□□□ □□□□/□1□2□ □□□□□□d□	11□
8□2 □□dr□□□ □□□□/□2□2□ □□□□□□d□	201
21□ □□dr□□□ □□□□/□2□7□ □□□□□□d□	□8
TOTAL	□72 (1□86 □□□□□□d□)

PARKING PROVIDED

1 □□r □□r□□□	121 (□□7 □□r□□ □□r□□□)
□□□□ □0 d□□r□□	241
□□□□ 4□ d□□r□□	10
TOTAL	□72 (1□86 □□□□□□d□) (8 □□□d□□□ □□□□□□)

NORT□

SCALE: 1" □40□

Pr□□□ □□□r□ S□□ P□□□-□□□□□A

A-1

VERNOLA MARKETPLACE APARTMENT COMMUNITY (Phase II)

VERNOLA FAMILY c/o McCUNE & ASSOCIATES, INC.

JURUPA VALLEY, CA

DATE: 05-27-21
JOB NO.: 2020-530

AO ARCHITECTS
144 NORTH ORANGE ST., ORANGE, CA 92866
(714) 639-9860
Architecture. Design. Relationships.

Appendix C

Existing Traffic Volume Data

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

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

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

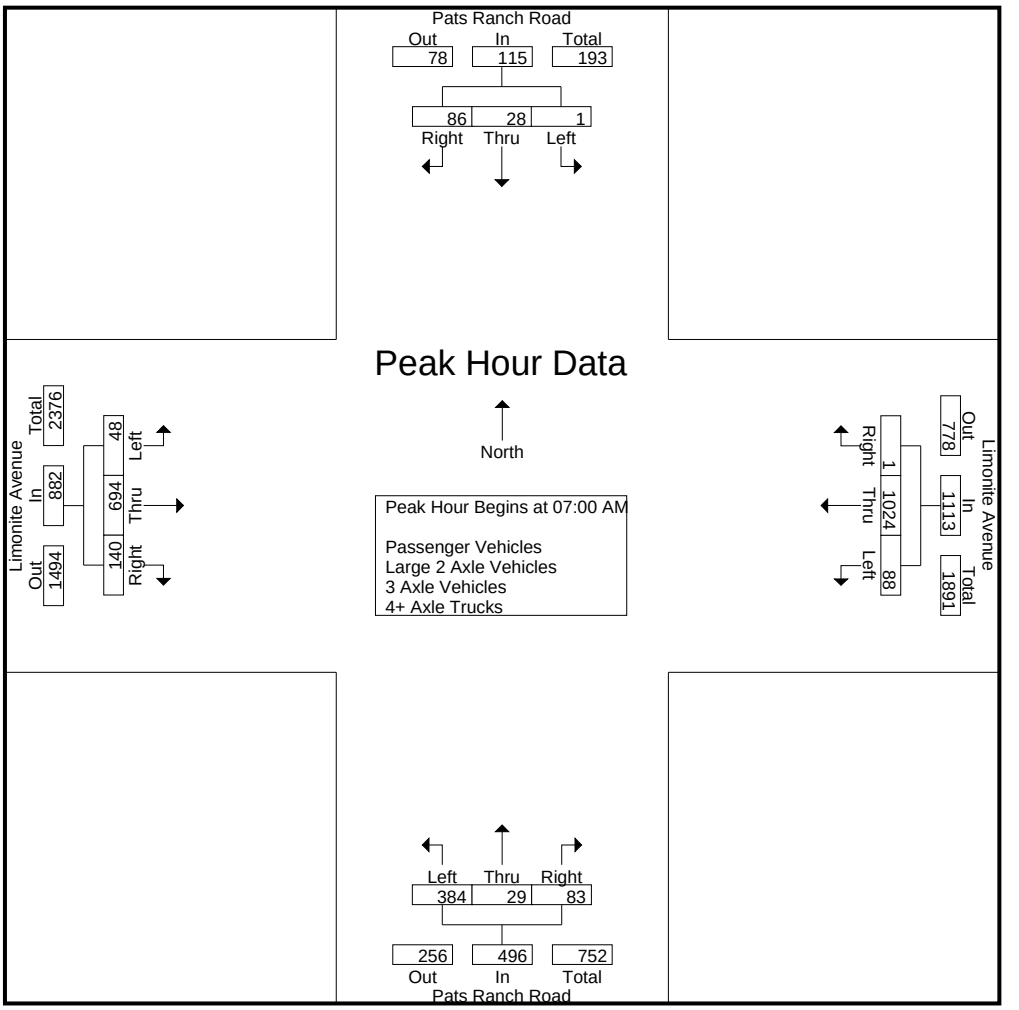
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	8	23	31	28	282	0	310	83	5	20	108	9	148	42	199	648
07:15 AM	0	7	27	34	31	240	0	271	98	8	21	127	11	179	37	227	659
07:30 AM	0	9	17	26	12	264	0	276	103	5	24	132	5	170	31	206	640
07:45 AM	1	4	19	24	17	238	1	256	100	11	18	129	23	197	30	250	659
Total	1	28	86	115	88	1024	1	1113	384	29	83	496	48	694	140	882	2606
08:00 AM	0	5	21	26	20	234	0	254	76	8	19	103	15	163	31	209	592
08:15 AM	1	6	21	28	30	201	0	231	75	5	10	90	10	182	30	222	571
08:30 AM	0	5	30	35	21	208	0	229	79	10	21	110	11	170	25	206	580
08:45 AM	0	5	12	17	47	202	0	249	82	4	18	104	12	167	28	207	577
Total	1	21	84	106	118	845	0	963	312	27	68	407	48	682	114	844	2320
Grand Total	2	49	170	221	206	1869	1	2076	696	56	151	903	96	1376	254	1726	4926
Apprch %	0.9	22.2	76.9		9.9	90	0		77.1	6.2	16.7		5.6	79.7	14.7		
Total %	0	1	3.5	4.5	4.2	37.9	0	42.1	14.1	1.1	3.1	18.3	1.9	27.9	5.2	35	
Passenger Vehicles	2	49	165	216	204	1778	1	1983	674	56	147	877	95	1309	236	1640	4716
% Passenger Vehicles	100	100	97.1	97.7	99	95.1	100	95.5	96.8	100	97.4	97.1	99	95.1	92.9	95	95.7
Large 2 Axle Vehicles	0	0	4	4	2	65	0	67	14	0	2	16	0	43	15	58	145
% Large 2 Axle Vehicles	0	0	2.4	1.8	1	3.5	0	3.2	2	0	1.3	1.8	0	3.1	5.9	3.4	2.9
3 Axle Vehicles	0	0	0	0	0	14	0	14	2	0	0	2	0	14	1	15	31
% 3 Axle Vehicles	0	0	0	0	0	0.7	0	0.7	0.3	0	0	0.2	0	1	0.4	0.9	0.6
4+ Axle Trucks	0	0	1	1	0	12	0	12	6	0	2	8	1	10	2	13	34
% 4+ Axle Trucks	0	0	0.6	0.5	0	0.6	0	0.6	0.9	0	1.3	0.9	1	0.7	0.8	0.8	0.7

	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	8	23	31	28	**282**	0	**310**	83	5	20	108	9	148	**42**	199	648
07:15 AM	0	7	**27**	**34**	**31**	240	0	271	98	8	21	127	11	179	37	227	**659**
07:30 AM	0	**9**	17	26	12	264	0	276	**103**	5	**24**	**132**	5	170	31	206	640
07:45 AM	**1**	4	19	24	17	238	**1**	256	100	**11**	18	129	**23**	**197**	30	**250**	659
Total Volume	1	28	86	115	88	1024	1	1113	384	29	83	496	48	694	140	882	2606
% App. Total	0.9	24.3	74.8		7.9	92	0.1		77.4	5.8	16.7		5.4	78.7	15.9		
PHF	.250	.778	.796	.846	.710	.908	.250	.898	.932	.659	.865	.939	.522	.881	.833	.882	.989

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

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

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	0	8	23	31	28	**282**	0	**310**	83	5	20	108	11	179	**37**	227
+15 mins.	0	7	**27**	**34**	**31**	240	0	271	98	8	21	127	5	170	31	206
+30 mins.	0	**9**	17	26	12	264	0	276	**103**	5	**24**	**132**	**23**	**197**	30	**250**
+45 mins.	**1**	4	19	24	17	238	**1**	256	100	**11**	18	129	15	163	31	209
Total Volume	1	28	86	115	88	1024	1	1113	384	29	83	496	54	709	129	892
% App. Total	0.9	24.3	74.8		7.9	92	0.1		77.4	5.8	16.7		6.1	79.5	14.5	
PHF	.250	.778	.796	.846	.710	.908	.250	.898	.932	.659	.865	.939	.587	.900	.872	.892

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

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles

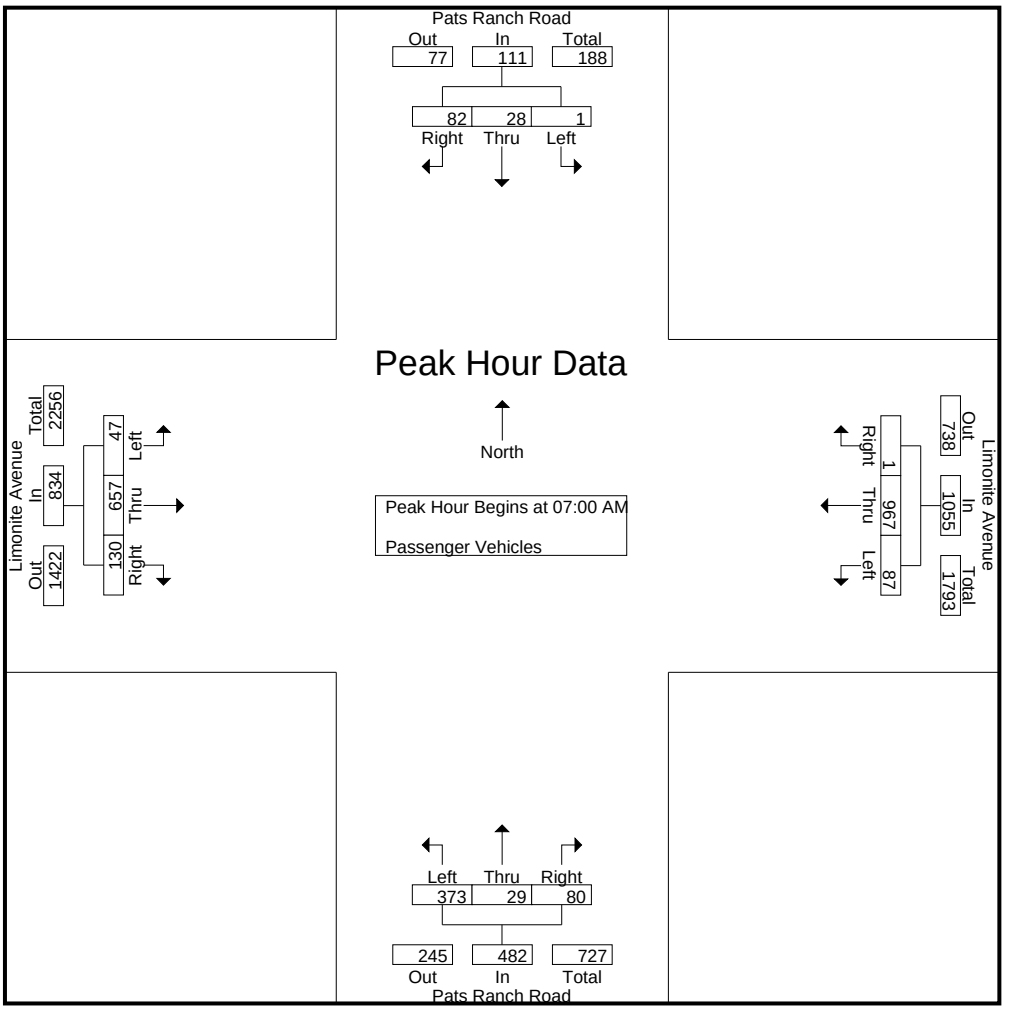
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	8	21	29	27	265	0	292	79	5	20	104	9	138	37	184	609
07:15 AM	0	7	25	32	31	223	0	254	95	8	21	124	10	168	35	213	623
07:30 AM	0	9	17	26	12	251	0	263	101	5	23	129	5	158	29	192	610
07:45 AM	1	4	19	24	17	228	1	246	98	11	16	125	23	193	29	245	640
Total	1	28	82	111	87	967	1	1055	373	29	80	482	47	657	130	834	2482
08:00 AM	0	5	21	26	20	227	0	247	75	8	19	102	15	159	26	200	575
08:15 AM	1	6	20	27	30	194	0	224	71	5	10	86	10	175	30	215	552
08:30 AM	0	5	30	35	20	199	0	219	77	10	20	107	11	160	24	195	556
08:45 AM	0	5	12	17	47	191	0	238	78	4	18	100	12	158	26	196	551
Total	1	21	83	105	117	811	0	928	301	27	67	395	48	652	106	806	2234
Grand Total	2	49	165	216	204	1778	1	1983	674	56	147	877	95	1309	236	1640	4716
Apprch %	0.9	22.7	76.4		10.3	89.7	0.1		76.9	6.4	16.8		5.8	79.8	14.4		
Total %	0	1	3.5	4.6	4.3	37.7	0	42	14.3	1.2	3.1	18.6	2	27.8	5	34.8	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	8	21	29	27	**265**	0	**292**	79	5	20	104	9	138	**37**	184	609
07:15 AM	0	7	**25**	**32**	**31**	223	0	254	95	8	21	124	10	168	35	213	623
07:30 AM	0	**9**	17	26	12	251	0	263	**101**	5	**23**	**129**	5	158	29	192	610
07:45 AM	**1**	4	19	24	17	228	**1**	246	98	**11**	16	125	**23**	**193**	29	**245**	**640**
Total Volume	1	28	82	111	87	967	1	1055	373	29	80	482	47	657	130	834	2482
% App. Total	0.9	25.2	73.9		8.2	91.7	0.1		77.4	6	16.6		5.6	78.8	15.6		
PHF	.250	.778	.820	.867	.702	.912	.250	.903	.923	.659	.870	.934	.511	.851	.878	.851	.970

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

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	8	21	29	27	**265**	0	**292**	79	5	20	104	9	138	**37**	184
+15 mins.	0	7	**25**	**32**	**31**	223	0	254	95	8	21	124	10	168	35	213
+30 mins.	0	**9**	17	26	12	251	0	263	**101**	5	**23**	**129**	5	158	29	192
+45 mins.	**1**	4	19	24	17	228	**1**	246	98	**11**	16	125	**23**	**193**	29	**245**
Total Volume	1	28	82	111	87	967	1	1055	373	29	80	482	47	657	130	834
% App. Total	0.9	25.2	73.9		8.2	91.7	0.1		77.4	6	16.6		5.6	78.8	15.6	
PHF	.250	.778	.820	.867	.702	.912	.250	.903	.923	.659	.870	.934	.511	.851	.878	.851

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

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

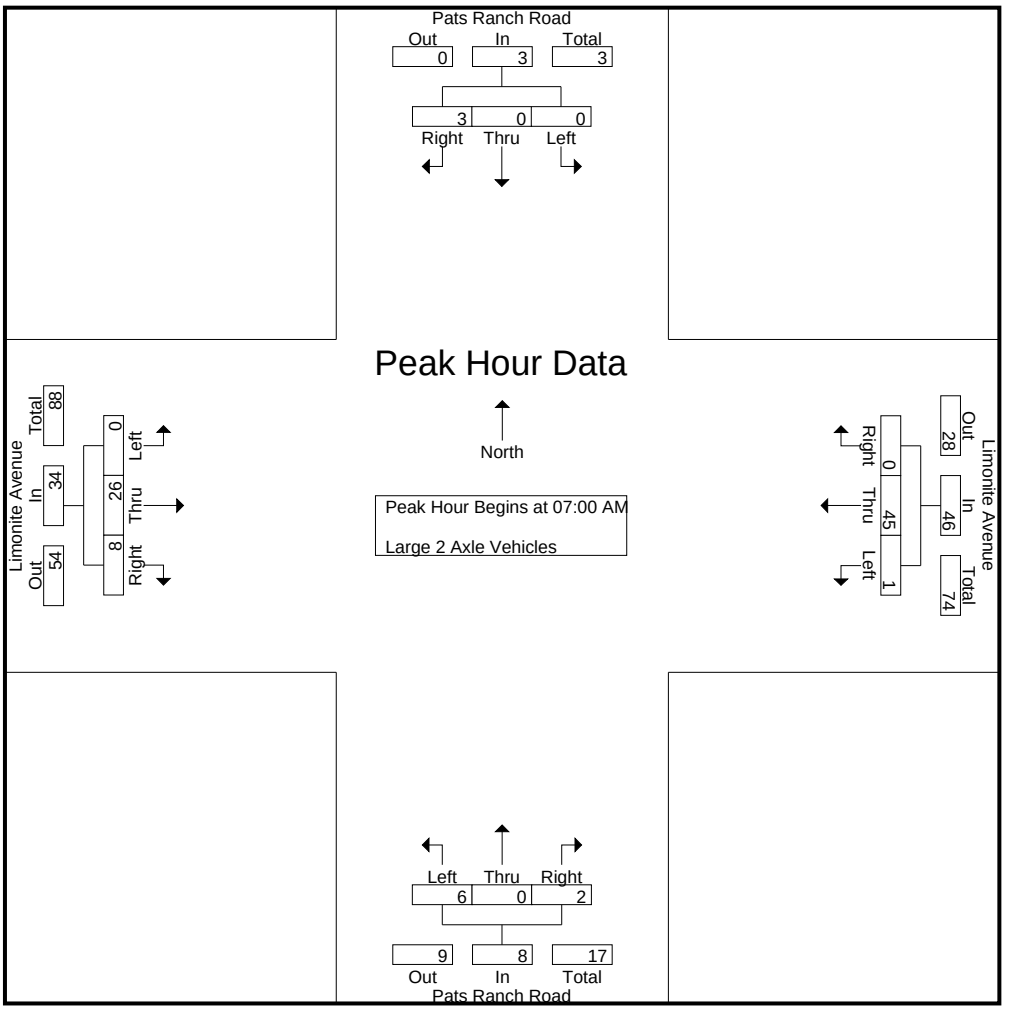
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	1	14	0	15	3	0	0	3	0	8	4	12	31
07:15 AM	0	0	2	2	0	15	0	15	2	0	0	2	0	10	1	11	30
07:30 AM	0	0	0	0	0	8	0	8	1	0	1	2	0	5	2	7	17
07:45 AM	0	0	0	0	0	8	0	8	0	0	1	1	0	3	1	4	13
Total	0	0	3	3	1	45	0	46	6	0	2	8	0	26	8	34	91
08:00 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	3	4	7	11
08:15 AM	0	0	1	1	0	2	0	2	3	0	0	3	0	3	0	3	9
08:30 AM	0	0	0	0	1	7	0	8	0	0	0	0	0	8	1	9	17
08:45 AM	0	0	0	0	0	8	0	8	4	0	0	4	0	3	2	5	17
Total	0	0	1	1	1	20	0	21	8	0	0	8	0	17	7	24	54
Grand Total	0	0	4	4	2	65	0	67	14	0	2	16	0	43	15	58	145
Apprch %	0	0	100		3	97	0		87.5	0	12.5		0	74.1	25.9		
Total %	0	0	2.8	2.8	1.4	44.8	0	46.2	9.7	0	1.4	11	0	29.7	10.3	40	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	1	1	**1**	14	0	**15**	**3**	0	0	**3**	0	8	**4**	**12**	**31**
07:15 AM	0	0	**2**	**2**	0	**15**	0	15	2	0	0	2	0	**10**	1	11	30
07:30 AM	0	0	0	0	0	8	0	8	1	0	**1**	2	0	5	2	7	17
07:45 AM	0	0	0	0	0	8	0	8	0	0	1	1	0	3	1	4	13
Total Volume	0	0	3	3	1	45	0	46	6	0	2	8	0	26	8	34	91
% App. Total	0	0	100		2.2	97.8	0		75	0	25		0	76.5	23.5		
PHF	.000	.000	.375	.375	.250	.750	.000	.767	.500	.000	.500	.667	.000	.650	.500	.708	.734

Counts Unlimited, Inc.
PO Box 1178
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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: Limonite Avenue
Weather: Clear

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	1	1	**1**	14	0	**15**	**3**	0	0	**3**	0	8	**4**	**12**
+15 mins.	0	0	**2**	**2**	0	**15**	0	15	2	0	0	2	0	**10**	1	11
+30 mins.	0	0	0	0	0	8	0	8	1	0	**1**	2	0	5	2	7
+45 mins.	0	0	0	0	0	8	0	8	0	0	1	1	0	3	1	4
Total Volume	0	0	3	3	1	45	0	46	6	0	2	8	0	26	8	34
% App. Total	0	0	100		2.2	97.8	0		75	0	25		0	76.5	23.5	
PHF	.000	.000	.375	.375	.250	.750	.000	.767	.500	.000	.500	.667	.000	.650	.500	.708

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

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

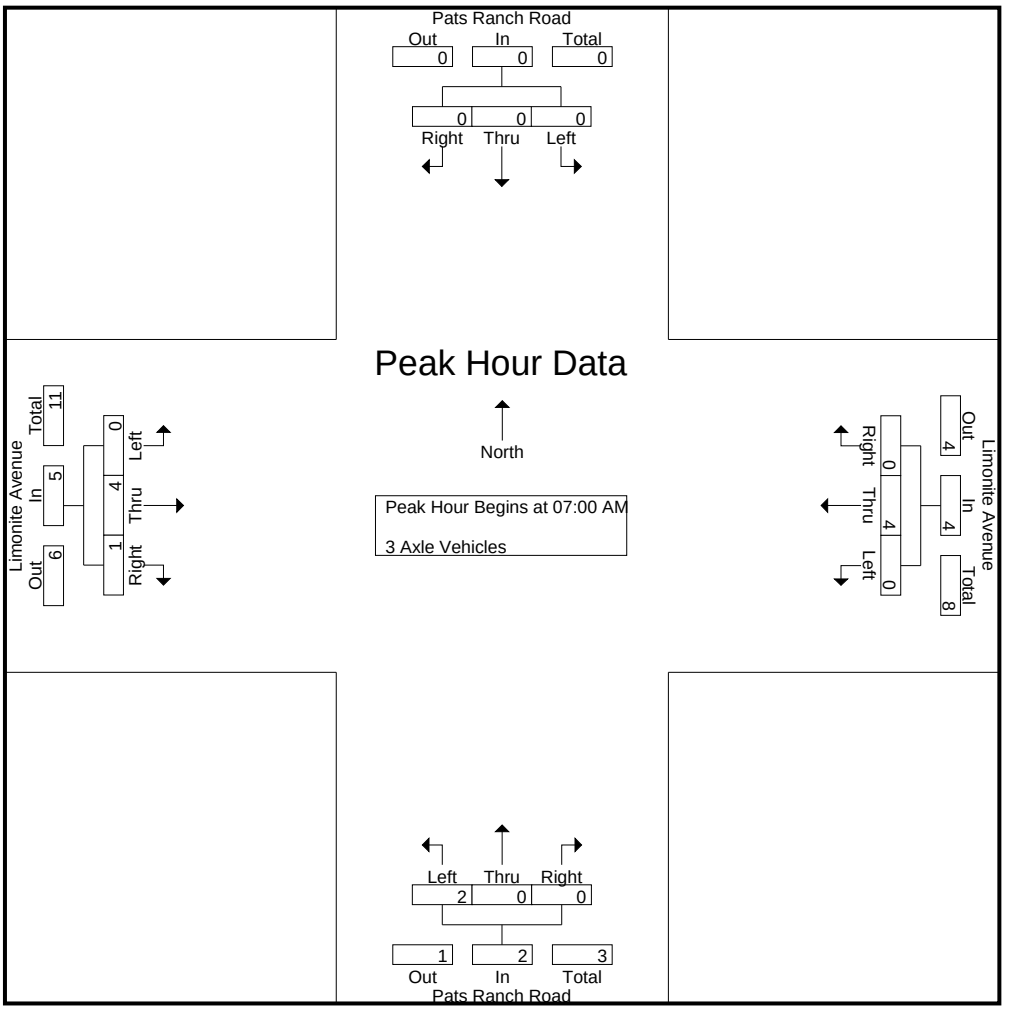
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	2	0	2	1	0	0	1	0	4	0	4	7
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	4	0	4	2	0	0	2	0	4	1	5	11
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
08:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5	8
Total	0	0	0	0	0	10	0	10	0	0	0	0	0	10	0	10	20
Grand Total	0	0	0	0	0	14	0	14	2	0	0	2	0	14	1	15	31
Apprch %	0	0	0		0	100	0		100	0	0		0	93.3	6.7		
Total %	0	0	0	0	0	45.2	0	45.2	6.5	0	0	6.5	0	45.2	3.2	48.4	

	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 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	**1**	1	2
07:15 AM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	1
07:30 AM	0	0	0	0	0	**2**	0	**2**	1	0	0	1	0	**4**	0	**4**	**7**
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	4	0	4	2	0	0	2	0	4	1	5	11
% App. Total	0	0	0		0	100	0		100	0	0		0	80	20		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.500	.000	.000	.500	.000	.250	.250	.313	.393

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

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	**1**	1
+15 mins.	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	**2**	0	**2**	1	0	0	1	0	**4**	0	**4**
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	4	0	4	2	0	0	2	0	4	1	5
% App. Total	0	0	0		0	100	0		100	0	0		0	80	20	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.500	.000	.000	.500	.000	.250	.250	.313

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

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

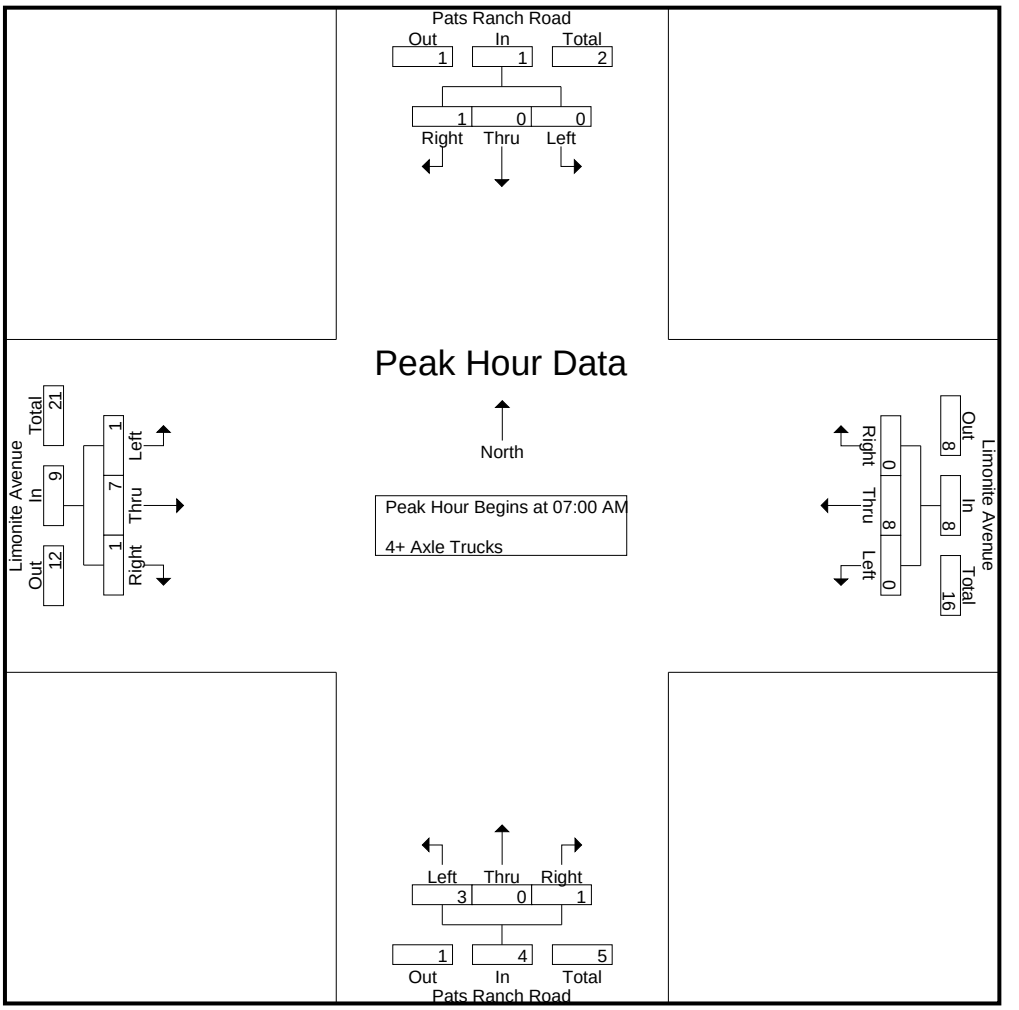
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	0	2	0	2	1	0	0	1	0	2	0	2	6
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	1	3	5
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
07:45 AM	0	0	0	0	0	1	0	1	2	0	1	3	0	1	0	1	5
Total	0	0	1	1	0	8	0	8	3	0	1	4	1	7	1	9	22
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
08:15 AM	0	0	0	0	0	2	0	2	1	0	0	1	0	2	0	2	5
08:30 AM	0	0	0	0	0	1	0	1	2	0	1	3	0	0	0	0	4
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	4	0	4	3	0	1	4	0	3	1	4	12
Grand Total	0	0	1	1	0	12	0	12	6	0	2	8	1	10	2	13	34
Apprch %	0	0	100		0	100	0		75	0	25		7.7	76.9	15.4		
Total %	0	0	2.9	2.9	0	35.3	0	35.3	17.6	0	5.9	23.5	2.9	29.4	5.9	38.2	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**1**	**1**	0	2	0	2	1	0	0	1	0	2	0	2	**6**
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	**1**	1	**1**	**3**	5
07:30 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**3**	0	3	6
07:45 AM	0	0	0	0	0	1	0	1	**2**	0	**1**	**3**	0	1	0	1	5
Total Volume	0	0	1	1	0	8	0	8	3	0	1	4	1	7	1	9	22
% App. Total	0	0	100		0	100	0		75	0	25		11.1	77.8	11.1		
PHF	.000	.000	.250	.250	.000	.667	.000	.667	.375	.000	.250	.333	.250	.583	.250	.750	.917

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

File Name : 01_JVY_Pats_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	**1**	**1**	0	2	0	2	1	0	0	1	0	2	0	2
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	**1**	1	**1**	**3**
+30 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**3**	0	3
+45 mins.	0	0	0	0	0	1	0	1	**2**	0	**1**	**3**	0	1	0	1
Total Volume	0	0	1	1	0	8	0	8	3	0	1	4	1	7	1	9
% App. Total	0	0	100		0	100	0		75	0	25		11.1	77.8	11.1	
PHF	.000	.000	.250	.250	.000	.667	.000	.667	.375	.000	.250	.333	.250	.583	.250	.750

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

File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

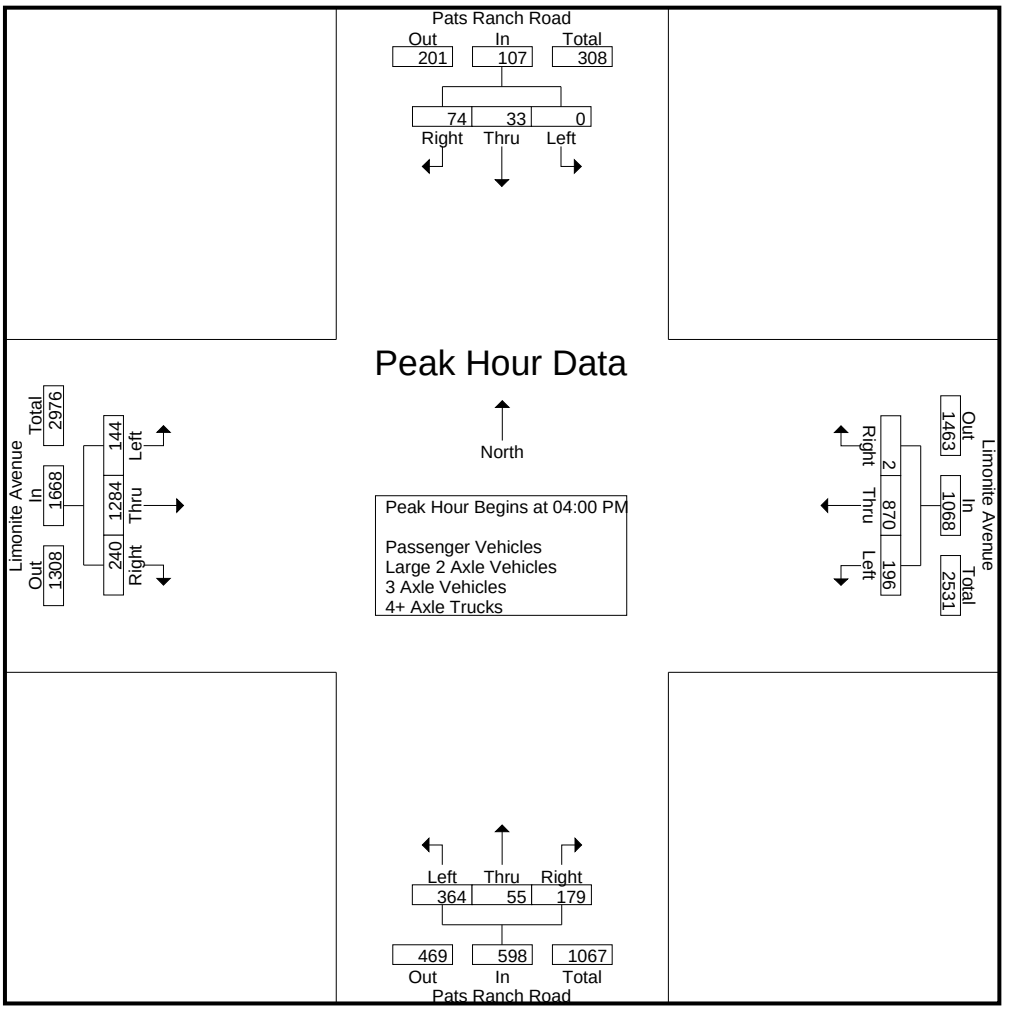
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	6	20	26	56	248	1	305	95	10	51	156	28	355	58	441	928
04:15 PM	0	4	14	18	52	197	0	249	103	13	48	164	38	325	59	422	853
04:30 PM	0	10	12	22	41	214	1	256	84	10	42	136	47	279	54	380	794
04:45 PM	0	13	28	41	47	211	0	258	82	22	38	142	31	325	69	425	866
Total	0	33	74	107	196	870	2	1068	364	55	179	598	144	1284	240	1668	3441
05:00 PM	1	9	17	27	52	237	0	289	95	12	33	140	34	291	67	392	848
05:15 PM	1	3	20	24	51	221	1	273	89	11	33	133	39	303	72	414	844
05:30 PM	0	12	14	26	58	228	0	286	84	15	43	142	28	328	66	422	876
05:45 PM	0	8	16	24	46	236	0	282	109	12	55	176	28	293	53	374	856
Total	2	32	67	101	207	922	1	1130	377	50	164	591	129	1215	258	1602	3424
Grand Total	2	65	141	208	403	1792	3	2198	741	105	343	1189	273	2499	498	3270	6865
Apprch %	1	31.2	67.8		18.3	81.5	0.1		62.3	8.8	28.8		8.3	76.4	15.2		
Total %	0	0.9	2.1	3	5.9	26.1	0	32	10.8	1.5	5	17.3	4	36.4	7.3	47.6	
Passenger Vehicles	2	65	141	208	403	1765	3	2171	736	104	340	1180	270	2421	486	3177	6736
% Passenger Vehicles	100	100	100	100	100	98.5	100	98.8	99.3	99	99.1	99.2	98.9	96.9	97.6	97.2	98.1
Large 2 Axle Vehicles	0	0	0	0	0	15	0	15	5	1	1	7	3	58	9	70	92
% Large 2 Axle Vehicles	0	0	0	0	0	0.8	0	0.7	0.7	1	0.3	0.6	1.1	2.3	1.8	2.1	1.3
3 Axle Vehicles	0	0	0	0	0	6	0	6	0	0	1	1	0	9	2	11	18
% 3 Axle Vehicles	0	0	0	0	0	0.3	0	0.3	0	0	0.3	0.1	0	0.4	0.4	0.3	0.3
4+ Axle Trucks	0	0	0	0	0	6	0	6	0	0	1	1	0	11	1	12	19
% 4+ Axle Trucks	0	0	0	0	0	0.3	0	0.3	0	0	0.3	0.1	0	0.4	0.2	0.4	0.3

	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 04:00 PM																	
04:00 PM	0	6	20	26	**56**	**248**	**1**	**305**	95	10	**51**	156	28	**355**	58	**441**	**928**
04:15 PM	0	4	14	18	52	197	0	249	**103**	13	48	**164**	38	325	59	422	853
04:30 PM	0	10	12	22	41	214	1	256	84	10	42	136	**47**	279	54	380	794
04:45 PM	0	**13**	**28**	**41**	47	211	0	258	82	**22**	38	142	31	325	**69**	425	866
Total Volume	0	33	74	107	196	870	2	1068	364	55	179	598	144	1284	240	1668	3441
% App. Total	0	30.8	69.2		18.4	81.5	0.2		60.9	9.2	29.9		8.6	77	14.4		
PHF	.000	.635	.661	.652	.875	.877	.500	.875	.883	.625	.877	.912	.766	.904	.870	.946	.927

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

File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
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				04:00 PM			
+0 mins.	0	**13**	**28**	**41**	52	**237**	0	**289**	95	10	**51**	156	28	**355**	58	**441**
+15 mins.	**1**	9	17	27	51	221	**1**	273	**103**	13	48	**164**	38	325	59	422
+30 mins.	1	3	20	24	**58**	228	0	286	84	10	42	136	**47**	279	54	380
+45 mins.	0	12	14	26	46	236	0	282	82	**22**	38	142	31	325	**69**	425
Total Volume	2	37	79	118	207	922	1	1130	364	55	179	598	144	1284	240	1668
% App. Total	1.7	31.4	66.9		18.3	81.6	0.1		60.9	9.2	29.9		8.6	77	14.4	
PHF	.500	.712	.705	.720	.892	.973	.250	.978	.883	.625	.877	.912	.766	.904	.870	.946

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City of Jurupa Valley
N/S: Pats Ranch Road
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File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles

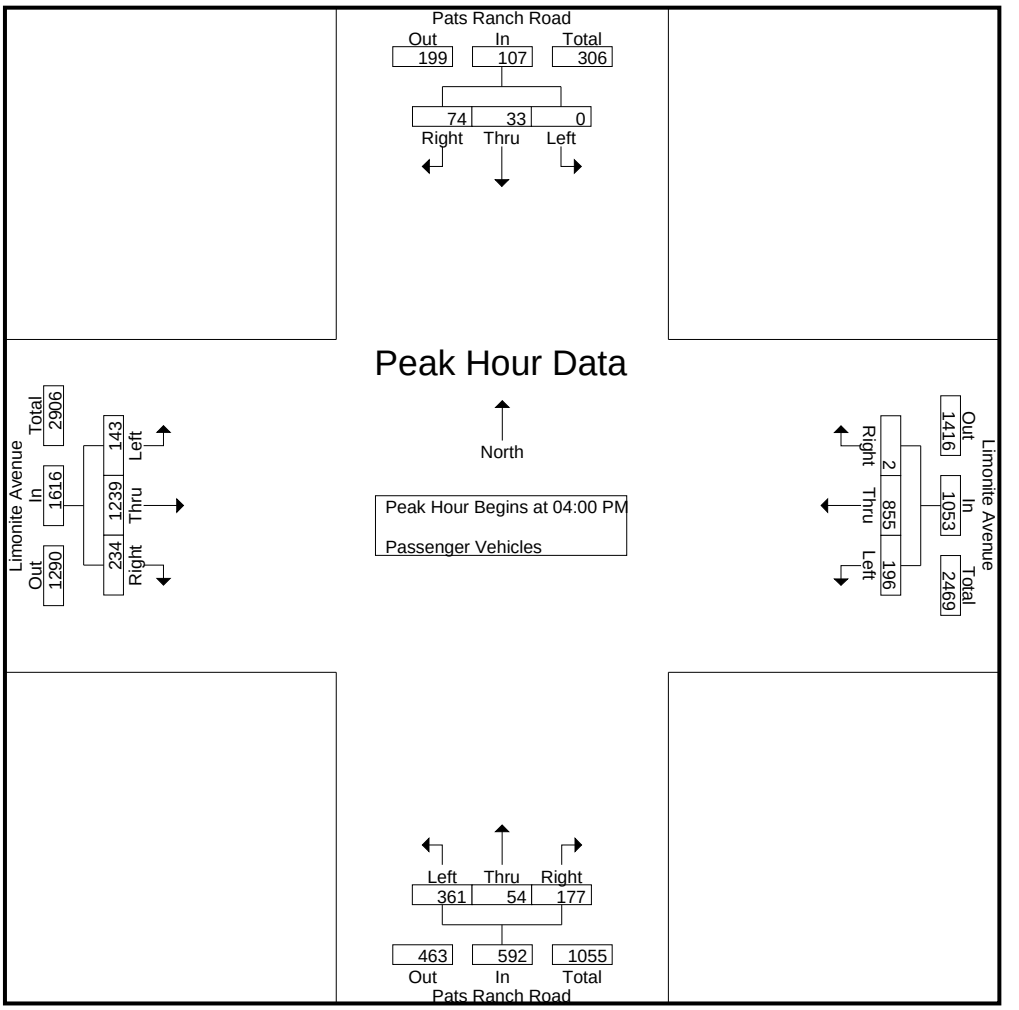
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	6	20	26	56	244	1	301	94	10	51	155	28	340	58	426	908
04:15 PM	0	4	14	18	52	191	0	243	103	13	47	163	37	317	55	409	833
04:30 PM	0	10	12	22	41	209	1	251	84	9	41	134	47	266	53	366	773
04:45 PM	0	13	28	41	47	211	0	258	80	22	38	140	31	316	68	415	854
Total	0	33	74	107	196	855	2	1053	361	54	177	592	143	1239	234	1616	3368
05:00 PM	1	9	17	27	52	235	0	287	94	12	33	139	33	285	65	383	836
05:15 PM	1	3	20	24	51	218	1	270	89	11	32	132	39	296	72	407	833
05:30 PM	0	12	14	26	58	225	0	283	84	15	43	142	28	322	62	412	863
05:45 PM	0	8	16	24	46	232	0	278	108	12	55	175	27	279	53	359	836
Total	2	32	67	101	207	910	1	1118	375	50	163	588	127	1182	252	1561	3368
Grand Total	2	65	141	208	403	1765	3	2171	736	104	340	1180	270	2421	486	3177	6736
Apprch %	1	31.2	67.8		18.6	81.3	0.1		62.4	8.8	28.8		8.5	76.2	15.3		
Total %	0	1	2.1	3.1	6	26.2	0	32.2	10.9	1.5	5	17.5	4	35.9	7.2	47.2	

	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 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	6	20	26	**56**	**244**	**1**	**301**	94	10	**51**	155	28	**340**	58	**426**	**908**
04:15 PM	0	4	14	18	52	191	0	243	**103**	13	47	**163**	37	317	55	409	833
04:30 PM	0	10	12	22	41	209	1	251	84	9	41	134	**47**	266	53	366	773
04:45 PM	0	**13**	**28**	**41**	47	211	0	258	80	**22**	38	140	31	316	**68**	415	854
Total Volume	0	33	74	107	196	855	2	1053	361	54	177	592	143	1239	234	1616	3368
% App. Total	0	30.8	69.2		18.6	81.2	0.2		61	9.1	29.9		8.8	76.7	14.5		
PHF	.000	.635	.661	.652	.875	.876	.500	.875	.876	.614	.868	.908	.761	.911	.860	.948	.927

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

File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	6	20	26	**56**	**244**	**1**	**301**	94	10	**51**	155	28	**340**	58	**426**
+15 mins.	0	4	14	18	52	191	0	243	**103**	13	47	**163**	37	317	55	409
+30 mins.	0	10	12	22	41	209	1	251	84	9	41	134	**47**	266	53	366
+45 mins.	0	**13**	**28**	**41**	47	211	0	258	80	**22**	38	140	31	316	**68**	415
Total Volume	0	33	74	107	196	855	2	1053	361	54	177	592	143	1239	234	1616
% App. Total	0	30.8	69.2		18.6	81.2	0.2		61	9.1	29.9		8.8	76.7	14.5	
PHF	.000	.635	.661	.652	.875	.876	.500	.875	.876	.614	.868	.908	.761	.911	.860	.948

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

File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

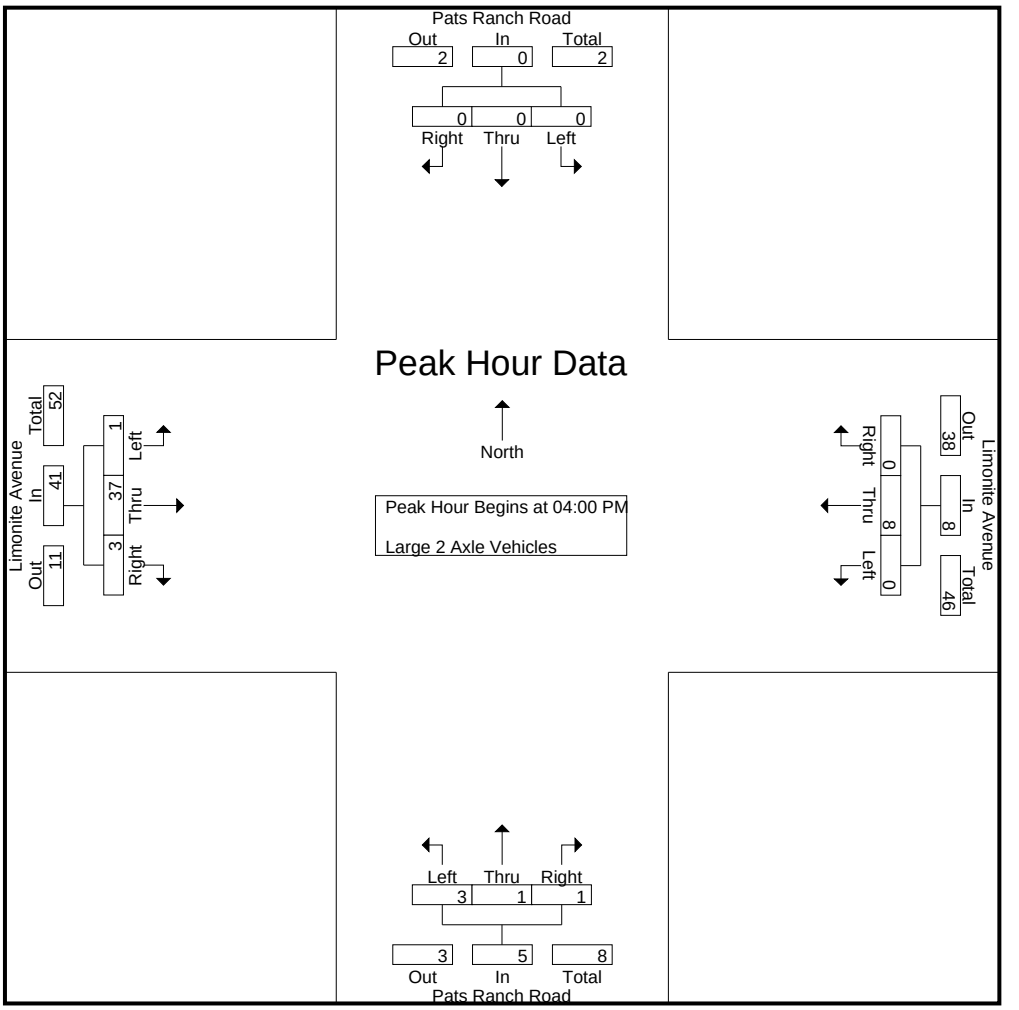
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	15	0	15	17
04:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	1	6	2	9	14
04:30 PM	0	0	0	0	0	2	0	2	0	1	1	2	0	8	1	9	13
04:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	8	0	8	10
Total	0	0	0	0	0	8	0	8	3	1	1	5	1	37	3	41	54
05:00 PM	0	0	0	0	0	2	0	2	1	0	0	1	1	4	2	7	10
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	7
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	4	6	8
05:45 PM	0	0	0	0	0	3	0	3	1	0	0	1	1	8	0	9	13
Total	0	0	0	0	0	7	0	7	2	0	0	2	2	21	6	29	38
Grand Total	0	0	0	0	0	15	0	15	5	1	1	7	3	58	9	70	92
Apprch %	0	0	0		0	100	0		71.4	14.3	14.3		4.3	82.9	12.9		
Total %	0	0	0	0	0	16.3	0	16.3	5.4	1.1	1.1	7.6	3.3	63	9.8	76.1	

	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 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	**15**	0	**15**	**17**
04:15 PM	0	0	0	0	0	**5**	0	**5**	0	0	0	0	**1**	6	**2**	9	14
04:30 PM	0	0	0	0	0	2	0	2	0	**1**	**1**	**2**	0	8	1	9	13
04:45 PM	0	0	0	0	0	0	0	0	**2**	0	0	2	0	8	0	8	10
Total Volume	0	0	0	0	0	8	0	8	3	1	1	5	1	37	3	41	54
% App. Total	0	0	0		0	100	0		60	20	20		2.4	90.2	7.3		
PHF	.000	.000	.000	.000	.000	.400	.000	.400	.375	.250	.250	.625	.250	.617	.375	.683	.794

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City of Jurupa Valley
N/S: Pats Ranch Road
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Weather: Clear

File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	1	0	0	1	0	**15**	0	**15**
+15 mins.	0	0	0	0	0	**5**	0	**5**	0	0	0	0	**1**	6	**2**	9
+30 mins.	0	0	0	0	0	2	0	2	0	**1**	**1**	**2**	0	8	1	9
+45 mins.	0	0	0	0	0	0	0	0	**2**	0	0	2	0	8	0	8
Total Volume	0	0	0	0	0	8	0	8	3	1	1	5	1	37	3	41
% App. Total	0	0	0		0	100	0		60	20	20		2.4	90.2	7.3	
PHF	.000	.000	.000	.000	.000	.400	.000	.400	.375	.250	.250	.625	.250	.617	.375	.683

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City of Jurupa Valley
N/S: Pats Ranch Road
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File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

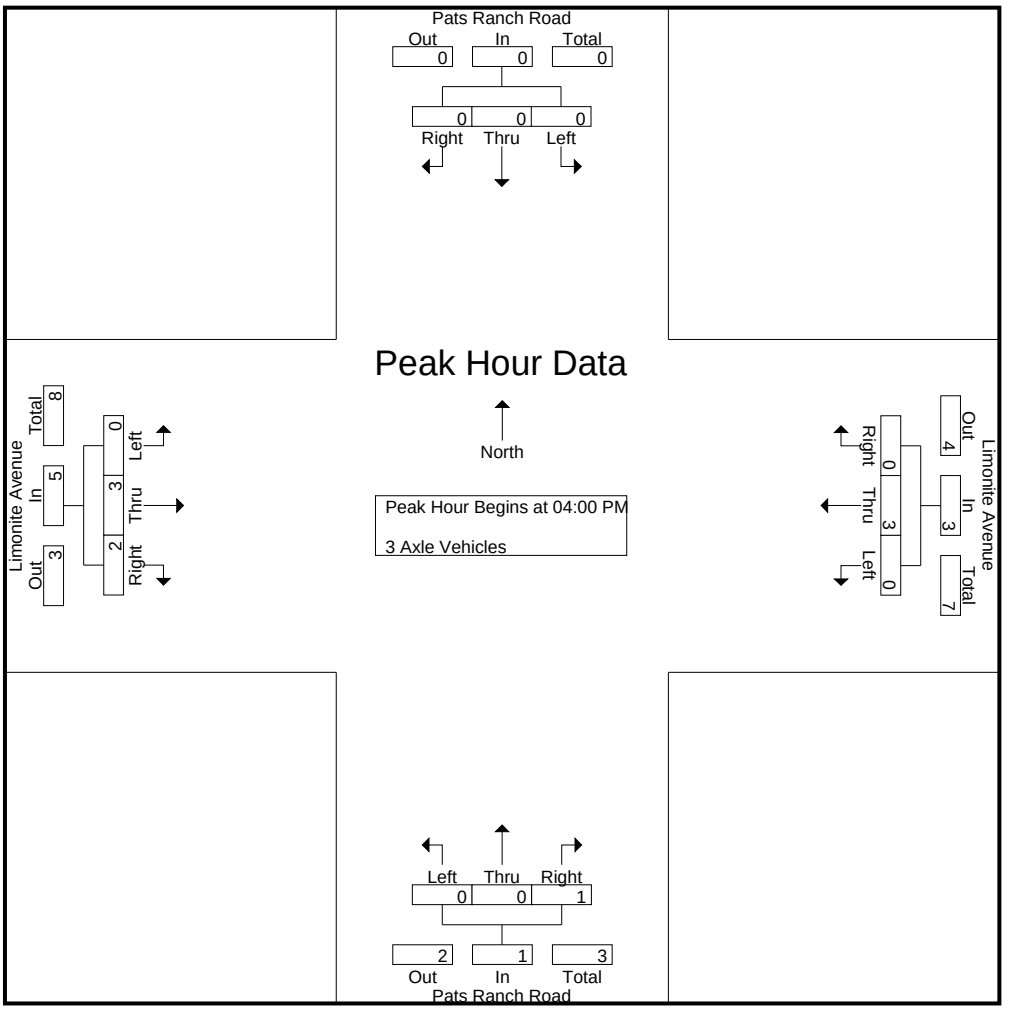
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	2	2	4
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	3	0	3	0	0	1	1	0	3	2	5	9
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	6	0	6	9
Grand Total	0	0	0	0	0	6	0	6	0	0	1	1	0	9	2	11	18
Apprch %	0	0	0		0	100	0		0	0	100		0	81.8	18.2		
Total %	0	0	0	0	0	33.3	0	33.3	0	0	5.6	5.6	0	50	11.1	61.1	

	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 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	1	0	1	0	0	**1**	**1**	0	0	**2**	**2**	**4**
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	2	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	3	0	3	0	0	1	1	0	3	2	5	9
% App. Total	0	0	0		0	100	0		0	0	100		0	60	40		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.250	.250	.000	.375	.250	.625	.563

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City of Jurupa Valley
N/S: Pats Ranch Road
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Weather: Clear

File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	**1**	**1**	0	0	**2**	**2**
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	2
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	3	0	3	0	0	1	1	0	3	2	5
% App. Total	0	0	0		0	100	0		0	0	100		0	60	40	
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.250	.250	.000	.375	.250	.625

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

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

File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

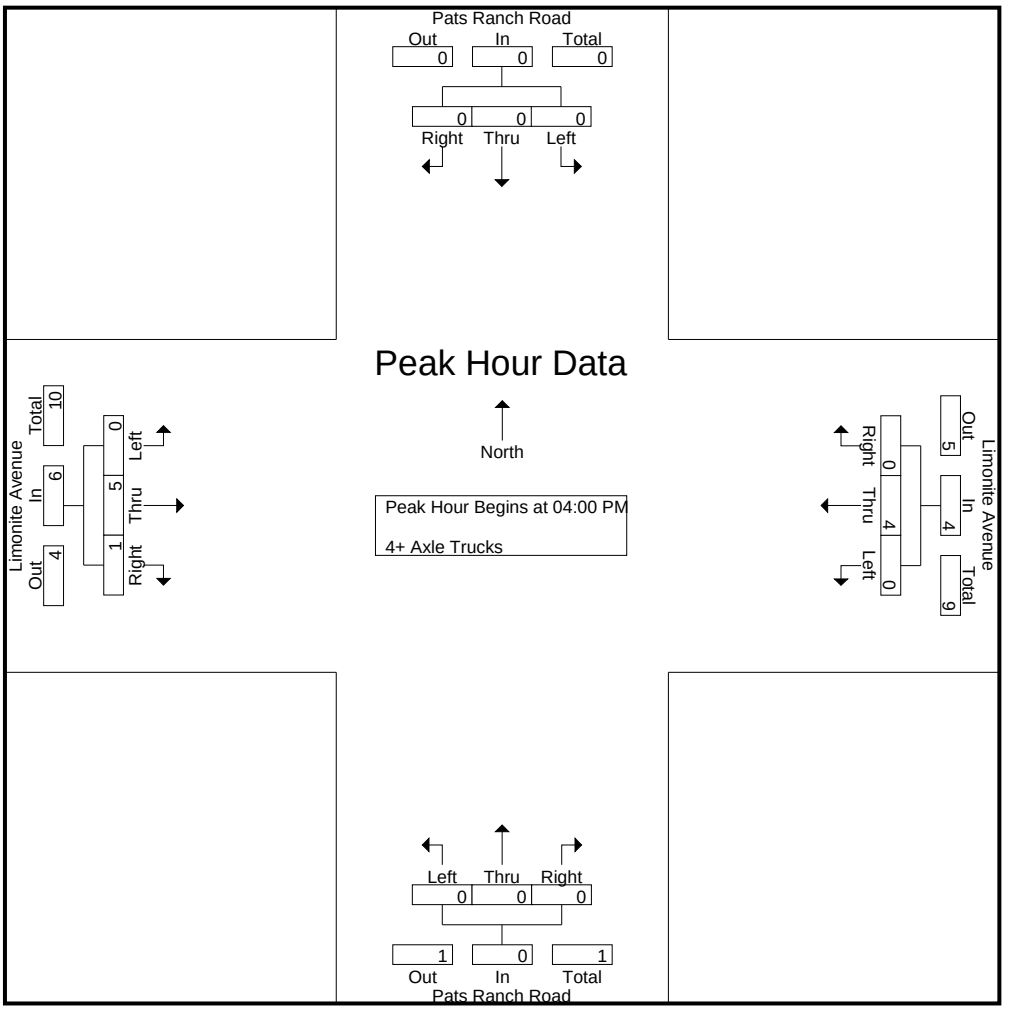
	Pats Ranch Road Southbound				Limonite Avenue Westbound				Pats Ranch Road Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	5	1	6	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
Total	0	0	0	0	0	2	0	2	0	0	1	1	0	6	0	6	9
Grand Total	0	0	0	0	0	6	0	6	0	0	1	1	0	11	1	12	19
Apprch %	0	0	0		0	100	0		0	0	100		0	91.7	8.3		
Total %	0	0	0	0	0	31.6	0	31.6	0	0	5.3	5.3	0	57.9	5.3	63.2	

	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 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**	**5**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	1
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	5	1	6	10
% App. Total	0	0	0		0	100	0		0	0	0		0	83.3	16.7		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.417	.250	.500	.500

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

File Name : 01_JVY_Pats_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	5	1	6
% App. Total	0	0	0		0	100	0		0	0	0		0	83.3	16.7	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.417	.250	.500

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

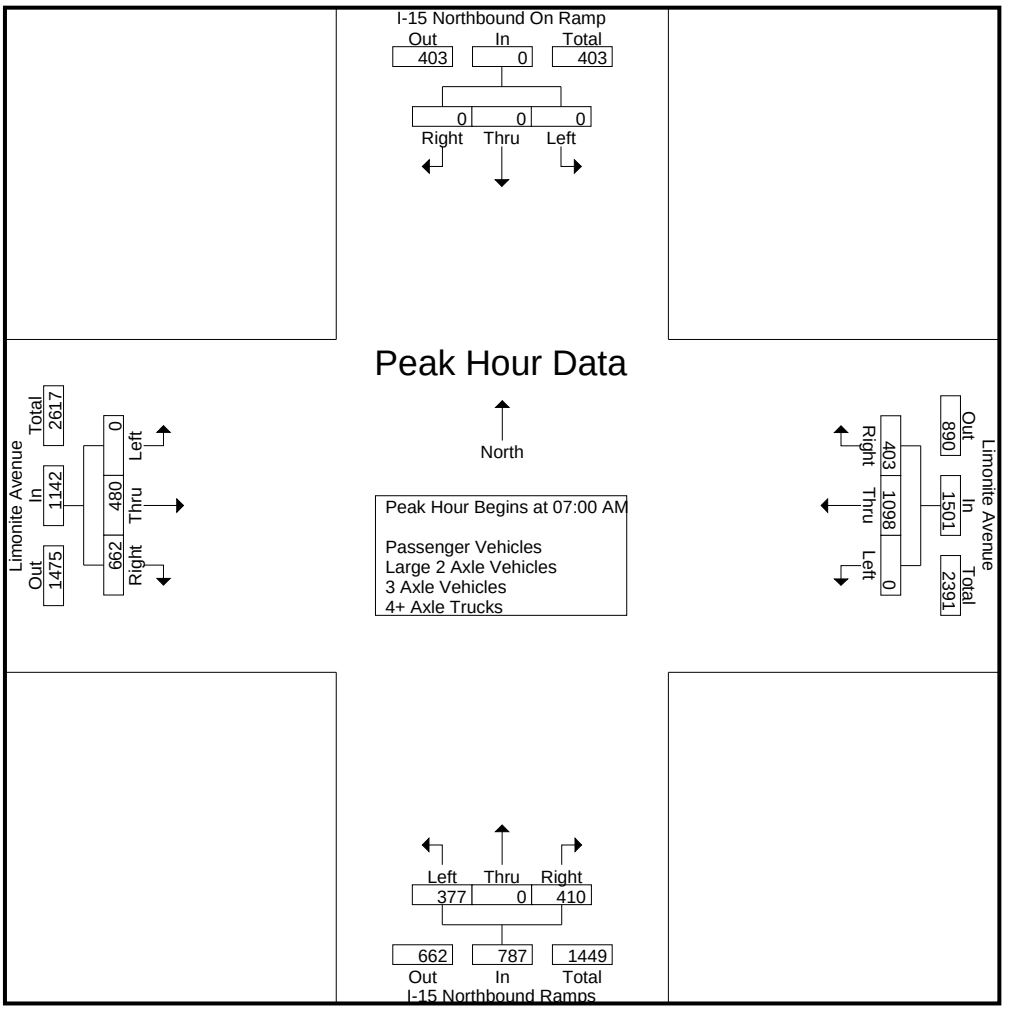
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	277	107	384	69	0	79	148	0	118	175	293	825
07:15 AM	0	0	0	0	0	271	117	388	97	0	105	202	0	120	183	303	893
07:30 AM	0	0	0	0	0	275	98	373	100	0	105	205	0	117	172	289	867
07:45 AM	0	0	0	0	0	275	81	356	111	0	121	232	0	125	132	257	845
Total	0	0	0	0	0	1098	403	1501	377	0	410	787	0	480	662	1142	3430
08:00 AM	0	0	0	0	0	247	99	346	100	0	104	204	0	117	117	234	784
08:15 AM	0	0	0	0	0	230	67	297	96	0	92	188	0	132	134	266	751
08:30 AM	0	0	0	0	0	215	105	320	78	0	95	173	0	133	149	282	775
08:45 AM	0	0	0	0	0	226	85	311	83	0	92	175	0	159	126	285	771
Total	0	0	0	0	0	918	356	1274	357	0	383	740	0	541	526	1067	3081
Grand Total	0	0	0	0	0	2016	759	2775	734	0	793	1527	0	1021	1188	2209	6511
Apprch %	0	0	0		0	72.6	27.4		48.1	0	51.9		0	46.2	53.8		
Total %	0	0	0	0	0	31	11.7	42.6	11.3	0	12.2	23.5	0	15.7	18.2	33.9	
Passenger Vehicles	0	0	0	0	0	1938	723	2661	695	0	744	1439	0	980	1142	2122	6222
% Passenger Vehicles	0	0	0	0	0	96.1	95.3	95.9	94.7	0	93.8	94.2	0	96	96.1	96.1	95.6
Large 2 Axle Vehicles	0	0	0	0	0	56	22	78	22	0	25	47	0	32	20	52	177
% Large 2 Axle Vehicles	0	0	0	0	0	2.8	2.9	2.8	3	0	3.2	3.1	0	3.1	1.7	2.4	2.7
3 Axle Vehicles	0	0	0	0	0	11	6	17	6	0	14	20	0	5	11	16	53
% 3 Axle Vehicles	0	0	0	0	0	0.5	0.8	0.6	0.8	0	1.8	1.3	0	0.5	0.9	0.7	0.8
4+ Axle Trucks	0	0	0	0	0	11	8	19	11	0	10	21	0	4	15	19	59
% 4+ Axle Trucks	0	0	0	0	0	0.5	1.1	0.7	1.5	0	1.3	1.4	0	0.4	1.3	0.9	0.9

	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	**277**	107	384	69	0	79	148	0	118	175	293	825
07:15 AM	0	0	0	0	0	271	**117**	**388**	97	0	105	202	0	120	**183**	**303**	**893**
07:30 AM	0	0	0	0	0	275	98	373	100	0	105	205	0	117	172	289	867
07:45 AM	0	0	0	0	0	275	81	356	**111**	0	**121**	**232**	0	**125**	132	257	845
Total Volume	0	0	0	0	0	1098	403	1501	377	0	410	787	0	480	662	1142	3430
% App. Total	0	0	0		0	73.2	26.8		47.9	0	52.1		0	42	58		
PHF	.000	.000	.000	.000	.000	.991	.861	.967	.849	.000	.847	.848	.000	.960	.904	.942	.960

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**277**	107	384	97	0	105	202	0	118	175	293
+15 mins.	0	0	0	0	0	271	**117**	**388**	100	0	105	205	0	120	**183**	**303**
+30 mins.	0	0	0	0	0	275	98	373	**111**	0	**121**	**232**	0	117	172	289
+45 mins.	0	0	0	0	0	275	81	356	100	0	104	204	0	**125**	132	257
Total Volume	0	0	0	0	0	1098	403	1501	408	0	435	843	0	480	662	1142
% App. Total	0	0	0		0	73.2	26.8		48.4	0	51.6		0	42	58	
PHF	.000	.000	.000	.000	.000	.991	.861	.967	.919	.000	.899	.908	.000	.960	.904	.942

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles

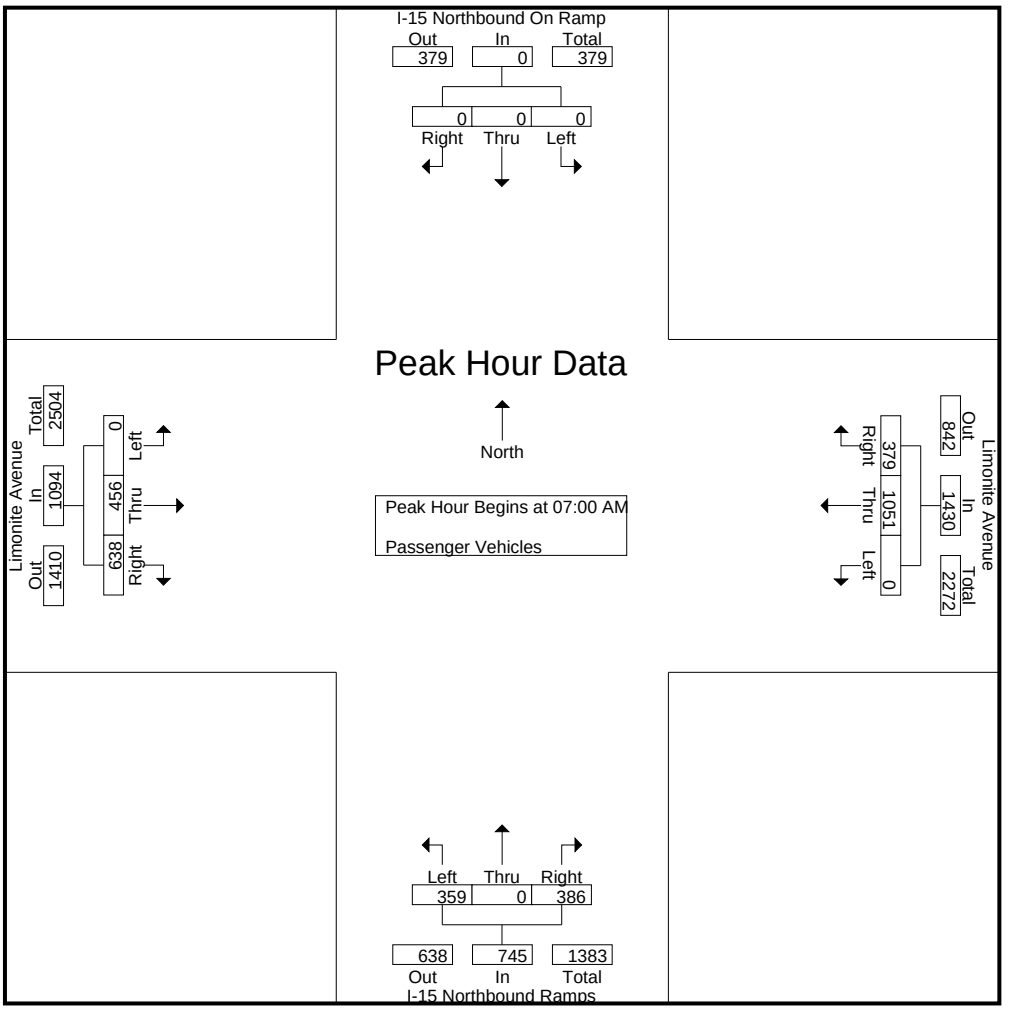
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	261	102	363	65	0	71	136	0	110	171	281	780
07:15 AM	0	0	0	0	0	256	107	363	93	0	100	193	0	114	174	288	844
07:30 AM	0	0	0	0	0	266	95	361	96	0	96	192	0	112	168	280	833
07:45 AM	0	0	0	0	0	268	75	343	105	0	119	224	0	120	125	245	812
Total	0	0	0	0	0	1051	379	1430	359	0	386	745	0	456	638	1094	3269
08:00 AM	0	0	0	0	0	242	97	339	96	0	101	197	0	111	115	226	762
08:15 AM	0	0	0	0	0	222	65	287	94	0	88	182	0	129	127	256	725
08:30 AM	0	0	0	0	0	206	102	308	69	0	87	156	0	129	139	268	732
08:45 AM	0	0	0	0	0	217	80	297	77	0	82	159	0	155	123	278	734
Total	0	0	0	0	0	887	344	1231	336	0	358	694	0	524	504	1028	2953
Grand Total	0	0	0	0	0	1938	723	2661	695	0	744	1439	0	980	1142	2122	6222
Apprch %	0	0	0		0	72.8	27.2		48.3	0	51.7		0	46.2	53.8		
Total %	0	0	0	0	0	31.1	11.6	42.8	11.2	0	12	23.1	0	15.8	18.4	34.1	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	261	102	**363**	65	0	71	136	0	110	171	281	780
07:15 AM	0	0	0	0	0	256	**107**	363	93	0	100	193	0	114	**174**	**288**	**844**
07:30 AM	0	0	0	0	0	266	95	361	96	0	96	192	0	112	168	280	833
07:45 AM	0	0	0	0	0	**268**	75	343	**105**	0	**119**	**224**	0	**120**	125	245	812
Total Volume	0	0	0	0	0	1051	379	1430	359	0	386	745	0	456	638	1094	3269
% App. Total	0	0	0		0	73.5	26.5		48.2	0	51.8		0	41.7	58.3		
PHF	.000	.000	.000	.000	.000	.980	.886	.985	.855	.000	.811	.831	.000	.950	.917	.950	.968

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	261	102	**363**	65	0	71	136	0	110	171	281
+15 mins.	0	0	0	0	0	256	**107**	363	93	0	100	193	0	114	**174**	**288**
+30 mins.	0	0	0	0	0	266	95	361	96	0	96	192	0	112	168	280
+45 mins.	0	0	0	0	0	**268**	75	343	**105**	0	**119**	**224**	0	**120**	125	245
Total Volume	0	0	0	0	0	1051	379	1430	359	0	386	745	0	456	638	1094
% App. Total	0	0	0		0	73.5	26.5		48.2	0	51.8		0	41.7	58.3	
PHF	.000	.000	.000	.000	.000	.980	.886	.985	.855	.000	.811	.831	.000	.950	.917	.950

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

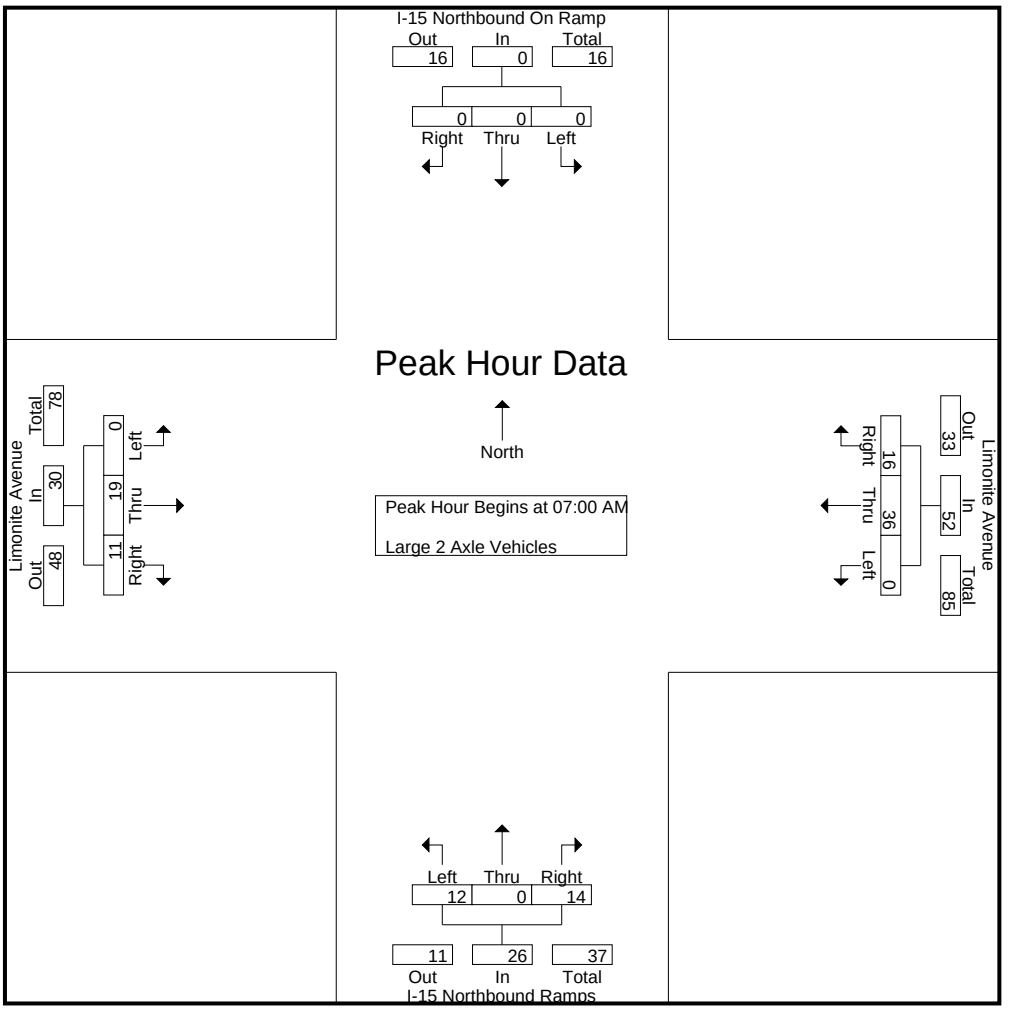
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	13	3	16	2	0	6	8	0	6	1	7	31
07:15 AM	0	0	0	0	0	13	7	20	2	0	5	7	0	5	5	10	37
07:30 AM	0	0	0	0	0	5	2	7	3	0	2	5	0	4	2	6	18
07:45 AM	0	0	0	0	0	5	4	9	5	0	1	6	0	4	3	7	22
Total	0	0	0	0	0	36	16	52	12	0	14	26	0	19	11	30	108
08:00 AM	0	0	0	0	0	2	1	3	3	0	3	6	0	3	0	3	12
08:15 AM	0	0	0	0	0	4	0	4	2	0	0	2	0	3	4	7	13
08:30 AM	0	0	0	0	0	7	1	8	5	0	5	10	0	3	3	6	24
08:45 AM	0	0	0	0	0	7	4	11	0	0	3	3	0	4	2	6	20
Total	0	0	0	0	0	20	6	26	10	0	11	21	0	13	9	22	69
Grand Total	0	0	0	0	0	56	22	78	22	0	25	47	0	32	20	52	177
Apprch %	0	0	0		0	71.8	28.2		46.8	0	53.2		0	61.5	38.5		
Total %	0	0	0	0	0	31.6	12.4	44.1	12.4	0	14.1	26.6	0	18.1	11.3	29.4	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**13**	3	16	2	0	**6**	**8**	0	**6**	1	7	31
07:15 AM	0	0	0	0	0	13	**7**	**20**	2	0	5	7	0	5	**5**	**10**	**37**
07:30 AM	0	0	0	0	0	5	2	7	3	0	2	5	0	4	2	6	18
07:45 AM	0	0	0	0	0	5	4	9	**5**	0	1	6	0	4	3	7	22
Total Volume	0	0	0	0	0	36	16	52	12	0	14	26	0	19	11	30	108
% App. Total	0	0	0		0	69.2	30.8		46.2	0	53.8		0	63.3	36.7		
PHF	.000	.000	.000	.000	.000	.692	.571	.650	.600	.000	.583	.813	.000	.792	.550	.750	.730

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**13**	3	16	2	0	**6**	**8**	0	**6**	1	7
+15 mins.	0	0	0	0	0	13	**7**	**20**	2	0	5	7	0	5	**5**	**10**
+30 mins.	0	0	0	0	0	5	2	7	3	0	2	5	0	4	2	6
+45 mins.	0	0	0	0	0	5	4	9	**5**	0	1	6	0	4	3	7
Total Volume	0	0	0	0	0	36	16	52	12	0	14	26	0	19	11	30
% App. Total	0	0	0		0	69.2	30.8		46.2	0	53.8		0	63.3	36.7	
PHF	.000	.000	.000	.000	.000	.692	.571	.650	.600	.000	.583	.813	.000	.792	.550	.750

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

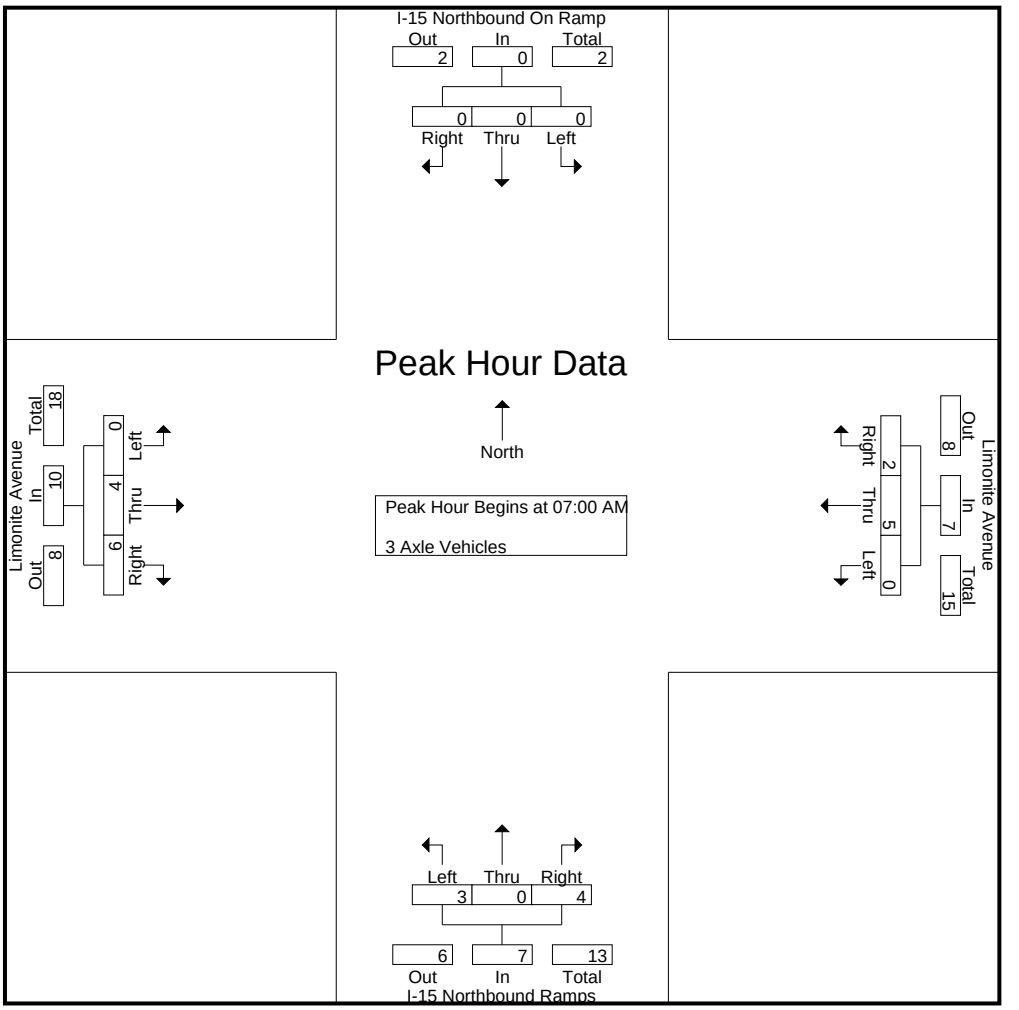
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	1	1	0	0	1	0	2	2	4	6
07:15 AM	0	0	0	0	0	1	1	2	1	0	0	1	0	0	2	2	5
07:30 AM	0	0	0	0	0	3	0	3	0	0	4	4	0	1	1	2	9
07:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	1	2	4
Total	0	0	0	0	0	5	2	7	3	0	4	7	0	4	6	10	24
08:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	2	3	6
08:15 AM	0	0	0	0	0	2	1	3	0	0	2	2	0	0	1	1	6
08:30 AM	0	0	0	0	0	0	1	1	2	0	3	5	0	0	1	1	7
08:45 AM	0	0	0	0	0	2	1	3	1	0	5	6	0	0	1	1	10
Total	0	0	0	0	0	6	4	10	3	0	10	13	0	1	5	6	29
Grand Total	0	0	0	0	0	11	6	17	6	0	14	20	0	5	11	16	53
Apprch %	0	0	0		0	64.7	35.3		30	0	70		0	31.2	68.8		
Total %	0	0	0	0	0	20.8	11.3	32.1	11.3	0	26.4	37.7	0	9.4	20.8	30.2	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	**1**	1	**1**	0	0	1	0	**2**	**2**	**4**	6
07:15 AM	0	0	0	0	0	1	1	2	1	0	0	1	0	0	2	2	5
07:30 AM	0	0	0	0	0	**3**	0	**3**	0	0	**4**	**4**	0	1	1	2	**9**
07:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	1	2	4
Total Volume	0	0	0	0	0	5	2	7	3	0	4	7	0	4	6	10	24
% App. Total	0	0	0		0	71.4	28.6		42.9	0	57.1		0	40	60		
PHF	.000	.000	.000	.000	.000	.417	.500	.583	.750	.000	.250	.438	.000	.500	.750	.625	.667

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

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	**1**	1	**1**	0	0	1	0	**2**	**2**	**4**
+15 mins.	0	0	0	0	0	1	1	2	1	0	0	1	0	0	2	2
+30 mins.	0	0	0	0	0	**3**	0	**3**	0	0	**4**	**4**	0	1	1	2
+45 mins.	0	0	0	0	0	1	0	1	1	0	0	1	0	1	1	2
Total Volume	0	0	0	0	0	5	2	7	3	0	4	7	0	4	6	10
% App. Total	0	0	0		0	71.4	28.6		42.9	0	57.1		0	40	60	
PHF	.000	.000	.000	.000	.000	.417	.500	.583	.750	.000	.250	.438	.000	.500	.750	.625

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

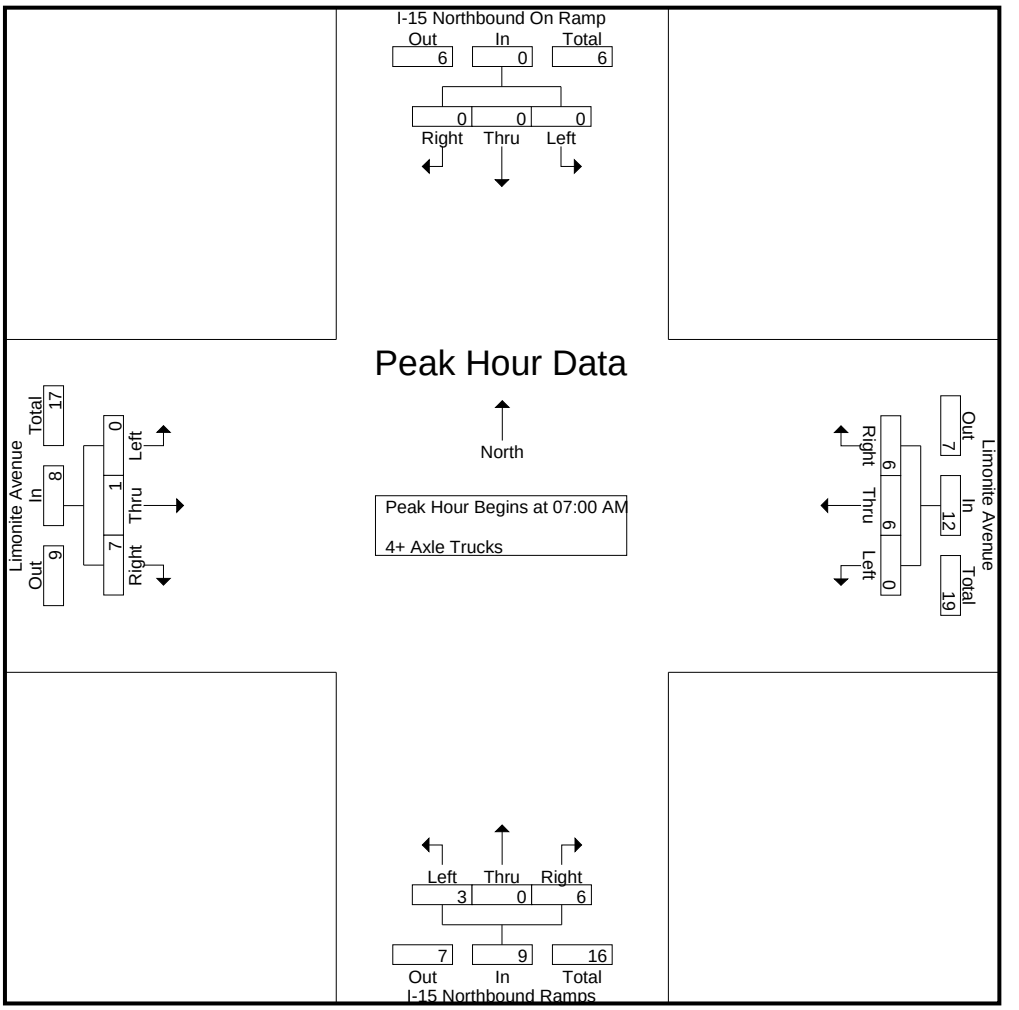
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	1	4	1	0	2	3	0	0	1	1	8
07:15 AM	0	0	0	0	0	1	2	3	1	0	0	1	0	1	2	3	7
07:30 AM	0	0	0	0	0	1	1	2	1	0	3	4	0	0	1	1	7
07:45 AM	0	0	0	0	0	1	2	3	0	0	1	1	0	0	3	3	7
Total	0	0	0	0	0	6	6	12	3	0	6	9	0	1	7	8	29
08:00 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	2	0	2	4
08:15 AM	0	0	0	0	0	2	1	3	0	0	2	2	0	0	2	2	7
08:30 AM	0	0	0	0	0	2	1	3	2	0	0	2	0	1	6	7	12
08:45 AM	0	0	0	0	0	0	0	0	5	0	2	7	0	0	0	0	7
Total	0	0	0	0	0	5	2	7	8	0	4	12	0	3	8	11	30
Grand Total	0	0	0	0	0	11	8	19	11	0	10	21	0	4	15	19	59
Apprch %	0	0	0		0	57.9	42.1		52.4	0	47.6		0	21.1	78.9		
Total %	0	0	0	0	0	18.6	13.6	32.2	18.6	0	16.9	35.6	0	6.8	25.4	32.2	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**3**	1	**4**	**1**	0	2	3	0	0	1	1	**8**
07:15 AM	0	0	0	0	0	1	**2**	3	1	0	0	1	0	**1**	2	**3**	7
07:30 AM	0	0	0	0	0	1	1	2	1	0	**3**	**4**	0	0	1	1	7
07:45 AM	0	0	0	0	0	1	2	3	0	0	1	1	0	0	**3**	3	7
Total Volume	0	0	0	0	0	6	6	12	3	0	6	9	0	1	7	8	29
% App. Total	0	0	0		0	50	50		33.3	0	66.7		0	12.5	87.5		
PHF	.000	.000	.000	.000	.000	.500	.750	.750	.750	.000	.500	.563	.000	.250	.583	.667	.906

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

File Name : 02_JVY_15N_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**3**	1	**4**	**1**	0	2	3	0	0	1	1
+15 mins.	0	0	0	0	0	1	**2**	3	1	0	0	1	0	**1**	2	**3**
+30 mins.	0	0	0	0	0	1	1	2	1	0	**3**	**4**	0	0	1	1
+45 mins.	0	0	0	0	0	1	2	3	0	0	1	1	0	0	**3**	3
Total Volume	0	0	0	0	0	6	6	12	3	0	6	9	0	1	7	8
% App. Total	0	0	0		0	50	50		33.3	0	66.7		0	12.5	87.5	
PHF	.000	.000	.000	.000	.000	.500	.750	.750	.750	.000	.500	.563	.000	.250	.583	.667

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

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

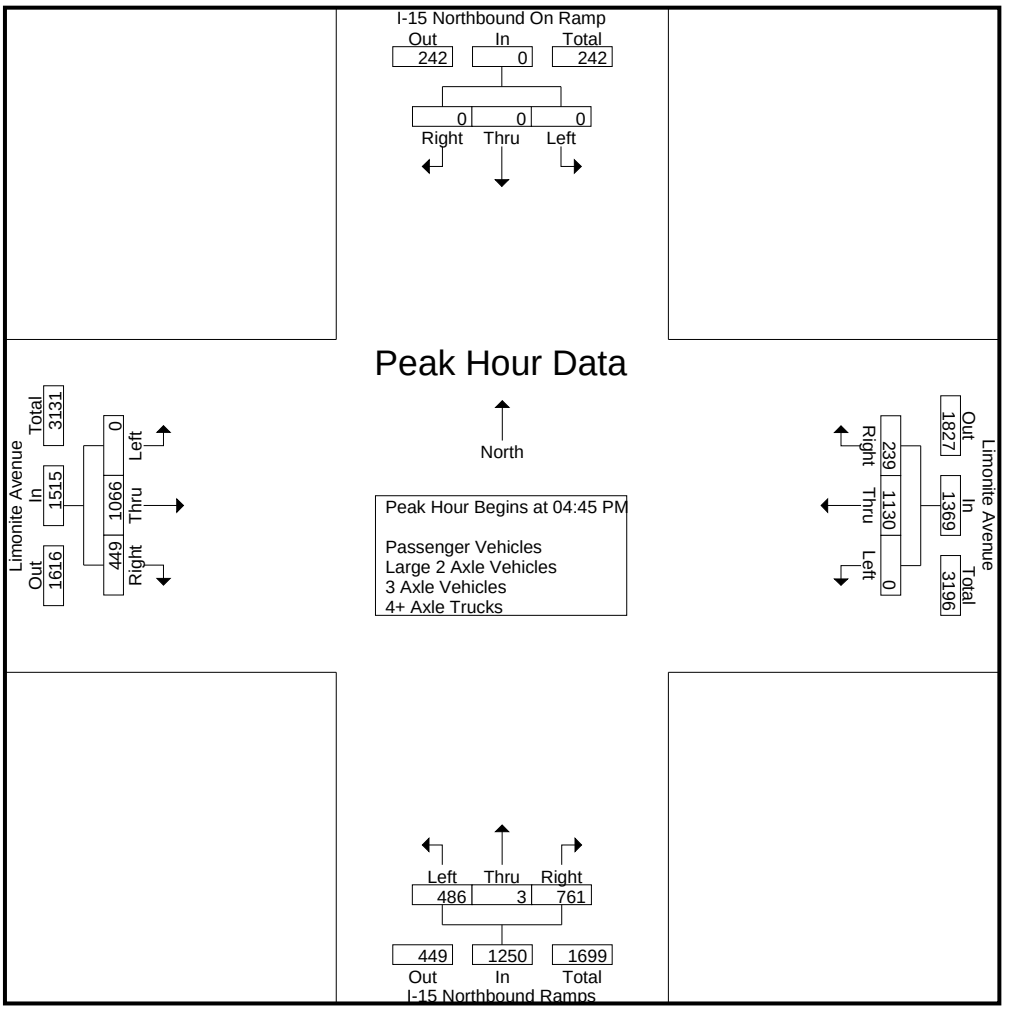
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	288	68	356	109	0	215	324	0	268	105	373	1053
04:15 PM	0	0	0	0	0	280	61	341	109	1	197	307	0	281	107	388	1036
04:30 PM	0	0	0	0	0	277	67	344	108	1	165	274	0	254	107	361	979
04:45 PM	0	0	0	0	0	287	51	338	121	1	211	333	0	273	107	380	1051
Total	0	0	0	0	0	1132	247	1379	447	3	788	1238	0	1076	426	1502	4119
05:00 PM	0	0	0	0	0	300	71	371	122	2	170	294	0	269	105	374	1039
05:15 PM	0	0	0	0	0	271	68	339	123	0	188	311	0	262	121	383	1033
05:30 PM	0	0	0	0	0	272	49	321	120	0	192	312	0	262	116	378	1011
05:45 PM	0	0	0	0	0	308	76	384	107	1	180	288	0	253	117	370	1042
Total	0	0	0	0	0	1151	264	1415	472	3	730	1205	0	1046	459	1505	4125
Grand Total	0	0	0	0	0	2283	511	2794	919	6	1518	2443	0	2122	885	3007	8244
Apprch %	0	0	0		0	81.7	18.3		37.6	0.2	62.1		0	70.6	29.4		
Total %	0	0	0	0	0	27.7	6.2	33.9	11.1	0.1	18.4	29.6	0	25.7	10.7	36.5	
Passenger Vehicles	0	0	0	0	0	2258	503	2761	902	6	1466	2374	0	2085	857	2942	8077
% Passenger Vehicles	0	0	0	0	0	98.9	98.4	98.8	98.2	100	96.6	97.2	0	98.3	96.8	97.8	98
Large 2 Axle Vehicles	0	0	0	0	0	14	5	19	9	0	40	49	0	27	12	39	107
% Large 2 Axle Vehicles	0	0	0	0	0	0.6	1	0.7	1	0	2.6	2	0	1.3	1.4	1.3	1.3
3 Axle Vehicles	0	0	0	0	0	5	2	7	1	0	7	8	0	4	3	7	22
% 3 Axle Vehicles	0	0	0	0	0	0.2	0.4	0.3	0.1	0	0.5	0.3	0	0.2	0.3	0.2	0.3
4+ Axle Trucks	0	0	0	0	0	6	1	7	7	0	5	12	0	6	13	19	38
% 4+ Axle Trucks	0	0	0	0	0	0.3	0.2	0.3	0.8	0	0.3	0.5	0	0.3	1.5	0.6	0.5

	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 04:45 PM																	
04:45 PM	0	0	0	0	0	287	51	338	121	1	**211**	**333**	0	**273**	107	380	**1051**
05:00 PM	0	0	0	0	0	**300**	**71**	**371**	122	**2**	170	294	0	269	105	374	1039
05:15 PM	0	0	0	0	0	271	68	339	**123**	0	188	311	0	262	**121**	**383**	1033
05:30 PM	0	0	0	0	0	272	49	321	120	0	192	312	0	262	116	378	1011
Total Volume	0	0	0	0	0	1130	239	1369	486	3	761	1250	0	1066	449	1515	4134
% App. Total	0	0	0		0	82.5	17.5		38.9	0.2	60.9		0	70.4	29.6		
PHF	.000	.000	.000	.000	.000	.942	.842	.923	.988	.375	.902	.938	.000	.976	.928	.989	.983

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

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	04:00 PM				05:00 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	300	71	371	121	1	**211**	**333**	0	**273**	107	380
+15 mins.	0	0	0	0	0	271	68	339	122	**2**	170	294	0	269	105	374
+30 mins.	0	0	0	0	0	272	49	321	**123**	0	188	311	0	262	**121**	**383**
+45 mins.	0	0	0	0	0	**308**	**76**	**384**	120	0	192	312	0	262	116	378
Total Volume	0	0	0	0	0	1151	264	1415	486	3	761	1250	0	1066	449	1515
% App. Total	0	0	0		0	81.3	18.7		38.9	0.2	60.9		0	70.4	29.6	
PHF	.000	.000	.000	.000	.000	.934	.868	.921	.988	.375	.902	.938	.000	.976	.928	.989

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

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles

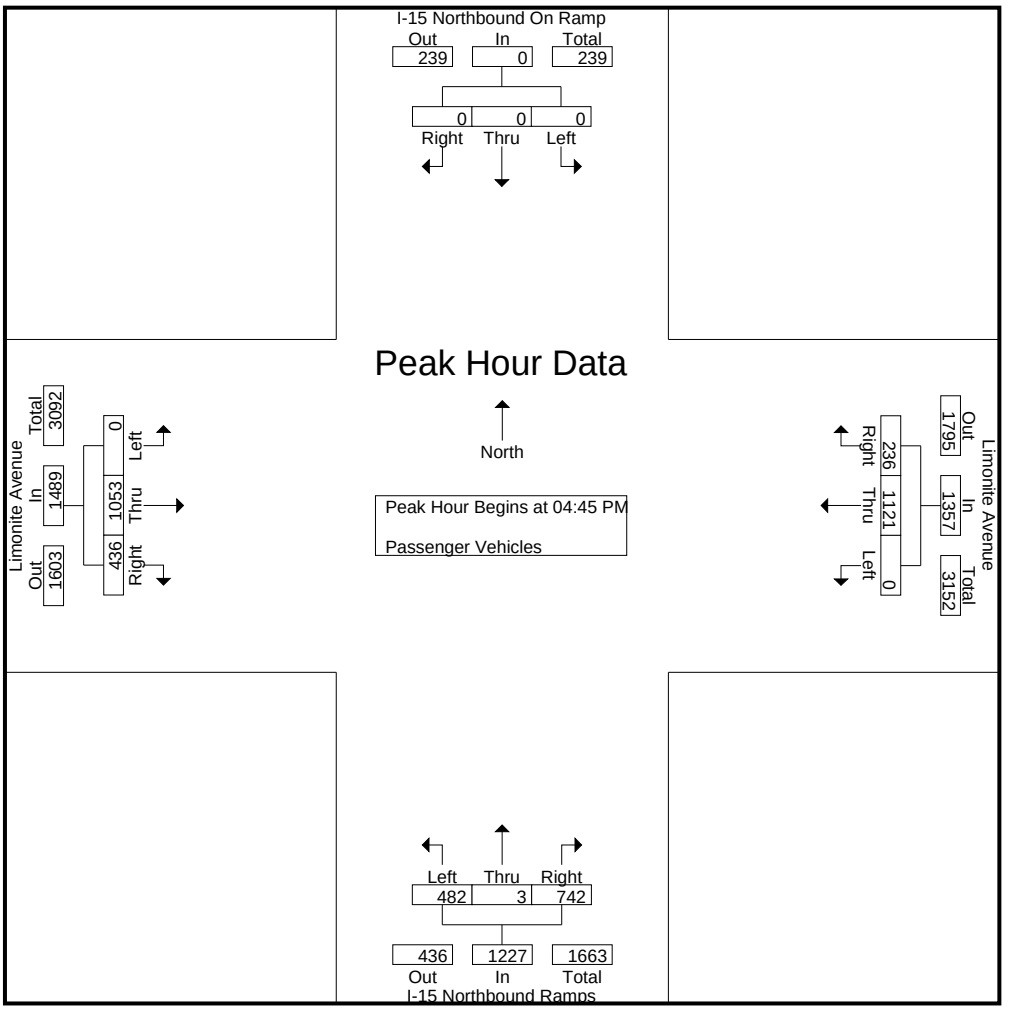
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	286	67	353	107	0	206	313	0	265	105	370	1036
04:15 PM	0	0	0	0	0	272	61	333	105	1	191	297	0	273	97	370	1000
04:30 PM	0	0	0	0	0	274	65	339	104	1	156	261	0	247	104	351	951
04:45 PM	0	0	0	0	0	286	50	336	120	1	207	328	0	266	104	370	1034
Total	0	0	0	0	0	1118	243	1361	436	3	760	1199	0	1051	410	1461	4021
05:00 PM	0	0	0	0	0	299	69	368	119	2	165	286	0	268	102	370	1024
05:15 PM	0	0	0	0	0	270	68	338	123	0	184	307	0	260	118	378	1023
05:30 PM	0	0	0	0	0	266	49	315	120	0	186	306	0	259	112	371	992
05:45 PM	0	0	0	0	0	305	74	379	104	1	171	276	0	247	115	362	1017
Total	0	0	0	0	0	1140	260	1400	466	3	706	1175	0	1034	447	1481	4056
Grand Total	0	0	0	0	0	2258	503	2761	902	6	1466	2374	0	2085	857	2942	8077
Apprch %	0	0	0		0	81.8	18.2		38	0.3	61.8		0	70.9	29.1		
Total %	0	0	0	0	0	28	6.2	34.2	11.2	0.1	18.2	29.4	0	25.8	10.6	36.4	

	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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	286	50	336	120	1	**207**	**328**	0	266	104	370	**1034**
05:00 PM	0	0	0	0	0	**299**	**69**	**368**	119	**2**	165	286	0	**268**	102	370	1024
05:15 PM	0	0	0	0	0	270	68	338	**123**	0	184	307	0	260	**118**	**378**	1023
05:30 PM	0	0	0	0	0	266	49	315	120	0	186	306	0	259	112	371	992
Total Volume	0	0	0	0	0	1121	236	1357	482	3	742	1227	0	1053	436	1489	4073
% App. Total	0	0	0		0	82.6	17.4		39.3	0.2	60.5		0	70.7	29.3		
PHF	.000	.000	.000	.000	.000	.937	.855	.922	.980	.375	.896	.935	.000	.982	.924	.985	.985

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

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	286	50	336	120	1	**207**	**328**	0	266	104	370
+15 mins.	0	0	0	0	0	**299**	**69**	**368**	119	**2**	165	286	0	**268**	102	370
+30 mins.	0	0	0	0	0	270	68	338	**123**	0	184	307	0	260	**118**	**378**
+45 mins.	0	0	0	0	0	266	49	315	120	0	186	306	0	259	112	371
Total Volume	0	0	0	0	0	1121	236	1357	482	3	742	1227	0	1053	436	1489
% App. Total	0	0	0		0	82.6	17.4		39.3	0.2	60.5		0	70.7	29.3	
PHF	.000	.000	.000	.000	.000	.937	.855	.922	.980	.375	.896	.935	.000	.982	.924	.985

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

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

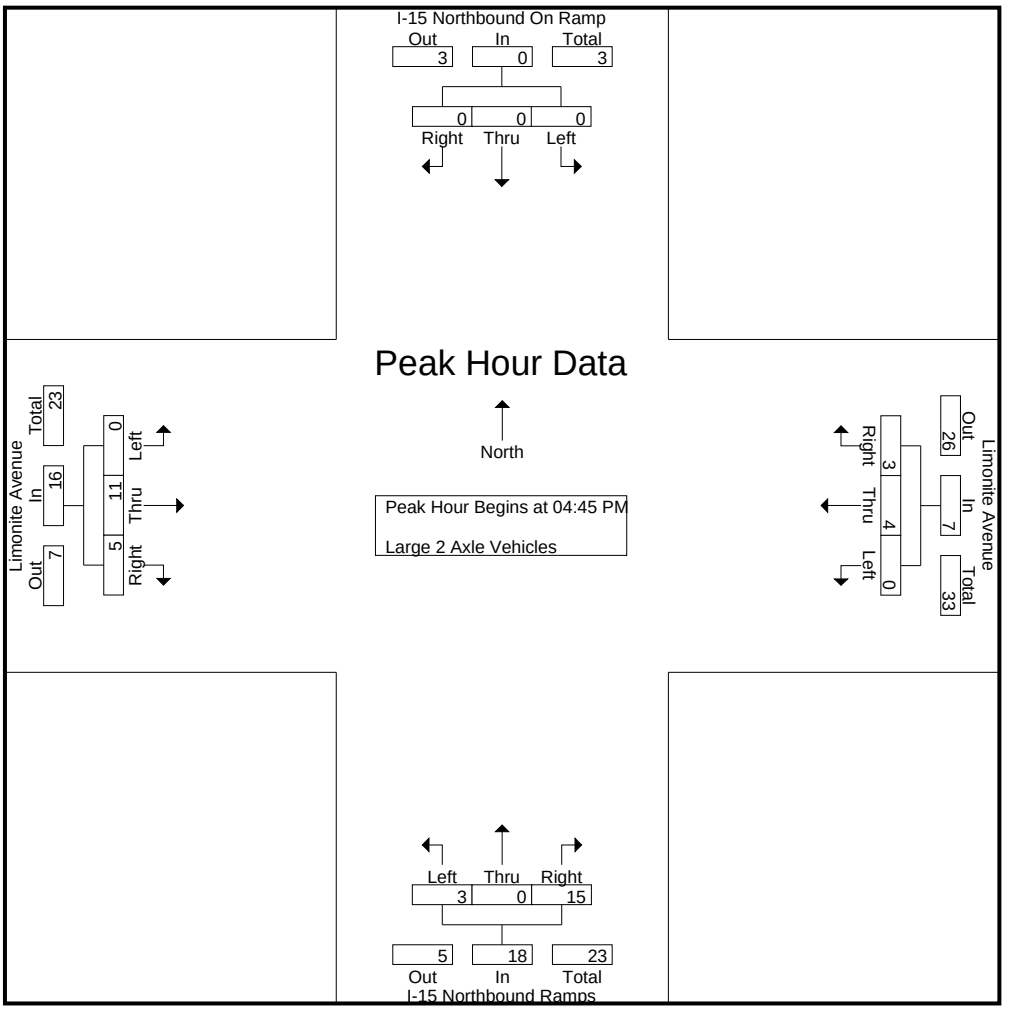
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	1	1	0	9	10	0	3	0	3	14
04:15 PM	0	0	0	0	0	5	0	5	2	0	5	7	0	4	3	7	19
04:30 PM	0	0	0	0	0	2	0	2	1	0	6	7	0	6	2	8	17
04:45 PM	0	0	0	0	0	1	1	2	1	0	3	4	0	6	0	6	12
Total	0	0	0	0	0	8	2	10	5	0	23	28	0	19	5	24	62
05:00 PM	0	0	0	0	0	0	2	2	2	0	5	7	0	0	1	1	10
05:15 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	2	2	4	8
05:30 PM	0	0	0	0	0	3	0	3	0	0	3	3	0	3	2	5	11
05:45 PM	0	0	0	0	0	3	1	4	2	0	5	7	0	3	2	5	16
Total	0	0	0	0	0	6	3	9	4	0	17	21	0	8	7	15	45
Grand Total	0	0	0	0	0	14	5	19	9	0	40	49	0	27	12	39	107
Apprch %	0	0	0		0	73.7	26.3		18.4	0	81.6		0	69.2	30.8		
Total %	0	0	0	0	0	13.1	4.7	17.8	8.4	0	37.4	45.8	0	25.2	11.2	36.4	

	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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	1	1	2	1	0	3	4	0	**6**	0	**6**	**12**
05:00 PM	0	0	0	0	0	0	**2**	2	**2**	0	**5**	**7**	0	0	1	1	10
05:15 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	2	**2**	4	8
05:30 PM	0	0	0	0	0	**3**	0	**3**	0	0	3	3	0	3	2	5	11
Total Volume	0	0	0	0	0	4	3	7	3	0	15	18	0	11	5	16	41
% App. Total	0	0	0		0	57.1	42.9		16.7	0	83.3		0	68.8	31.2		
PHF	.000	.000	.000	.000	.000	.333	.375	.583	.375	.000	.750	.643	.000	.458	.625	.667	.854

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

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

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	1	1	2	1	0	3	4	0	**6**	0	**6**
+15 mins.	0	0	0	0	0	0	**2**	2	**2**	0	**5**	**7**	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	4	4	0	2	**2**	4
+45 mins.	0	0	0	0	0	**3**	0	**3**	0	0	3	3	0	3	2	5
Total Volume	0	0	0	0	0	4	3	7	3	0	15	18	0	11	5	16
% App. Total	0	0	0		0	57.1	42.9		16.7	0	83.3		0	68.8	31.2	
PHF	.000	.000	.000	.000	.000	.333	.375	.583	.375	.000	.750	.643	.000	.458	.625	.667

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

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

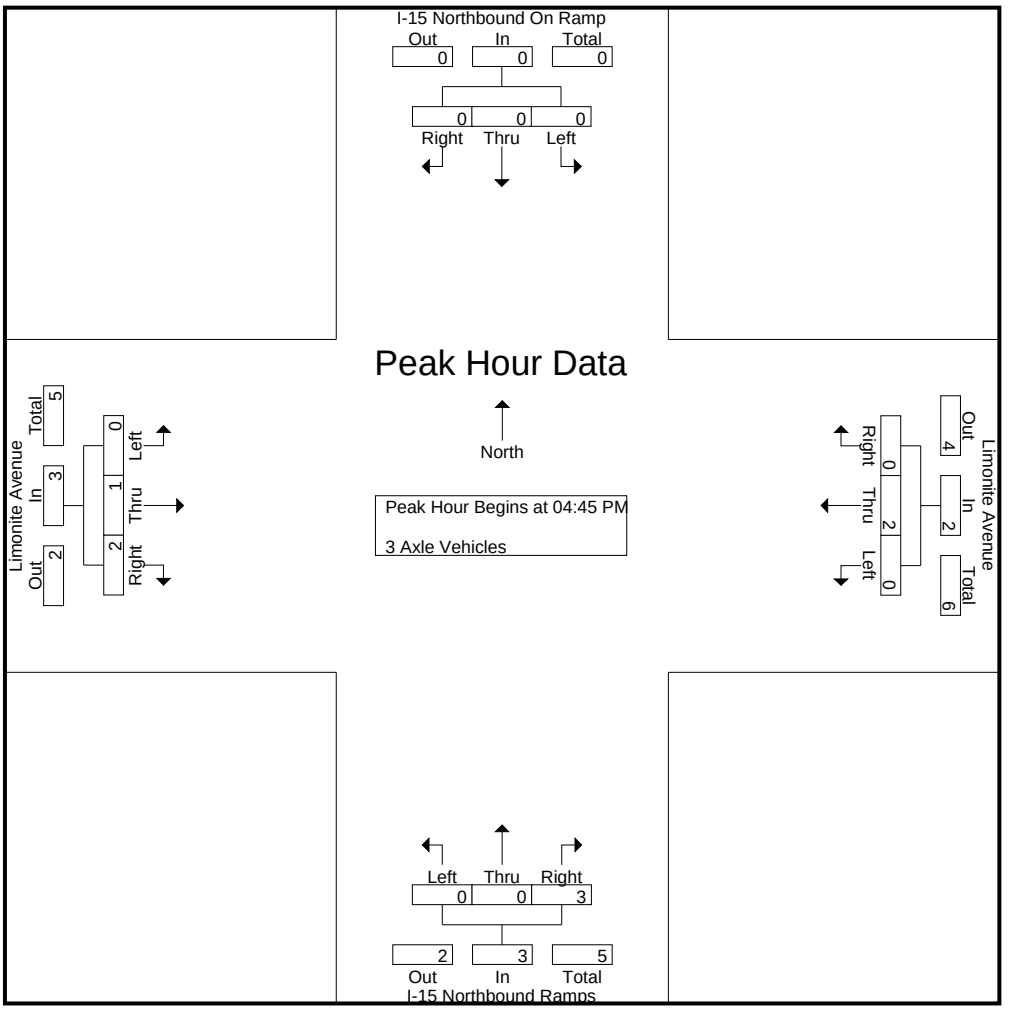
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	1	3	7
04:30 PM	0	0	0	0	0	0	1	1	0	0	1	1	0	1	0	1	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2
Total	0	0	0	0	0	3	1	4	1	0	2	3	0	3	2	5	12
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	2	0	2	0	0	2	2	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	1	1	0	0	3	3	0	0	0	0	4
Total	0	0	0	0	0	2	1	3	0	0	5	5	0	1	1	2	10
Grand Total	0	0	0	0	0	5	2	7	1	0	7	8	0	4	3	7	22
Apprch %	0	0	0		0	71.4	28.6		12.5	0	87.5		0	57.1	42.9		
Total %	0	0	0	0	0	22.7	9.1	31.8	4.5	0	31.8	36.4	0	18.2	13.6	31.8	

	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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	**1**	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	**2**	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	**2**	0	**2**	0	0	**2**	**2**	0	0	0	0	**4**
Total Volume	0	0	0	0	0	2	0	2	0	0	3	3	0	1	2	3	8
% App. Total	0	0	0		0	100	0		0	0	100		0	33.3	66.7		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.375	.375	.000	.250	.500	.375	.500

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

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	**1**	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	**2**	0	**2**	0	0	**2**	**2**	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	3	3	0	1	2	3
% App. Total	0	0	0		0	100	0		0	0	100		0	33.3	66.7	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.375	.375	.000	.250	.500	.375

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

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

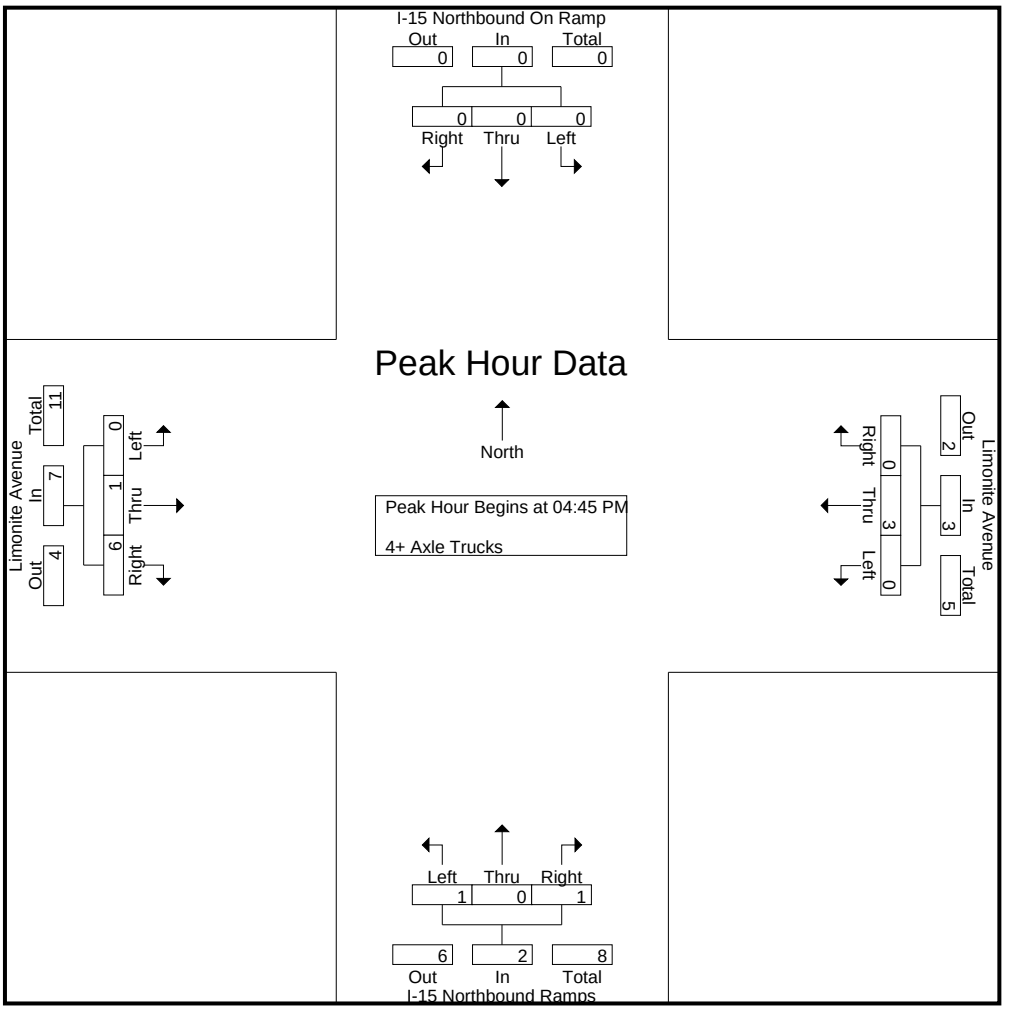
	I-15 Northbound On Ramp Southbound				Limonite Avenue Westbound				I-15 Northbound Ramps Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	1	0	1	2	0	2	6	8	10
04:30 PM	0	0	0	0	0	1	1	2	3	0	2	5	0	0	1	1	8
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3
Total	0	0	0	0	0	3	1	4	5	0	3	8	0	3	9	12	24
05:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	1	1	3
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
05:30 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	2	2	4
05:45 PM	0	0	0	0	0	0	0	0	1	0	1	2	0	3	0	3	5
Total	0	0	0	0	0	3	0	3	2	0	2	4	0	3	4	7	14
Grand Total	0	0	0	0	0	6	1	7	7	0	5	12	0	6	13	19	38
Apprch %	0	0	0		0	85.7	14.3		58.3	0	41.7		0	31.6	68.4		
Total %	0	0	0	0	0	15.8	2.6	18.4	18.4	0	13.2	31.6	0	15.8	34.2	50	

	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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**2**	**3**	3
05:00 PM	0	0	0	0	0	**1**	0	**1**	**1**	0	0	**1**	0	0	1	1	3
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
05:30 PM	0	0	0	0	0	1	0	1	0	0	**1**	1	0	0	2	2	**4**
Total Volume	0	0	0	0	0	3	0	3	1	0	1	2	0	1	6	7	12
% App. Total	0	0	0		0	100	0		50	0	50		0	14.3	85.7		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.250	.000	.250	.500	.000	.250	.750	.583	.750

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PO Box 1178
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City of Jurupa Valley
N/S: I-15 Northbound Ramps
E/W: Limonite Avenue
Weather: Clear

File Name : 02_JVY_15N_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**2**	**3**
+15 mins.	0	0	0	0	0	**1**	0	**1**	**1**	0	0	**1**	0	0	1	1
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	1	0	1	0	0	**1**	1	0	0	2	2
Total Volume	0	0	0	0	0	3	0	3	1	0	1	2	0	1	6	7
% App. Total	0	0	0		0	100	0		50	0	50		0	14.3	85.7	
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.250	.000	.250	.500	.000	.250	.750	.583

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

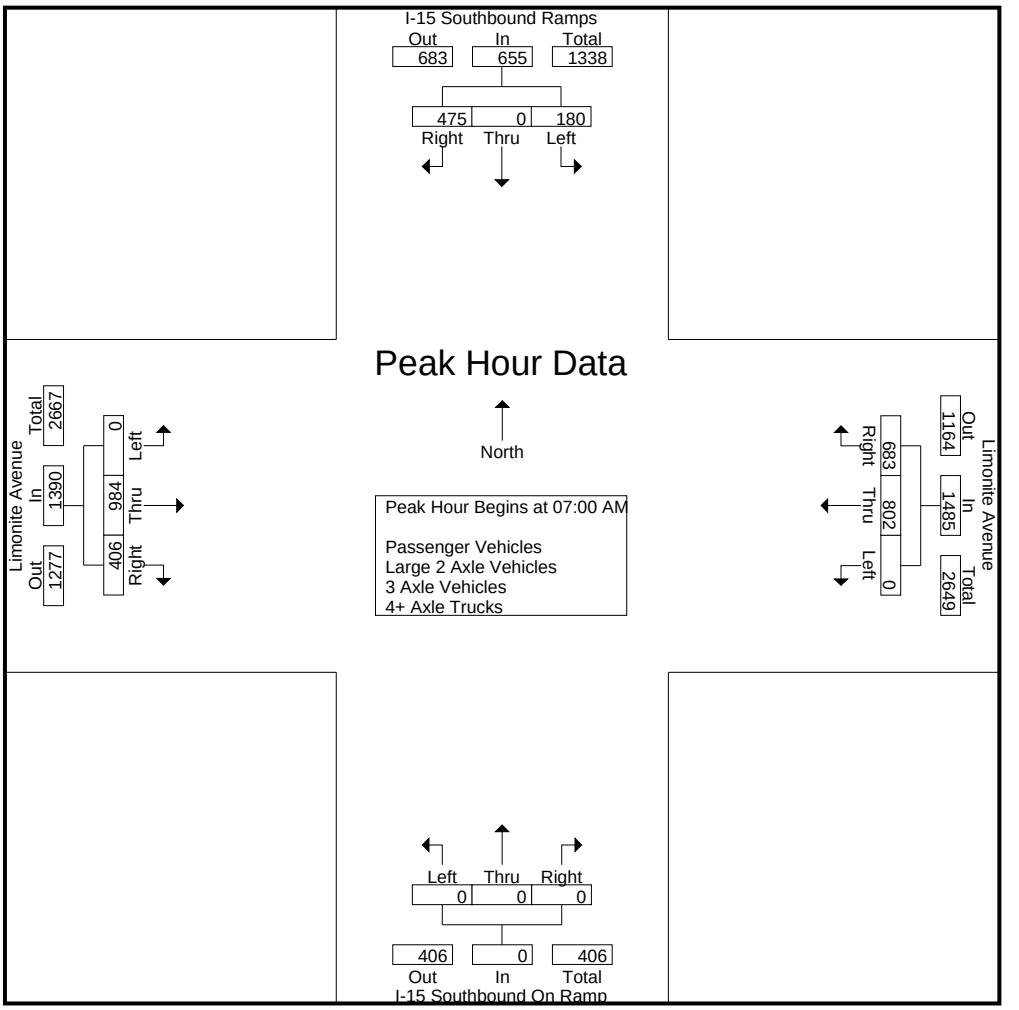
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	59	0	113	172	0	157	183	340	0	0	0	0	0	249	112	361	873
07:15 AM	43	0	114	157	0	201	174	375	0	0	0	0	0	260	105	365	897
07:30 AM	38	0	121	159	0	204	180	384	0	0	0	0	0	248	89	337	880
07:45 AM	40	0	127	167	0	240	146	386	0	0	0	0	0	227	100	327	880
Total	180	0	475	655	0	802	683	1485	0	0	0	0	0	984	406	1390	3530
08:00 AM	41	0	143	184	0	232	111	343	0	0	0	0	0	194	111	305	832
08:15 AM	44	0	133	177	0	204	125	329	0	0	0	0	0	239	100	339	845
08:30 AM	46	0	130	176	0	183	115	298	0	0	0	0	0	239	113	352	826
08:45 AM	44	0	132	176	0	202	108	310	0	0	0	0	0	244	85	329	815
Total	175	0	538	713	0	821	459	1280	0	0	0	0	0	916	409	1325	3318
Grand Total	355	0	1013	1368	0	1623	1142	2765	0	0	0	0	0	1900	815	2715	6848
Apprch %	26	0	74		0	58.7	41.3		0	0	0		0	70	30		
Total %	5.2	0	14.8	20	0	23.7	16.7	40.4	0	0	0	0	0	27.7	11.9	39.6	
Passenger Vehicles	333	0	933	1266	0	1545	1082	2627	0	0	0	0	0	1823	764	2587	6480
% Passenger Vehicles	93.8	0	92.1	92.5	0	95.2	94.7	95	0	0	0	0	0	95.9	93.7	95.3	94.6
Large 2 Axle Vehicles	16	0	29	45	0	56	41	97	0	0	0	0	0	48	33	81	223
% Large 2 Axle Vehicles	4.5	0	2.9	3.3	0	3.5	3.6	3.5	0	0	0	0	0	2.5	4	3	3.3
3 Axle Vehicles	4	0	25	29	0	9	9	18	0	0	0	0	0	8	5	13	60
% 3 Axle Vehicles	1.1	0	2.5	2.1	0	0.6	0.8	0.7	0	0	0	0	0	0.4	0.6	0.5	0.9
4+ Axle Trucks	2	0	26	28	0	13	10	23	0	0	0	0	0	21	13	34	85
% 4+ Axle Trucks	0.6	0	2.6	2	0	0.8	0.9	0.8	0	0	0	0	0	1.1	1.6	1.3	1.2

	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	**59**	0	113	**172**	0	157	**183**	340	0	0	0	0	0	249	**112**	361	873
07:15 AM	43	0	114	157	0	201	174	375	0	0	0	0	0	**260**	105	**365**	**897**
07:30 AM	38	0	121	159	0	204	180	384	0	0	0	0	0	248	89	337	880
07:45 AM	40	0	**127**	167	0	**240**	146	**386**	0	0	0	0	0	227	100	327	880
Total Volume	180	0	475	655	0	802	683	1485	0	0	0	0	0	984	406	1390	3530
% App. Total	27.5	0	72.5		0	54	46		0	0	0		0	70.8	29.2		
PHF	.763	.000	.935	.952	.000	.835	.933	.962	.000	.000	.000	.000	.000	.946	.906	.952	.984

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
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.	41	0	**143**	**184**	0	201	174	375	0	0	0	0	0	249	**112**	361
+15 mins.	44	0	133	177	0	204	**180**	384	0	0	0	0	0	**260**	105	**365**
+30 mins.	**46**	0	130	176	0	**240**	146	**386**	0	0	0	0	0	248	89	337
+45 mins.	44	0	132	176	0	232	111	343	0	0	0	0	0	227	100	327
Total Volume	175	0	538	713	0	877	611	1488	0	0	0	0	0	984	406	1390
% App. Total	24.5	0	75.5		0	58.9	41.1		0	0	0		0	70.8	29.2	
PHF	.951	.000	.941	.969	.000	.914	.849	.964	.000	.000	.000	.000	.000	.946	.906	.952

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
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Groups Printed- Passenger Vehicles

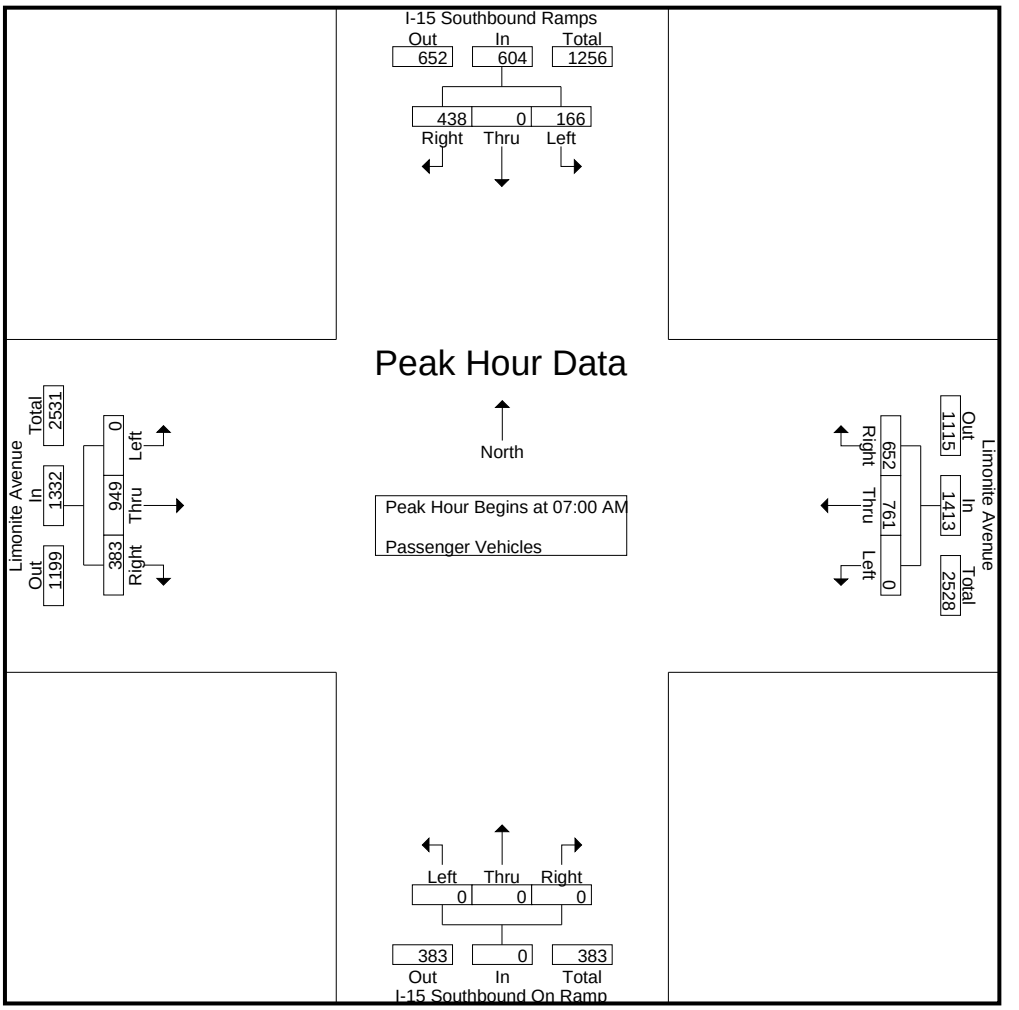
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	55	0	102	157	0	147	171	318	0	0	0	0	0	240	108	348	823
07:15 AM	40	0	104	144	0	189	165	354	0	0	0	0	0	248	97	345	843
07:30 AM	34	0	107	141	0	194	175	369	0	0	0	0	0	242	85	327	837
07:45 AM	37	0	125	162	0	231	141	372	0	0	0	0	0	219	93	312	846
Total	166	0	438	604	0	761	652	1413	0	0	0	0	0	949	383	1332	3349
08:00 AM	37	0	133	170	0	223	108	331	0	0	0	0	0	187	101	288	789
08:15 AM	42	0	120	162	0	195	118	313	0	0	0	0	0	227	96	323	798
08:30 AM	45	0	121	166	0	173	106	279	0	0	0	0	0	224	105	329	774
08:45 AM	43	0	121	164	0	193	98	291	0	0	0	0	0	236	79	315	770
Total	167	0	495	662	0	784	430	1214	0	0	0	0	0	874	381	1255	3131
Grand Total	333	0	933	1266	0	1545	1082	2627	0	0	0	0	0	1823	764	2587	6480
Apprch %	26.3	0	73.7		0	58.8	41.2		0	0	0		0	70.5	29.5		
Total %	5.1	0	14.4	19.5	0	23.8	16.7	40.5	0	0	0	0	0	28.1	11.8	39.9	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**55**	0	102	157	0	147	171	318	0	0	0	0	0	240	**108**	**348**	823
07:15 AM	40	0	104	144	0	189	165	354	0	0	0	0	0	**248**	97	345	843
07:30 AM	34	0	107	141	0	194	**175**	369	0	0	0	0	0	242	85	327	837
07:45 AM	37	0	**125**	**162**	0	**231**	141	**372**	0	0	0	0	0	219	93	312	**846**
Total Volume	166	0	438	604	0	761	652	1413	0	0	0	0	0	949	383	1332	3349
% App. Total	27.5	0	72.5		0	53.9	46.1		0	0	0		0	71.2	28.8		
PHF	.755	.000	.876	.932	.000	.824	.931	.950	.000	.000	.000	.000	.000	.957	.887	.957	.990

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

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**55**	0	102	157	0	147	171	318	0	0	0	0	0	240	**108**	**348**
+15 mins.	40	0	104	144	0	189	165	354	0	0	0	0	0	**248**	97	345
+30 mins.	34	0	107	141	0	194	**175**	369	0	0	0	0	0	242	85	327
+45 mins.	37	0	**125**	**162**	0	**231**	141	**372**	0	0	0	0	0	219	93	312
Total Volume	166	0	438	604	0	761	652	1413	0	0	0	0	0	949	383	1332
% App. Total	27.5	0	72.5		0	53.9	46.1		0	0	0		0	71.2	28.8	
PHF	.755	.000	.876	.932	.000	.824	.931	.950	.000	.000	.000	.000	.000	.957	.887	.957

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

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

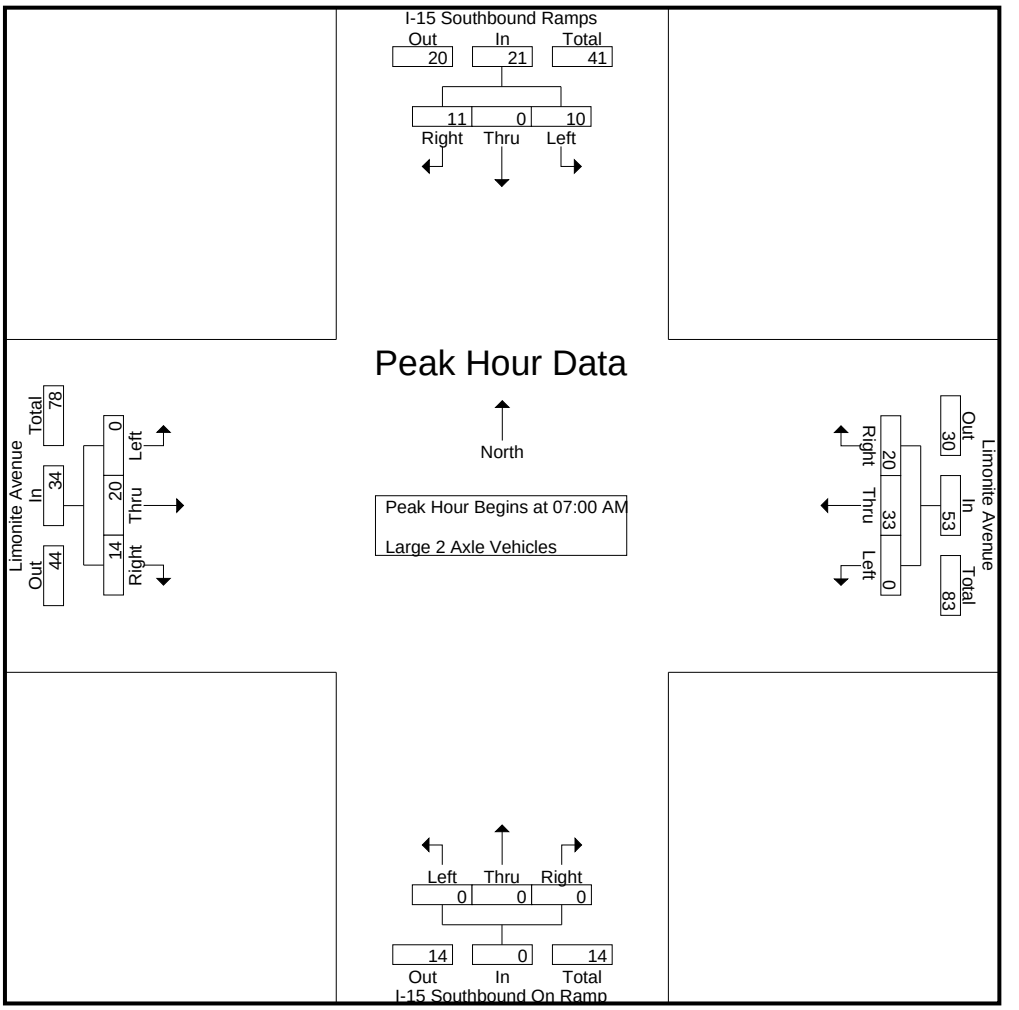
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	2	4	0	9	7	16	0	0	0	0	0	6	2	8	28
07:15 AM	2	0	3	5	0	9	7	16	0	0	0	0	0	6	5	11	32
07:30 AM	3	0	5	8	0	8	3	11	0	0	0	0	0	4	2	6	25
07:45 AM	3	0	1	4	0	7	3	10	0	0	0	0	0	4	5	9	23
Total	10	0	11	21	0	33	20	53	0	0	0	0	0	20	14	34	108
08:00 AM	2	0	3	5	0	6	2	8	0	0	0	0	0	4	7	11	24
08:15 AM	2	0	7	9	0	7	3	10	0	0	0	0	0	9	3	12	31
08:30 AM	1	0	5	6	0	6	8	14	0	0	0	0	0	7	5	12	32
08:45 AM	1	0	3	4	0	4	8	12	0	0	0	0	0	8	4	12	28
Total	6	0	18	24	0	23	21	44	0	0	0	0	0	28	19	47	115
Grand Total	16	0	29	45	0	56	41	97	0	0	0	0	0	48	33	81	223
Apprch %	35.6	0	64.4		0	57.7	42.3		0	0	0		0	59.3	40.7		
Total %	7.2	0	13	20.2	0	25.1	18.4	43.5	0	0	0	0	0	21.5	14.8	36.3	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	0	2	4	0	**9**	**7**	**16**	0	0	0	0	0	**6**	2	8	28
07:15 AM	2	0	3	5	0	9	7	16	0	0	0	0	0	6	**5**	**11**	**32**
07:30 AM	**3**	0	**5**	**8**	0	8	3	11	0	0	0	0	0	4	2	6	25
07:45 AM	3	0	1	4	0	7	3	10	0	0	0	0	0	4	5	9	23
Total Volume	10	0	11	21	0	33	20	53	0	0	0	0	0	20	14	34	108
% App. Total	47.6	0	52.4		0	62.3	37.7		0	0	0		0	58.8	41.2		
PHF	.833	.000	.550	.656	.000	.917	.714	.828	.000	.000	.000	.000	.000	.833	.700	.773	.844

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

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	2	0	2	4	0	**9**	**7**	**16**	0	0	0	0	0	**6**	2	8
+15 mins.	2	0	3	5	0	9	7	16	0	0	0	0	0	6	**5**	**11**
+30 mins.	**3**	0	**5**	**8**	0	8	3	11	0	0	0	0	0	4	2	6
+45 mins.	3	0	1	4	0	7	3	10	0	0	0	0	0	4	5	9
Total Volume	10	0	11	21	0	33	20	53	0	0	0	0	0	20	14	34
% App. Total	47.6	0	52.4		0	62.3	37.7		0	0	0		0	58.8	41.2	
PHF	.833	.000	.550	.656	.000	.917	.714	.828	.000	.000	.000	.000	.000	.833	.700	.773

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

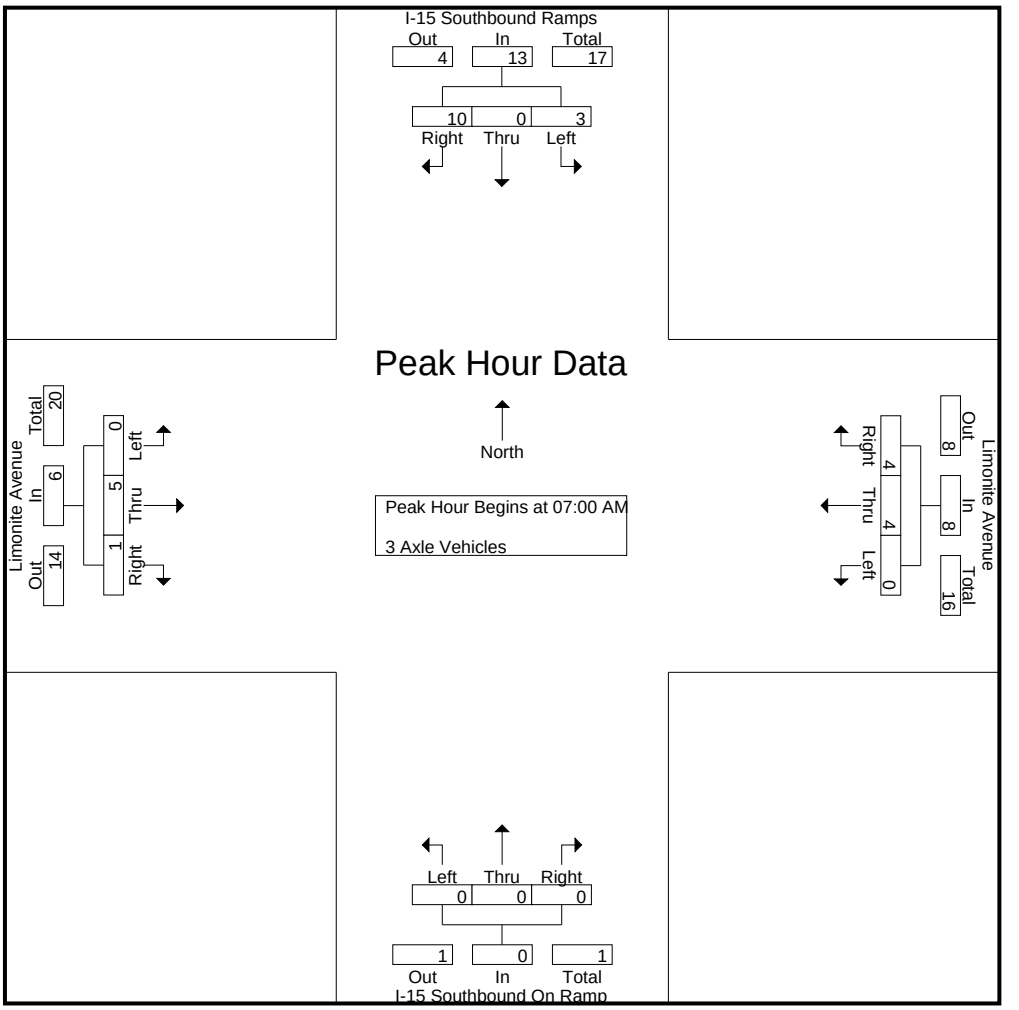
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	3	5	0	1	0	1	0	0	0	0	0	1	0	1	7
07:15 AM	0	0	4	4	0	1	1	2	0	0	0	0	0	2	0	2	8
07:30 AM	1	0	3	4	0	1	2	3	0	0	0	0	0	1	0	1	8
07:45 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	2	4
Total	3	0	10	13	0	4	4	8	0	0	0	0	0	5	1	6	27
08:00 AM	1	0	3	4	0	0	1	1	0	0	0	0	0	2	2	4	9
08:15 AM	0	0	4	4	0	2	2	4	0	0	0	0	0	0	0	0	8
08:30 AM	0	0	2	2	0	1	0	1	0	0	0	0	0	1	1	2	5
08:45 AM	0	0	6	6	0	2	2	4	0	0	0	0	0	0	1	1	11
Total	1	0	15	16	0	5	5	10	0	0	0	0	0	3	4	7	33
Grand Total	4	0	25	29	0	9	9	18	0	0	0	0	0	8	5	13	60
Apprch %	13.8	0	86.2		0	50	50		0	0	0		0	61.5	38.5		
Total %	6.7	0	41.7	48.3	0	15	15	30	0	0	0	0	0	13.3	8.3	21.7	

	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 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	0	3	**5**	0	**1**	0	1	0	0	0	0	0	1	0	1	7
07:15 AM	0	0	**4**	4	0	1	1	2	0	0	0	0	0	**2**	0	**2**	**8**
07:30 AM	1	0	3	4	0	1	**2**	**3**	0	0	0	0	0	1	0	1	8
07:45 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	**1**	2	4
Total Volume	3	0	10	13	0	4	4	8	0	0	0	0	0	5	1	6	27
% App. Total	23.1	0	76.9		0	50	50		0	0	0		0	83.3	16.7		
PHF	.375	.000	.625	.650	.000	1.00	.500	.667	.000	.000	.000	.000	.000	.625	.250	.750	.844

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

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**2**	0	3	**5**	0	**1**	0	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	**4**	4	0	1	1	2	0	0	0	0	0	**2**	0	**2**
+30 mins.	1	0	3	4	0	1	**2**	**3**	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	1	1	2	0	0	0	0	0	1	**1**	2
Total Volume	3	0	10	13	0	4	4	8	0	0	0	0	0	5	1	6
% App. Total	23.1	0	76.9		0	50	50		0	0	0		0	83.3	16.7	
PHF	.375	.000	.625	.650	.000	1.000	.500	.667	.000	.000	.000	.000	.000	.625	.250	.750

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(951)268-6268

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

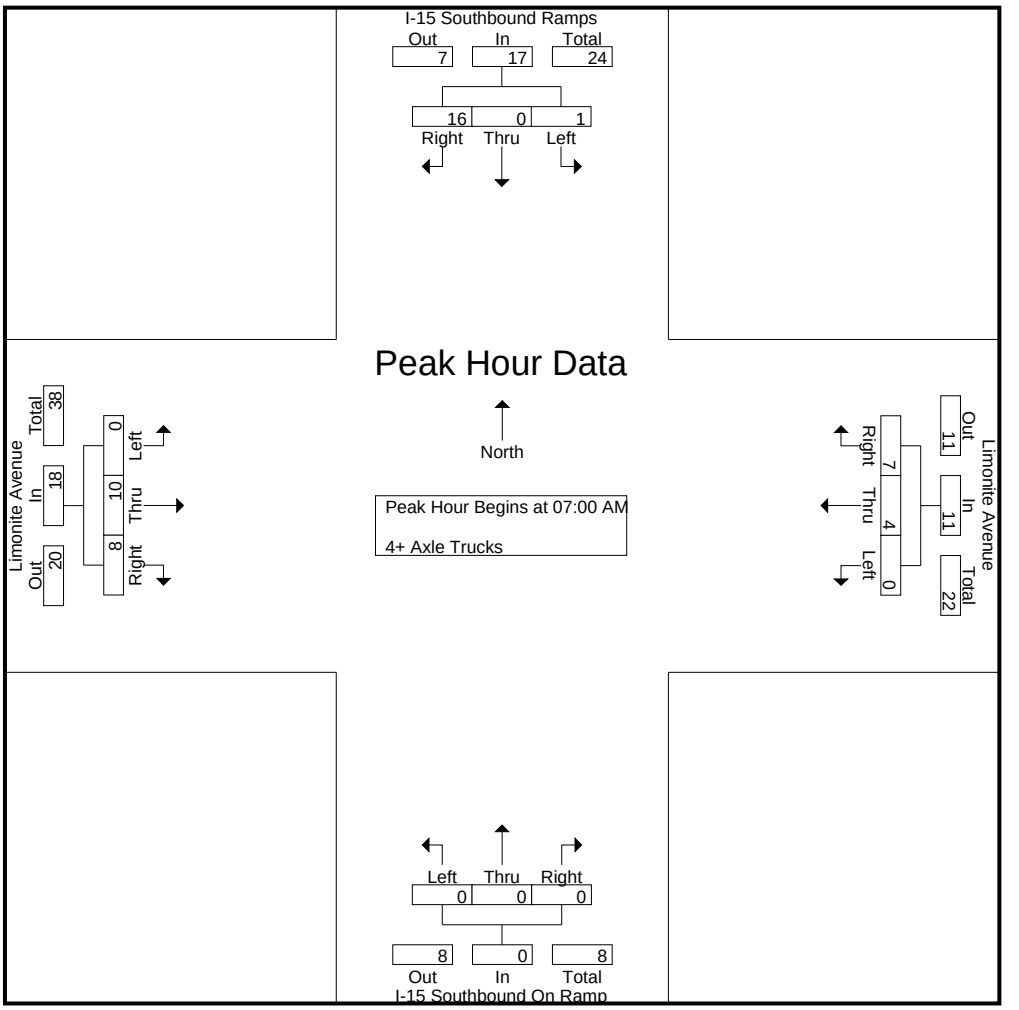
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	6	6	0	0	5	5	0	0	0	0	0	2	2	4	15
07:15 AM	1	0	3	4	0	2	1	3	0	0	0	0	0	4	3	7	14
07:30 AM	0	0	6	6	0	1	0	1	0	0	0	0	0	1	2	3	10
07:45 AM	0	0	1	1	0	1	1	2	0	0	0	0	0	3	1	4	7
Total	1	0	16	17	0	4	7	11	0	0	0	0	0	10	8	18	46
08:00 AM	1	0	4	5	0	3	0	3	0	0	0	0	0	1	1	2	10
08:15 AM	0	0	2	2	0	0	2	2	0	0	0	0	0	3	1	4	8
08:30 AM	0	0	2	2	0	3	1	4	0	0	0	0	0	7	2	9	15
08:45 AM	0	0	2	2	0	3	0	3	0	0	0	0	0	0	1	1	6
Total	1	0	10	11	0	9	3	12	0	0	0	0	0	11	5	16	39
Grand Total	2	0	26	28	0	13	10	23	0	0	0	0	0	21	13	34	85
Apprch %	7.1	0	92.9		0	56.5	43.5		0	0	0		0	61.8	38.2		
Total %	2.4	0	30.6	32.9	0	15.3	11.8	27.1	0	0	0	0	0	24.7	15.3	40	

	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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**6**	**6**	0	0	**5**	**5**	0	0	0	0	0	2	2	4	**15**
07:15 AM	**1**	0	3	4	0	**2**	1	3	0	0	0	0	0	**4**	**3**	**7**	14
07:30 AM	0	0	6	6	0	1	0	1	0	0	0	0	0	1	2	3	10
07:45 AM	0	0	1	1	0	1	1	2	0	0	0	0	0	3	1	4	7
Total Volume	1	0	16	17	0	4	7	11	0	0	0	0	0	10	8	18	46
% App. Total	5.9	0	94.1		0	36.4	63.6		0	0	0		0	55.6	44.4		
PHF	.250	.000	.667	.708	.000	.500	.350	.550	.000	.000	.000	.000	.000	.625	.667	.643	.767

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

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

File Name : 03_JVY_15S_Limo AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	**6**	**6**	0	0	**5**	**5**	0	0	0	0	0	2	2	4
+15 mins.	**1**	0	3	4	0	**2**	1	3	0	0	0	0	0	**4**	**3**	**7**
+30 mins.	0	0	6	6	0	1	0	1	0	0	0	0	0	1	2	3
+45 mins.	0	0	1	1	0	1	1	2	0	0	0	0	0	3	1	4
Total Volume	1	0	16	17	0	4	7	11	0	0	0	0	0	10	8	18
% App. Total	5.9	0	94.1		0	36.4	63.6		0	0	0		0	55.6	44.4	
PHF	.250	.000	.667	.708	.000	.500	.350	.550	.000	.000	.000	.000	.000	.625	.667	.643

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

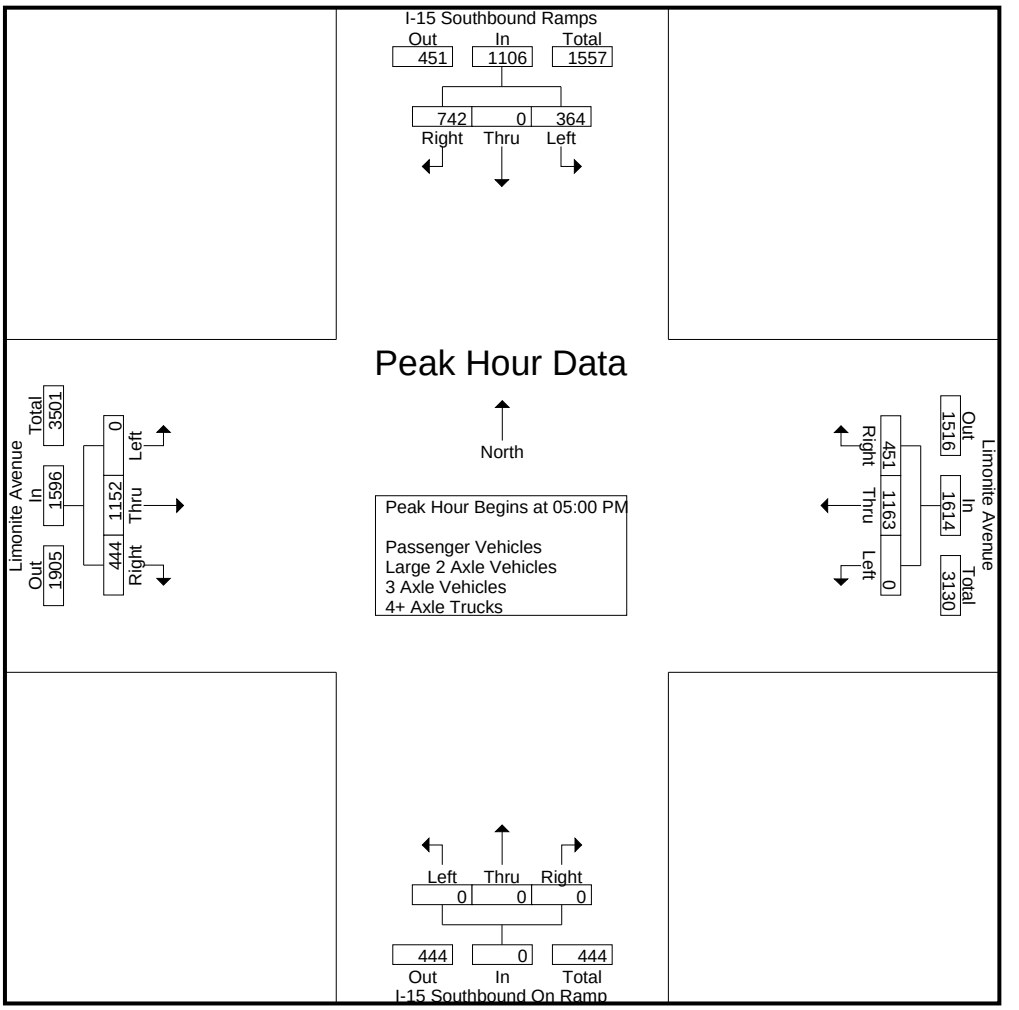
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	58	0	151	209	0	278	118	396	0	0	0	0	0	322	123	445	1050
04:15 PM	73	0	166	239	0	275	116	391	0	0	0	0	0	324	116	440	1070
04:30 PM	82	0	158	240	0	264	122	386	0	0	0	0	0	279	105	384	1010
04:45 PM	83	0	160	243	0	274	128	402	0	0	0	0	0	297	120	417	1062
Total	296	0	635	931	0	1091	484	1575	0	0	0	0	0	1222	464	1686	4192
05:00 PM	87	0	145	232	0	294	119	413	0	0	0	0	0	286	96	382	1027
05:15 PM	89	0	220	309	0	297	108	405	0	0	0	0	0	294	104	398	1112
05:30 PM	94	0	191	285	0	283	98	381	0	0	0	0	0	291	115	406	1072
05:45 PM	94	0	186	280	0	289	126	415	0	0	0	0	0	281	129	410	1105
Total	364	0	742	1106	0	1163	451	1614	0	0	0	0	0	1152	444	1596	4316
Grand Total	660	0	1377	2037	0	2254	935	3189	0	0	0	0	0	2374	908	3282	8508
Apprch %	32.4	0	67.6		0	70.7	29.3		0	0	0		0	72.3	27.7		
Total %	7.8	0	16.2	23.9	0	26.5	11	37.5	0	0	0	0	0	27.9	10.7	38.6	
Passenger Vehicles	641	0	1357	1998	0	2229	915	3144	0	0	0	0	0	2316	889	3205	8347
% Passenger Vehicles	97.1	0	98.5	98.1	0	98.9	97.9	98.6	0	0	0	0	0	97.6	97.9	97.7	98.1
Large 2 Axle Vehicles	10	0	9	19	0	18	10	28	0	0	0	0	0	37	15	52	99
% Large 2 Axle Vehicles	1.5	0	0.7	0.9	0	0.8	1.1	0.9	0	0	0	0	0	1.6	1.7	1.6	1.2
3 Axle Vehicles	2	0	2	4	0	1	4	5	0	0	0	0	0	6	3	9	18
% 3 Axle Vehicles	0.3	0	0.1	0.2	0	0	0.4	0.2	0	0	0	0	0	0.3	0.3	0.3	0.2
4+ Axle Trucks	7	0	9	16	0	6	6	12	0	0	0	0	0	15	1	16	44
% 4+ Axle Trucks	1.1	0	0.7	0.8	0	0.3	0.6	0.4	0	0	0	0	0	0.6	0.1	0.5	0.5

	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	87	0	145	232	0	294	119	413	0	0	0	0	0	286	96	382	1027
05:15 PM	89	0	**220**	**309**	0	**297**	108	405	0	0	0	0	0	**294**	104	398	**1112**
05:30 PM	**94**	0	191	285	0	283	98	381	0	0	0	0	0	291	115	406	1072
05:45 PM	94	0	186	280	0	289	**126**	**415**	0	0	0	0	0	281	**129**	**410**	1105
Total Volume	364	0	742	1106	0	1163	451	1614	0	0	0	0	0	1152	444	1596	4316
% App. Total	32.9	0	67.1		0	72.1	27.9		0	0	0		0	72.2	27.8		
PHF	.968	.000	.843	.895	.000	.979	.895	.972	.000	.000	.000	.000	.000	.980	.860	.973	.970

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

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
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				04:00 PM			
+0 mins.	87	0	145	232	0	294	119	413	0	0	0	0	0	322	**123**	**445**
+15 mins.	89	0	**220**	**309**	0	**297**	108	405	0	0	0	0	0	**324**	116	440
+30 mins.	**94**	0	191	285	0	283	98	381	0	0	0	0	0	279	105	384
+45 mins.	94	0	186	280	0	289	**126**	**415**	0	0	0	0	0	297	120	417
Total Volume	364	0	742	1106	0	1163	451	1614	0	0	0	0	0	1222	464	1686
% App. Total	32.9	0	67.1		0	72.1	27.9		0	0	0		0	72.5	27.5	
PHF	.968	.000	.843	.895	.000	.979	.895	.972	.000	.000	.000	.000	.000	.943	.943	.947

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles

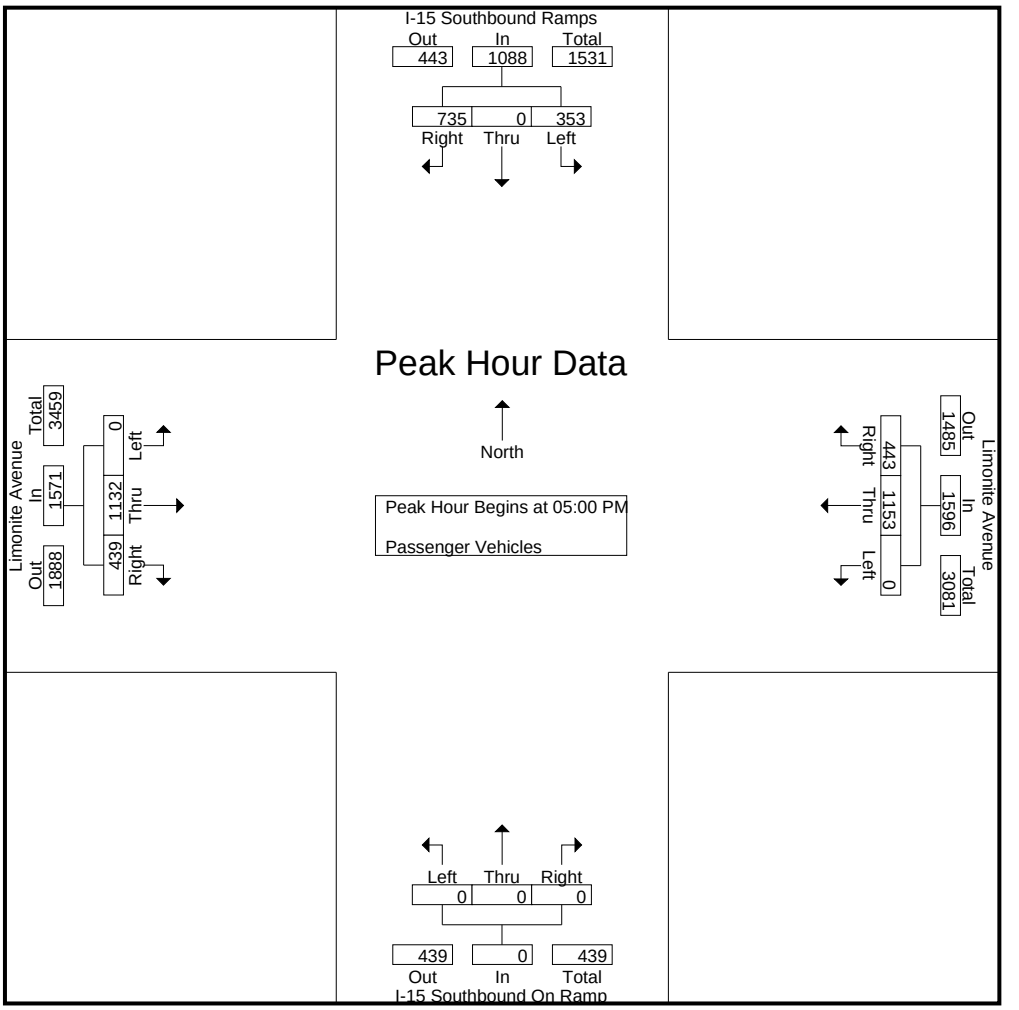
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	57	0	146	203	0	276	116	392	0	0	0	0	0	319	120	439	1034
04:15 PM	72	0	163	235	0	268	111	379	0	0	0	0	0	305	111	416	1030
04:30 PM	78	0	157	235	0	261	117	378	0	0	0	0	0	272	102	374	987
04:45 PM	81	0	156	237	0	271	128	399	0	0	0	0	0	288	117	405	1041
Total	288	0	622	910	0	1076	472	1548	0	0	0	0	0	1184	450	1634	4092
05:00 PM	84	0	144	228	0	291	118	409	0	0	0	0	0	283	95	378	1015
05:15 PM	88	0	218	306	0	296	107	403	0	0	0	0	0	290	101	391	1100
05:30 PM	91	0	189	280	0	282	95	377	0	0	0	0	0	285	115	400	1057
05:45 PM	90	0	184	274	0	284	123	407	0	0	0	0	0	274	128	402	1083
Total	353	0	735	1088	0	1153	443	1596	0	0	0	0	0	1132	439	1571	4255
Grand Total	641	0	1357	1998	0	2229	915	3144	0	0	0	0	0	2316	889	3205	8347
Apprch %	32.1	0	67.9		0	70.9	29.1		0	0	0		0	72.3	27.7		
Total %	7.7	0	16.3	23.9	0	26.7	11	37.7	0	0	0	0	0	27.7	10.7	38.4	

	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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	84	0	144	228	0	291	118	**409**	0	0	0	0	0	283	95	378	1015
05:15 PM	88	0	**218**	**306**	0	**296**	107	403	0	0	0	0	0	**290**	101	391	**1100**
05:30 PM	**91**	0	189	280	0	282	95	377	0	0	0	0	0	285	115	400	1057
05:45 PM	90	0	184	274	0	284	**123**	407	0	0	0	0	0	274	**128**	**402**	1083
Total Volume	353	0	735	1088	0	1153	443	1596	0	0	0	0	0	1132	439	1571	4255
% App. Total	32.4	0	67.6		0	72.2	27.8		0	0	0		0	72.1	27.9		
PHF	.970	.000	.843	.889	.000	.974	.900	.976	.000	.000	.000	.000	.000	.976	.857	.977	.967

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

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 05:00 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.	84	0	144	228	0	291	118	**409**	0	0	0	0	0	283	95	378
+15 mins.	88	0	**218**	**306**	0	**296**	107	403	0	0	0	0	0	**290**	101	391
+30 mins.	**91**	0	189	280	0	282	95	377	0	0	0	0	0	285	115	400
+45 mins.	90	0	184	274	0	284	**123**	407	0	0	0	0	0	274	**128**	**402**
Total Volume	353	0	735	1088	0	1153	443	1596	0	0	0	0	0	1132	439	1571
% App. Total	32.4	0	67.6		0	72.2	27.8		0	0	0		0	72.1	27.9	
PHF	.970	.000	.843	.889	.000	.974	.900	.976	.000	.000	.000	.000	.000	.976	.857	.977

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

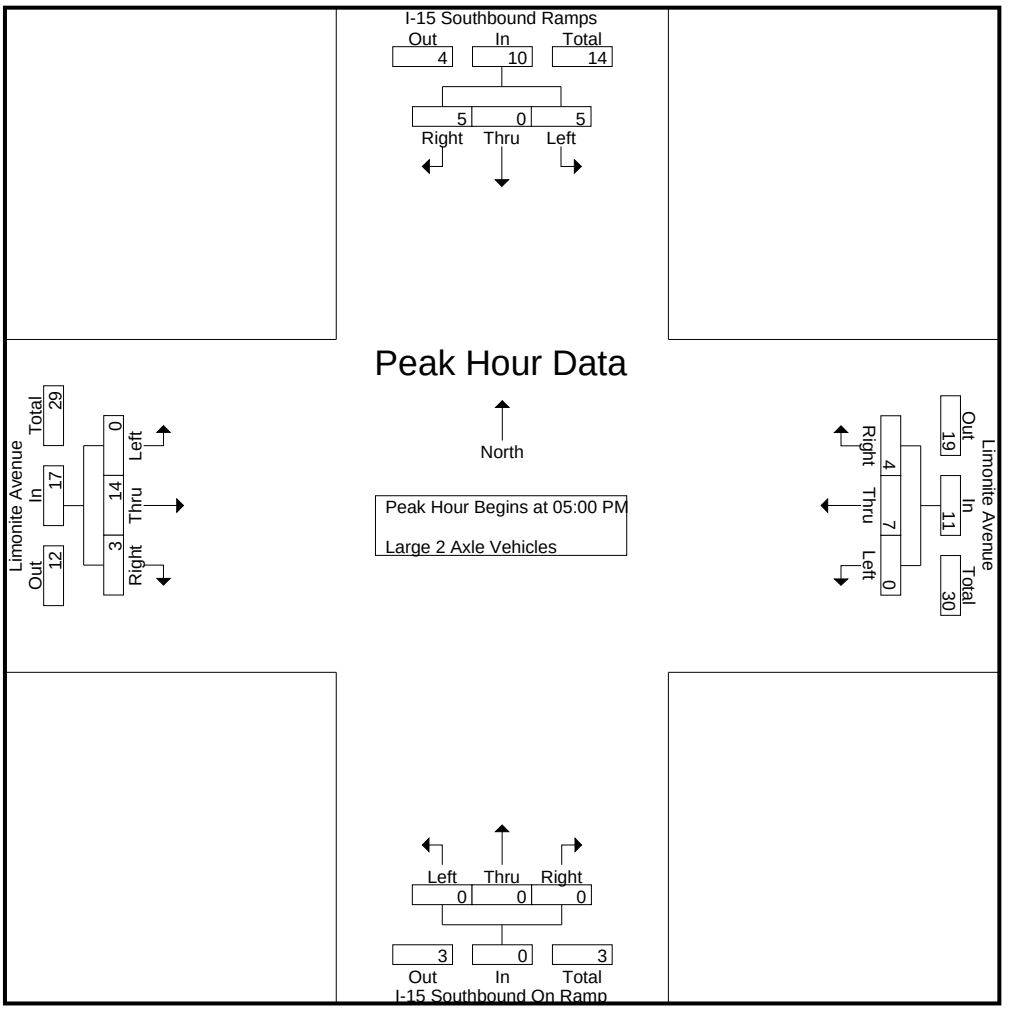
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	2	3	0	1	0	1	0	0	0	0	0	3	1	4	8
04:15 PM	0	0	1	1	0	5	3	8	0	0	0	0	0	9	5	14	23
04:30 PM	3	0	0	3	0	2	3	5	0	0	0	0	0	6	3	9	17
04:45 PM	1	0	1	2	0	3	0	3	0	0	0	0	0	5	3	8	13
Total	5	0	4	9	0	11	6	17	0	0	0	0	0	23	12	35	61
05:00 PM	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
05:15 PM	0	0	1	1	0	0	1	1	0	0	0	0	0	3	2	5	7
05:30 PM	2	0	2	4	0	1	1	2	0	0	0	0	0	5	0	5	11
05:45 PM	2	0	2	4	0	4	2	6	0	0	0	0	0	5	1	6	16
Total	5	0	5	10	0	7	4	11	0	0	0	0	0	14	3	17	38
Grand Total	10	0	9	19	0	18	10	28	0	0	0	0	0	37	15	52	99
Apprch %	52.6	0	47.4		0	64.3	35.7		0	0	0		0	71.2	28.8		
Total %	10.1	0	9.1	19.2	0	18.2	10.1	28.3	0	0	0	0	0	37.4	15.2	52.5	

	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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
05:15 PM	0	0	1	1	0	0	1	1	0	0	0	0	0	3	**2**	5	7
05:30 PM	**2**	0	**2**	**4**	0	1	1	2	0	0	0	0	0	**5**	0	5	11
05:45 PM	2	0	2	4	0	**4**	**2**	**6**	0	0	0	0	0	5	1	**6**	**16**
Total Volume	5	0	5	10	0	7	4	11	0	0	0	0	0	14	3	17	38
% App. Total	50	0	50		0	63.6	36.4		0	0	0		0	82.4	17.6		
PHF	.625	.000	.625	.625	.000	.438	.500	.458	.000	.000	.000	.000	.000	.700	.375	.708	.594

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

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 05:00 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.	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1
+15 mins.	0	0	1	1	0	0	1	1	0	0	0	0	0	3	**2**	5
+30 mins.	**2**	0	**2**	**4**	0	1	1	2	0	0	0	0	0	**5**	0	5
+45 mins.	2	0	2	4	0	**4**	**2**	**6**	0	0	0	0	0	5	1	**6**
Total Volume	5	0	5	10	0	7	4	11	0	0	0	0	0	14	3	17
% App. Total	50	0	50		0	63.6	36.4		0	0	0		0	82.4	17.6	
PHF	.625	.000	.625	.625	.000	.438	.500	.458	.000	.000	.000	.000	.000	.700	.375	.708

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

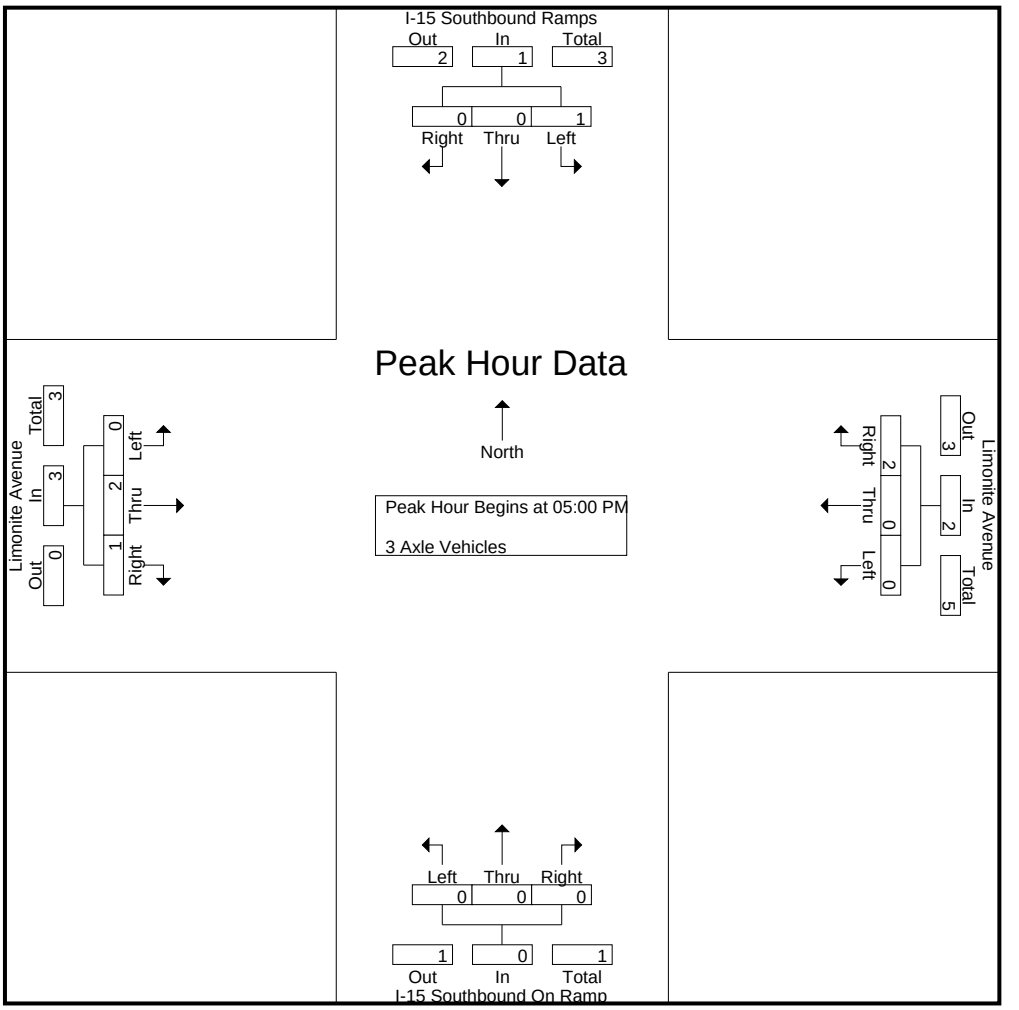
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
04:15 PM	0	0	0	0	0	1	2	3	0	0	0	0	0	3	0	3	6
04:30 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	1	0	2	3	0	1	2	3	0	0	0	0	0	4	2	6	12
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	2	2	0	0	0	0	0	2	1	3	6
Grand Total	2	0	2	4	0	1	4	5	0	0	0	0	0	6	3	9	18
Apprch %	50	0	50		0	20	80		0	0	0		0	66.7	33.3		
Total %	11.1	0	11.1	22.2	0	5.6	22.2	27.8	0	0	0	0	0	33.3	16.7	50	

	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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**3**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	1
05:30 PM	0	0	0	0	0	0	**2**	**2**	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	2	2	0	0	0	0	0	2	1	3	6
% App. Total	100	0	0		0	0	100		0	0	0		0	66.7	33.3		
PHF	.250	.000	.000	.250	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.250	.375	.500

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

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 05:00 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.	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1
+30 mins.	0	0	0	0	0	0	**2**	**2**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	2	2	0	0	0	0	0	2	1	3
% App. Total	100	0	0		0	0	100		0	0	0		0	66.7	33.3	
PHF	.250	.000	.000	.250	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.250	.375

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(951)268-6268

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

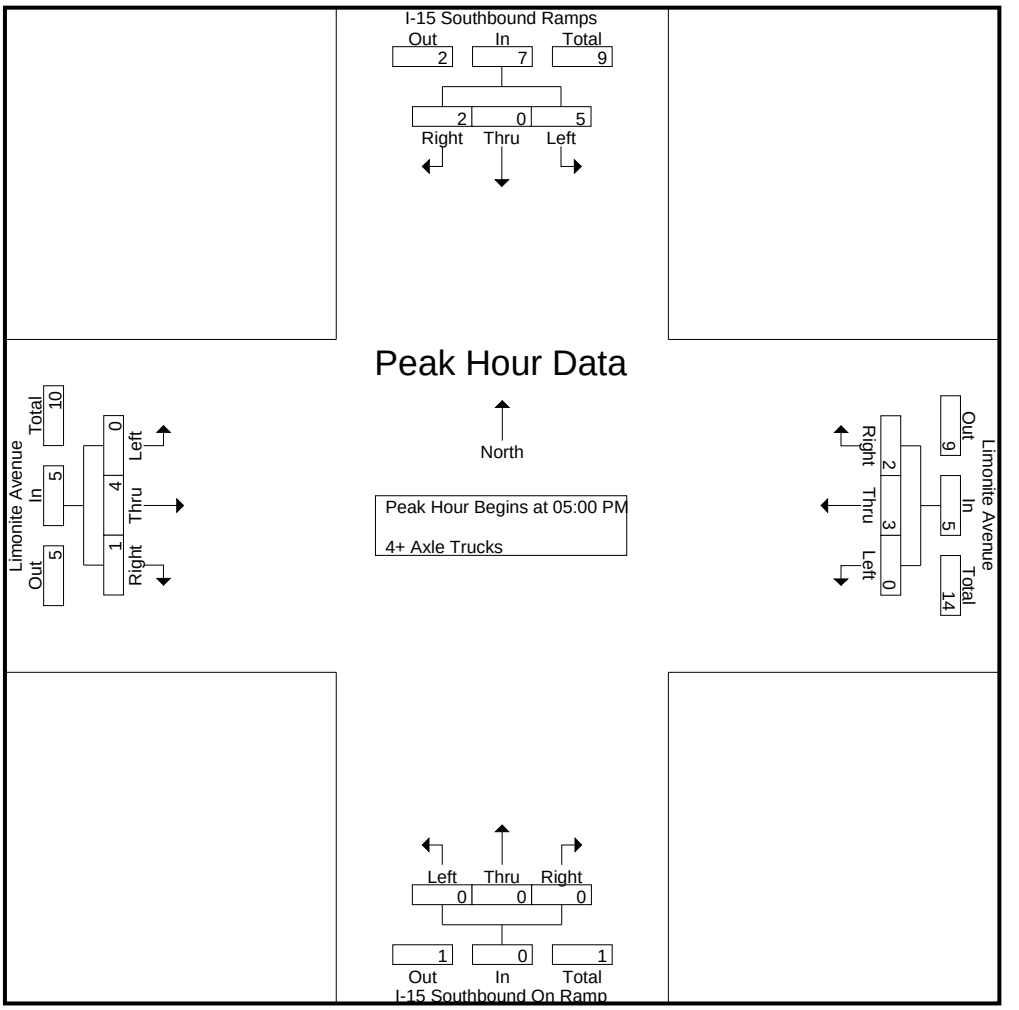
	I-15 Southbound Ramps Southbound				Limonite Avenue Westbound				I-15 Southbound On Ramp Northbound				Limonite Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	3	3	0	1	2	3	0	0	0	0	0	0	0	0	6
04:15 PM	1	0	2	3	0	1	0	1	0	0	0	0	0	7	0	7	11
04:30 PM	0	0	0	0	0	1	2	3	0	0	0	0	0	1	0	1	4
04:45 PM	1	0	2	3	0	0	0	0	0	0	0	0	0	3	0	3	6
Total	2	0	7	9	0	3	4	7	0	0	0	0	0	11	0	11	27
05:00 PM	1	0	1	2	0	1	1	2	0	0	0	0	0	0	1	1	5
05:15 PM	1	0	1	2	0	1	0	1	0	0	0	0	0	1	0	1	4
05:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:45 PM	2	0	0	2	0	1	1	2	0	0	0	0	0	2	0	2	6
Total	5	0	2	7	0	3	2	5	0	0	0	0	0	4	1	5	17
Grand Total	7	0	9	16	0	6	6	12	0	0	0	0	0	15	1	16	44
Apprch %	43.8	0	56.2		0	50	50		0	0	0		0	93.8	6.2		
Total %	15.9	0	20.5	36.4	0	13.6	13.6	27.3	0	0	0	0	0	34.1	2.3	36.4	

	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 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	**1**	**2**	0	**1**	**1**	**2**	0	0	0	0	0	0	**1**	1	5
05:15 PM	1	0	1	2	0	1	0	1	0	0	0	0	0	1	0	1	4
05:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:45 PM	**2**	0	0	2	0	1	1	2	0	0	0	0	0	**2**	0	**2**	**6**
Total Volume	5	0	2	7	0	3	2	5	0	0	0	0	0	4	1	5	17
% App. Total	71.4	0	28.6		0	60	40		0	0	0		0	80	20		
PHF	.625	.000	.500	.875	.000	.750	.500	.625	.000	.000	.000	.000	.000	.500	.250	.625	.708

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

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

File Name : 03_JVY_15S_Limo PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 05:00 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.	1	0	**1**	**2**	0	**1**	**1**	**2**	0	0	0	0	0	0	**1**	1
+15 mins.	1	0	1	2	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	**2**	0	0	2	0	1	1	2	0	0	0	0	0	**2**	0	**2**
Total Volume	5	0	2	7	0	3	2	5	0	0	0	0	0	4	1	5
% App. Total	71.4	0	28.6		0	60	40		0	0	0		0	80	20	
PHF	.625	.000	.500	.875	.000	.750	.500	.625	.000	.000	.000	.000	.000	.500	.250	.625

Counts Unlimited, Inc.
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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

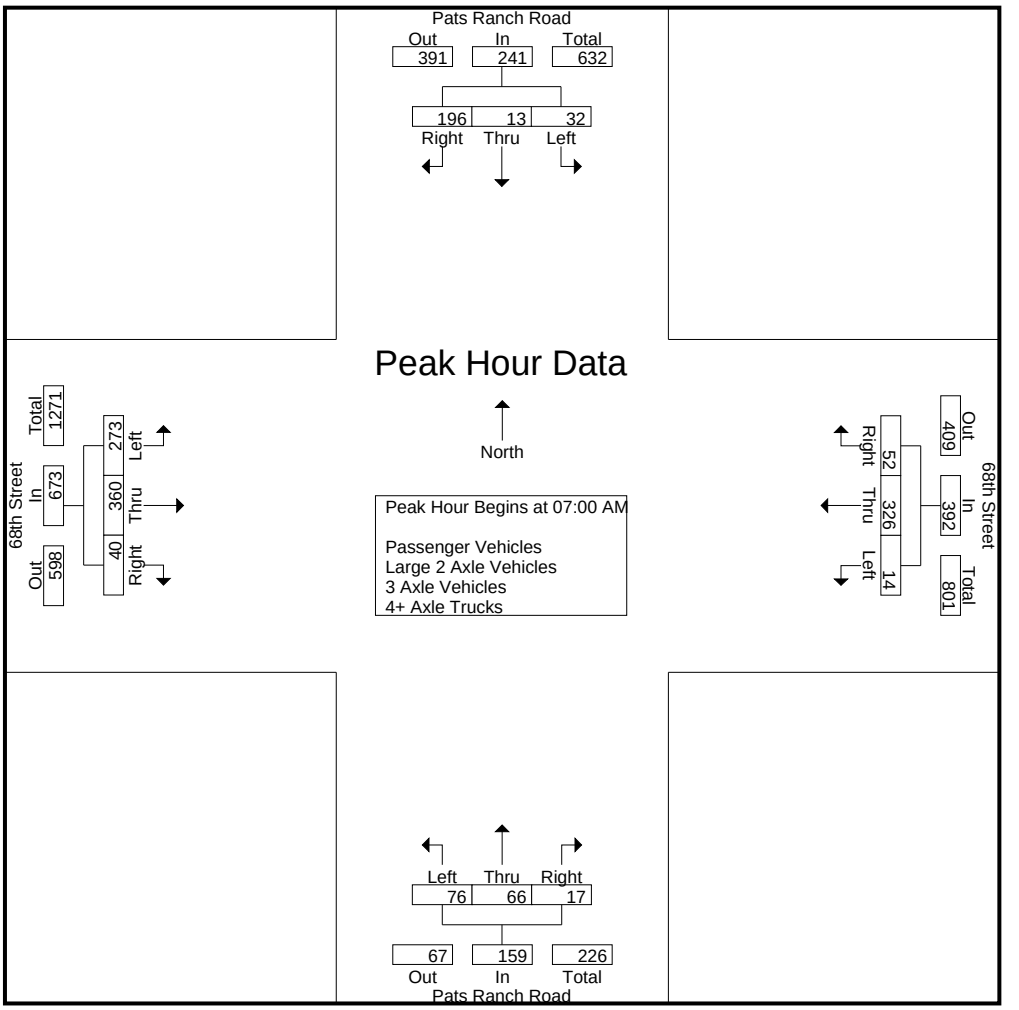
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	6	47	58	0	72	8	80	25	16	1	42	54	50	3	107	287
07:15 AM	11	2	55	68	5	105	16	126	28	16	9	53	76	106	10	192	439
07:30 AM	11	2	53	66	8	89	15	112	7	16	4	27	79	133	13	225	430
07:45 AM	5	3	41	49	1	60	13	74	16	18	3	37	64	71	14	149	309
Total	32	13	196	241	14	326	52	392	76	66	17	159	273	360	40	673	1465
08:00 AM	8	2	36	46	1	56	5	62	13	16	0	29	59	56	9	124	261
08:15 AM	7	6	32	45	1	69	8	78	10	9	0	19	73	80	13	166	308
08:30 AM	5	5	20	30	1	37	4	42	9	10	1	20	73	72	10	155	247
08:45 AM	6	5	22	33	0	26	8	34	7	11	0	18	43	25	8	76	161
Total	26	18	110	154	3	188	25	216	39	46	1	86	248	233	40	521	977
Grand Total	58	31	306	395	17	514	77	608	115	112	18	245	521	593	80	1194	2442
Apprch %	14.7	7.8	77.5		2.8	84.5	12.7		46.9	45.7	7.3		43.6	49.7	6.7		
Total %	2.4	1.3	12.5	16.2	0.7	21	3.2	24.9	4.7	4.6	0.7	10	21.3	24.3	3.3	48.9	
Passenger Vehicles	52	30	298	380	16	502	76	594	114	109	18	241	514	585	80	1179	2394
% Passenger Vehicles	89.7	96.8	97.4	96.2	94.1	97.7	98.7	97.7	99.1	97.3	100	98.4	98.7	98.7	100	98.7	98
Large 2 Axle Vehicles	5	1	7	13	1	10	1	12	1	3	0	4	6	7	0	13	42
% Large 2 Axle Vehicles	8.6	3.2	2.3	3.3	5.9	1.9	1.3	2	0.9	2.7	0	1.6	1.2	1.2	0	1.1	1.7
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	1	0	1	2	0	2	0	2	0	0	0	0	1	1	0	2	6
% 4+ Axle Trucks	1.7	0	0.3	0.5	0	0.4	0	0.3	0	0	0	0	0.2	0.2	0	0.2	0.2

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	**6**	47	58	0	72	8	80	25	16	1	42	54	50	3	107	287
07:15 AM	**11**	2	**55**	**68**	5	**105**	**16**	**126**	**28**	16	**9**	**53**	76	106	10	192	**439**
07:30 AM	11	2	53	66	**8**	89	15	112	7	16	4	27	**79**	**133**	13	**225**	430
07:45 AM	5	3	41	49	1	60	13	74	16	**18**	3	37	64	71	**14**	149	309
Total Volume	32	13	196	241	14	326	52	392	76	66	17	159	273	360	40	673	1465
% App. Total	13.3	5.4	81.3		3.6	83.2	13.3		47.8	41.5	10.7		40.6	53.5	5.9		
PHF	.727	.542	.891	.886	.438	.776	.813	.778	.679	.917	.472	.750	.864	.677	.714	.748	.834

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	5	**6**	47	58	0	72	8	80	25	16	1	42	76	106	10	192
+15 mins.	**11**	2	**55**	**68**	5	**105**	**16**	**126**	**28**	16	**9**	**53**	**79**	**133**	13	**225**
+30 mins.	11	2	53	66	**8**	89	15	112	7	16	4	27	64	71	**14**	149
+45 mins.	5	3	41	49	1	60	13	74	16	**18**	3	37	59	56	9	124
Total Volume	32	13	196	241	14	326	52	392	76	66	17	159	278	366	46	690
% App. Total	13.3	5.4	81.3		3.6	83.2	13.3		47.8	41.5	10.7		40.3	53	6.7	
PHF	.727	.542	.891	.886	.438	.776	.813	.778	.679	.917	.472	.750	.880	.688	.821	.767

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles

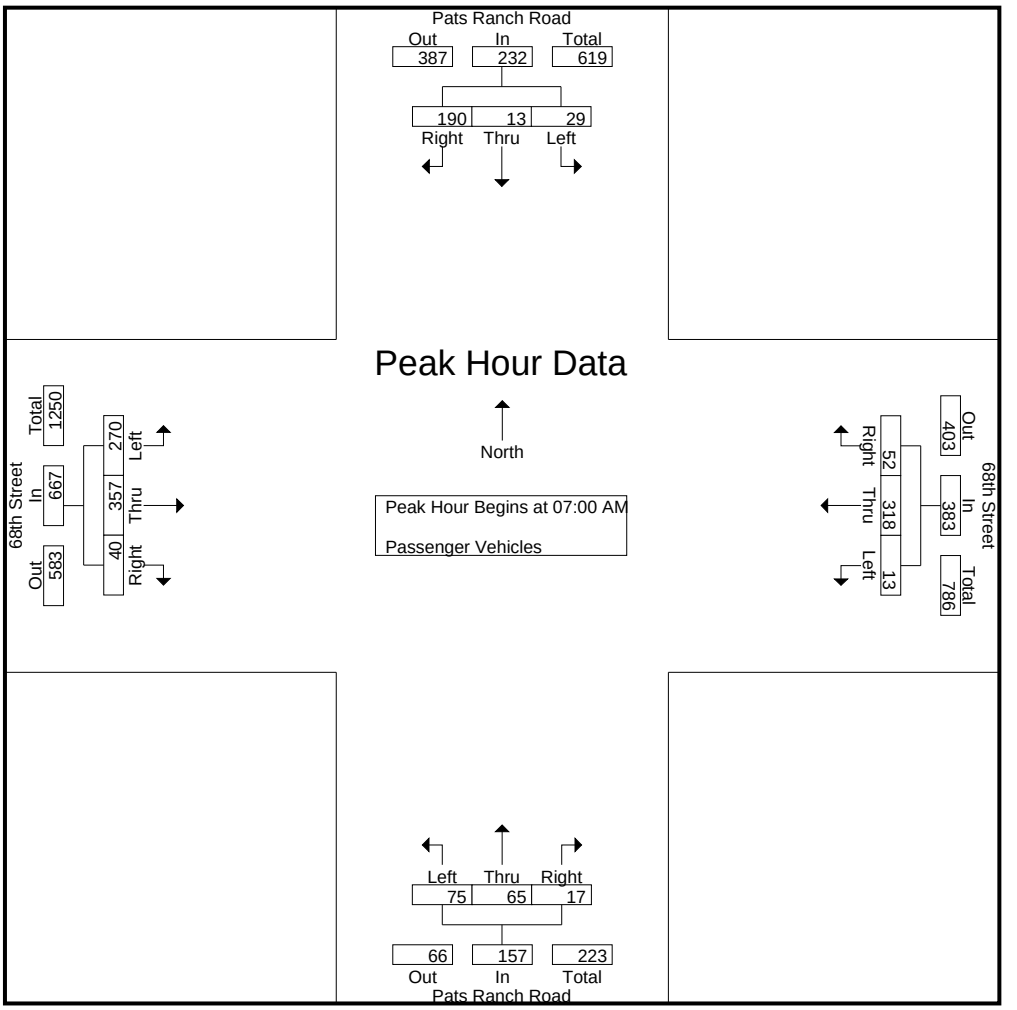
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	6	44	53	0	72	8	80	25	16	1	42	54	49	3	106	281
07:15 AM	11	2	54	67	4	103	16	123	27	15	9	51	76	106	10	192	433
07:30 AM	11	2	53	66	8	89	15	112	7	16	4	27	77	131	13	221	426
07:45 AM	4	3	39	46	1	54	13	68	16	18	3	37	63	71	14	148	299
Total	29	13	190	232	13	318	52	383	75	65	17	157	270	357	40	667	1439
08:00 AM	6	1	35	42	1	56	5	62	13	16	0	29	58	56	9	123	256
08:15 AM	7	6	32	45	1	67	8	76	10	8	0	18	71	76	13	160	299
08:30 AM	4	5	20	29	1	36	4	41	9	9	1	19	73	71	10	154	243
08:45 AM	6	5	21	32	0	25	7	32	7	11	0	18	42	25	8	75	157
Total	23	17	108	148	3	184	24	211	39	44	1	84	244	228	40	512	955
Grand Total	52	30	298	380	16	502	76	594	114	109	18	241	514	585	80	1179	2394
Apprch %	13.7	7.9	78.4		2.7	84.5	12.8		47.3	45.2	7.5		43.6	49.6	6.8		
Total %	2.2	1.3	12.4	15.9	0.7	21	3.2	24.8	4.8	4.6	0.8	10.1	21.5	24.4	3.3	49.2	

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	**6**	44	53	0	72	8	80	25	16	1	42	54	49	3	106	281
07:15 AM	**11**	2	**54**	**67**	4	**103**	**16**	**123**	**27**	15	**9**	**51**	76	106	10	192	**433**
07:30 AM	11	2	53	66	**8**	89	15	112	7	16	4	27	**77**	**131**	13	**221**	426
07:45 AM	4	3	39	46	1	54	13	68	16	**18**	3	37	63	71	**14**	148	299
Total Volume	29	13	190	232	13	318	52	383	75	65	17	157	270	357	40	667	1439
% App. Total	12.5	5.6	81.9		3.4	83	13.6		47.8	41.4	10.8		40.5	53.5	6		
PHF	.659	.542	.880	.866	.406	.772	.813	.778	.694	.903	.472	.770	.877	.681	.714	.755	.831

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	3	**6**	44	53	0	72	8	80	25	16	1	42	54	49	3	106
+15 mins.	**11**	2	**54**	**67**	4	**103**	**16**	**123**	**27**	15	**9**	**51**	76	106	10	192
+30 mins.	11	2	53	66	**8**	89	15	112	7	16	4	27	**77**	**131**	13	**221**
+45 mins.	4	3	39	46	1	54	13	68	16	**18**	3	37	63	71	**14**	148
Total Volume	29	13	190	232	13	318	52	383	75	65	17	157	270	357	40	667
% App. Total	12.5	5.6	81.9		3.4	83	13.6		47.8	41.4	10.8		40.5	53.5	6	
PHF	.659	.542	.880	.866	.406	.772	.813	.778	.694	.903	.472	.770	.877	.681	.714	.755

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

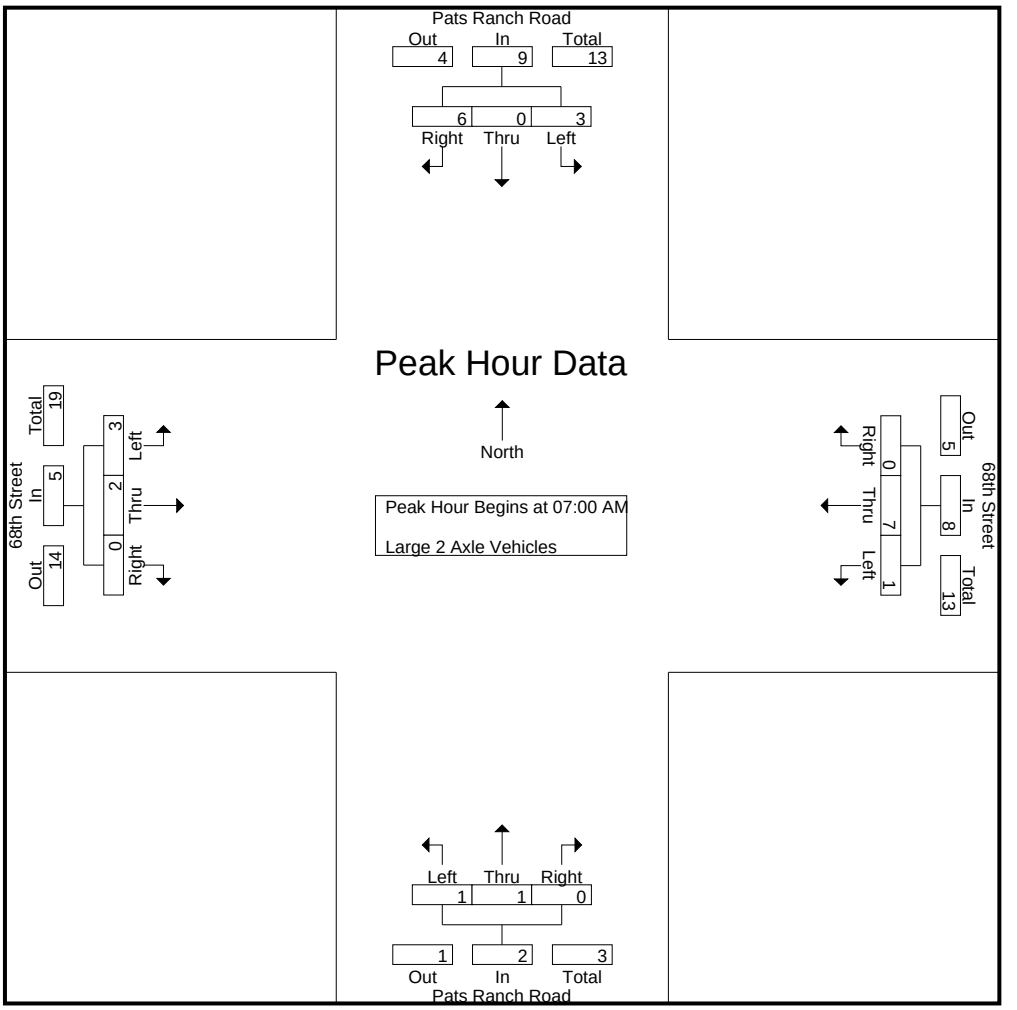
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	5
07:15 AM	0	0	1	1	1	2	0	3	1	1	0	2	0	0	0	0	6
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	4
07:45 AM	1	0	2	3	0	5	0	5	0	0	0	0	1	0	0	1	9
Total	3	0	6	9	1	7	0	8	1	1	0	2	3	2	0	5	24
08:00 AM	1	1	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
08:15 AM	0	0	0	0	0	1	0	1	0	1	0	1	1	4	0	5	7
08:30 AM	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	4
08:45 AM	0	0	1	1	0	1	1	2	0	0	0	0	1	0	0	1	4
Total	2	1	1	4	0	3	1	4	0	2	0	2	3	5	0	8	18
Grand Total	5	1	7	13	1	10	1	12	1	3	0	4	6	7	0	13	42
Apprch %	38.5	7.7	53.8		8.3	83.3	8.3		25	75	0		46.2	53.8	0		
Total %	11.9	2.4	16.7	31	2.4	23.8	2.4	28.6	2.4	7.1	0	9.5	14.3	16.7	0	31	

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	0	**3**	**5**	0	0	0	0	0	0	0	0	0	0	0	0	5
07:15 AM	0	0	1	1	**1**	2	0	3	**1**	**1**	0	**2**	0	0	0	0	6
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**	0	**4**	4
07:45 AM	1	0	2	3	0	**5**	0	**5**	0	0	0	0	1	0	0	1	**9**
Total Volume	3	0	6	9	1	7	0	8	1	1	0	2	3	2	0	5	24
% App. Total	33.3	0	66.7		12.5	87.5	0		50	50	0		60	40	0		
PHF	.375	.000	.500	.450	.250	.350	.000	.400	.250	.250	.000	.250	.375	.250	.000	.313	.667

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**2**	0	**3**	**5**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	1	1	**1**	2	0	3	**1**	**1**	0	**2**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**	0	**4**
+45 mins.	1	0	2	3	0	**5**	0	**5**	0	0	0	0	1	0	0	1
Total Volume	3	0	6	9	1	7	0	8	1	1	0	2	3	2	0	5
% App. Total	33.3	0	66.7		12.5	87.5	0		50	50	0		60	40	0	
PHF	.375	.000	.500	.450	.250	.350	.000	.400	.250	.250	.000	.250	.375	.250	.000	.313

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

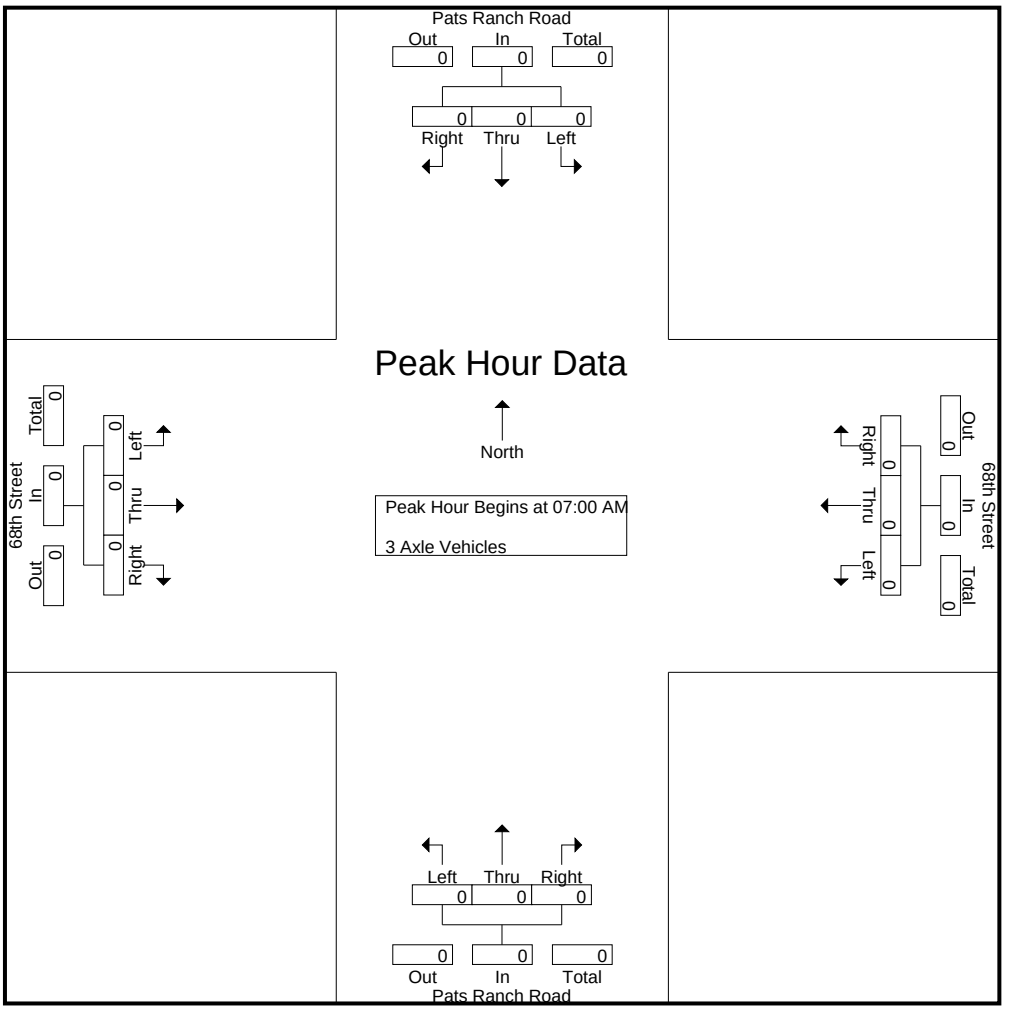
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

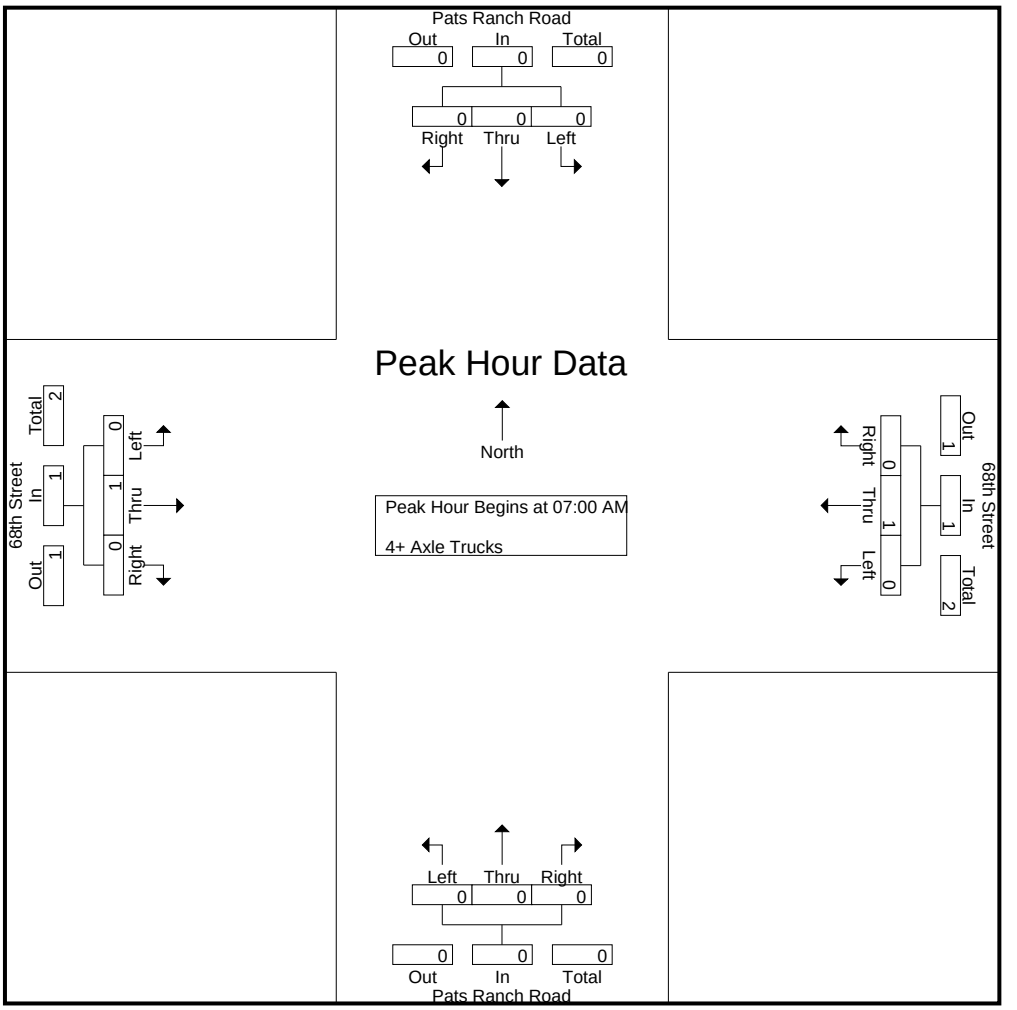
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:00 AM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	2	0	1	0	1	0	0	0	0	1	0	0	1	4
Grand Total	1	0	1	2	0	2	0	2	0	0	0	0	1	1	0	2	6
Apprch %	50	0	50		0	100	0		0	0	0		50	50	0		
Total %	16.7	0	16.7	33.3	0	33.3	0	33.3	0	0	0	0	16.7	16.7	0	33.3	

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**1**
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.500

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th AM
Site Code : 06721366
Start Date : 8/19/2021
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250

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City of Jurupa Valley
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File Name : 04_JVY_Pats_68th PM
Site Code : 06721366
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

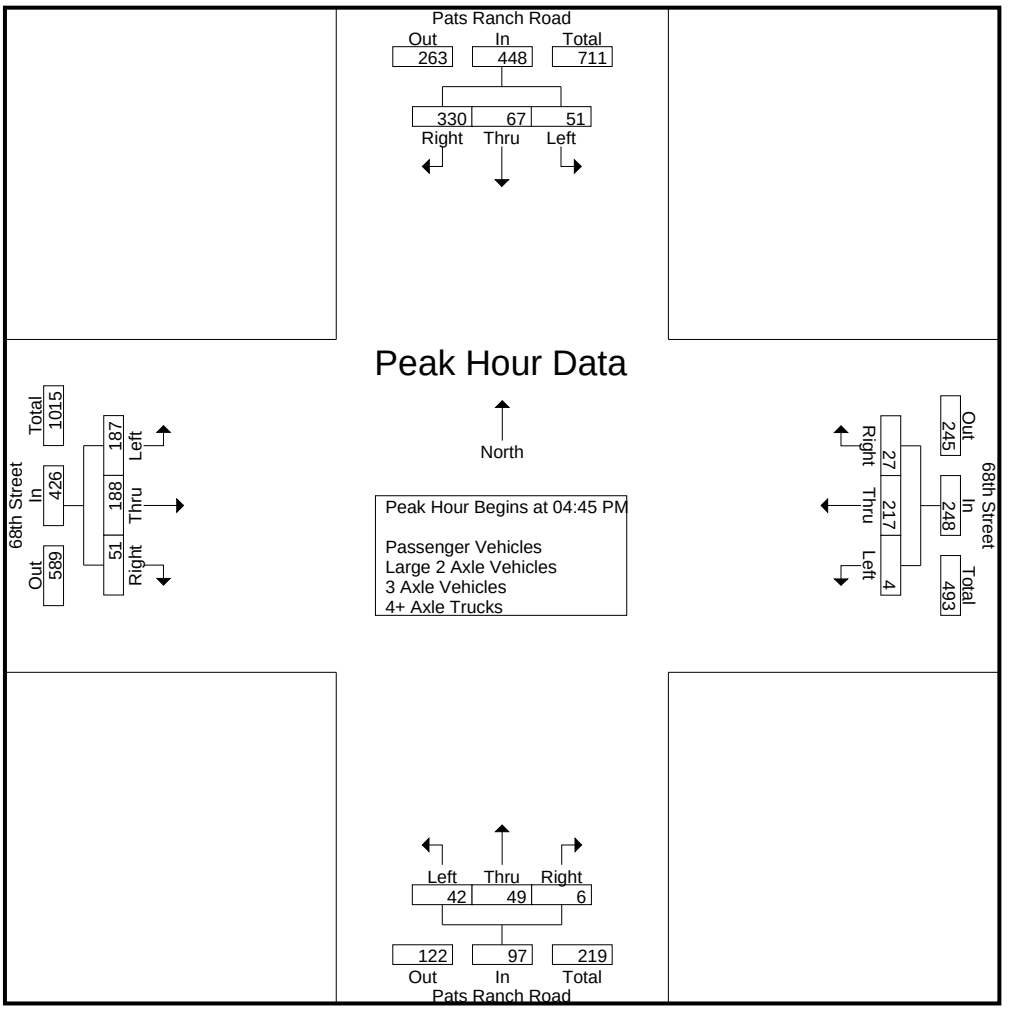
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	17	59	81	0	37	8	45	7	12	0	19	47	68	9	124	269
04:15 PM	9	18	67	94	0	32	6	38	10	6	0	16	48	62	10	120	268
04:30 PM	14	17	55	86	2	50	5	57	5	14	2	21	51	58	10	119	283
04:45 PM	10	20	84	114	1	52	13	66	15	12	1	28	41	53	14	108	316
Total	38	72	265	375	3	171	32	206	37	44	3	84	187	241	43	471	1136
05:00 PM	15	19	79	113	1	57	7	65	11	15	1	27	44	36	13	93	298
05:15 PM	14	17	83	114	1	57	4	62	8	8	1	17	45	42	9	96	289
05:30 PM	12	11	84	107	1	51	3	55	8	14	3	25	57	57	15	129	316
05:45 PM	8	17	79	104	0	52	12	64	10	7	1	18	54	48	7	109	295
Total	49	64	325	438	3	217	26	246	37	44	6	87	200	183	44	427	1198
Grand Total	87	136	590	813	6	388	58	452	74	88	9	171	387	424	87	898	2334
Apprch %	10.7	16.7	72.6		1.3	85.8	12.8		43.3	51.5	5.3		43.1	47.2	9.7		
Total %	3.7	5.8	25.3	34.8	0.3	16.6	2.5	19.4	3.2	3.8	0.4	7.3	16.6	18.2	3.7	38.5	
Passenger Vehicles	85	135	585	805	6	383	58	447	73	87	9	169	382	415	86	883	2304
% Passenger Vehicles	97.7	99.3	99.2	99	100	98.7	100	98.9	98.6	98.9	100	98.8	98.7	97.9	98.9	98.3	98.7
Large 2 Axle Vehicles	2	1	5	8	0	5	0	5	1	1	0	2	5	9	1	15	30
% Large 2 Axle Vehicles	2.3	0.7	0.8	1	0	1.3	0	1.1	1.4	1.1	0	1.2	1.3	2.1	1.1	1.7	1.3
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	10	**20**	**84**	**114**	**1**	52	**13**	**66**	**15**	12	1	**28**	41	53	14	108	**316**
05:00 PM	**15**	19	79	113	1	**57**	7	65	11	**15**	1	27	44	36	13	93	298
05:15 PM	14	17	83	114	1	57	4	62	8	8	1	17	45	42	9	96	289
05:30 PM	12	11	84	107	1	51	3	55	8	14	**3**	25	**57**	**57**	**15**	**129**	316
Total Volume	51	67	330	448	4	217	27	248	42	49	6	97	187	188	51	426	1219
% App. Total	11.4	15	73.7		1.6	87.5	10.9		43.3	50.5	6.2		43.9	44.1	12		
PHF	.850	.838	.982	.982	1.00	.952	.519	.939	.700	.817	.500	.866	.820	.825	.850	.826	.964

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Site Code : 06721366
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:45 PM				04:00 PM			
+0 mins.	10	**20**	**84**	**114**	**2**	50	5	57	**15**	12	1	**28**	47	**68**	9	**124**
+15 mins.	**15**	19	79	113	1	52	**13**	**66**	11	**15**	1	27	48	62	10	120
+30 mins.	14	17	83	114	1	**57**	7	65	8	8	1	17	**51**	58	10	119
+45 mins.	12	11	84	107	1	57	4	62	8	14	**3**	25	41	53	**14**	108
Total Volume	51	67	330	448	5	216	29	250	42	49	6	97	187	241	43	471
% App. Total	11.4	15	73.7		2	86.4	11.6		43.3	50.5	6.2		39.7	51.2	9.1	
PHF	.850	.838	.982	.982	.625	.947	.558	.947	.700	.817	.500	.866	.917	.886	.768	.950

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File Name : 04_JVY_Pats_68th PM
Site Code : 06721366
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Groups Printed- Passenger Vehicles

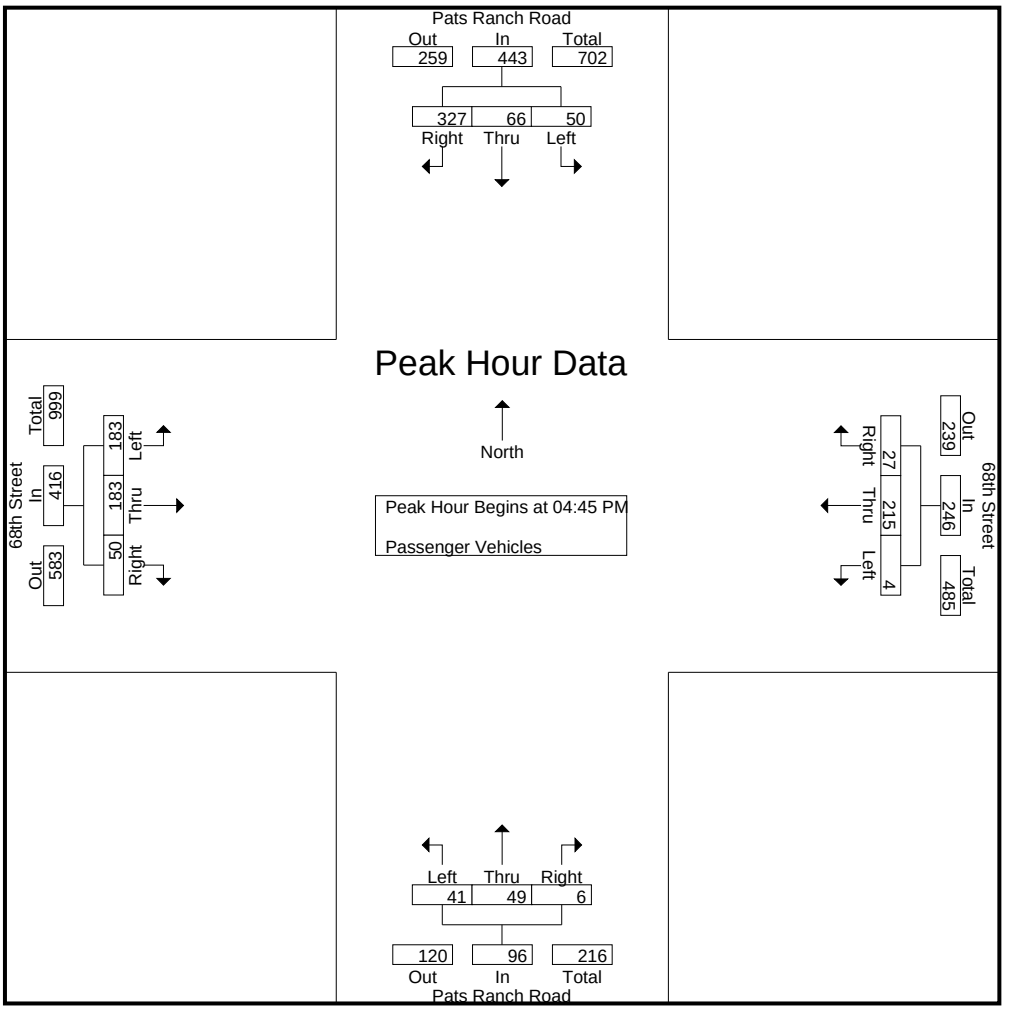
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	17	59	81	0	37	8	45	7	12	0	19	47	67	9	123	268
04:15 PM	9	18	66	93	0	31	6	37	10	6	0	16	48	61	10	119	265
04:30 PM	13	17	55	85	2	49	5	56	5	13	2	20	50	56	10	116	277
04:45 PM	10	20	83	113	1	51	13	65	15	12	1	28	39	51	14	104	310
Total	37	72	263	372	3	168	32	203	37	43	3	83	184	235	43	462	1120
05:00 PM	15	18	78	111	1	56	7	64	11	15	1	27	42	36	12	90	292
05:15 PM	14	17	83	114	1	57	4	62	7	8	1	16	45	40	9	94	286
05:30 PM	11	11	83	105	1	51	3	55	8	14	3	25	57	56	15	128	313
05:45 PM	8	17	78	103	0	51	12	63	10	7	1	18	54	48	7	109	293
Total	48	63	322	433	3	215	26	244	36	44	6	86	198	180	43	421	1184
Grand Total	85	135	585	805	6	383	58	447	73	87	9	169	382	415	86	883	2304
Apprch %	10.6	16.8	72.7		1.3	85.7	13		43.2	51.5	5.3		43.3	47	9.7		
Total %	3.7	5.9	25.4	34.9	0.3	16.6	2.5	19.4	3.2	3.8	0.4	7.3	16.6	18	3.7	38.3	

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	10	**20**	**83**	113	**1**	51	**13**	**65**	**15**	12	1	**28**	39	51	14	104	310
05:00 PM	**15**	18	78	111	1	56	7	64	11	**15**	1	27	42	36	12	90	292
05:15 PM	14	17	83	**114**	1	**57**	4	62	7	8	1	16	45	40	9	94	286
05:30 PM	11	11	83	105	1	51	3	55	8	14	**3**	25	**57**	**56**	**15**	**128**	**313**
Total Volume	50	66	327	443	4	215	27	246	41	49	6	96	183	183	50	416	1201
% App. Total	11.3	14.9	73.8		1.6	87.4	11		42.7	51	6.2		44	44	12		
PHF	.833	.825	.985	.971	1.00	.943	.519	.946	.683	.817	.500	.857	.803	.817	.833	.813	.959

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File Name : 04_JVY_Pats_68th PM
Site Code : 06721366
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	10	**20**	**83**	113	**1**	51	**13**	**65**	**15**	12	1	**28**	39	51	14	104
+15 mins.	**15**	18	78	111	1	56	7	64	11	**15**	1	27	42	36	12	90
+30 mins.	14	17	83	**114**	1	**57**	4	62	7	8	1	16	45	40	9	94
+45 mins.	11	11	83	105	1	51	3	55	8	14	**3**	25	**57**	**56**	**15**	**128**
Total Volume	50	66	327	443	4	215	27	246	41	49	6	96	183	183	50	416
% App. Total	11.3	14.9	73.8		1.6	87.4	11		42.7	51	6.2		44	44	12	
PHF	.833	.825	.985	.971	1.000	.943	.519	.946	.683	.817	.500	.857	.803	.817	.833	.813

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File Name : 04_JVY_Pats_68th PM
Site Code : 06721366
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Groups Printed- Large 2 Axle Vehicles

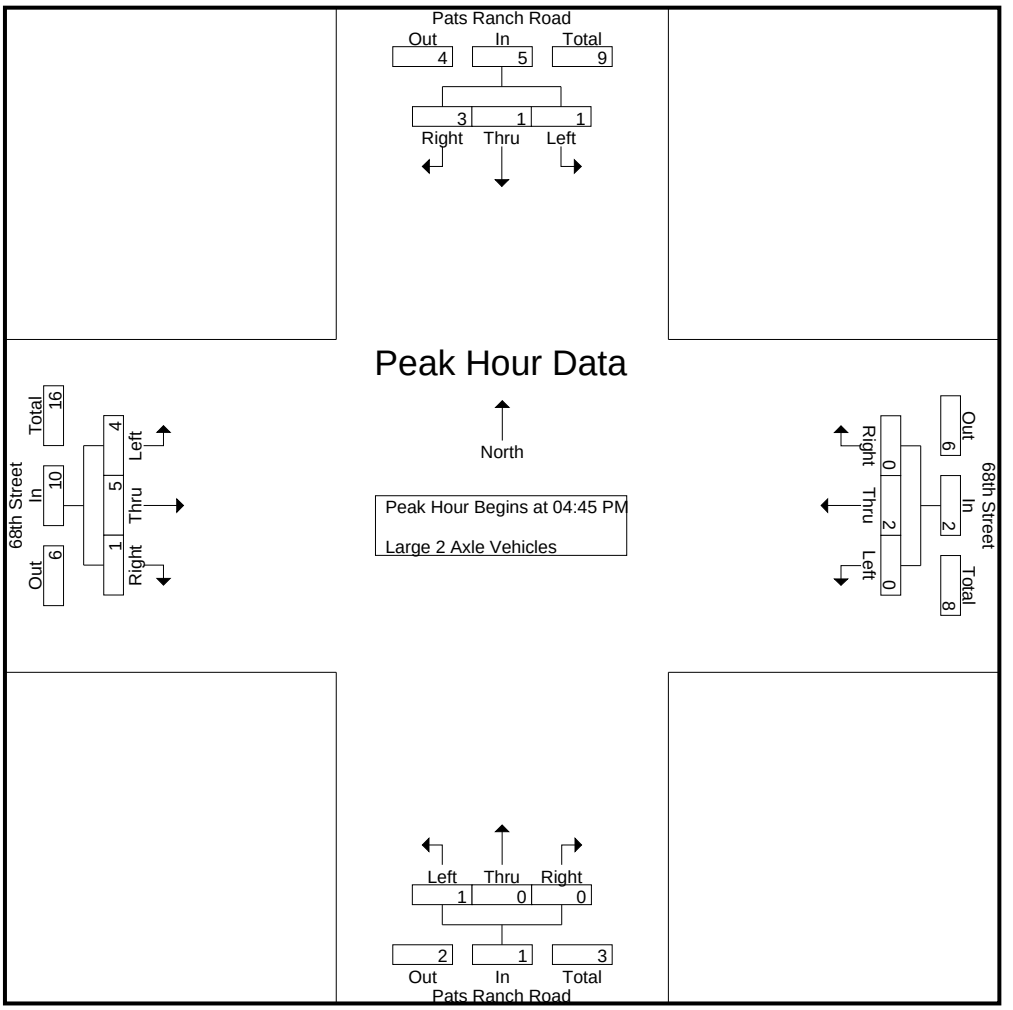
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
04:30 PM	1	0	0	1	0	1	0	1	0	1	0	1	1	2	0	3	6
04:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	2	2	0	4	6
Total	1	0	2	3	0	3	0	3	0	1	0	1	3	6	0	9	16
05:00 PM	0	1	1	2	0	1	0	1	0	0	0	0	2	0	1	3	6
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	3
05:30 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
05:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	1	1	3	5	0	2	0	2	1	0	0	1	2	3	1	6	14
Grand Total	2	1	5	8	0	5	0	5	1	1	0	2	5	9	1	15	30
Apprch %	25	12.5	62.5		0	100	0		50	50	0		33.3	60	6.7		
Total %	6.7	3.3	16.7	26.7	0	16.7	0	16.7	3.3	3.3	0	6.7	16.7	30	3.3	50	

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	**1**	1	0	**1**	0	**1**	0	0	0	0	**2**	**2**	0	**4**	**6**
05:00 PM	0	**1**	1	**2**	0	1	0	1	0	0	0	0	2	0	**1**	3	6
05:15 PM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	2	0	2	3
05:30 PM	**1**	0	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
Total Volume	1	1	3	5	0	2	0	2	1	0	0	1	4	5	1	10	18
% App. Total	20	20	60		0	100	0		100	0	0		40	50	10		
PHF	.250	.250	.750	.625	.000	.500	.000	.500	.250	.000	.000	.250	.500	.625	.250	.625	.750

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File Name : 04_JVY_Pats_68th PM
Site Code : 06721366
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	**1**	1	0	**1**	0	**1**	0	0	0	0	**2**	**2**	0	**4**
+15 mins.	0	**1**	1	**2**	0	1	0	1	0	0	0	0	2	0	**1**	3
+30 mins.	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	2	0	2
+45 mins.	**1**	0	1	2	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	1	1	3	5	0	2	0	2	1	0	0	1	4	5	1	10
% App. Total	20	20	60		0	100	0		100	0	0		40	50	10	
PHF	.250	.250	.750	.625	.000	.500	.000	.500	.250	.000	.000	.250	.500	.625	.250	.625

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File Name : 04_JVY_Pats_68th PM
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Groups Printed- 3 Axle Vehicles

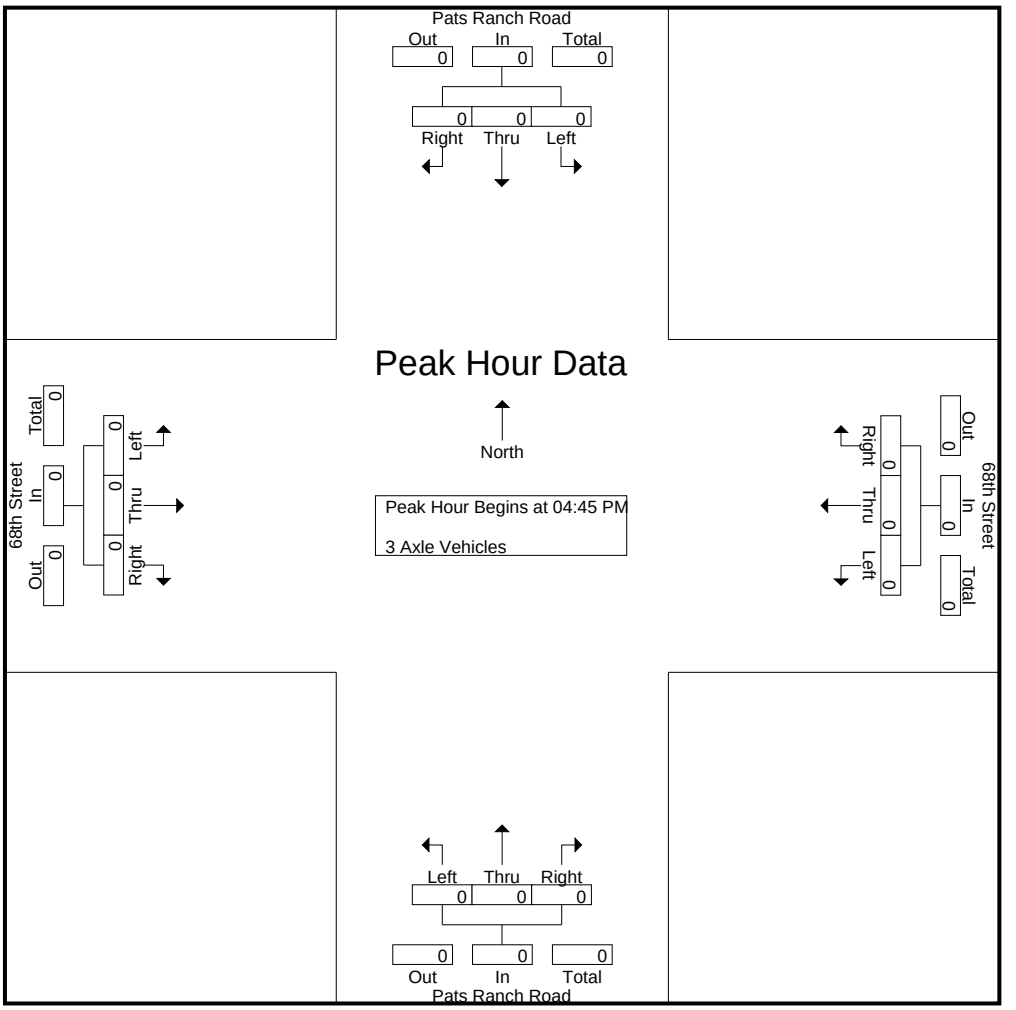
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

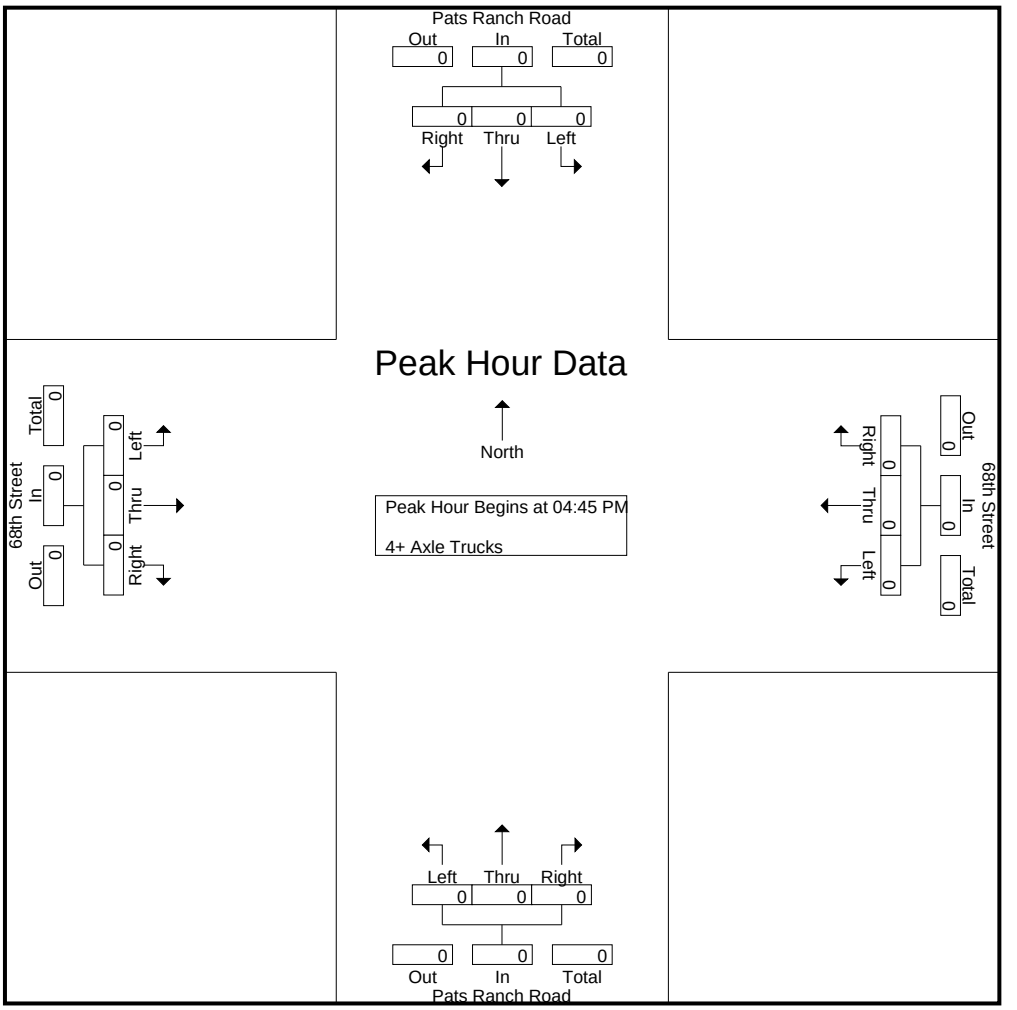
	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Pats Ranch Road Southbound				68th Street Westbound				Pats Ranch Road Northbound				68th Street 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 68th Street
Weather: Clear

File Name : 04_JVY_Pats_68th PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 65th Street
Weather: Clear

File Name : 05_JVY_Pats_65th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

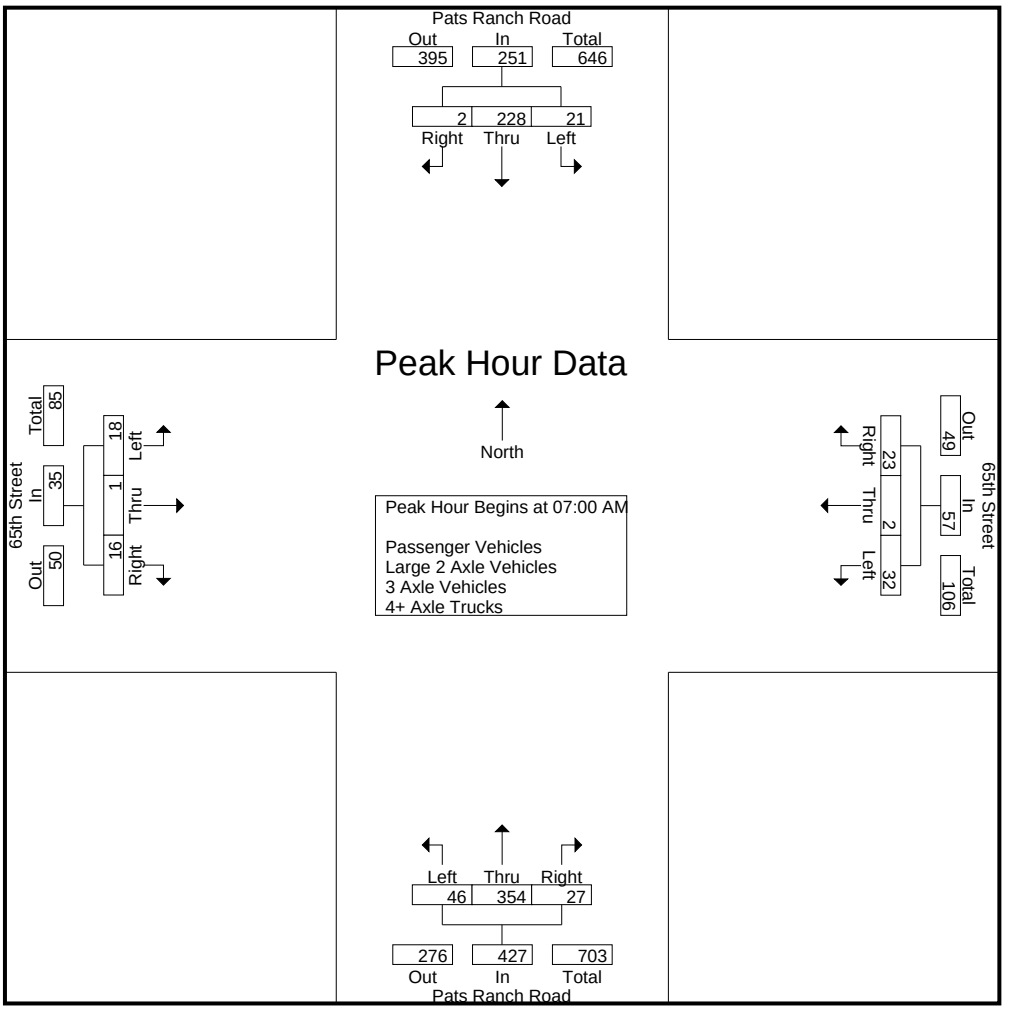
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	71	1	75	12	1	6	19	8	71	2	81	8	0	5	13	188
07:15 AM	6	77	0	83	11	1	7	19	9	98	7	114	2	0	2	4	220
07:30 AM	7	47	0	54	5	0	3	8	15	98	12	125	5	0	3	8	195
07:45 AM	5	33	1	39	4	0	7	11	14	87	6	107	3	1	6	10	167
Total	21	228	2	251	32	2	23	57	46	354	27	427	18	1	16	35	770
08:00 AM	2	46	0	48	4	2	3	9	11	76	1	88	6	0	4	10	155
08:15 AM	1	32	1	34	7	1	8	16	18	72	6	96	1	2	7	10	156
08:30 AM	2	23	4	29	0	2	6	8	13	70	5	88	5	0	7	12	137
08:45 AM	7	26	2	35	1	2	4	7	9	58	3	70	6	0	8	14	126
Total	12	127	7	146	12	7	21	40	51	276	15	342	18	2	26	46	574
Grand Total	33	355	9	397	44	9	44	97	97	630	42	769	36	3	42	81	1344
Apprch %	8.3	89.4	2.3		45.4	9.3	45.4		12.6	81.9	5.5		44.4	3.7	51.9		
Total %	2.5	26.4	0.7	29.5	3.3	0.7	3.3	7.2	7.2	46.9	3.1	57.2	2.7	0.2	3.1	6	
Passenger Vehicles	32	335	7	374	44	8	43	95	94	616	42	752	30	3	40	73	1294
% Passenger Vehicles	97	94.4	77.8	94.2	100	88.9	97.7	97.9	96.9	97.8	100	97.8	83.3	100	95.2	90.1	96.3
Large 2 Axle Vehicles	1	17	1	19	0	1	1	2	3	11	0	14	2	0	2	4	39
% Large 2 Axle Vehicles	3	4.8	11.1	4.8	0	11.1	2.3	2.1	3.1	1.7	0	1.8	5.6	0	4.8	4.9	2.9
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
% 3 Axle Vehicles	0	0.3	0	0.3	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0.1
4+ Axle Trucks	0	2	1	3	0	0	0	0	0	2	0	2	4	0	0	4	9
% 4+ Axle Trucks	0	0.6	11.1	0.8	0	0	0	0	0	0.3	0	0.3	11.1	0	0	4.9	0.7

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street 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	3	71	**1**	75	**12**	**1**	6	**19**	8	71	2	81	**8**	0	5	**13**	188
07:15 AM	6	**77**	0	**83**	11	1	**7**	19	9	**98**	7	114	2	0	2	4	**220**
07:30 AM	**7**	47	0	54	5	0	3	8	**15**	98	**12**	**125**	5	0	3	8	195
07:45 AM	5	33	1	39	4	0	7	11	14	87	6	107	3	**1**	**6**	10	167
Total Volume	21	228	2	251	32	2	23	57	46	354	27	427	18	1	16	35	770
% App. Total	8.4	90.8	0.8		56.1	3.5	40.4		10.8	82.9	6.3		51.4	2.9	45.7		
PHF	.750	.740	.500	.756	.667	.500	.821	.750	.767	.903	.563	.854	.563	.250	.667	.673	.875

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 65th Street
Weather: Clear

File Name : 05_JVY_Pats_65th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:15 AM				08:00 AM			
+0 mins.	3	71	**1**	75	**12**	**1**	6	**19**	9	**98**	7	114	**6**	0	4	10
+15 mins.	6	**77**	0	**83**	11	1	**7**	19	**15**	98	**12**	**125**	1	**2**	7	10
+30 mins.	**7**	47	0	54	5	0	3	8	14	87	6	107	5	0	7	12
+45 mins.	5	33	1	39	4	0	7	11	11	76	1	88	6	0	**8**	**14**
Total Volume	21	228	2	251	32	2	23	57	49	359	26	434	18	2	26	46
% App. Total	8.4	90.8	0.8		56.1	3.5	40.4		11.3	82.7	6		39.1	4.3	56.5	
PHF	.750	.740	.500	.756	.667	.500	.821	.750	.817	.916	.542	.868	.750	.250	.813	.821

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City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 65th Street
Weather: Clear

File Name : 05_JVY_Pats_65th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Passenger Vehicles

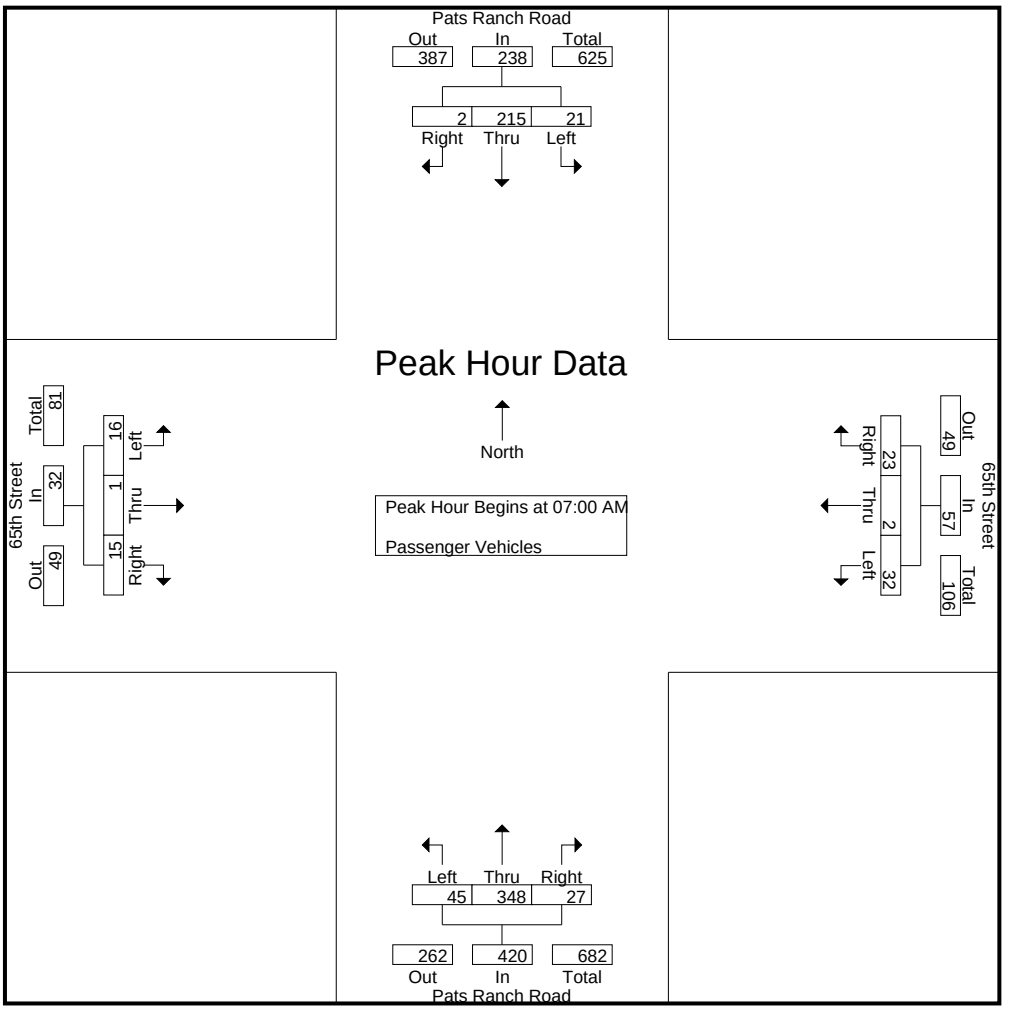
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	64	1	68	12	1	6	19	8	71	2	81	7	0	5	12	180
07:15 AM	6	74	0	80	11	1	7	19	9	97	7	113	2	0	2	4	216
07:30 AM	7	45	0	52	5	0	3	8	15	94	12	121	5	0	3	8	189
07:45 AM	5	32	1	38	4	0	7	11	13	86	6	105	2	1	5	8	162
Total	21	215	2	238	32	2	23	57	45	348	27	420	16	1	15	32	747
08:00 AM	1	41	0	42	4	2	3	9	10	76	1	87	6	0	4	10	148
08:15 AM	1	32	1	34	7	1	8	16	18	69	6	93	0	2	7	9	152
08:30 AM	2	22	2	26	0	1	6	7	13	70	5	88	2	0	7	9	130
08:45 AM	7	25	2	34	1	2	3	6	8	53	3	64	6	0	7	13	117
Total	11	120	5	136	12	6	20	38	49	268	15	332	14	2	25	41	547
Grand Total	32	335	7	374	44	8	43	95	94	616	42	752	30	3	40	73	1294
Apprch %	8.6	89.6	1.9		46.3	8.4	45.3		12.5	81.9	5.6		41.1	4.1	54.8		
Total %	2.5	25.9	0.5	28.9	3.4	0.6	3.3	7.3	7.3	47.6	3.2	58.1	2.3	0.2	3.1	5.6	

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	64	**1**	68	**12**	**1**	6	**19**	8	71	2	81	**7**	0	**5**	**12**	180
07:15 AM	6	**74**	0	**80**	11	1	**7**	19	9	**97**	7	113	2	0	2	4	**216**
07:30 AM	**7**	45	0	52	5	0	3	8	**15**	94	**12**	**121**	5	0	3	8	189
07:45 AM	5	32	1	38	4	0	7	11	13	86	6	105	2	**1**	5	8	162
Total Volume	21	215	2	238	32	2	23	57	45	348	27	420	16	1	15	32	747
% App. Total	8.8	90.3	0.8		56.1	3.5	40.4		10.7	82.9	6.4		50	3.1	46.9		
PHF	.750	.726	.500	.744	.667	.500	.821	.750	.750	.897	.563	.868	.571	.250	.750	.667	.865

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City of Jurupa Valley
N/S: Pats Ranch Road
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File Name : 05_JVY_Pats_65th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	3	64	**1**	68	**12**	**1**	6	**19**	8	71	2	81	**7**	0	**5**	**12**
+15 mins.	6	**74**	0	**80**	11	1	**7**	19	9	**97**	7	113	2	0	2	4
+30 mins.	**7**	45	0	52	5	0	3	8	**15**	94	**12**	**121**	5	0	3	8
+45 mins.	5	32	1	38	4	0	7	11	13	86	6	105	2	**1**	5	8
Total Volume	21	215	2	238	32	2	23	57	45	348	27	420	16	1	15	32
% App. Total	8.8	90.3	0.8		56.1	3.5	40.4		10.7	82.9	6.4		50	3.1	46.9	
PHF	.750	.726	.500	.744	.667	.500	.821	.750	.750	.897	.563	.868	.571	.250	.750	.667

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City of Jurupa Valley
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File Name : 05_JVY_Pats_65th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

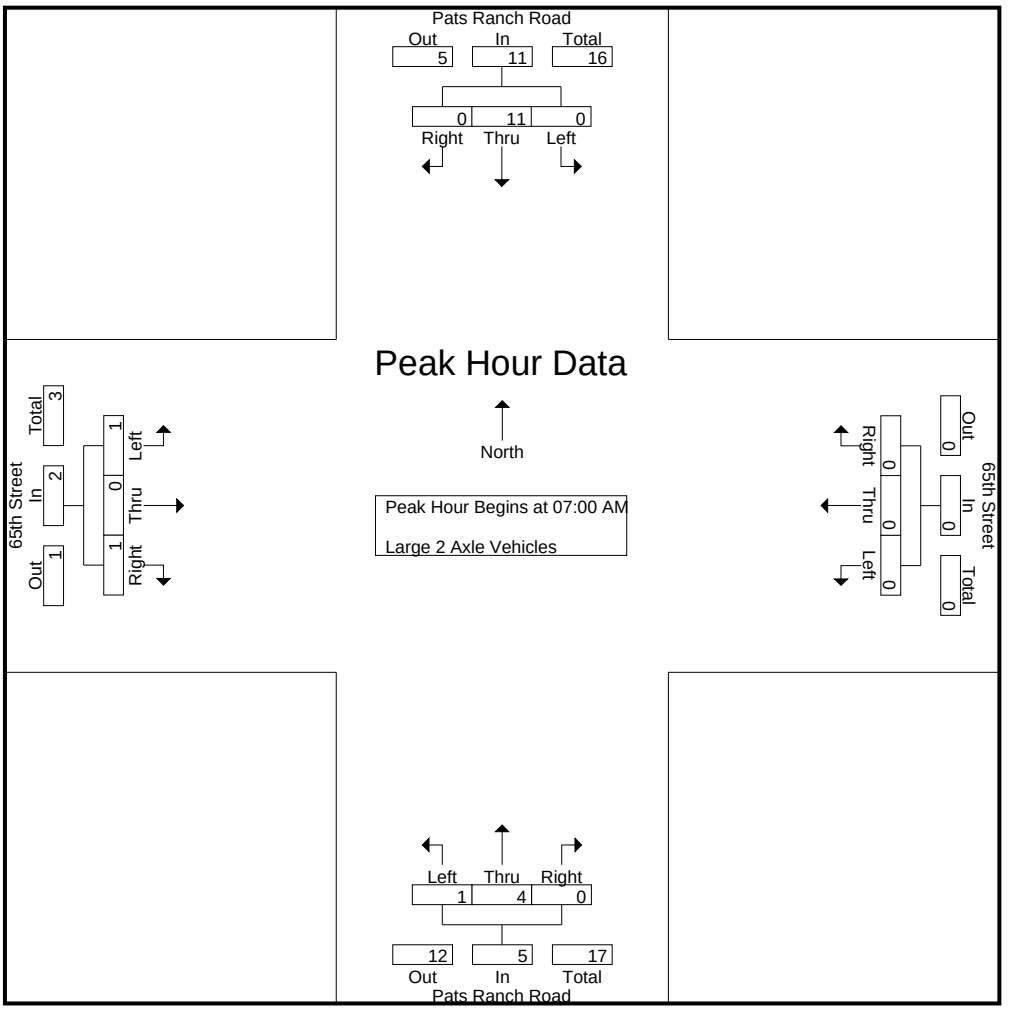
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
07:15 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
07:30 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
07:45 AM	0	1	0	1	0	0	0	0	1	1	0	2	1	0	1	2	5
Total	0	11	0	11	0	0	0	0	1	4	0	5	1	0	1	2	18
08:00 AM	1	4	0	5	0	0	0	0	1	0	0	1	0	0	0	0	6
08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:30 AM	0	1	1	2	0	1	0	1	0	0	0	0	1	0	0	1	4
08:45 AM	0	1	0	1	0	0	1	1	1	5	0	6	0	0	1	1	9
Total	1	6	1	8	0	1	1	2	2	7	0	9	1	0	1	2	21
Grand Total	1	17	1	19	0	1	1	2	3	11	0	14	2	0	2	4	39
Apprch %	5.3	89.5	5.3		0	50	50		21.4	78.6	0		50	0	50		
Total %	2.6	43.6	2.6	48.7	0	2.6	2.6	5.1	7.7	28.2	0	35.9	5.1	0	5.1	10.3	

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**6**	0	**6**	0	0	0	0	0	0	0	0	0	0	0	0	**6**
07:15 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
07:30 AM	0	2	0	2	0	0	0	0	0	**2**	0	**2**	0	0	0	0	4
07:45 AM	0	1	0	1	0	0	0	0	**1**	1	0	2	**1**	0	**1**	**2**	5
Total Volume	0	11	0	11	0	0	0	0	1	4	0	5	1	0	1	2	18
% App. Total	0	100	0		0	0	0		20	80	0		50	0	50		
PHF	.000	.458	.000	.458	.000	.000	.000	.000	.250	.500	.000	.625	.250	.000	.250	.250	.750

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City of Jurupa Valley
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File Name : 05_JVY_Pats_65th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**6**	0	**6**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	**1**	1	0	2	**1**	0	**1**	**2**
Total Volume	0	11	0	11	0	0	0	0	1	4	0	5	1	0	1	2
% App. Total	0	100	0		0	0	0		20	80	0		50	0	50	
PHF	.000	.458	.000	.458	.000	.000	.000	.000	.250	.500	.000	.625	.250	.000	.250	.250

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Corona, CA 92878
(951)268-6268

City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 65th Street
Weather: Clear

File Name : 05_JVY_Pats_65th AM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

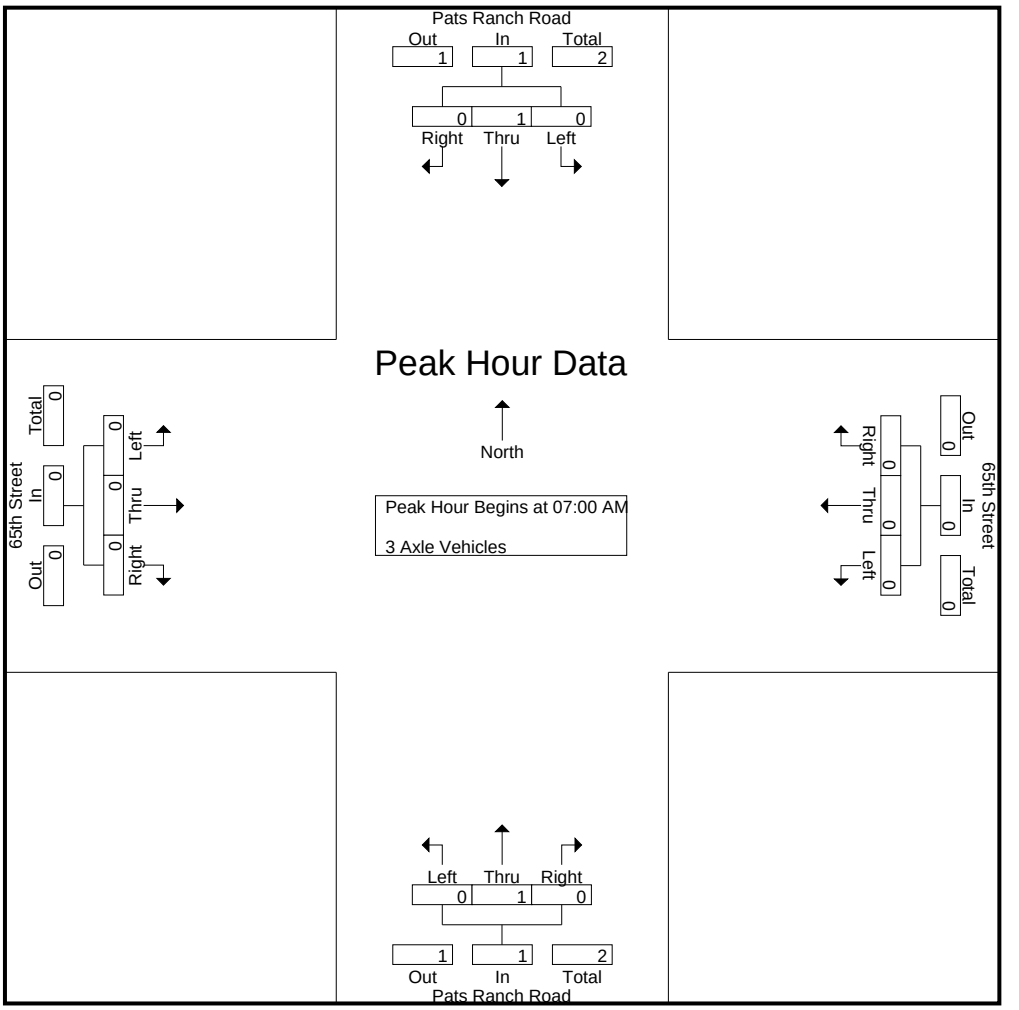
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	50	0	50	0	0	0	0	0	50	0	50	0	0	0	0	

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.500

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File Name : 05_JVY_Pats_65th AM
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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File Name : 05_JVY_Pats_65th AM
Site Code : 06721366
Start Date : 8/19/2021
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Groups Printed- 4+ Axle Trucks

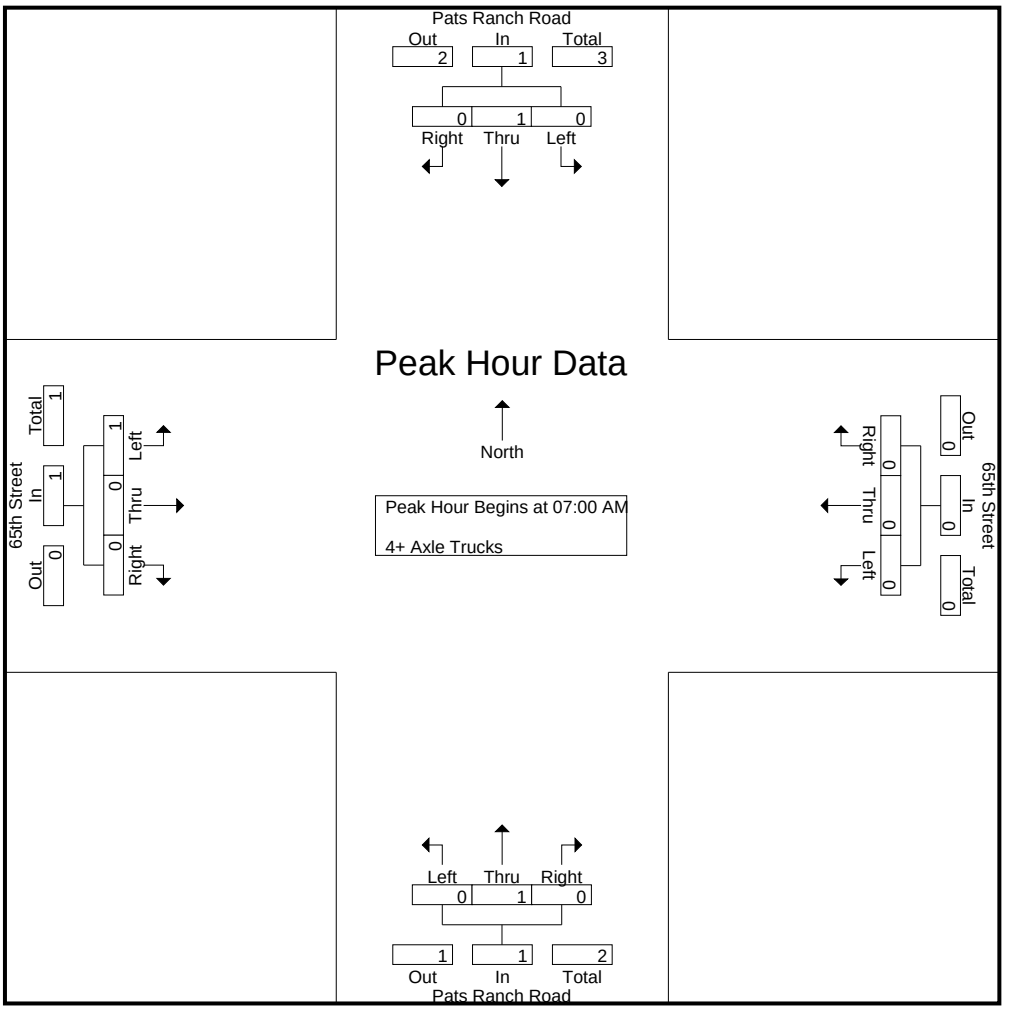
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
08:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2	3
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	0	0	0	0	1	0	1	3	0	0	3	6
Grand Total	0	2	1	3	0	0	0	0	0	2	0	2	4	0	0	4	9
Apprch %	0	66.7	33.3		0	0	0		0	100	0		100	0	0		
Total %	0	22.2	11.1	33.3	0	0	0	0	0	22.2	0	22.2	44.4	0	0	44.4	

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street 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 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	**1**
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
% App. Total	0	100	0		0	0	0		0	100	0		100	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250	.750

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File Name : 05_JVY_Pats_65th AM
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1
% App. Total	0	100	0		0	0	0		0	100	0		100	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250

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City of Jurupa Valley
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File Name : 05_JVY_Pats_65th PM
Site Code : 06721366
Start Date : 8/19/2021
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

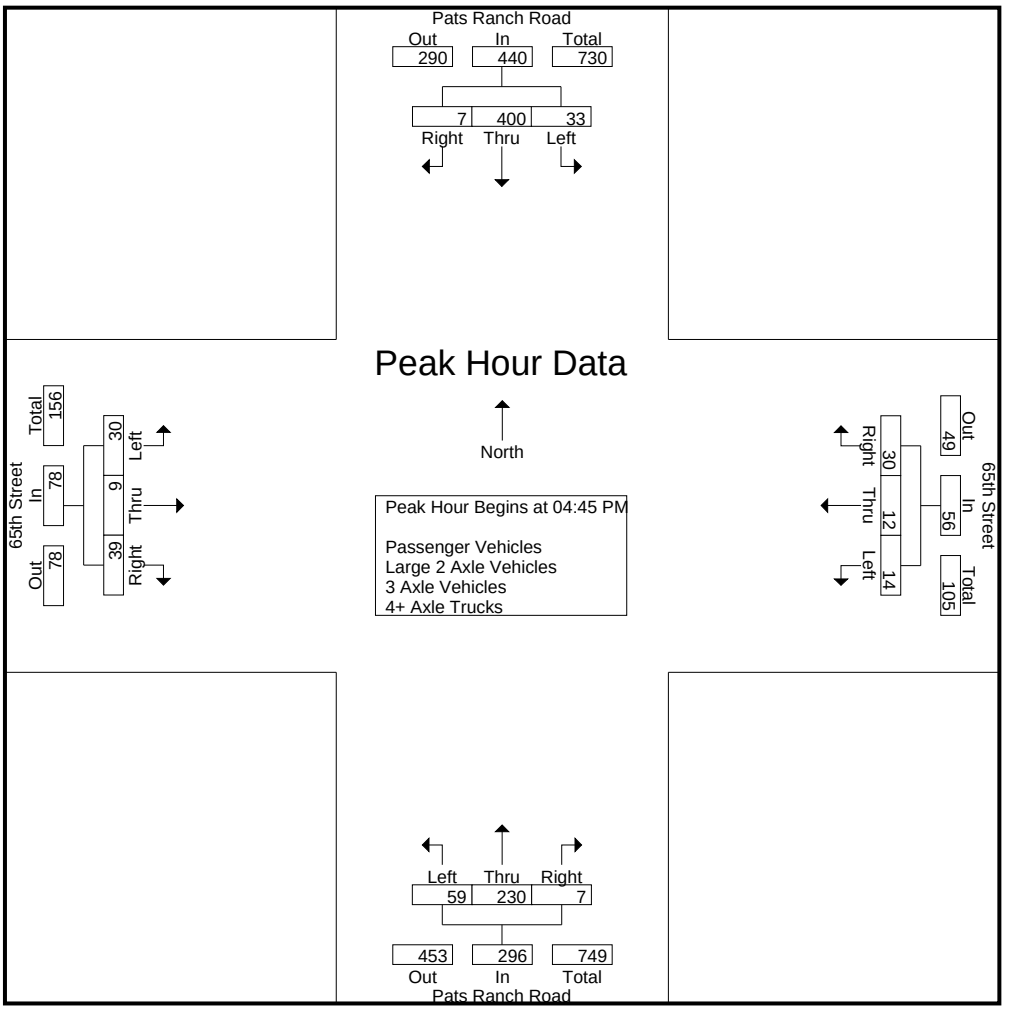
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	87	5	94	3	1	3	7	16	59	2	77	7	1	6	14	192
04:15 PM	11	80	0	91	1	3	3	7	7	58	2	67	5	2	9	16	181
04:30 PM	6	83	4	93	2	2	6	10	15	56	5	76	7	4	4	15	194
04:45 PM	8	102	3	113	3	2	9	14	17	62	0	79	8	3	6	17	223
Total	27	352	12	391	9	8	21	38	55	235	9	299	27	10	25	62	790
05:00 PM	7	110	2	119	2	4	6	12	13	58	2	73	9	0	7	16	220
05:15 PM	8	95	1	104	3	3	6	12	15	49	2	66	3	4	13	20	202
05:30 PM	10	93	1	104	6	3	9	18	14	61	3	78	10	2	13	25	225
05:45 PM	2	91	4	97	4	4	0	8	21	55	3	79	8	2	8	18	202
Total	27	389	8	424	15	14	21	50	63	223	10	296	30	8	41	79	849
Grand Total	54	741	20	815	24	22	42	88	118	458	19	595	57	18	66	141	1639
Apprch %	6.6	90.9	2.5		27.3	25	47.7		19.8	77	3.2		40.4	12.8	46.8		
Total %	3.3	45.2	1.2	49.7	1.5	1.3	2.6	5.4	7.2	27.9	1.2	36.3	3.5	1.1	4	8.6	
Passenger Vehicles	54	733	19	806	24	22	42	88	117	452	19	588	55	18	66	139	1621
% Passenger Vehicles	100	98.9	95	98.9	100	100	100	100	99.2	98.7	100	98.8	96.5	100	100	98.6	98.9
Large 2 Axle Vehicles	0	7	0	7	0	0	0	0	1	6	0	7	1	0	0	1	15
% Large 2 Axle Vehicles	0	0.9	0	0.9	0	0	0	0	0.8	1.3	0	1.2	1.8	0	0	0.7	0.9
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
% 4+ Axle Trucks	0	0	5	0.1	0	0	0	0	0	0	0	0	1.8	0	0	0.7	0.1

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	8	102	**3**	113	3	2	**9**	14	**17**	**62**	0	**79**	8	3	6	17	223
05:00 PM	7	**110**	2	**119**	2	**4**	6	12	13	58	2	73	9	0	7	16	220
05:15 PM	8	95	1	104	3	3	6	12	15	49	2	66	3	**4**	**13**	20	202
05:30 PM	**10**	93	1	104	**6**	3	9	**18**	14	61	**3**	78	**10**	2	13	**25**	**225**
Total Volume	33	400	7	440	14	12	30	56	59	230	7	296	30	9	39	78	870
% App. Total	7.5	90.9	1.6		25	21.4	53.6		19.9	77.7	2.4		38.5	11.5	50		
PHF	.825	.909	.583	.924	.583	.750	.833	.778	.868	.927	.583	.937	.750	.563	.750	.780	.967

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N/S: Pats Ranch Road
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File Name : 05_JVY_Pats_65th PM
Site Code : 06721366
Start Date : 8/19/2021
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:00 PM				05:00 PM			
+0 mins.	8	102	**3**	113	3	2	**9**	14	16	59	2	77	9	0	7	16
+15 mins.	7	**110**	2	**119**	2	**4**	6	12	7	58	2	67	3	**4**	**13**	20
+30 mins.	8	95	1	104	3	3	6	12	15	56	**5**	76	**10**	2	13	**25**
+45 mins.	**10**	93	1	104	**6**	3	9	**18**	**17**	**62**	0	**79**	8	2	8	18
Total Volume	33	400	7	440	14	12	30	56	55	235	9	299	30	8	41	79
% App. Total	7.5	90.9	1.6		25	21.4	53.6		18.4	78.6	3		38	10.1	51.9	
PHF	.825	.909	.583	.924	.583	.750	.833	.778	.809	.948	.450	.946	.750	.500	.788	.790

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File Name : 05_JVY_Pats_65th PM
Site Code : 06721366
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Groups Printed- Passenger Vehicles

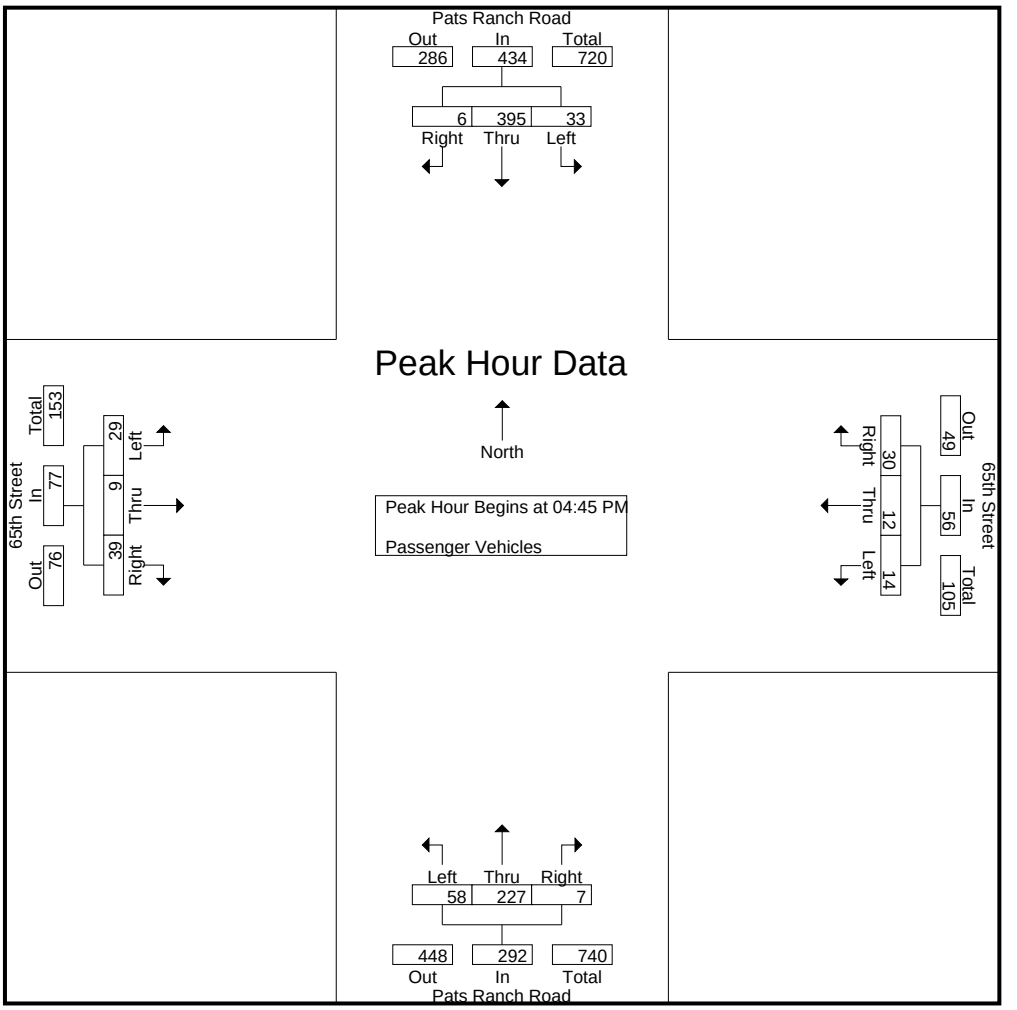
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	87	5	94	3	1	3	7	16	58	2	76	7	1	6	14	191
04:15 PM	11	78	0	89	1	3	3	7	7	58	2	67	5	2	9	16	179
04:30 PM	6	83	4	93	2	2	6	10	15	54	5	74	7	4	4	15	192
04:45 PM	8	101	2	111	3	2	9	14	16	61	0	77	8	3	6	17	219
Total	27	349	11	387	9	8	21	38	54	231	9	294	27	10	25	62	781
05:00 PM	7	108	2	117	2	4	6	12	13	56	2	71	9	0	7	16	216
05:15 PM	8	95	1	104	3	3	6	12	15	49	2	66	2	4	13	19	201
05:30 PM	10	91	1	102	6	3	9	18	14	61	3	78	10	2	13	25	223
05:45 PM	2	90	4	96	4	4	0	8	21	55	3	79	7	2	8	17	200
Total	27	384	8	419	15	14	21	50	63	221	10	294	28	8	41	77	840
Grand Total	54	733	19	806	24	22	42	88	117	452	19	588	55	18	66	139	1621
Apprch %	6.7	90.9	2.4		27.3	25	47.7		19.9	76.9	3.2		39.6	12.9	47.5		
Total %	3.3	45.2	1.2	49.7	1.5	1.4	2.6	5.4	7.2	27.9	1.2	36.3	3.4	1.1	4.1	8.6	

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	8	101	**2**	111	3	2	**9**	14	**16**	**61**	0	77	8	3	6	17	219
05:00 PM	7	**108**	2	**117**	2	**4**	6	12	13	56	2	71	9	0	7	16	216
05:15 PM	8	95	1	104	3	3	6	12	15	49	2	66	2	**4**	**13**	19	201
05:30 PM	**10**	91	1	102	**6**	3	9	**18**	14	61	**3**	**78**	**10**	2	13	**25**	**223**
Total Volume	33	395	6	434	14	12	30	56	58	227	7	292	29	9	39	77	859
% App. Total	7.6	91	1.4		25	21.4	53.6		19.9	77.7	2.4		37.7	11.7	50.6		
PHF	.825	.914	.750	.927	.583	.750	.833	.778	.906	.930	.583	.936	.725	.563	.750	.770	.963

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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	8	101	**2**	111	3	2	**9**	14	**16**	**61**	0	77	8	3	6	17
+15 mins.	7	**108**	2	**117**	2	**4**	6	12	13	56	2	71	9	0	7	16
+30 mins.	8	95	1	104	3	3	6	12	15	49	2	66	2	**4**	**13**	19
+45 mins.	**10**	91	1	102	**6**	3	9	**18**	14	61	**3**	**78**	**10**	2	13	**25**
Total Volume	33	395	6	434	14	12	30	56	58	227	7	292	29	9	39	77
% App. Total	7.6	91	1.4		25	21.4	53.6		19.9	77.7	2.4		37.7	11.7	50.6	
PHF	.825	.914	.750	.927	.583	.750	.833	.778	.906	.930	.583	.936	.725	.563	.750	.770

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Groups Printed- Large 2 Axle Vehicles

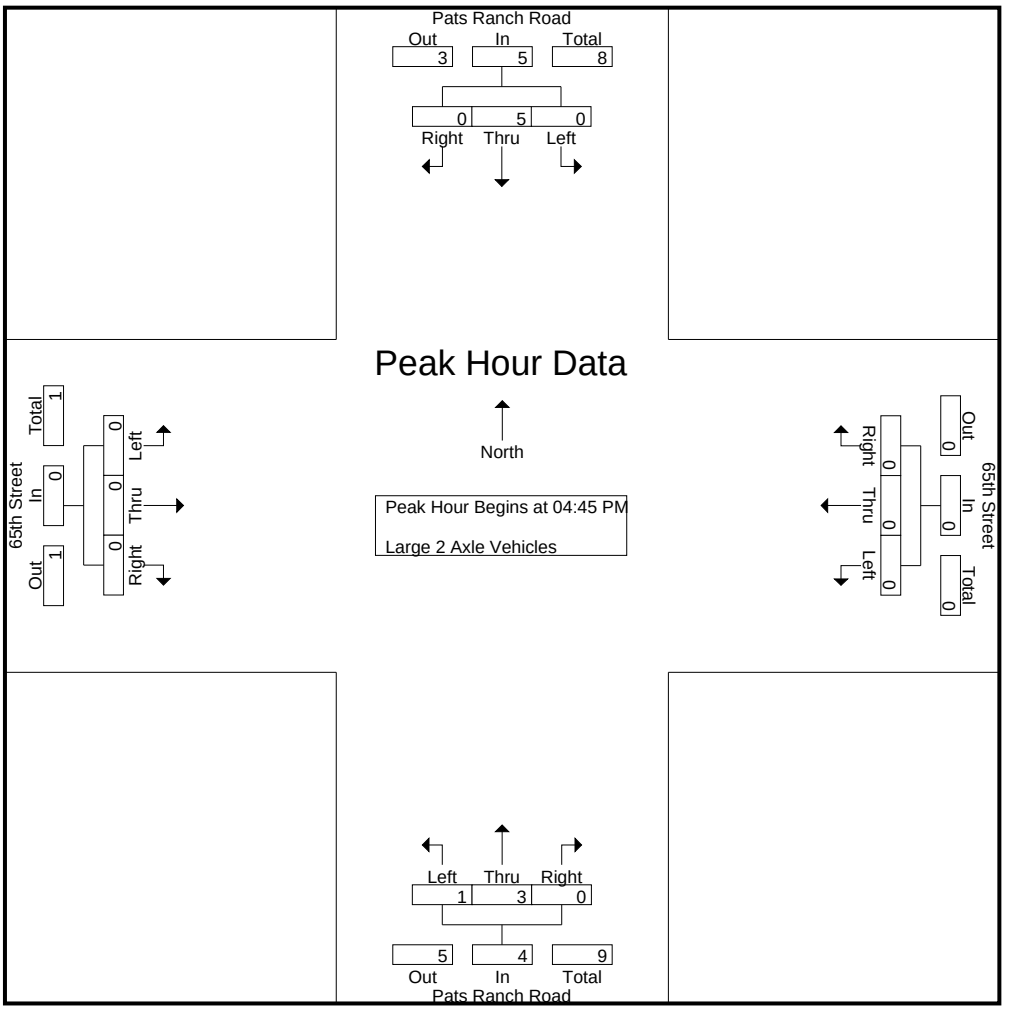
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:45 PM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	3
Total	0	2	0	2	0	0	0	0	1	4	0	5	0	0	0	0	7
05:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	5	0	5	0	0	0	0	0	2	0	2	1	0	0	1	8
Grand Total	0	7	0	7	0	0	0	0	1	6	0	7	1	0	0	1	15
Apprch %	0	100	0		0	0	0		14.3	85.7	0		100	0	0		
Total %	0	46.7	0	46.7	0	0	0	0	6.7	40	0	46.7	6.7	0	0	6.7	

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	0	0	0	0	**1**	1	0	**2**	0	0	0	0	3
05:00 PM	0	**2**	0	**2**	0	0	0	0	0	**2**	0	2	0	0	0	0	**4**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	5	0	5	0	0	0	0	1	3	0	4	0	0	0	0	9
% App. Total	0	100	0		0	0	0		25	75	0		0	0	0		
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.250	.375	.000	.500	.000	.000	.000	.000	.563

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

City of Jurupa Valley
N/S: Pats Ranch Road
E/W: 65th Street
Weather: Clear

File Name : 05_JVY_Pats_65th PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	0	1	0	0	0	0	**1**	1	0	**2**	0	0	0	0
+15 mins.	0	**2**	0	**2**	0	0	0	0	0	**2**	0	2	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	5	0	5	0	0	0	0	1	3	0	4	0	0	0	0
% App. Total	0	100	0		0	0	0		25	75	0		0	0	0	
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.250	.375	.000	.500	.000	.000	.000	.000

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File Name : 05_JVY_Pats_65th PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

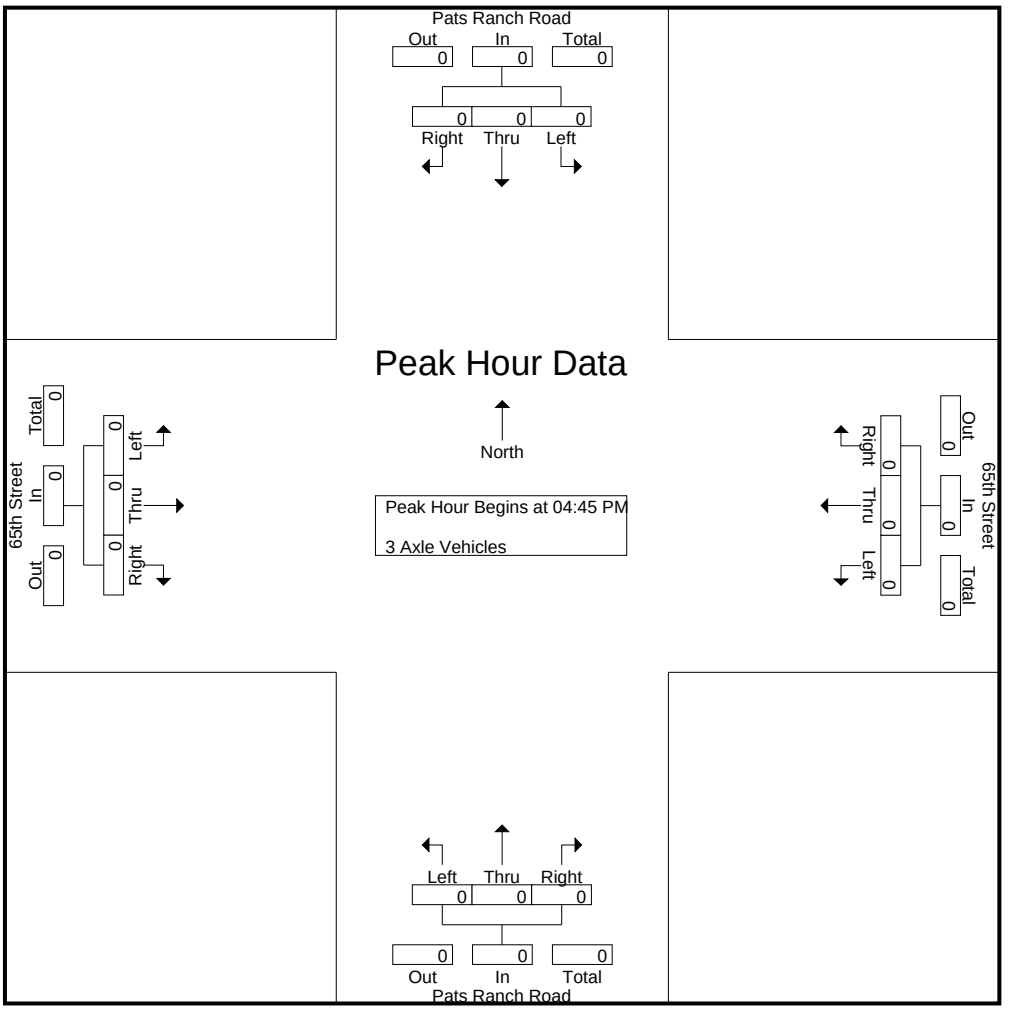
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Jurupa Valley
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Weather: Clear

File Name : 05_JVY_Pats_65th PM
Site Code : 06721366
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Jurupa Valley
N/S: Pats Ranch Road
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Weather: Clear

File Name : 05_JVY_Pats_65th PM
Site Code : 06721366
Start Date : 8/19/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

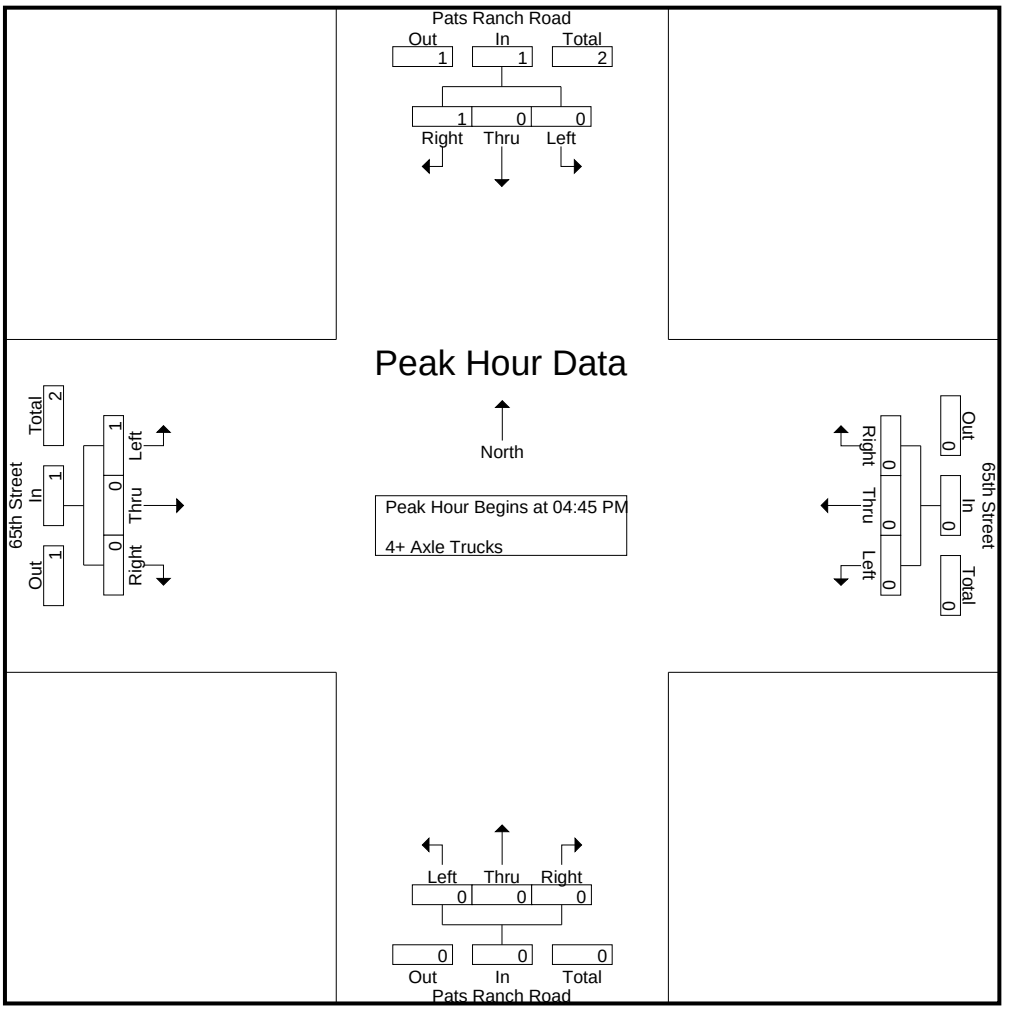
	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	50	50	0	0	0	0	0	0	0	0	50	0	0	50	

	Pats Ranch Road Southbound				65th Street Westbound				Pats Ranch Road Northbound				65th Street 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.500

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File Name : 05_JVY_Pats_65th PM
Site Code : 06721366
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250

Appendix D

Level of Service Analysis Worksheets

Appendix D-1

Existing Conditions (2021)

Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Existing AM.pdf

Scenario 1 Existing AM
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Left	0.423	18.4	B
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.587	9.6	A
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.633	10.4	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	SB Right	0.373	12.2	B
5	Pats Ranch/65th (Project Dwy)	Signalized	HCM 6th Edition	NB Left	0.671	2.7	A

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: Limonite/Pats Ranch

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):	0.423

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	395	29	86	1	28	90	50	725	147	89	1067	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]	395	29	86	1	28	90	50	725	147	89	1067	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	99	7	22	0	7	23	13	181	37	22	267	0
Total Analysis Volume [veh/h]	395	29	86	1	28	90	50	725	147	89	1067	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]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	52	52	52	52	52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	9	14	14	0	5	3	14	14	4	15	15
g / C, Green / Cycle	0.17	0.26	0.26	0.00	0.09	0.05	0.28	0.28	0.07	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.11	0.02	0.05	0.00	0.07	0.03	0.14	0.09	0.03	0.21	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1648	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	582	488	415	3	155	89	1410	440	242	1512	472
d1, Uniform Delay [s]	20.39	14.48	15.07	26.04	23.07	24.24	15.92	15.05	23.17	16.33	12.92
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]	1.40	0.05	0.25	72.39	7.42	5.43	0.29	0.44	0.93	0.61	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	0.68	0.06	0.21	0.38	0.76	0.56	0.51	0.33	0.37	0.71	0.00
d, Delay for Lane Group [s/veh]	21.79	14.53	15.32	98.43	30.49	29.66	16.21	15.49	24.10	16.94	12.92
Lane Group LOS	C	B	B	F	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]	2.15	0.24	0.74	0.06	1.62	0.69	2.17	1.28	0.51	3.36	0.01
50th-Percentile Queue Length [ft/ln]	53.79	5.92	18.45	1.61	40.46	17.31	54.32	32.03	12.84	84.09	0.19
95th-Percentile Queue Length [veh/ln]	3.87	0.43	1.33	0.12	2.91	1.25	3.91	2.31	0.92	6.05	0.01
95th-Percentile Queue Length [ft/ln]	96.81	10.66	33.22	2.89	72.82	31.16	97.77	57.66	23.11	151.36	0.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.79	14.53	15.32	98.43	30.49	30.49	29.66	16.21	15.49	24.10	16.94	12.92
Movement LOS	C	B	B	F	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	20.28			31.06			16.83			17.49		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.39											
Intersection LOS	B											
Intersection V/C	0.423											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.713	2.191	3.038	3.074
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]	820	675	595	595
d_b, Bicycle Delay [s]	19.15	24.16	27.16	27.16
l_b,int, Bicycle LOS Score for Intersection	2.401	1.756	2.067	2.196
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 2: I-15 NB Ramp/Limonite Ave

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

Intersection Setup

Name	I-15 NB Ramp				Limonite Ave				Limonite Ave			
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	392	0	433	0	0	0	0	496	688	0	1133	425
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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]	392	0	433	0	0	0	0	496	688	0	1133	425
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	98	0	108	0	0	0	0	124	172	0	283	106
Total Analysis Volume [veh/h]	392	0	433	0	0	0	0	496	688	0	1133	425
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	42	42	42		42	42	42	42
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	10	10	10		21	21	21	21
g / C, Green / Cycle	0.24	0.24	0.24		0.51	0.51	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.15		0.10	0.43	0.22	0.27
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	427	427	674		2580	805	2580	805
d1, Uniform Delay [s]	13.57	13.57	14.27		5.63	8.96	6.54	6.94
k, delay calibration	0.11	0.11	0.11		0.11	0.14	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]	0.77	0.77	1.03		0.04	3.53	0.12	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	0.46	0.46	0.64		0.19	0.85	0.44	0.53
d, Delay for Lane Group [s/veh]	14.34	14.34	15.30		5.67	12.49	6.66	7.48
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]	1.39	1.39	1.61		0.53	4.22	1.40	1.76
50th-Percentile Queue Length [ft/ln]	34.84	34.84	40.23		13.16	105.46	35.03	44.01
95th-Percentile Queue Length [veh/ln]	2.51	2.51	2.90		0.95	7.59	2.52	3.17
95th-Percentile Queue Length [ft/ln]	62.72	62.72	72.42		23.69	189.66	63.06	79.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.34	14.34	15.30	0.00	0.00	0.00	0.00	5.67	12.49	0.00	6.66	7.48
Movement LOS	B	B	B					A	B		A	A
d_A, Approach Delay [s/veh]	14.84			0.00			9.63			6.88		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	9.63											
Intersection LOS	A											
Intersection V/C	0.587											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.891	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	2.921	4.132	2.211	2.417
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite Ave

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):	0.633

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	190	0	523	0	1019	430	0	831	711
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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	190	0	523	0	1019	430	0	831	711
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	48	0	131	0	255	108	0	208	178
Total Analysis Volume [veh/h]	0	0	0	190	0	523	0	1019	430	0	831	711
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		47	47	47	47	47	47	47
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		12	12	12	24	24	24	24
g / C, Green / Cycle		0.26	0.26	0.26	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.05	0.05	0.19	0.20	0.27	0.16	0.45
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		455	455	718	2643	825	2643	825
d1, Uniform Delay [s]		13.75	13.75	15.99	6.79	7.45	6.49	9.83
k, delay calibration		0.11	0.11	0.11	0.11	0.11	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]		0.23	0.23	1.43	0.09	0.51	0.07	5.29
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		0.21	0.21	0.73	0.39	0.52	0.31	0.86
d, Delay for Lane Group [s/veh]		13.98	13.98	17.42	6.88	7.96	6.56	15.12
Lane Group LOS		B	B	B	A	A	A	B
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		0.71	0.71	2.33	1.46	2.11	1.13	5.56
50th-Percentile Queue Length [ft/ln]		17.79	17.79	58.23	36.42	52.72	28.37	138.95
95th-Percentile Queue Length [veh/ln]		1.28	1.28	4.19	2.62	3.80	2.04	9.42
95th-Percentile Queue Length [ft/ln]		32.02	32.02	104.82	65.56	94.89	51.06	235.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	13.98	13.98	17.42	0.00	6.88	7.96	0.00	6.56	15.12
Movement LOS				B	B	B		A	A		A	B
d_A, Approach Delay [s/veh]	0.00			16.50			7.20			10.51		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	10.37											
Intersection LOS	B											
Intersection V/C	0.633											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.061	2.880	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	2.736	2.357	2.408
Bicycle LOS	D	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.373

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	77	67	17	34	13	199	275	363	40	15	332	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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]	77	67	17	34	13	199	275	363	40	15	332	52
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	17	4	9	3	50	69	91	10	4	83	13
Total Analysis Volume [veh/h]	77	67	17	34	13	199	275	363	40	15	332	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	39	0	9	34	0	13	21	0	11	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	37	37	37	37	37	37	37	37	37	37	37
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	13	8	13	6	6	16	11	11	16	6	6
g / C, Green / Cycle	0.35	0.20	0.35	0.17	0.17	0.43	0.31	0.31	0.43	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.02	0.01	0.13	0.19	0.11	0.11	0.01	0.09	0.03
s, saturation flow rate [veh/h]	1539	1805	1438	1870	1589	1418	1870	1806	1117	3560	1589
c, Capacity [veh/h]	826	370	748	319	271	814	575	555	692	574	256
d1, Uniform Delay [s]	8.21	12.42	8.04	12.97	14.72	7.28	10.08	10.09	6.17	14.53	13.62
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
I, Upstream 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]	0.05	0.31	0.02	0.05	3.82	0.24	0.37	0.39	0.01	0.92	0.39
d3, Initial Queue 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	0.09	0.23	0.05	0.04	0.73	0.34	0.36	0.36	0.02	0.58	0.20
d, Delay for Lane Group [s/veh]	8.26	12.73	8.06	13.02	18.55	7.52	10.46	10.47	6.19	15.45	14.01
Lane Group LOS	A	B	A	B	B	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]	0.32	0.50	0.14	0.08	1.59	1.02	1.05	1.02	0.05	1.14	0.34
50th-Percentile Queue Length [ft/ln]	7.99	12.60	3.45	1.98	39.70	25.61	26.17	25.42	1.19	28.42	8.49
95th-Percentile Queue Length [veh/ln]	0.58	0.91	0.25	0.14	2.86	1.84	1.88	1.83	0.09	2.05	0.61
95th-Percentile Queue Length [ft/ln]	14.38	22.68	6.21	3.57	71.46	46.10	47.11	45.75	2.14	51.15	15.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.26	12.73	12.73	8.06	13.02	18.55	7.52	10.46	10.47	6.19	15.45	14.01
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	10.59			16.81			9.27			14.92		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	12.18											
Intersection LOS	B											
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]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.018	2.504	2.571	2.593
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]	875	750	425	375
d_b, Bicycle Delay [s]	12.66	15.63	24.81	26.41
l_b,int, Bicycle LOS Score for Intersection	1.825	1.966	2.119	1.889
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 5: Pats Ranch/65th (Project Dwy)

Control Type:	Signalized	Delay (sec / veh):	2.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	47	359	27	21	237	2	21	1	17	32	2	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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]	47	359	27	21	237	2	21	1	17	32	2	23
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	90	7	5	59	1	5	0	4	8	1	6
Total Analysis Volume [veh/h]	47	359	27	21	237	2	21	1	17	32	2	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	16	32	0	0	36	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	22	0	0	25	0	0	27	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]	2.0	2.0	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	13	13	13	13	13	13	13	13	13
L, Total Lost Time per Cycle [s]	0.00	0.00	0.00	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	0	0	0	3	3	3	1	1	1
g / C, Green / Cycle	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.10	0.10	0.02	0.07	0.00	0.02	0.01	0.60
s, saturation flow rate [veh/h]	1099	1870	1825	997	3560	1589	975	1603	94
c, Capacity [veh/h]	542	0	0	620	811	362	542	165	433
d1, Uniform Delay [s]	6.65	0.00	0.00	5.77	4.25	3.97	6.65	5.41	6.64
k, delay calibration	0.50	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
d2, Incremental Delay [s]	0.32	0.00	0.00	0.02	0.20	0.01	0.03	0.29	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
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	0.09	10000.0	10000.0	0.03	0.29	0.01	0.04	0.11	0.13
d, Delay for Lane Group [s/veh]	6.96	0.00	0.00	5.79	4.44	3.97	6.68	5.70	6.77
Lane Group LOS	A	F	F	A	A	A	A	A	A
Critical Lane Group	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.02	0.02	0.00	0.02	0.02	0.06
50th-Percentile Queue Length [ft/ln]	2.15	0.00	0.00	0.39	0.56	0.01	0.54	0.52	1.55
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.03	0.04	0.00	0.04	0.04	0.11
95th-Percentile Queue Length [ft/ln]	3.87	0.00	0.00	0.70	1.00	0.03	0.96	0.94	2.80

Movement, Approach, & Intersection Results

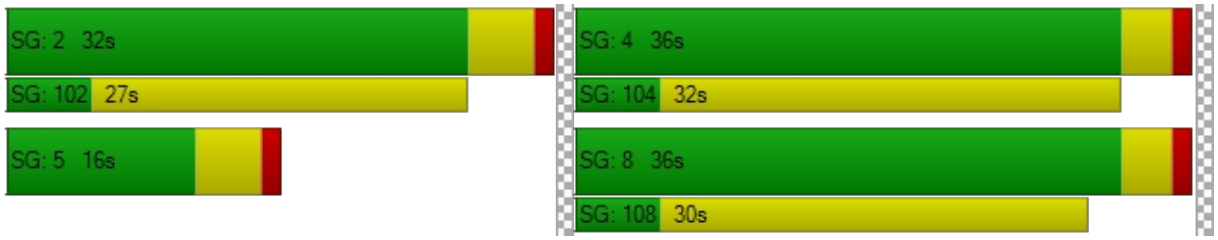
d_M, Delay for Movement [s/veh]	6.96	0.00	0.00	5.79	4.44	3.97	6.68	5.70	5.70	6.77	6.77	6.77
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.76			4.55			6.23			6.77		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.71											
Intersection LOS	A											
Intersection V/C	0.671											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.481	2.586	2.032	1.792
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]	0	678	800	800
d_b, Bicycle Delay [s]	40.00	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.917	1.774	1.624	1.654
Bicycle LOS	A	A	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Existing PM.pdf

Scenario 2 Existing PM
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Right	0.485	20.9	C
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.572	11.9	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.555	11.5	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	WB Thru	0.374	12.6	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	1.534	9.0	A

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: Limonite/Pats Ranch

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):	0.485

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	366	56	181	0	33	74	145	1316	246	196	885	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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]	366	56	181	0	33	74	145	1316	246	196	885	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	92	14	45	0	8	19	36	329	62	49	221	1
Total Analysis Volume [veh/h]	366	56	181	0	33	74	145	1316	246	196	885	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	63	63	63	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	9	15	15	0	5	7	22	22	6	21	21
g / C, Green / Cycle	0.15	0.23	0.23	0.00	0.08	0.11	0.35	0.35	0.09	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.11	0.03	0.11	0.00	0.06	0.08	0.26	0.15	0.06	0.17	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1667	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	518	438	372	0	140	192	1774	553	320	1696	529
d1, Uniform Delay [s]	25.34	18.96	20.76	0.00	28.10	27.18	17.96	15.76	27.38	16.88	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
I, Upstream 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]	1.78	0.13	0.99	0.00	8.28	5.97	0.63	0.56	1.91	0.25	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	0.71	0.13	0.49	0.00	0.76	0.76	0.74	0.44	0.61	0.52	0.00
d, Delay for Lane Group [s/veh]	27.12	19.09	21.75	0.00	36.38	33.14	18.59	16.32	29.28	17.13	13.97
Lane Group LOS	C	B	C	A	D	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.56	0.62	2.23	0.00	1.81	2.31	5.09	2.54	1.42	3.15	0.02
50th-Percentile Queue Length [ft/ln]	64.00	15.45	55.80	0.00	45.30	57.74	127.37	63.57	35.57	78.65	0.45
95th-Percentile Queue Length [veh/ln]	4.61	1.11	4.02	0.00	3.26	4.16	8.80	4.58	2.56	5.66	0.03
95th-Percentile Queue Length [ft/ln]	115.20	27.80	100.44	0.00	81.54	103.94	219.92	114.42	64.03	141.57	0.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.12	19.09	21.75	0.00	36.38	36.38	33.14	18.59	16.32	29.28	17.13	13.97
Movement LOS	C	B	C	A	D	D	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	24.76			36.38			19.50			19.33		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	20.87											
Intersection LOS	C											
Intersection V/C	0.485											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.755	2.218	3.106	3.140
Crosswalk LOS	C	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.555	1.736	2.498	2.155
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 2: I-15 NB Ramp/Limonite Ave

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):	0.572

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	463	3	810	0	0	0	0	1101	451	0	1151	253
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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]	463	3	810	0	0	0	0	1101	451	0	1151	253
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	116	1	203	0	0	0	0	275	113	0	288	63
Total Analysis Volume [veh/h]	463	3	810	0	0	0	0	1101	451	0	1151	253
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	47	47	47		47	47	47	47
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	18	18	18		19	19	19	19
g / C, Green / Cycle	0.38	0.38	0.38		0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.29		0.22	0.28	0.23	0.16
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	674	674	1064		2019	630	2019	630
d1, Uniform Delay [s]	10.46	10.46	12.77		10.94	11.97	11.08	10.20
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]	0.30	0.30	1.15		0.23	1.54	0.25	0.41
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	0.76		0.55	0.72	0.57	0.40
d, Delay for Lane Group [s/veh]	10.77	10.77	13.92		11.17	13.50	11.33	10.61
Lane Group LOS	B	B	B		B	B	B	B
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.46	1.46	3.14		2.38	3.41	2.52	1.57
50th-Percentile Queue Length [ft/ln]	36.41	36.40	78.47		59.40	85.15	62.93	39.29
95th-Percentile Queue Length [veh/ln]	2.62	2.62	5.65		4.28	6.13	4.53	2.83
95th-Percentile Queue Length [ft/ln]	65.53	65.52	141.24		106.91	153.27	113.28	70.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.77	10.77	13.92	0.00	0.00	0.00	0.00	11.17	13.50	0.00	11.33	10.61
Movement LOS	B	B	B					B	B		B	B
d_A, Approach Delay [s/veh]	12.77			0.00			11.85			11.20		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	11.91											
Intersection LOS	B											
Intersection V/C	0.572											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.917	2.004	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	3.665	4.132	2.413	2.332
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite Ave

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	378	0	749	0	1169	449	0	1173	459
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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	378	0	749	0	1169	449	0	1173	459
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	95	0	187	0	292	112	0	293	115
Total Analysis Volume [veh/h]	0	0	0	378	0	749	0	1169	449	0	1173	459
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		16	16	16	19	19	19	19
g / C, Green / Cycle		0.35	0.35	0.35	0.41	0.41	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate		0.11	0.11	0.27	0.23	0.28	0.23	0.29
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		632	632	998	2102	656	2102	656
d1, Uniform Delay [s]		10.61	10.61	12.93	10.20	10.96	10.21	11.05
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]		0.26	0.26	1.16	0.23	1.27	0.23	1.37
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		0.30	0.30	0.75	0.56	0.68	0.56	0.70
d, Delay for Lane Group [s/veh]		10.88	10.88	14.09	10.43	12.23	10.45	12.42
Lane Group LOS		B	B	B	B	B	B	B
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		1.16	1.16	2.84	2.33	3.06	2.34	3.17
50th-Percentile Queue Length [ft/ln]		28.95	28.95	71.12	58.35	76.61	58.61	79.25
95th-Percentile Queue Length [veh/ln]		2.08	2.08	5.12	4.20	5.52	4.22	5.71
95th-Percentile Queue Length [ft/ln]		52.11	52.11	128.02	105.02	137.90	105.50	142.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	10.88	10.88	14.09	0.00	10.43	12.23	0.00	10.45	12.42
Movement LOS				B	B	B		B	B		B	B
d_A, Approach Delay [s/veh]	0.00			13.01			10.93			11.00		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	11.49											
Intersection LOS	B											
Intersection V/C	0.555											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.067	2.899	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	3.419	2.450	2.457
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

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):	0.374

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	43	49	6	52	68	332	189	191	52	4	218	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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]	43	49	6	52	68	332	189	191	52	4	218	27
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	12	2	13	17	83	47	48	13	1	55	7
Total Analysis Volume [veh/h]	43	49	6	52	68	332	189	191	52	4	218	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	37	37	37	37	37	37	37	37	37	37	37
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	16	10	16	10	10	13	9	9	13	5	5
g / C, Green / Cycle	0.43	0.27	0.43	0.28	0.28	0.35	0.24	0.24	0.35	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.04	0.04	0.21	0.13	0.07	0.07	0.00	0.06	0.02
s, saturation flow rate [veh/h]	1439	1835	1459	1870	1589	1472	1870	1735	1244	3560	1589
c, Capacity [veh/h]	881	493	895	516	439	743	453	421	669	441	197
d1, Uniform Delay [s]	6.21	10.36	6.24	10.21	12.43	8.82	11.54	11.56	7.88	15.35	14.66
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]	0.02	0.10	0.03	0.11	2.68	0.18	0.33	0.36	0.00	0.86	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	0.05	0.11	0.06	0.13	0.76	0.25	0.28	0.28	0.01	0.49	0.14
d, Delay for Lane Group [s/veh]	6.23	10.46	6.27	10.32	15.11	9.00	11.87	11.93	7.89	16.21	14.97
Lane Group LOS	A	B	A	B	B	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]	0.14	0.28	0.17	0.34	2.27	0.84	0.71	0.67	0.02	0.77	0.19
50th-Percentile Queue Length [ft/ln]	3.46	7.02	4.20	8.59	56.81	21.07	17.66	16.87	0.40	19.32	4.69
95th-Percentile Queue Length [veh/ln]	0.25	0.51	0.30	0.62	4.09	1.52	1.27	1.21	0.03	1.39	0.34
95th-Percentile Queue Length [ft/ln]	6.23	12.64	7.57	15.46	102.27	37.93	31.79	30.37	0.72	34.78	8.44

Movement, Approach, & Intersection Results

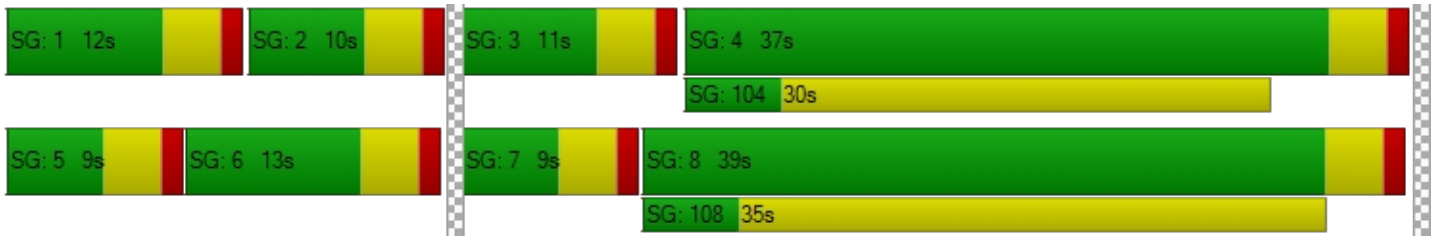
d_M, Delay for Movement [s/veh]	6.23	10.46	10.46	6.27	10.32	15.11	9.00	11.89	11.93	7.89	16.21	14.97
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	8.60			13.38			10.63			15.94		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.55											
Intersection LOS	B											
Intersection V/C	0.374											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.509	2.546
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.721	2.305	1.916	1.765
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 5: Project Driveway

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):	1.534

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	60	232	7	33	403	9	32	9	39	14	12	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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]	60	232	7	33	403	9	32	9	39	14	12	30
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	58	2	8	101	2	8	2	10	4	3	8
Total Analysis Volume [veh/h]	60	232	7	33	403	9	32	9	39	14	12	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	22	22	22	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	5	5	1	5	5	2	2	2
g / C, Green / Cycle	0.07	0.24	0.24	0.04	0.21	0.21	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.06	0.02	0.11	0.01	0.02	0.03	1.39
s, saturation flow rate [veh/h]	1781	1870	1851	1781	3560	1589	1364	1635	40
c, Capacity [veh/h]	126	454	450	75	763	341	324	154	206
d1, Uniform Delay [s]	9.93	6.81	6.81	10.39	7.73	6.90	9.35	9.40	11.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.47
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.77	0.31	0.31	3.99	0.57	0.03	0.13	1.15	3.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.26	0.27	0.44	0.53	0.03	0.10	0.31	0.27
d, Delay for Lane Group [s/veh]	12.70	7.11	7.12	14.38	8.30	6.93	9.48	10.54	14.15
Lane Group LOS	B	A	A	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.27	0.27	0.27	0.19	0.51	0.02	0.10	0.18	0.36
50th-Percentile Queue Length [ft/ln]	6.87	6.75	6.73	4.64	12.77	0.52	2.51	4.56	9.09
95th-Percentile Queue Length [veh/ln]	0.49	0.49	0.48	0.33	0.92	0.04	0.18	0.33	0.65
95th-Percentile Queue Length [ft/ln]	12.37	12.16	12.12	8.35	22.99	0.94	4.51	8.20	16.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.70	7.12	7.12	14.38	8.30	6.93	9.48	10.54	10.54	14.15	14.15	14.15
Movement LOS	B	A	A	B	A	A	A	B	B	B	B	B
d_A, Approach Delay [s/veh]	8.24			8.73			10.12			14.15		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	9.03											
Intersection LOS	A											
Intersection V/C	1.534											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.463	2.614	1.988	1.762
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.806	1.927	1.692	1.652
Bicycle LOS	A	A	A	A

Sequence

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



Appendix D-2

Opening Day Conditions (2023)

Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Background AM NP.pdf

Scenario 3 Background AM NP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Left	0.441	18.9	B
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.610	10.3	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.658	11.2	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	SB Right	0.388	12.5	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.771	9.0	A

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: Limonite/Pats Ranch

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):	0.441

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	395	29	86	1	28	90	50	725	147	89	1067	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	411	30	89	1	29	94	52	754	153	93	1110	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	8	22	0	7	24	13	189	38	23	278	0
Total Analysis Volume [veh/h]	411	30	89	1	29	94	52	754	153	93	1110	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]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	54	54	54	54	54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	9	14	14	0	5	3	15	15	4	16	16
g / C, Green / Cycle	0.17	0.27	0.27	0.00	0.10	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	0.07	0.03	0.15	0.10	0.03	0.22	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1648	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	593	502	426	3	162	90	1450	452	242	1548	483
d1, Uniform Delay [s]	21.15	14.78	15.40	27.09	23.86	25.21	16.31	15.38	24.13	16.82	13.16
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]	1.46	0.05	0.24	72.75	7.15	5.69	0.29	0.44	1.00	0.63	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	0.21	0.38	0.76	0.58	0.52	0.34	0.38	0.72	0.00
d, Delay for Lane Group [s/veh]	22.61	14.83	15.64	99.83	31.01	30.89	16.60	15.81	25.13	17.45	13.16
Lane Group LOS	C	B	B	F	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]	2.35	0.25	0.79	0.07	1.74	0.75	2.36	1.39	0.56	3.68	0.01
50th-Percentile Queue Length [ft/ln]	58.84	6.37	19.87	1.63	43.52	18.82	59.07	34.72	14.10	91.98	0.20
95th-Percentile Queue Length [veh/ln]	4.24	0.46	1.43	0.12	3.13	1.35	4.25	2.50	1.01	6.62	0.01
95th-Percentile Queue Length [ft/ln]	105.92	11.46	35.76	2.93	78.34	33.87	106.32	62.49	25.37	165.56	0.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.61	14.83	15.64	99.83	31.01	31.01	30.89	16.60	15.81	25.13	17.45	13.16
Movement LOS	C	B	B	F	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.00			31.57			17.25			18.04		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.92											
Intersection LOS	B											
Intersection V/C	0.441											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.717	2.193	3.050	3.082
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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.434	1.764	2.087	2.222
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 2: I-15 NB Ramp/Limonite Ave

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):	0.610

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	392	0	433	0	0	0	0	496	688	0	1133	425
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	408	0	450	0	0	0	0	516	716	0	1178	442
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	102	0	113	0	0	0	0	129	179	0	295	111
Total Analysis Volume [veh/h]	408	0	450	0	0	0	0	516	716	0	1178	442
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	44	44	44		44	44	44	44
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	11	11	11		23	23	23	23
g / C, Green / Cycle	0.24	0.24	0.24		0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.16		0.10	0.45	0.23	0.28
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	432	432	682		2636	822	2636	822
d1, Uniform Delay [s]	14.30	14.30	15.08		5.72	9.35	6.68	7.12
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]	0.81	0.81	1.10		0.04	4.99	0.12	0.55
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	0.66		0.20	0.87	0.45	0.54
d, Delay for Lane Group [s/veh]	15.11	15.11	16.18		5.75	14.34	6.80	7.66
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]	1.57	1.57	1.81		0.59	5.07	1.57	1.97
50th-Percentile Queue Length [ft/ln]	39.15	39.15	45.31		14.66	126.79	39.26	49.32
95th-Percentile Queue Length [veh/ln]	2.82	2.82	3.26		1.06	8.76	2.83	3.55
95th-Percentile Queue Length [ft/ln]	70.47	70.47	81.56		26.38	219.12	70.67	88.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.11	15.11	16.18	0.00	0.00	0.00	0.00	5.75	14.34	0.00	6.80	7.66
Movement LOS	B	B	B					A	B		A	A
d_A, Approach Delay [s/veh]	15.67			0.00			10.74			7.04		
Approach LOS	B			A			B			A		
d_I, Intersection Delay [s/veh]	10.26											
Intersection LOS	B											
Intersection V/C	0.610											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.898	2.065	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	2.975	4.132	2.237	2.451
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite Ave

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	190	0	523	0	1019	430	0	831	711
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	198	0	544	0	1060	447	0	864	739
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	50	0	136	0	265	112	0	216	185
Total Analysis Volume [veh/h]	0	0	0	198	0	544	0	1060	447	0	864	739
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		50	50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		13	13	13	26	26	26	26
g / C, Green / Cycle		0.26	0.26	0.26	0.53	0.53	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.19	0.21	0.28	0.17	0.46
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		463	463	732	2682	837	2682	837
d1, Uniform Delay [s]		14.40	14.40	16.86	7.03	7.75	6.71	10.41
k, delay calibration		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
d2, Incremental Delay [s]		0.23	0.23	1.52	0.09	0.53	0.07	7.40
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		0.21	0.21	0.74	0.40	0.53	0.32	0.88
d, Delay for Lane Group [s/veh]		14.63	14.63	18.38	7.13	8.28	6.78	17.81
Lane Group LOS		B	B	B	A	A	A	B
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		0.79	0.79	2.62	1.65	2.38	1.28	6.74
50th-Percentile Queue Length [ft/ln]		19.87	19.87	65.42	41.14	59.61	31.95	168.54
95th-Percentile Queue Length [veh/ln]		1.43	1.43	4.71	2.96	4.29	2.30	11.00
95th-Percentile Queue Length [ft/ln]		35.77	35.77	117.76	74.06	107.30	57.51	274.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.63	14.63	18.38	0.00	7.13	8.28	0.00	6.78	17.81
Movement LOS				B	B	B		A	A		A	B
d_A, Approach Delay [s/veh]	0.00			17.38			7.47			11.86		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	11.21											
Intersection LOS	B											
Intersection V/C	0.658											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.066	2.887	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	2.784	2.388	2.441
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.388

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	77	67	17	34	13	199	275	363	40	15	332	52
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	80	70	18	35	14	207	286	378	42	16	345	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	18	5	9	4	52	72	95	11	4	86	14
Total Analysis Volume [veh/h]	80	70	18	35	14	207	286	378	42	16	345	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	14	8	14	7	7	17	12	12	17	6	6
g / C, Green / Cycle	0.36	0.21	0.36	0.18	0.18	0.44	0.31	0.31	0.44	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.02	0.01	0.13	0.20	0.11	0.11	0.01	0.10	0.03
s, saturation flow rate [veh/h]	1536	1805	1432	1870	1589	1414	1870	1805	1102	3560	1589
c, Capacity [veh/h]	820	381	739	330	281	805	586	566	678	584	261
d1, Uniform Delay [s]	8.42	12.67	8.23	13.22	15.09	7.50	10.30	10.30	6.32	14.98	14.00
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]	0.05	0.31	0.03	0.05	3.77	0.27	0.38	0.39	0.01	0.96	0.39
d3, Initial Queue 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	0.10	0.23	0.05	0.04	0.74	0.36	0.36	0.37	0.02	0.59	0.21
d, Delay for Lane Group [s/veh]	8.47	12.98	8.25	13.27	18.86	7.76	10.67	10.69	6.33	15.94	14.39
Lane Group LOS	A	B	A	B	B	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]	0.35	0.55	0.15	0.09	1.71	1.13	1.14	1.11	0.05	1.24	0.37
50th-Percentile Queue Length [ft/ln]	8.71	13.70	3.72	2.21	42.69	28.22	28.48	27.63	1.33	30.92	9.19
95th-Percentile Queue Length [veh/ln]	0.63	0.99	0.27	0.16	3.07	2.03	2.05	1.99	0.10	2.23	0.66
95th-Percentile Queue Length [ft/ln]	15.68	24.65	6.70	3.98	76.84	50.80	51.26	49.73	2.40	55.66	16.54

Movement, Approach, & Intersection Results

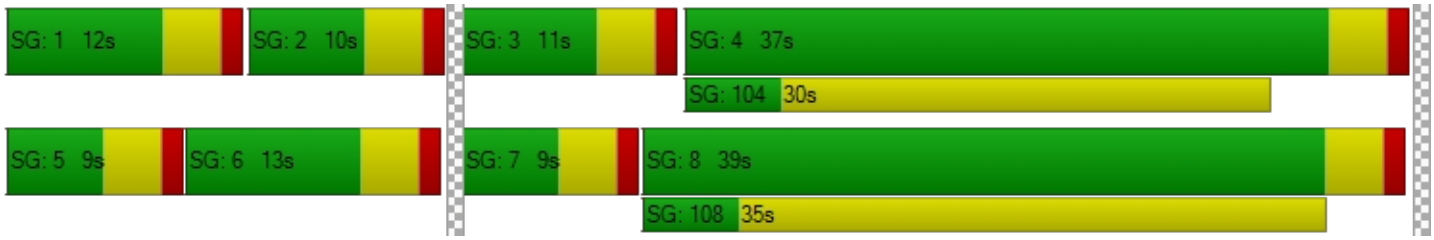
d_M, Delay for Movement [s/veh]	8.47	12.98	12.98	8.25	13.27	18.86	7.76	10.68	10.69	6.33	15.94	14.39
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	10.83			17.10			9.50			15.36		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	12.48											
Intersection LOS	B											
Intersection V/C	0.388											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.576	2.592
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.837	1.982	2.142	1.902
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 5: Project Driveway

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):	0.771

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	47	359	27	21	237	2	21	1	17	32	2	23
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	49	373	28	22	246	2	22	1	18	33	2	24
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	93	7	6	62	1	6	0	5	8	1	6
Total Analysis Volume [veh/h]	49	373	28	22	246	2	22	1	18	33	2	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	21	21	21	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	5	5	1	4	4	2	2	2
g / C, Green / Cycle	0.06	0.21	0.21	0.03	0.18	0.18	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.01	0.07	0.00	0.02	0.01	0.65
s, saturation flow rate [veh/h]	1781	1870	1825	1781	3560	1589	1384	1602	91
c, Capacity [veh/h]	105	398	389	51	650	290	338	176	274
d1, Uniform Delay [s]	9.69	7.39	7.39	10.16	7.64	7.12	8.58	8.53	10.63
k, delay calibration	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
d2, Incremental Delay [s]	3.17	1.00	1.04	5.64	0.36	0.01	0.08	0.27	0.39
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	0.47	0.51	0.51	0.43	0.38	0.01	0.07	0.11	0.22
d, Delay for Lane Group [s/veh]	12.86	8.39	8.44	15.80	8.00	7.13	8.66	8.80	11.02
Lane Group LOS	B	A	A	B	A	A	A	A	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.23	0.51	0.51	0.14	0.29	0.00	0.06	0.06	0.21
50th-Percentile Queue Length [ft/ln]	5.69	12.79	12.66	3.59	7.25	0.12	1.52	1.47	5.33
95th-Percentile Queue Length [veh/ln]	0.41	0.92	0.91	0.26	0.52	0.01	0.11	0.11	0.38
95th-Percentile Queue Length [ft/ln]	10.24	23.02	22.79	6.46	13.05	0.21	2.73	2.65	9.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.86	8.41	8.44	15.80	8.00	7.13	8.66	8.80	8.80	11.02	11.02	11.02
Movement LOS	B	A	A	B	A	A	A	A	A	B	B	B
d_A, Approach Delay [s/veh]	8.90			8.63			8.72			11.02		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	8.95											
Intersection LOS	A											
Intersection V/C	0.771											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.488	2.592	1.966	1.764
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.931	1.782	1.627	1.657
Bicycle LOS	A	A	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Background AM WP.pdf

Scenario 5 Background AM WP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Left	0.457	19.6	B
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.614	10.4	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.658	11.2	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	SB Right	0.396	12.7	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.333	9.0	A

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: Limonite/Pats Ranch

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.457

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	395	29	86	1	28	90	50	725	147	89	1067	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	56	0	8	0	0	0	0	0	17	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	467	30	97	1	29	94	52	754	170	95	1110	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	117	8	24	0	7	24	13	189	43	24	278	0
Total Analysis Volume [veh/h]	467	30	97	1	29	94	52	754	170	95	1110	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]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	56	56	56	56	56	56	56	56	56	56	56
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	11	16	16	0	5	3	16	16	4	17	17
g / C, Green / Cycle	0.19	0.28	0.28	0.00	0.10	0.05	0.28	0.28	0.07	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.14	0.02	0.06	0.00	0.07	0.03	0.15	0.11	0.03	0.22	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1648	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	650	532	452	3	162	89	1434	447	240	1532	478
d1, Uniform Delay [s]	21.42	14.61	15.31	28.03	24.70	26.12	17.02	16.24	25.02	17.56	13.74
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]	1.51	0.04	0.23	73.03	7.18	5.91	0.30	0.53	1.06	0.66	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	0.72	0.06	0.21	0.38	0.76	0.58	0.53	0.38	0.40	0.72	0.00
d, Delay for Lane Group [s/veh]	22.92	14.66	15.55	101.06	31.88	32.03	17.32	16.77	26.08	18.23	13.75
Lane Group LOS	C	B	B	F	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]	2.77	0.26	0.88	0.07	1.80	0.78	2.49	1.65	0.60	3.88	0.01
50th-Percentile Queue Length [ft/ln]	69.21	6.45	22.05	1.64	45.12	19.59	62.20	41.14	15.04	96.94	0.21
95th-Percentile Queue Length [veh/ln]	4.98	0.46	1.59	0.12	3.25	1.41	4.48	2.96	1.08	6.98	0.01
95th-Percentile Queue Length [ft/ln]	124.58	11.62	39.70	2.96	81.21	35.26	111.96	74.06	27.07	174.49	0.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.92	14.66	15.55	101.06	31.88	31.88	32.03	17.32	16.77	26.08	18.23	13.75
Movement LOS	C	B	B	F	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.30			32.44			18.01			18.84		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.65											
Intersection LOS	B											
Intersection V/C	0.457											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.729	2.193	3.059	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.540	1.764	2.096	2.223
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 2: I-15 NB Ramp/Limonite Ave

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):	0.614

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	392	0	433	0	0	0	0	496	688	0	1133	425
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	9	0	0	0	0	8	0	0	34	23
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	408	0	459	0	0	0	0	524	716	0	1212	465
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	102	0	115	0	0	0	0	131	179	0	303	116
Total Analysis Volume [veh/h]	408	0	459	0	0	0	0	524	716	0	1212	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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	44	44	44		44	44	44	44
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	11	11	11		23	23	23	23
g / C, Green / Cycle	0.24	0.24	0.24		0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.16		0.10	0.45	0.24	0.29
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	436	436	689		2632	821	2632	821
d1, Uniform Delay [s]	14.32	14.32	15.16		5.79	9.46	6.82	7.35
k, delay calibration	0.11	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
d2, Incremental Delay [s]	0.78	0.78	1.12		0.04	5.14	0.13	0.62
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	0.47	0.47	0.67		0.20	0.87	0.46	0.57
d, Delay for Lane Group [s/veh]	15.10	15.10	16.27		5.83	14.60	6.94	7.96
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]	1.58	1.58	1.87		0.61	5.18	1.66	2.16
50th-Percentile Queue Length [ft/ln]	39.38	39.38	46.73		15.20	129.58	41.56	54.09
95th-Percentile Queue Length [veh/ln]	2.84	2.84	3.36		1.09	8.92	2.99	3.89
95th-Percentile Queue Length [ft/ln]	70.88	70.88	84.11		27.37	222.92	74.81	97.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.10	15.10	16.27	0.00	0.00	0.00	0.00	5.83	14.60	0.00	6.94	7.96
Movement LOS	B	B	B					A	B		A	A
d_A, Approach Delay [s/veh]	15.72			0.00			10.89			7.23		
Approach LOS	B			A			B			A		
d_I, Intersection Delay [s/veh]	10.37											
Intersection LOS	B											
Intersection V/C	0.614											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.899	2.072	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	2.990	4.132	2.242	2.482
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite Ave

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	190	0	523	0	1019	430	0	831	711
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	7	0	0	0	1	0	30	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]	0	0	0	205	0	544	0	1061	447	30	868	739
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	51	0	136	0	265	112	8	217	185
Total Analysis Volume [veh/h]	0	0	0	205	0	544	0	1061	447	30	868	739
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		50	50	50	50	50	50	50
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		13	13	13	26	26	26	26
g / C, Green / Cycle		0.26	0.26	0.26	0.53	0.53	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.19	0.21	0.28	0.17	0.46
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		464	464	732	2682	837	2682	837
d1, Uniform Delay [s]		14.43	14.43	16.86	7.04	7.76	6.72	10.42
k, delay calibration		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
d2, Incremental Delay [s]		0.24	0.24	1.51	0.09	0.53	0.07	7.41
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	0.74	0.40	0.53	0.32	0.88
d, Delay for Lane Group [s/veh]		14.67	14.67	18.38	7.14	8.29	6.79	17.83
Lane Group LOS		B	B	B	A	A	A	B
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		0.83	0.83	2.62	1.65	2.39	1.29	6.75
50th-Percentile Queue Length [ft/ln]		20.64	20.64	65.46	41.26	59.71	32.18	168.84
95th-Percentile Queue Length [veh/ln]		1.49	1.49	4.71	2.97	4.30	2.32	11.02
95th-Percentile Queue Length [ft/ln]		37.15	37.15	117.83	74.27	107.48	57.93	275.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.67	14.67	18.38	0.00	7.14	8.29	0.00	6.79	17.83
Movement LOS				B	B	B		A	A		A	B
d_A, Approach Delay [s/veh]	0.00			17.36			7.48			11.87		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	11.22											
Intersection LOS	B											
Intersection V/C	0.658											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.066	2.887	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	2.795	2.389	2.443
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

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):	0.396

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	77	67	17	34	13	199	275	363	40	15	332	52
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	11	3	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	70	18	35	14	218	289	378	42	16	345	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	18	5	9	4	55	72	95	11	4	86	14
Total Analysis Volume [veh/h]	80	70	18	35	14	218	289	378	42	16	345	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	14	9	14	7	7	17	12	12	17	6	6
g / C, Green / Cycle	0.36	0.22	0.36	0.18	0.18	0.44	0.31	0.31	0.44	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.02	0.01	0.14	0.20	0.11	0.11	0.01	0.10	0.03
s, saturation flow rate [veh/h]	1532	1805	1429	1870	1589	1416	1870	1805	1100	3560	1589
c, Capacity [veh/h]	822	394	741	345	294	798	587	566	670	580	259
d1, Uniform Delay [s]	8.43	12.66	8.24	13.21	15.19	7.71	10.49	10.49	6.48	15.30	14.31
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]	0.05	0.28	0.03	0.05	3.70	0.28	0.38	0.39	0.01	0.98	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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	0.10	0.22	0.05	0.04	0.74	0.36	0.36	0.36	0.02	0.60	0.21
d, Delay for Lane Group [s/veh]	8.48	12.94	8.26	13.26	18.90	7.98	10.86	10.88	6.49	16.28	14.70
Lane Group LOS	A	B	A	B	B	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]	0.35	0.55	0.15	0.09	1.82	1.19	1.17	1.14	0.06	1.27	0.38
50th-Percentile Queue Length [ft/ln]	8.86	13.84	3.78	2.24	45.56	29.76	29.31	28.43	1.39	31.83	9.45
95th-Percentile Queue Length [veh/ln]	0.64	1.00	0.27	0.16	3.28	2.14	2.11	2.05	0.10	2.29	0.68
95th-Percentile Queue Length [ft/ln]	15.94	24.91	6.81	4.03	82.01	53.56	52.76	51.18	2.50	57.29	17.01

Movement, Approach, & Intersection Results

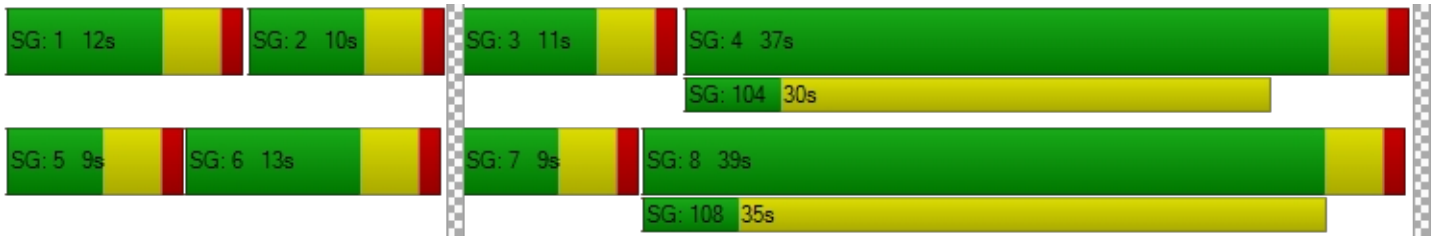
d_M, Delay for Movement [s/veh]	8.48	12.94	12.94	8.26	13.26	18.90	7.98	10.87	10.88	6.49	16.28	14.70
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	10.82			17.21			9.69			15.70		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	12.70											
Intersection LOS	B											
Intersection V/C	0.396											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.579	2.593
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.837	2.000	2.145	1.902
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 5: Project Driveway

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):	0.333

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	47	359	27	21	237	2	21	1	17	32	2	23
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	0	0	0	0	19	64	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	373	28	22	246	21	86	1	29	33	2	24
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	93	7	6	62	5	22	0	7	8	1	6
Total Analysis Volume [veh/h]	52	373	28	22	246	21	86	1	29	33	2	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	22	22	22	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	5	5	1	4	4	3	3	3
g / C, Green / Cycle	0.06	0.22	0.22	0.03	0.19	0.19	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.01	0.07	0.01	0.06	0.02	0.21
s, saturation flow rate [veh/h]	1781	1870	1825	1781	3560	1589	1384	1597	278
c, Capacity [veh/h]	118	416	405	56	668	298	334	193	288
d1, Uniform Delay [s]	9.91	7.48	7.49	10.48	7.82	7.38	9.12	8.69	10.89
k, delay calibration	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
d2, Incremental Delay [s]	2.59	0.88	0.92	4.43	0.34	0.10	0.40	0.37	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.49	0.49	0.39	0.37	0.07	0.26	0.16	0.20
d, Delay for Lane Group [s/veh]	12.50	8.37	8.41	14.90	8.16	7.48	9.52	9.06	11.23
Lane Group LOS	B	A	A	B	A	A	A	A	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	0.52	0.52	0.14	0.30	0.05	0.27	0.10	0.22
50th-Percentile Queue Length [ft/ln]	5.88	13.08	12.93	3.40	7.60	1.30	6.63	2.39	5.42
95th-Percentile Queue Length [veh/ln]	0.42	0.94	0.93	0.24	0.55	0.09	0.48	0.17	0.39
95th-Percentile Queue Length [ft/ln]	10.58	23.54	23.28	6.12	13.69	2.34	11.93	4.30	9.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.50	8.38	8.41	14.90	8.16	7.48	9.52	9.06	9.06	11.23	11.23	11.23
Movement LOS	B	A	A	B	A	A	A	A	A	B	B	B
d_A, Approach Delay [s/veh]	8.86			8.62			9.40			11.23		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	9.01											
Intersection LOS	A											
Intersection V/C	0.333											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.491	2.696	1.998	1.764
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.933	1.798	1.751	1.657
Bicycle LOS	A	A	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Background PM NP.pdf

Scenario 4 Background PM NP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Right	0.505	21.7	C
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.594	12.5	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.577	12.1	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	WB Thru	0.389	12.8	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.880	8.9	A

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: Limonite/Pats Ranch

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):	0.505

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	366	56	181	0	33	74	145	1316	246	196	885	2
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	381	58	188	0	34	77	151	1369	256	204	920	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	15	47	0	9	19	38	342	64	51	230	1
Total Analysis Volume [veh/h]	381	58	188	0	34	77	151	1369	256	204	920	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	65	65	65	65	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	10	16	16	0	6	7	23	23	6	22	22
g / C, Green / Cycle	0.15	0.24	0.24	0.00	0.09	0.11	0.35	0.35	0.09	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.11	0.03	0.12	0.00	0.07	0.08	0.27	0.16	0.06	0.18	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1666	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	528	449	381	0	145	198	1806	564	325	1719	536
d1, Uniform Delay [s]	26.42	19.53	21.46	0.00	29.24	28.27	18.66	16.26	28.56	17.55	14.39
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]	1.87	0.13	0.99	0.00	8.09	5.97	0.67	0.57	1.99	0.26	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	0.72	0.13	0.49	0.00	0.76	0.76	0.76	0.45	0.63	0.54	0.00
d, Delay for Lane Group [s/veh]	28.29	19.66	22.45	0.00	37.33	34.24	19.33	16.83	30.55	17.81	14.40
Lane Group LOS	C	B	C	A	D	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.81	0.67	2.43	0.00	1.95	2.51	5.62	2.78	1.56	3.46	0.02
50th-Percentile Queue Length [ft/ln]	70.30	16.74	60.81	0.00	48.84	62.86	140.56	69.60	38.98	86.54	0.47
95th-Percentile Queue Length [veh/ln]	5.06	1.21	4.38	0.00	3.52	4.53	9.51	5.01	2.81	6.23	0.03
95th-Percentile Queue Length [ft/ln]	126.54	30.13	109.46	0.00	87.92	113.15	237.77	125.28	70.17	155.77	0.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.29	19.66	22.45	0.00	37.33	37.33	34.24	19.33	16.83	30.55	17.81	14.40
Movement LOS	C	B	C	A	D	D	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	25.74			37.33			20.24			20.11		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	21.67											
Intersection LOS	C											
Intersection V/C	0.505											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.761	2.221	3.121	3.151
Crosswalk LOS	C	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.594	1.743	2.536	2.179
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 2: I-15 NB Ramp/Limonite Ave

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	463	3	810	0	0	0	0	1101	451	0	1151	253
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	482	3	842	0	0	0	0	1145	469	0	1197	263
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	121	1	211	0	0	0	0	286	117	0	299	66
Total Analysis Volume [veh/h]	482	3	842	0	0	0	0	1145	469	0	1197	263
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	50	50	50		50	50	50	50
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	19	19	19		20	20	20	20
g / C, Green / Cycle	0.38	0.38	0.38		0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.30		0.22	0.30	0.23	0.17
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	685	686	1083		2048	639	2048	639
d1, Uniform Delay [s]	10.90	10.90	13.44		11.47	12.61	11.62	10.66
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]	0.31	0.31	1.24		0.24	1.65	0.27	0.42
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	0.78		0.56	0.73	0.58	0.41
d, Delay for Lane Group [s/veh]	11.21	11.21	14.68		11.71	14.27	11.89	11.08
Lane Group LOS	B	B	B		B	B	B	B
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.63	1.63	3.55		2.68	3.86	2.85	1.76
50th-Percentile Queue Length [ft/ln]	40.76	40.76	88.75		67.09	96.47	71.13	44.10
95th-Percentile Queue Length [veh/ln]	2.94	2.93	6.39		4.83	6.95	5.12	3.18
95th-Percentile Queue Length [ft/ln]	73.38	73.37	159.75		120.76	173.64	128.04	79.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.21	11.21	14.68	0.00	0.00	0.00	0.00	11.71	14.27	0.00	11.89	11.08
Movement LOS	B	B	B					B	B		B	B
d_A, Approach Delay [s/veh]	13.41			0.00			12.45			11.74		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	12.51											
Intersection LOS	B											
Intersection V/C	0.594											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.925	2.007	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	3.749	4.132	2.447	2.363
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite 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):	0.577

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	378	0	749	0	1169	449	0	1173	459
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	393	0	779	0	1216	467	0	1220	477
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	98	0	195	0	304	117	0	305	119
Total Analysis Volume [veh/h]	0	0	0	393	0	779	0	1216	467	0	1220	477
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		17	17	17	20	20	20	20
g / C, Green / Cycle		0.36	0.36	0.36	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate		0.11	0.11	0.28	0.24	0.29	0.24	0.30
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		643	643	1016	2132	665	2132	665
d1, Uniform Delay [s]		11.03	11.03	13.58	10.69	11.52	10.70	11.62
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]		0.27	0.27	1.24	0.24	1.36	0.24	1.47
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		0.31	0.31	0.77	0.57	0.70	0.57	0.72
d, Delay for Lane Group [s/veh]		11.30	11.30	14.82	10.93	12.88	10.94	13.09
Lane Group LOS		B	B	B	B	B	B	B
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		1.29	1.29	3.21	2.64	3.47	2.65	3.59
50th-Percentile Queue Length [ft/ln]		32.28	32.28	80.21	65.95	86.73	66.24	89.66
95th-Percentile Queue Length [veh/ln]		2.32	2.32	5.77	4.75	6.24	4.77	6.46
95th-Percentile Queue Length [ft/ln]		58.10	58.10	144.37	118.71	156.12	119.24	161.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	11.30	11.30	14.82	0.00	10.93	12.88	0.00	10.94	13.09
Movement LOS				B	B	B		B	B		B	B
d_A, Approach Delay [s/veh]	0.00			13.64			11.47			11.54		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.06											
Intersection LOS	B											
Intersection V/C	0.577											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.073	2.907	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	3.493	2.485	2.493
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

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):	0.389

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	43	49	6	52	68	332	189	191	52	4	218	27
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	51	6	54	71	345	197	199	54	4	227	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	13	2	14	18	86	49	50	14	1	57	7
Total Analysis Volume [veh/h]	45	51	6	54	71	345	197	199	54	4	227	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38	38	38
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	17	11	17	11	11	14	9	9	14	5	5
g / C, Green / Cycle	0.44	0.27	0.44	0.28	0.28	0.35	0.24	0.24	0.35	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.04	0.04	0.22	0.13	0.07	0.07	0.00	0.06	0.02
s, saturation flow rate [veh/h]	1435	1836	1455	1870	1589	1472	1870	1736	1233	3560	1589
c, Capacity [veh/h]	876	505	891	529	449	733	458	425	655	435	194
d1, Uniform Delay [s]	6.25	10.42	6.28	10.28	12.63	9.09	11.78	11.80	8.08	15.81	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
I, Upstream 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]	0.02	0.10	0.03	0.11	2.79	0.19	0.34	0.37	0.00	0.97	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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	0.05	0.11	0.06	0.13	0.77	0.27	0.28	0.29	0.01	0.52	0.14
d, Delay for Lane Group [s/veh]	6.28	10.52	6.31	10.39	15.41	9.28	12.12	12.17	8.09	16.78	15.41
Lane Group LOS	A	B	A	B	B	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]	0.15	0.30	0.18	0.37	2.44	0.92	0.76	0.73	0.02	0.84	0.20
50th-Percentile Queue Length [ft/ln]	3.73	7.45	4.50	9.19	61.05	23.05	19.05	18.17	0.42	21.02	5.05
95th-Percentile Queue Length [veh/ln]	0.27	0.54	0.32	0.66	4.40	1.66	1.37	1.31	0.03	1.51	0.36
95th-Percentile Queue Length [ft/ln]	6.72	13.41	8.10	16.54	109.90	41.49	34.30	32.71	0.75	37.83	9.09

Movement, Approach, & Intersection Results

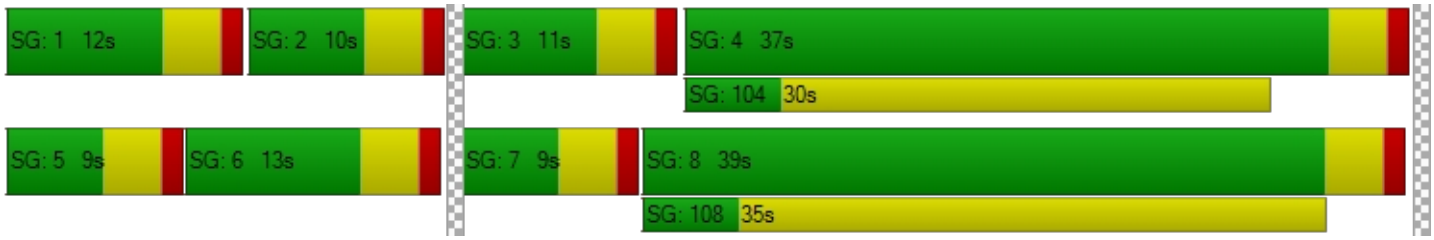
d_M, Delay for Movement [s/veh]	6.28	10.52	10.52	6.31	10.39	15.41	9.28	12.13	12.17	8.09	16.78	15.41
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	8.65			13.61			10.89			16.50		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.84											
Intersection LOS	B											
Intersection V/C	0.389											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.518	2.551
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.728	2.335	1.931	1.773
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 5: Project Driveway

Control Type:	Signalized	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.880

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	60	232	7	33	403	9	32	9	39	14	12	30
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	62	241	7	34	419	9	33	9	41	15	12	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	60	2	9	105	2	8	2	10	4	3	8
Total Analysis Volume [veh/h]	62	241	7	34	419	9	33	9	41	15	12	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	22	22	22	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	6	6	1	5	5	2	2	2
g / C, Green / Cycle	0.07	0.25	0.25	0.04	0.22	0.22	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.03	0.07	0.07	0.02	0.12	0.01	0.02	0.03	0.73
s, saturation flow rate [veh/h]	1781	1870	1851	1781	3560	1589	1363	1634	80
c, Capacity [veh/h]	130	468	463	78	787	351	319	158	208
d1, Uniform Delay [s]	10.08	6.82	6.82	10.56	7.79	6.91	9.48	9.53	11.31
k, delay calibration	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
d2, Incremental Delay [s]	2.70	0.30	0.31	3.85	0.56	0.03	0.14	1.14	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.48	0.27	0.27	0.44	0.53	0.03	0.10	0.32	0.28
d, Delay for Lane Group [s/veh]	12.78	7.12	7.12	14.40	8.35	6.94	9.62	10.67	12.11
Lane Group LOS	B	A	A	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.28	0.28	0.28	0.19	0.53	0.02	0.11	0.19	0.25
50th-Percentile Queue Length [ft/ln]	7.12	6.99	6.97	4.76	13.34	0.52	2.66	4.83	6.20
95th-Percentile Queue Length [veh/ln]	0.51	0.50	0.50	0.34	0.96	0.04	0.19	0.35	0.45
95th-Percentile Queue Length [ft/ln]	12.81	12.58	12.54	8.56	24.01	0.94	4.79	8.70	11.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.78	7.12	7.12	14.40	8.35	6.94	9.62	10.67	10.67	12.11	12.11	12.11
Movement LOS	B	A	A	B	A	A	A	B	B	B	B	B
d_A, Approach Delay [s/veh]	8.25			8.77			10.25			12.11		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	8.94											
Intersection LOS	A											
Intersection V/C	0.880											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.470	2.620	1.990	1.763
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.815	1.941	1.697	1.655
Bicycle LOS	A	A	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Background PM WP.pdf

Scenario 6 Background PM WP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Right	0.516	22.4	C
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.605	12.9	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.577	12.1	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	WB Thru	0.399	13.0	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.283	9.2	A

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: Limonite/Pats Ranch

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):	0.516

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	366	56	181	0	33	74	145	1316	246	196	885	2
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	33	0	4	0	0	0	0	0	56	7	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	414	58	192	0	34	77	151	1369	312	211	920	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	104	15	48	0	9	19	38	342	78	53	230	1
Total Analysis Volume [veh/h]	414	58	192	0	34	77	151	1369	312	211	920	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	67	67	67	67	67	67	67	67	67	67	67
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	11	17	17	0	6	7	24	24	6	23	23
g / C, Green / Cycle	0.16	0.25	0.25	0.00	0.09	0.11	0.35	0.35	0.10	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.12	0.03	0.12	0.00	0.07	0.08	0.27	0.20	0.06	0.18	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1666	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	561	466	396	0	145	197	1795	560	331	1718	536
d1, Uniform Delay [s]	26.87	19.61	21.61	0.00	30.09	29.10	19.32	17.58	29.34	18.05	14.81
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]	1.93	0.12	0.92	0.00	8.15	6.07	0.69	0.87	2.04	0.26	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	0.74	0.12	0.49	0.00	0.77	0.77	0.76	0.56	0.64	0.54	0.00
d, Delay for Lane Group [s/veh]	28.80	19.73	22.53	0.00	38.24	35.18	20.01	18.44	31.38	18.32	14.82
Lane Group LOS	C	B	C	A	D	D	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.15	0.68	2.53	0.00	2.01	2.60	5.86	3.71	1.67	3.59	0.02
50th-Percentile Queue Length [ft/ln]	78.77	17.06	63.37	0.00	50.31	64.91	146.49	92.72	41.67	89.79	0.48
95th-Percentile Queue Length [veh/ln]	5.67	1.23	4.56	0.00	3.62	4.67	9.83	6.68	3.00	6.46	0.03
95th-Percentile Queue Length [ft/ln]	141.78	30.70	114.06	0.00	90.56	116.84	245.74	166.90	75.00	161.62	0.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.80	19.73	22.53	0.00	38.24	38.24	35.18	20.01	18.44	31.38	18.32	14.82
Movement LOS	C	B	C	A	D	D	D	C	B	C	B	B
d_A, Approach Delay [s/veh]	26.19			38.24			20.99			20.74		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	22.35											
Intersection LOS	C											
Intersection V/C	0.516											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.775	2.221	3.132	3.152
Crosswalk LOS	C	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.655	1.743	2.567	2.183
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 2: I-15 NB Ramp/Limonite Ave

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):	0.605

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	463	3	810	0	0	0	0	1101	451	0	1151	253
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	30	0	0	0	0	26	0	0	20	13
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	482	3	872	0	0	0	0	1171	469	0	1217	276
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	121	1	218	0	0	0	0	293	117	0	304	69
Total Analysis Volume [veh/h]	482	3	872	0	0	0	0	1171	469	0	1217	276
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	51	51	51		51	51	51	51
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	20	20	20		20	20	20	20
g / C, Green / Cycle	0.39	0.39	0.39		0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.31		0.23	0.30	0.24	0.17
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	700	700	1106		2040	637	2040	637
d1, Uniform Delay [s]	10.95	10.95	13.71		11.98	13.09	12.12	11.17
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]	0.29	0.29	1.29		0.26	1.69	0.28	0.47
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	0.79		0.57	0.74	0.60	0.43
d, Delay for Lane Group [s/veh]	11.24	11.24	15.00		12.24	14.77	12.40	11.63
Lane Group LOS	B	B	B		B	B	B	B
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.67	1.67	3.83		2.91	4.05	3.06	1.97
50th-Percentile Queue Length [ft/ln]	41.77	41.77	95.77		72.68	101.26	76.48	49.16
95th-Percentile Queue Length [veh/ln]	3.01	3.01	6.90		5.23	7.29	5.51	3.54
95th-Percentile Queue Length [ft/ln]	75.19	75.18	172.38		130.82	182.26	137.67	88.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.24	11.24	15.00	0.00	0.00	0.00	0.00	12.24	14.77	0.00	12.40	11.63
Movement LOS	B	B	B					B	B		B	B
d_A, Approach Delay [s/veh]	13.66			0.00			12.96			12.26		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	12.94											
Intersection LOS	B											
Intersection V/C	0.605											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.929	2.012	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	3.799	4.132	2.462	2.381
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite 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):	0.577

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	378	0	749	0	1169	449	0	1173	459
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	22	0	0	0	4	0	18	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	415	0	779	0	1220	467	18	1222	477
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	104	0	195	0	305	117	5	306	119
Total Analysis Volume [veh/h]	0	0	0	415	0	779	0	1220	467	18	1222	477
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		17	17	17	20	20	20	20
g / C, Green / Cycle		0.36	0.36	0.36	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate		0.12	0.12	0.28	0.24	0.29	0.24	0.30
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		644	644	1018	2131	665	2131	665
d1, Uniform Delay [s]		11.11	11.11	13.58	10.73	11.55	10.73	11.66
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]		0.29	0.29	1.23	0.24	1.37	0.25	1.47
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	0.57	0.70	0.57	0.72
d, Delay for Lane Group [s/veh]		11.40	11.40	14.81	10.97	12.92	10.98	13.12
Lane Group LOS		B	B	B	B	B	B	B
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		1.38	1.38	3.21	2.66	3.48	2.67	3.60
50th-Percentile Queue Length [ft/ln]		34.41	34.41	80.32	66.51	87.07	66.66	90.01
95th-Percentile Queue Length [veh/ln]		2.48	2.48	5.78	4.79	6.27	4.80	6.48
95th-Percentile Queue Length [ft/ln]		61.93	61.93	144.57	119.73	156.73	119.99	162.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	11.40	11.40	14.81	0.00	10.97	12.92	0.00	10.98	13.12
Movement LOS				B	B	B		B	B		B	B
d_A, Approach Delay [s/veh]	0.00			13.62			11.51			11.58		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.09											
Intersection LOS	B											
Intersection V/C	0.577											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.073	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	3.530	2.487	2.494
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

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):	0.399

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	43	49	6	52	68	332	189	191	52	4	218	27
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	7	11	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	51	6	54	71	352	208	199	54	4	227	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	13	2	14	18	88	52	50	14	1	57	7
Total Analysis Volume [veh/h]	45	51	6	54	71	352	208	199	54	4	227	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	17	11	17	11	11	14	10	10	14	5	5
g / C, Green / Cycle	0.44	0.28	0.44	0.29	0.29	0.36	0.25	0.25	0.36	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.04	0.04	0.22	0.14	0.07	0.07	0.00	0.06	0.02
s, saturation flow rate [veh/h]	1434	1836	1454	1870	1589	1480	1870	1736	1230	3560	1589
c, Capacity [veh/h]	872	512	888	536	455	734	466	433	653	429	191
d1, Uniform Delay [s]	6.34	10.51	6.37	10.37	12.82	9.26	11.87	11.88	8.18	16.19	15.43
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]	0.02	0.10	0.03	0.11	2.84	0.21	0.32	0.36	0.00	1.02	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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	0.05	0.11	0.06	0.13	0.77	0.28	0.28	0.28	0.01	0.53	0.15
d, Delay for Lane Group [s/veh]	6.37	10.61	6.40	10.49	15.65	9.46	12.19	12.24	8.18	17.21	15.78
Lane Group LOS	A	B	A	B	B	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]	0.15	0.30	0.19	0.38	2.56	1.01	0.78	0.74	0.02	0.87	0.21
50th-Percentile Queue Length [ft/ln]	3.85	7.61	4.64	9.39	63.93	25.14	19.41	18.49	0.43	21.68	5.20
95th-Percentile Queue Length [veh/ln]	0.28	0.55	0.33	0.68	4.60	1.81	1.40	1.33	0.03	1.56	0.37
95th-Percentile Queue Length [ft/ln]	6.93	13.69	8.36	16.89	115.08	45.26	34.94	33.28	0.77	39.02	9.37

Movement, Approach, & Intersection Results

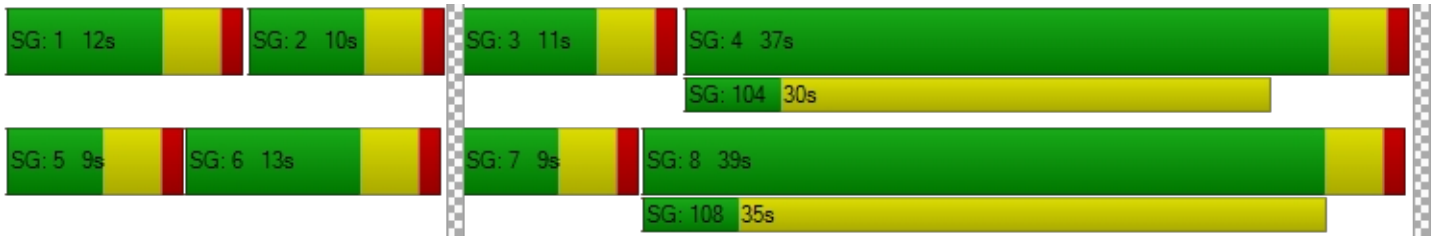
d_M, Delay for Movement [s/veh]	6.37	10.61	10.61	6.40	10.49	15.65	9.46	12.21	12.24	8.18	17.21	15.78
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	8.74			13.84			10.97			16.92		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	13.03											
Intersection LOS	B											
Intersection V/C	0.399											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.522	2.551
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.728	2.347	1.940	1.773
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 5: Project Driveway

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.283

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	60	232	7	33	403	9	32	9	39	14	12	30
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	63	37	0	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	241	7	34	419	72	70	9	48	15	12	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	60	2	9	105	18	18	2	12	4	3	8
Total Analysis Volume [veh/h]	73	241	7	34	419	72	70	9	48	15	12	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	24	24	24	24	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	6	6	1	5	5	3	3	3
g / C, Green / Cycle	0.08	0.26	0.26	0.04	0.23	0.23	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.07	0.07	0.02	0.12	0.05	0.05	0.04	0.12
s, saturation flow rate [veh/h]	1781	1870	1851	1781	3560	1589	1363	1628	467
c, Capacity [veh/h]	150	499	494	81	811	362	302	200	243
d1, Uniform Delay [s]	10.68	7.04	7.04	11.35	8.26	7.63	9.93	9.73	10.61
k, delay calibration	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
d2, Incremental Delay [s]	2.42	0.26	0.26	3.45	0.51	0.27	0.39	0.77	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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.25	0.25	0.42	0.52	0.20	0.23	0.28	0.24
d, Delay for Lane Group [s/veh]	13.10	7.30	7.30	14.79	8.77	7.90	10.32	10.50	11.12
Lane Group LOS	B	A	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.35	0.31	0.31	0.20	0.61	0.20	0.26	0.22	0.22
50th-Percentile Queue Length [ft/ln]	8.79	7.77	7.74	5.01	15.24	5.05	6.42	5.54	5.39
95th-Percentile Queue Length [veh/ln]	0.63	0.56	0.56	0.36	1.10	0.36	0.46	0.40	0.39
95th-Percentile Queue Length [ft/ln]	15.82	13.99	13.94	9.02	27.44	9.10	11.55	9.98	9.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.10	7.30	7.30	14.79	8.77	7.90	10.32	10.50	10.50	11.12	11.12	11.12
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	8.62			9.04			10.40			11.12		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	9.19											
Intersection LOS	A											
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]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.473	2.689	2.028	1.763
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]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.824	1.993	1.769	1.655
Bicycle LOS	A	A	A	A

Sequence

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



Appendix D-3

Opening Day with Cumulative Projects

Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Background AM NP CP.pdf

Scenario 7 Background AM NP CP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Left	0.452	19.1	B
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.614	10.5	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	WB Right	0.675	12.0	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	SB Right	0.388	12.5	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.772	9.0	A

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: Limonite/Pats Ranch

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):	0.452

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	395	29	86	1	28	90	50	725	147	89	1067	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	1	0	0	0	0	42	0	2	57	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	411	30	90	1	29	94	52	796	153	95	1167	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	8	23	0	7	24	13	199	38	24	292	0
Total Analysis Volume [veh/h]	411	30	90	1	29	94	52	796	153	95	1167	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]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	56	56	56	56	56	56	56	56	56	56	56
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	9	15	15	0	5	3	16	16	4	18	18
g / C, Green / Cycle	0.17	0.27	0.27	0.00	0.10	0.05	0.30	0.30	0.07	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.12	0.02	0.06	0.00	0.07	0.03	0.16	0.10	0.03	0.23	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1648	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	589	499	424	3	162	89	1509	471	241	1608	502
d1, Uniform Delay [s]	21.79	15.23	15.89	27.82	24.51	25.91	16.36	15.28	24.82	16.94	13.06
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]	1.51	0.05	0.25	73.01	7.18	5.86	0.29	0.40	1.05	0.64	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	0.70	0.06	0.21	0.38	0.76	0.58	0.53	0.32	0.39	0.73	0.00
d, Delay for Lane Group [s/veh]	23.30	15.28	16.14	100.83	31.70	31.77	16.65	15.67	25.86	17.57	13.07
Lane Group LOS	C	B	B	F	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]	2.44	0.26	0.83	0.07	1.79	0.78	2.55	1.40	0.60	3.97	0.01
50th-Percentile Queue Length [ft/ln]	61.00	6.61	20.87	1.64	44.77	19.42	63.79	35.10	14.89	99.32	0.20
95th-Percentile Queue Length [veh/ln]	4.39	0.48	1.50	0.12	3.22	1.40	4.59	2.53	1.07	7.15	0.01
95th-Percentile Queue Length [ft/ln]	109.80	11.90	37.57	2.95	80.59	34.95	114.82	63.18	26.81	178.77	0.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.30	15.28	16.14	100.83	31.70	31.70	31.77	16.65	15.67	25.86	17.57	13.07
Movement LOS	C	B	B	F	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.64			32.25			17.29			18.19		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.11											
Intersection LOS	B											
Intersection V/C	0.452											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.718	2.193	3.062	3.093
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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.436	1.764	2.110	2.254
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 2: I-15 NB Ramp/Limonite Ave

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):	0.614

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	392	0	433	0	0	0	0	496	688	0	1133	425
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	47	0	11	0	0	0	46	32	0	0	41	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	0	461	0	0	0	46	548	716	0	1219	459
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	114	0	115	0	0	0	12	137	179	0	305	115
Total Analysis Volume [veh/h]	455	0	461	0	0	0	46	548	716	0	1219	459
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	45	45	45		45	45	45	45
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	11	11	11		23	23	23	23
g / C, Green / Cycle	0.25	0.25	0.25		0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.16		0.11	0.45	0.24	0.29
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	441	441	696		2631	821	2631	821
d1, Uniform Delay [s]	14.58	14.58	15.21		5.88	9.55	6.90	7.38
k, delay calibration	0.11	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
d2, Incremental Delay [s]	0.94	0.94	1.09		0.04	5.27	0.13	0.60
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	0.52	0.52	0.66		0.21	0.87	0.46	0.56
d, Delay for Lane Group [s/veh]	15.52	15.52	16.30		5.92	14.82	7.03	7.98
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]	1.81	1.81	1.89		0.65	5.29	1.71	2.16
50th-Percentile Queue Length [ft/ln]	45.15	45.15	47.31		16.28	132.18	42.65	54.01
95th-Percentile Queue Length [veh/ln]	3.25	3.25	3.41		1.17	9.06	3.07	3.89
95th-Percentile Queue Length [ft/ln]	81.26	81.26	85.16		29.31	226.45	76.78	97.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.52	15.52	16.30	0.00	0.00	0.00	0.00	5.92	14.82	0.00	7.03	7.98
Movement LOS	B	B	B					A	B		A	A
d_A, Approach Delay [s/veh]	15.91			0.00			10.96			7.29		
Approach LOS	B			A			B			A		
d_I, Intersection Delay [s/veh]	10.54											
Intersection LOS	B											
Intersection V/C	0.614											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.905	2.070	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	3.071	4.132	2.255	2.483
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite Ave

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):	0.675

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	190	0	523	0	1019	430	0	831	711
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	11	0	47	0	68	46	17	71	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	209	0	591	0	1128	493	17	935	739
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	52	0	148	0	282	123	4	234	185
Total Analysis Volume [veh/h]	0	0	0	209	0	591	0	1128	493	17	935	739
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		14	14	14	27	27	27	27
g / C, Green / Cycle		0.28	0.28	0.28	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.21	0.22	0.31	0.18	0.46
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		491	491	775	2655	828	2655	828
d1, Uniform Delay [s]		14.54	14.54	17.32	7.68	8.67	7.32	11.18
k, delay calibration		0.11	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
d2, Incremental Delay [s]		0.21	0.21	1.58	0.11	0.69	0.08	8.74
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		0.21	0.21	0.76	0.42	0.60	0.35	0.89
d, Delay for Lane Group [s/veh]		14.75	14.75	18.91	7.79	9.36	7.40	19.92
Lane Group LOS		B	B	B	A	A	A	B
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		0.87	0.87	3.01	1.98	3.04	1.56	7.58
50th-Percentile Queue Length [ft/ln]		21.78	21.78	75.19	49.38	76.04	38.99	189.58
95th-Percentile Queue Length [veh/ln]		1.57	1.57	5.41	3.56	5.47	2.81	12.10
95th-Percentile Queue Length [ft/ln]		39.20	39.20	135.34	88.88	136.87	70.19	302.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.75	14.75	18.91	0.00	7.79	9.36	0.00	7.40	19.92
Movement LOS				B	B	B		A	A		A	B
d_A, Approach Delay [s/veh]	0.00			17.82			8.27			12.93		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	12.04											
Intersection LOS	B											
Intersection V/C	0.675											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.081	2.894	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	2.880	2.451	2.480
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.388

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	77	67	17	34	13	199	275	363	40	15	332	52
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	1	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	71	18	35	16	207	286	378	42	16	345	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	18	5	9	4	52	72	95	11	4	86	14
Total Analysis Volume [veh/h]	80	71	18	35	16	207	286	378	42	16	345	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	14	8	14	7	7	17	12	12	17	6	6
g / C, Green / Cycle	0.36	0.21	0.36	0.18	0.18	0.44	0.31	0.31	0.44	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.02	0.01	0.13	0.20	0.11	0.11	0.01	0.10	0.03
s, saturation flow rate [veh/h]	1534	1806	1431	1870	1589	1414	1870	1805	1102	3560	1589
c, Capacity [veh/h]	818	381	738	331	281	805	586	566	677	584	261
d1, Uniform Delay [s]	8.41	12.67	8.23	13.23	15.08	7.51	10.30	10.31	6.32	14.99	14.01
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]	0.05	0.31	0.03	0.06	3.74	0.27	0.38	0.39	0.01	0.96	0.39
d3, Initial Queue 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	0.10	0.23	0.05	0.05	0.74	0.36	0.36	0.37	0.02	0.59	0.21
d, Delay for Lane Group [s/veh]	8.47	12.98	8.25	13.29	18.82	7.77	10.68	10.70	6.34	15.95	14.40
Lane Group LOS	A	B	A	B	B	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]	0.35	0.55	0.15	0.10	1.71	1.13	1.14	1.11	0.05	1.24	0.37
50th-Percentile Queue Length [ft/ln]	8.72	13.87	3.72	2.53	42.64	28.27	28.52	27.67	1.33	30.96	9.20
95th-Percentile Queue Length [veh/ln]	0.63	1.00	0.27	0.18	3.07	2.04	2.05	1.99	0.10	2.23	0.66
95th-Percentile Queue Length [ft/ln]	15.69	24.96	6.70	4.56	76.76	50.89	51.33	49.80	2.40	55.73	16.55

Movement, Approach, & Intersection Results

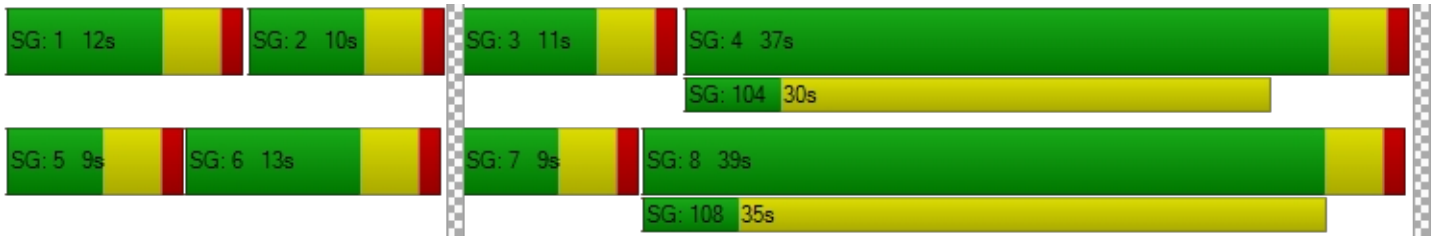
d_M, Delay for Movement [s/veh]	8.47	12.98	12.98	8.25	13.29	18.82	7.77	10.69	10.70	6.34	15.95	14.40
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	10.85			17.04			9.51			15.38		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	12.48											
Intersection LOS	B											
Intersection V/C	0.388											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.576	2.592
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.838	1.985	2.142	1.902
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 5: Project Driveway

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):	0.772

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	47	359	27	21	237	2	21	1	17	32	2	23
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	1	0	0	2	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	374	28	22	248	2	22	1	18	33	2	24
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	94	7	6	62	1	6	0	5	8	1	6
Total Analysis Volume [veh/h]	49	374	28	22	248	2	22	1	18	33	2	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	21	21	21	21	21	21	21	21	21
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	5	5	1	4	4	2	2	2
g / C, Green / Cycle	0.06	0.21	0.21	0.03	0.18	0.18	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.01	0.07	0.00	0.02	0.01	0.65
s, saturation flow rate [veh/h]	1781	1870	1825	1781	3560	1589	1384	1602	91
c, Capacity [veh/h]	105	399	389	51	651	290	338	176	274
d1, Uniform Delay [s]	9.69	7.39	7.40	10.16	7.64	7.12	8.58	8.54	10.63
k, delay calibration	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
d2, Incremental Delay [s]	3.17	1.01	1.04	5.63	0.37	0.01	0.08	0.27	0.39
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	0.47	0.51	0.51	0.43	0.38	0.01	0.07	0.11	0.22
d, Delay for Lane Group [s/veh]	12.85	8.39	8.44	15.80	8.01	7.13	8.66	8.80	11.02
Lane Group LOS	B	A	A	B	A	A	A	A	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.23	0.51	0.51	0.14	0.29	0.00	0.06	0.06	0.21
50th-Percentile Queue Length [ft/ln]	5.69	12.83	12.70	3.59	7.32	0.12	1.52	1.47	5.33
95th-Percentile Queue Length [veh/ln]	0.41	0.92	0.91	0.26	0.53	0.01	0.11	0.11	0.38
95th-Percentile Queue Length [ft/ln]	10.24	23.09	22.86	6.46	13.17	0.21	2.73	2.65	9.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.85	8.41	8.44	15.80	8.01	7.13	8.66	8.80	8.80	11.02	11.02	11.02
Movement LOS	B	A	A	B	A	A	A	A	A	B	B	B
d_A, Approach Delay [s/veh]	8.90			8.63			8.73			11.02		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	8.95											
Intersection LOS	A											
Intersection V/C	0.772											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.489	2.592	1.966	1.764
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.932	1.784	1.627	1.657
Bicycle LOS	A	A	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Background AM WP CP.pdf

Scenario 7 Background AM WP CP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Left	0.468	19.9	B
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.617	10.6	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	WB Right	0.675	12.0	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	SB Right	0.396	12.7	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.333	9.0	A

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: Limonite/Pats Ranch

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	395	29	86	1	28	90	50	725	147	89	1067	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	56	0	9	0	0	0	0	42	17	4	57	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	467	30	98	1	29	94	52	796	170	97	1167	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	117	8	25	0	7	24	13	199	43	24	292	0
Total Analysis Volume [veh/h]	467	30	98	1	29	94	52	796	170	97	1167	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]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	58	58	58	58	58	58	58	58	58	58	58
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	11	16	16	0	6	3	17	17	4	18	18
g / C, Green / Cycle	0.19	0.28	0.28	0.00	0.10	0.05	0.29	0.29	0.07	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.14	0.02	0.06	0.00	0.07	0.03	0.16	0.11	0.03	0.23	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1648	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	645	529	450	3	161	88	1493	466	238	1591	497
d1, Uniform Delay [s]	22.07	15.07	15.81	28.79	25.38	26.85	17.09	16.15	25.74	17.70	13.65
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
I, Upstream 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]	1.56	0.04	0.24	73.30	7.22	6.11	0.30	0.48	1.12	0.67	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	0.72	0.06	0.22	0.38	0.76	0.59	0.53	0.36	0.41	0.73	0.00
d, Delay for Lane Group [s/veh]	23.63	15.12	16.05	102.09	32.60	32.96	17.39	16.63	26.86	18.37	13.65
Lane Group LOS	C	B	B	F	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]	2.87	0.27	0.93	0.07	1.86	0.81	2.69	1.66	0.64	4.19	0.01
50th-Percentile Queue Length [ft/ln]	71.77	6.70	23.16	1.65	46.43	20.22	67.20	41.60	15.89	104.74	0.21
95th-Percentile Queue Length [veh/ln]	5.17	0.48	1.67	0.12	3.34	1.46	4.84	3.00	1.14	7.54	0.01
95th-Percentile Queue Length [ft/ln]	129.18	12.07	41.68	2.98	83.57	36.40	120.96	74.89	28.59	188.52	0.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.63	15.12	16.05	102.09	32.60	32.60	32.96	17.39	16.63	26.86	18.37	13.65
Movement LOS	C	B	B	F	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.95			33.16			18.06			19.02		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.86											
Intersection LOS	B											
Intersection V/C	0.468											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.729	2.193	3.071	3.094
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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.541	1.764	2.120	2.255
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 2: I-15 NB Ramp/Limonite Ave

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	392	0	433	0	0	0	0	496	688	0	1133	425
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	47	0	19	0	0	0	46	40	0	0	74	39
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	0	469	0	0	0	46	556	716	0	1252	481
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	114	0	117	0	0	0	12	139	179	0	313	120
Total Analysis Volume [veh/h]	455	0	469	0	0	0	46	556	716	0	1252	481
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	45	45	45		45	45	45	45
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	11	11	11		23	23	23	23
g / C, Green / Cycle	0.25	0.25	0.25		0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.17		0.11	0.45	0.25	0.30
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	445	445	703		2628	820	2628	820
d1, Uniform Delay [s]	14.60	14.60	15.29		5.95	9.65	7.03	7.60
k, delay calibration	0.11	0.11	0.11		0.11	0.20	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]	0.91	0.91	1.10		0.04	5.41	0.13	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	0.51	0.51	0.67		0.21	0.87	0.48	0.59
d, Delay for Lane Group [s/veh]	15.51	15.51	16.39		5.99	15.06	7.17	8.27
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]	1.81	1.81	1.94		0.67	5.39	1.80	2.35
50th-Percentile Queue Length [ft/ln]	45.37	45.37	48.61		16.84	134.72	44.95	58.83
95th-Percentile Queue Length [veh/ln]	3.27	3.27	3.50		1.21	9.20	3.24	4.24
95th-Percentile Queue Length [ft/ln]	81.67	81.67	87.49		30.30	229.89	80.92	105.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.51	15.51	16.39	0.00	0.00	0.00	0.00	5.99	15.06	0.00	7.17	8.27
Movement LOS	B	B	B					A	B		A	A
d_A, Approach Delay [s/veh]	15.96			0.00			11.09			7.47		
Approach LOS	B			A			B			A		
d_I, Intersection Delay [s/veh]	10.64											
Intersection LOS	B											
Intersection V/C	0.617											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.906	2.077	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	3.084	4.132	2.259	2.513
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite Ave

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):	0.675

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	190	0	523	0	1019	430	0	831	711
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	17	0	47	0	69	46	47	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]	0	0	0	215	0	591	0	1129	493	47	939	739
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	54	0	148	0	282	123	12	235	185
Total Analysis Volume [veh/h]	0	0	0	215	0	591	0	1129	493	47	939	739
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		14	14	14	27	27	27	27
g / C, Green / Cycle		0.28	0.28	0.28	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.21	0.22	0.31	0.18	0.46
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		491	491	776	2655	828	2655	828
d1, Uniform Delay [s]		14.57	14.57	17.33	7.69	8.68	7.34	11.18
k, delay calibration		0.11	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
d2, Incremental Delay [s]		0.22	0.22	1.58	0.11	0.69	0.08	8.75
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	0.76	0.43	0.60	0.35	0.89
d, Delay for Lane Group [s/veh]		14.79	14.79	18.91	7.80	9.36	7.42	19.94
Lane Group LOS		B	B	B	A	A	A	B
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		0.90	0.90	3.01	1.98	3.05	1.57	7.59
50th-Percentile Queue Length [ft/ln]		22.46	22.46	75.23	49.50	76.14	39.25	189.85
95th-Percentile Queue Length [veh/ln]		1.62	1.62	5.42	3.56	5.48	2.83	12.11
95th-Percentile Queue Length [ft/ln]		40.43	40.43	135.41	89.10	137.05	70.65	302.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.79	14.79	18.91	0.00	7.80	9.36	0.00	7.42	19.94
Movement LOS				B	B	B		A	A		A	B
d_A, Approach Delay [s/veh]	0.00			17.81			8.27			12.93		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	12.05											
Intersection LOS	B											
Intersection V/C	0.675											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.081	2.894	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	2.890	2.452	2.483
Bicycle LOS	D	C	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

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):	0.396

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	77	67	17	34	13	199	275	363	40	15	332	52
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	1	0	0	2	11	3	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	71	18	35	16	218	289	378	42	16	345	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	18	5	9	4	55	72	95	11	4	86	14
Total Analysis Volume [veh/h]	80	71	18	35	16	218	289	378	42	16	345	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	14	9	14	7	7	17	12	12	17	6	6
g / C, Green / Cycle	0.36	0.22	0.36	0.18	0.18	0.44	0.31	0.31	0.44	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.02	0.01	0.14	0.20	0.11	0.11	0.01	0.10	0.03
s, saturation flow rate [veh/h]	1530	1806	1428	1870	1589	1416	1870	1805	1100	3560	1589
c, Capacity [veh/h]	820	395	740	346	294	798	587	566	670	580	259
d1, Uniform Delay [s]	8.43	12.66	8.24	13.22	15.19	7.71	10.49	10.50	6.48	15.32	14.32
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]	0.05	0.29	0.03	0.05	3.67	0.28	0.38	0.39	0.01	0.98	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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	0.10	0.23	0.05	0.05	0.74	0.36	0.36	0.36	0.02	0.60	0.21
d, Delay for Lane Group [s/veh]	8.48	12.95	8.26	13.27	18.86	7.99	10.87	10.89	6.50	16.30	14.71
Lane Group LOS	A	B	A	B	B	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]	0.35	0.56	0.15	0.10	1.82	1.19	1.17	1.14	0.06	1.27	0.38
50th-Percentile Queue Length [ft/ln]	8.86	14.01	3.79	2.56	45.52	29.81	29.34	28.47	1.39	31.86	9.46
95th-Percentile Queue Length [veh/ln]	0.64	1.01	0.27	0.18	3.28	2.15	2.11	2.05	0.10	2.29	0.68
95th-Percentile Queue Length [ft/ln]	15.95	25.21	6.82	4.61	81.94	53.65	52.82	51.24	2.50	57.35	17.02

Movement, Approach, & Intersection Results

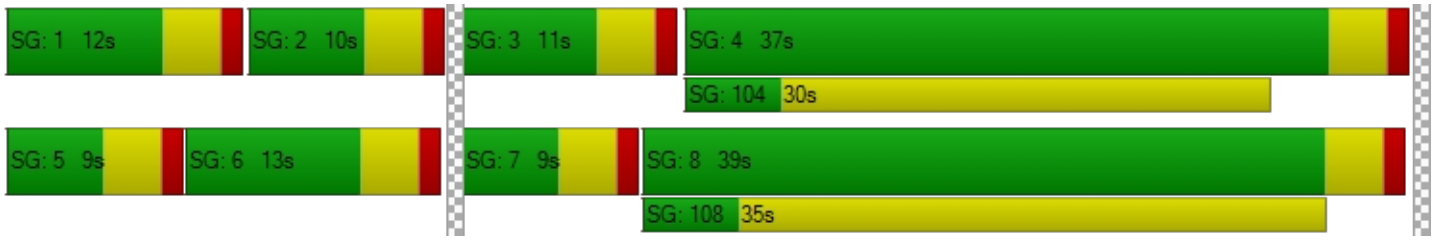
d_M, Delay for Movement [s/veh]	8.48	12.95	12.95	8.26	13.27	18.86	7.99	10.88	10.89	6.50	16.30	14.71
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	10.83			17.15			9.70			15.71		
Approach LOS	B			B			A			B		
d_I, Intersection Delay [s/veh]	12.70											
Intersection LOS	B											
Intersection V/C	0.396											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.579	2.593
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.838	2.003	2.145	1.902
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 5: Project Driveway

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):	0.333

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	47	359	27	21	237	2	21	1	17	32	2	23
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	1	0	0	2	19	64	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	374	28	22	248	21	86	1	29	33	2	24
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	94	7	6	62	5	22	0	7	8	1	6
Total Analysis Volume [veh/h]	52	374	28	22	248	21	86	1	29	33	2	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	22	22	22	22	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	5	5	1	4	4	3	3	3
g / C, Green / Cycle	0.06	0.22	0.22	0.03	0.19	0.19	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.11	0.11	0.01	0.07	0.01	0.06	0.02	0.21
s, saturation flow rate [veh/h]	1781	1870	1825	1781	3560	1589	1384	1597	278
c, Capacity [veh/h]	118	416	406	56	670	299	334	193	288
d1, Uniform Delay [s]	9.92	7.48	7.49	10.48	7.82	7.37	9.13	8.70	10.89
k, delay calibration	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
d2, Incremental Delay [s]	2.59	0.88	0.92	4.43	0.34	0.10	0.40	0.37	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.49	0.49	0.39	0.37	0.07	0.26	0.16	0.20
d, Delay for Lane Group [s/veh]	12.51	8.36	8.40	14.91	8.16	7.47	9.53	9.07	11.24
Lane Group LOS	B	A	A	B	A	A	A	A	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	0.52	0.52	0.14	0.31	0.05	0.27	0.10	0.22
50th-Percentile Queue Length [ft/ln]	5.88	13.11	12.97	3.40	7.67	1.30	6.64	2.39	5.43
95th-Percentile Queue Length [veh/ln]	0.42	0.94	0.93	0.24	0.55	0.09	0.48	0.17	0.39
95th-Percentile Queue Length [ft/ln]	10.59	23.60	23.34	6.12	13.81	2.34	11.94	4.31	9.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.51	8.38	8.40	14.91	8.16	7.47	9.53	9.07	9.07	11.24	11.24	11.24
Movement LOS	B	A	A	B	A	A	A	A	A	B	B	B
d_A, Approach Delay [s/veh]	8.86			8.62			9.41			11.24		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	9.00											
Intersection LOS	A											
Intersection V/C	0.333											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.491	2.697	1.998	1.764
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.934	1.800	1.751	1.657
Bicycle LOS	A	A	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Backround PM NP CP.pdf

Scenario 8 Background PM NP CP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Right	0.525	22.2	C
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.606	13.1	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.624	13.3	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	WB Thru	0.389	12.8	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	1.224	9.0	A

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: Limonite/Pats Ranch

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):	0.525

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	366	56	181	0	33	74	145	1316	246	196	885	2
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	4	0	0	0	0	98	0	3	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]	381	58	192	0	34	77	151	1467	256	207	1006	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	15	48	0	9	19	38	367	64	52	252	1
Total Analysis Volume [veh/h]	381	58	192	0	34	77	151	1467	256	207	1006	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	68	68	68	68	68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	10	16	16	0	6	8	25	25	6	24	24
g / C, Green / Cycle	0.15	0.24	0.24	0.00	0.09	0.11	0.37	0.37	0.09	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.11	0.03	0.12	0.00	0.07	0.08	0.29	0.16	0.06	0.20	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1666	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	523	446	379	0	145	198	1880	587	325	1795	560
d1, Uniform Delay [s]	27.68	20.47	22.56	0.00	30.52	29.53	19.11	16.22	29.85	17.87	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]	1.96	0.13	1.05	0.00	8.06	6.05	0.73	0.51	2.06	0.28	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	0.73	0.13	0.51	0.00	0.76	0.76	0.78	0.44	0.64	0.56	0.00
d, Delay for Lane Group [s/veh]	29.64	20.60	23.61	0.00	38.59	35.58	19.84	16.73	31.91	18.15	14.36
Lane Group LOS	C	C	C	A	D	D	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.97	0.71	2.63	0.00	2.04	2.63	6.35	2.85	1.66	3.96	0.02
50th-Percentile Queue Length [ft/ln]	74.16	17.69	65.81	0.00	50.97	65.87	158.78	71.22	41.62	99.12	0.48
95th-Percentile Queue Length [veh/ln]	5.34	1.27	4.74	0.00	3.67	4.74	10.48	5.13	3.00	7.14	0.03
95th-Percentile Queue Length [ft/ln]	133.50	31.83	118.46	0.00	91.74	118.56	262.10	128.20	74.91	178.41	0.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.64	20.60	23.61	0.00	38.59	38.59	35.58	19.84	16.73	31.91	18.15	14.36
Movement LOS	C	C	C	A	D	D	D	B	B	C	B	B
d_A, Approach Delay [s/veh]	26.97			38.59			20.68			20.49		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	22.18											
Intersection LOS	C											
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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.762	2.221	3.143	3.172
Crosswalk LOS	C	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.601	1.743	2.590	2.228
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 2: I-15 NB Ramp/Limonite Ave

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):	0.606

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	463	3	810	0	0	0	0	1101	451	0	1151	253
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	0	32	0	0	0	52	66	0	0	59	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]	539	3	874	0	0	0	52	1211	469	0	1256	289
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	135	1	219	0	0	0	13	303	117	0	314	72
Total Analysis Volume [veh/h]	539	3	874	0	0	0	52	1211	469	0	1256	289
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	52	52	52		52	52	52	52
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	20	20	20		21	21	21	21
g / C, Green / Cycle	0.39	0.39	0.39		0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.15	0.15	0.31		0.24	0.30	0.25	0.18
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	702	703	1109		2047	639	2047	639
d1, Uniform Delay [s]	11.25	11.25	13.84		12.20	13.20	12.35	11.37
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]	0.35	0.35	1.29		0.27	1.66	0.30	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.39	0.79		0.59	0.73	0.61	0.45
d, Delay for Lane Group [s/veh]	11.60	11.60	15.13		12.48	14.85	12.65	11.87
Lane Group LOS	B	B	B		B	B	B	B
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.94	1.94	3.90		3.09	4.11	3.24	2.11
50th-Percentile Queue Length [ft/ln]	48.40	48.40	97.59		77.20	102.71	81.07	52.85
95th-Percentile Queue Length [veh/ln]	3.49	3.48	7.03		5.56	7.40	5.84	3.81
95th-Percentile Queue Length [ft/ln]	87.13	87.12	175.65		138.96	184.88	145.93	95.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.60	11.60	15.13	0.00	0.00	0.00	0.00	12.48	14.85	0.00	12.65	11.87
Movement LOS	B	B	B					B	B		B	B
d_A, Approach Delay [s/veh]	13.78			0.00			13.14			12.50		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	13.12											
Intersection LOS	B											
Intersection V/C	0.606											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.936	2.016	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	3.896	4.132	2.484	2.409
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite Ave

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):	0.624

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	378	0	749	0	1169	449	0	1173	459
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	32	0	57	0	86	52	26	91	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	425	0	836	0	1302	519	26	1311	477
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	106	0	209	0	326	130	7	328	119
Total Analysis Volume [veh/h]	0	0	0	425	0	836	0	1302	519	26	1311	477
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		20	20	20	23	23	23	23
g / C, Green / Cycle		0.37	0.37	0.37	0.43	0.43	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate		0.12	0.12	0.30	0.26	0.33	0.26	0.30
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		664	664	1049	2189	683	2189	683
d1, Uniform Delay [s]		11.99	11.99	15.02	11.73	12.96	11.76	12.47
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]		0.28	0.28	1.43	0.26	2.11	0.26	1.31
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	0.80	0.59	0.76	0.60	0.70
d, Delay for Lane Group [s/veh]		12.27	12.27	16.46	11.99	15.07	12.02	13.78
Lane Group LOS		B	B	B	B	B	B	B
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.61	1.61	4.04	3.32	4.72	3.35	4.06
50th-Percentile Queue Length [ft/ln]		40.17	40.17	101.10	82.94	117.88	83.72	101.60
95th-Percentile Queue Length [veh/ln]		2.89	2.89	7.28	5.97	8.28	6.03	7.32
95th-Percentile Queue Length [ft/ln]		72.31	72.31	181.99	149.30	206.91	150.70	182.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	12.27	12.27	16.46	0.00	11.99	15.07	0.00	12.02	13.78
Movement LOS				B	B	B		B	B		B	B
d_A, Approach Delay [s/veh]	0.00			15.04			12.87			12.49		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	13.29											
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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.090	2.918	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	3.640	2.561	2.543
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

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):	0.389

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	43	49	6	52	68	332	189	191	52	4	218	27
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	3	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	55	6	54	74	345	197	199	54	4	227	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	14	2	14	19	86	49	50	14	1	57	7
Total Analysis Volume [veh/h]	45	55	6	54	74	345	197	199	54	4	227	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	38	38	38	38	38	38	38	38	38	38	38
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	17	11	17	11	11	14	9	9	14	5	5
g / C, Green / Cycle	0.44	0.27	0.44	0.28	0.28	0.35	0.24	0.24	0.35	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.04	0.04	0.22	0.13	0.07	0.07	0.00	0.06	0.02
s, saturation flow rate [veh/h]	1432	1838	1452	1870	1589	1472	1870	1736	1233	3560	1589
c, Capacity [veh/h]	873	506	888	529	450	733	458	425	655	435	194
d1, Uniform Delay [s]	6.25	10.44	6.28	10.29	12.63	9.09	11.78	11.80	8.09	15.82	15.08
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]	0.02	0.11	0.03	0.12	2.78	0.19	0.34	0.37	0.00	0.97	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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	0.05	0.12	0.06	0.14	0.77	0.27	0.28	0.29	0.01	0.52	0.14
d, Delay for Lane Group [s/veh]	6.28	10.54	6.31	10.41	15.40	9.29	12.12	12.18	8.09	16.79	15.42
Lane Group LOS	A	B	A	B	B	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]	0.15	0.32	0.18	0.38	2.44	0.92	0.76	0.73	0.02	0.84	0.20
50th-Percentile Queue Length [ft/ln]	3.73	7.99	4.50	9.60	61.04	23.07	19.06	18.18	0.42	21.03	5.05
95th-Percentile Queue Length [veh/ln]	0.27	0.58	0.32	0.69	4.39	1.66	1.37	1.31	0.03	1.51	0.36
95th-Percentile Queue Length [ft/ln]	6.72	14.39	8.10	17.27	109.87	41.52	34.32	32.73	0.75	37.85	9.10

Movement, Approach, & Intersection Results

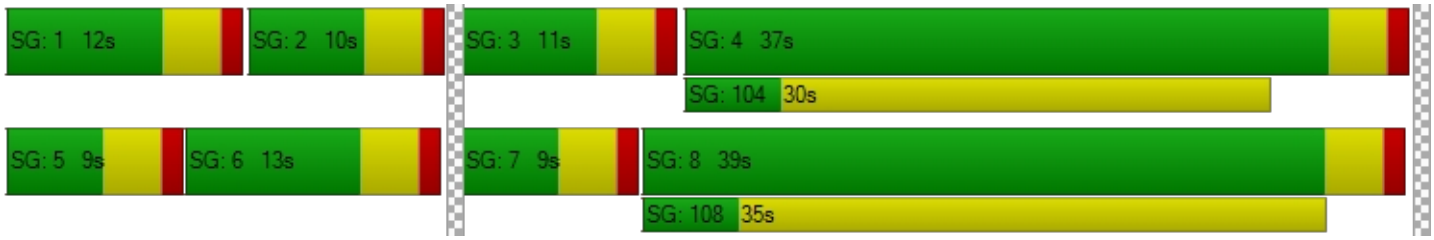
d_M, Delay for Movement [s/veh]	6.28	10.54	10.54	6.31	10.41	15.40	9.29	12.14	12.18	8.09	16.79	15.42
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	8.73			13.58			10.89			16.51		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.83											
Intersection LOS	B											
Intersection V/C	0.389											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.518	2.551
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.735	2.340	1.931	1.773
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 5: Project Driveway

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):	1.224

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	60	232	7	33	403	9	32	9	39	14	12	30
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	3	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	245	7	34	422	9	33	9	41	15	12	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	61	2	9	106	2	8	2	10	4	3	8
Total Analysis Volume [veh/h]	62	245	7	34	422	9	33	9	41	15	12	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	23	23	23	23	23	23	23	23	23
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	6	6	1	5	5	2	2	2
g / C, Green / Cycle	0.07	0.25	0.25	0.04	0.22	0.22	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.03	0.07	0.07	0.02	0.12	0.01	0.02	0.03	1.07
s, saturation flow rate [veh/h]	1781	1870	1852	1781	3560	1589	1363	1634	54
c, Capacity [veh/h]	129	469	465	77	789	352	319	156	206
d1, Uniform Delay [s]	10.07	6.80	6.80	10.54	7.77	6.89	9.49	9.54	11.30
k, delay calibration	0.11	0.11	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	1.00	1.00
d2, Incremental Delay [s]	2.73	0.31	0.31	3.90	0.57	0.03	0.14	1.18	2.11
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	0.48	0.27	0.27	0.44	0.53	0.03	0.10	0.32	0.28
d, Delay for Lane Group [s/veh]	12.81	7.11	7.12	14.44	8.33	6.92	9.63	10.72	13.41
Lane Group LOS	B	A	A	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.29	0.28	0.28	0.19	0.54	0.02	0.11	0.19	0.32
50th-Percentile Queue Length [ft/ln]	7.14	7.11	7.09	4.78	13.44	0.52	2.67	4.86	8.08
95th-Percentile Queue Length [veh/ln]	0.51	0.51	0.51	0.34	0.97	0.04	0.19	0.35	0.58
95th-Percentile Queue Length [ft/ln]	12.85	12.80	12.75	8.60	24.20	0.94	4.80	8.75	14.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.81	7.11	7.12	14.44	8.33	6.92	9.63	10.72	10.72	13.41	13.41	13.41
Movement LOS	B	A	A	B	A	A	A	B	B	B	B	B
d_A, Approach Delay [s/veh]	8.24			8.75			10.29			13.41		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	9.01											
Intersection LOS	A											
Intersection V/C	1.224											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.471	2.621	1.990	1.763
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.819	1.943	1.697	1.655
Bicycle LOS	A	A	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Background PM WP CP.pdf

Scenario 8 Background PM WP CP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Right	0.536	22.9	C
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	NB Right	0.616	13.5	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.624	13.3	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	WB Thru	0.399	13.0	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.283	9.2	A

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: Limonite/Pats Ranch

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	366	56	181	0	33	74	145	1316	246	196	885	2
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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]	33	0	8	0	0	0	0	98	56	10	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]	414	58	196	0	34	77	151	1467	312	214	1006	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	104	15	49	0	9	19	38	367	78	54	252	1
Total Analysis Volume [veh/h]	414	58	196	0	34	77	151	1467	312	214	1006	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	11	17	17	0	6	8	26	26	7	25	25
g / C, Green / Cycle	0.16	0.25	0.25	0.00	0.09	0.11	0.37	0.37	0.10	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.12	0.03	0.12	0.00	0.07	0.08	0.29	0.20	0.06	0.20	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1666	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	556	463	393	0	145	197	1865	582	331	1790	559
d1, Uniform Delay [s]	28.11	20.52	22.68	0.00	31.36	30.36	19.81	17.55	30.61	18.41	14.79
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]	2.01	0.12	0.98	0.00	8.13	6.15	0.76	0.77	2.12	0.28	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	0.13	0.50	0.00	0.77	0.77	0.79	0.54	0.65	0.56	0.00
d, Delay for Lane Group [s/veh]	30.12	20.64	23.66	0.00	39.49	36.51	20.57	18.32	32.73	18.69	14.79
Lane Group LOS	C	C	C	A	D	D	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.32	0.72	2.74	0.00	2.10	2.72	6.62	3.79	1.77	4.11	0.02
50th-Percentile Queue Length [ft/ln]	82.93	17.99	68.40	0.00	52.42	67.89	165.43	94.76	44.37	102.78	0.50
95th-Percentile Queue Length [veh/ln]	5.97	1.29	4.93	0.00	3.77	4.89	10.84	6.82	3.19	7.40	0.04
95th-Percentile Queue Length [ft/ln]	149.27	32.37	123.13	0.00	94.36	122.21	270.90	170.57	79.87	185.01	0.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.12	20.64	23.66	0.00	39.49	39.49	36.51	20.57	18.32	32.73	18.69	14.79
Movement LOS	C	C	C	A	D	D	D	C	B	C	B	B
d_A, Approach Delay [s/veh]	27.40			39.49			21.46			21.14		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	22.88											
Intersection LOS	C											
Intersection V/C	0.536											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.776	2.221	3.154	3.173
Crosswalk LOS	C	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.662	1.743	2.621	2.232
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 2: I-15 NB Ramp/Limonite Ave

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.616

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	463	3	810	0	0	0	0	1101	451	0	1151	253
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	0	61	0	0	0	52	92	0	0	79	39
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	539	3	903	0	0	0	52	1237	469	0	1276	302
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	135	1	226	0	0	0	13	309	117	0	319	76
Total Analysis Volume [veh/h]	539	3	903	0	0	0	52	1237	469	0	1276	302
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	53	53	53		53	53	53	53
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	21	21	21		21	21	21	21
g / C, Green / Cycle	0.40	0.40	0.40		0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.15	0.15	0.32		0.24	0.30	0.25	0.19
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	715	715	1129		2038	636	2038	636
d1, Uniform Delay [s]	11.28	11.28	14.09		12.69	13.63	12.82	11.86
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]	0.33	0.33	1.35		0.29	1.69	0.32	0.55
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	0.80		0.61	0.74	0.63	0.47
d, Delay for Lane Group [s/veh]	11.61	11.61	15.44		12.98	15.32	13.14	12.41
Lane Group LOS	B	B	B		B	B	B	B
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.98	1.98	4.18		3.32	4.29	3.46	2.33
50th-Percentile Queue Length [ft/ln]	49.38	49.38	104.61		82.95	107.13	86.50	58.28
95th-Percentile Queue Length [veh/ln]	3.56	3.56	7.53		5.97	7.68	6.23	4.20
95th-Percentile Queue Length [ft/ln]	88.89	88.88	188.30		149.31	192.00	155.70	104.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.61	11.61	15.44	0.00	0.00	0.00	0.00	12.98	15.32	0.00	13.14	12.41
Movement LOS	B	B	B					B	B		B	B
d_A, Approach Delay [s/veh]	14.01			0.00			13.62			13.00		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	13.53											
Intersection LOS	B											
Intersection V/C	0.616											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.939	2.020	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	3.944	4.132	2.498	2.428
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite Ave

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):	0.624

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	378	0	749	0	1169	449	0	1173	459
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	54	0	57	0	90	52	44	93	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	447	0	836	0	1306	519	44	1313	477
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	112	0	209	0	327	130	11	328	119
Total Analysis Volume [veh/h]	0	0	0	447	0	836	0	1306	519	44	1313	477
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		54	54	54	54	54	54	54
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		20	20	20	23	23	23	23
g / C, Green / Cycle		0.37	0.37	0.37	0.43	0.43	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate		0.13	0.13	0.30	0.26	0.33	0.26	0.30
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		665	665	1050	2189	683	2189	683
d1, Uniform Delay [s]		12.08	12.08	15.03	11.77	13.00	11.79	12.50
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]		0.30	0.30	1.42	0.26	2.12	0.27	1.31
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	0.80	0.60	0.76	0.60	0.70
d, Delay for Lane Group [s/veh]		12.38	12.38	16.45	12.03	15.12	12.06	13.81
Lane Group LOS		B	B	B	B	B	B	B
Critical Lane Group		No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]		1.71	1.71	4.05	3.34	4.73	3.37	4.08
50th-Percentile Queue Length [ft/ln]		42.66	42.66	101.28	83.59	118.35	84.20	101.96
95th-Percentile Queue Length [veh/ln]		3.07	3.07	7.29	6.02	8.30	6.06	7.34
95th-Percentile Queue Length [ft/ln]		76.79	76.79	182.30	150.47	207.56	151.57	183.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	12.38	12.38	16.45	0.00	12.03	15.12	0.00	12.06	13.81
Movement LOS				B	B	B		B	B		B	B
d_A, Approach Delay [s/veh]	0.00			15.03			12.91			12.53		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	13.33											
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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.090	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	3.677	2.563	2.544
Bicycle LOS	D	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

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):	0.399

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	43	49	6	52	68	332	189	191	52	4	218	27
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	3	7	11	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	55	6	54	74	352	208	199	54	4	227	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	14	2	14	19	88	52	50	14	1	57	7
Total Analysis Volume [veh/h]	45	55	6	54	74	352	208	199	54	4	227	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	39	39	39	39	39	39	39	39	39	39	39
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	17	11	17	11	11	14	10	10	14	5	5
g / C, Green / Cycle	0.44	0.28	0.44	0.29	0.29	0.36	0.25	0.25	0.36	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.04	0.04	0.22	0.14	0.07	0.07	0.00	0.06	0.02
s, saturation flow rate [veh/h]	1431	1838	1450	1870	1589	1480	1870	1736	1230	3560	1589
c, Capacity [veh/h]	870	513	884	536	455	734	466	433	653	429	191
d1, Uniform Delay [s]	6.34	10.54	6.37	10.39	12.82	9.26	11.87	11.89	8.18	16.20	15.44
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
I, Upstream 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]	0.02	0.10	0.03	0.12	2.83	0.21	0.32	0.36	0.00	1.02	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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	0.05	0.12	0.06	0.14	0.77	0.28	0.28	0.28	0.01	0.53	0.15
d, Delay for Lane Group [s/veh]	6.37	10.64	6.40	10.51	15.64	9.47	12.19	12.25	8.18	17.22	15.79
Lane Group LOS	A	B	A	B	B	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]	0.15	0.33	0.19	0.39	2.56	1.01	0.78	0.74	0.02	0.87	0.21
50th-Percentile Queue Length [ft/ln]	3.85	8.16	4.64	9.80	63.92	25.16	19.42	18.50	0.43	21.69	5.21
95th-Percentile Queue Length [veh/ln]	0.28	0.59	0.33	0.71	4.60	1.81	1.40	1.33	0.03	1.56	0.37
95th-Percentile Queue Length [ft/ln]	6.93	14.69	8.36	17.64	115.05	45.29	34.96	33.30	0.77	39.04	9.37

Movement, Approach, & Intersection Results

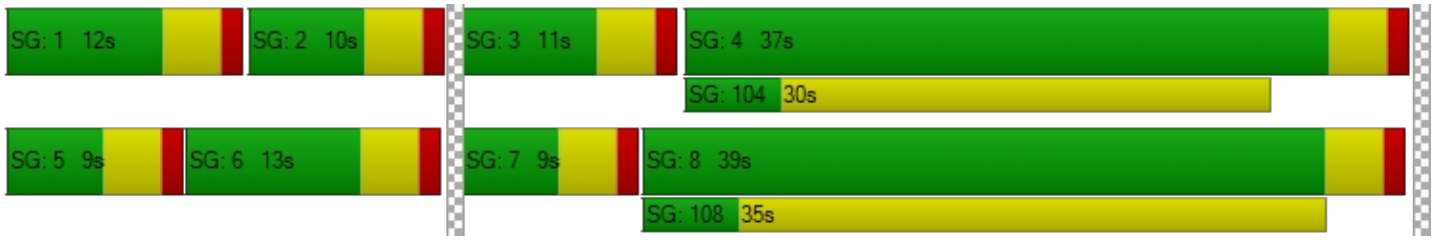
d_M, Delay for Movement [s/veh]	6.37	10.64	10.64	6.40	10.51	15.64	9.47	12.21	12.25	8.18	17.22	15.79
Movement LOS	A	B	B	A	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	8.83			13.81			10.98			16.92		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	13.02											
Intersection LOS	B											
Intersection V/C	0.399											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.522	2.551
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.735	2.352	1.940	1.773
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 5: Project Driveway

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.283

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	60	232	7	33	403	9	32	9	39	14	12	30
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	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	4	0	0	3	63	37	0	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	245	7	34	422	72	70	9	48	15	12	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	61	2	9	106	18	18	2	12	4	3	8
Total Analysis Volume [veh/h]	73	245	7	34	422	72	70	9	48	15	12	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	24	24	24	24	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	6	6	1	6	6	3	3	3
g / C, Green / Cycle	0.08	0.27	0.27	0.04	0.23	0.23	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.07	0.07	0.02	0.12	0.05	0.05	0.04	0.12
s, saturation flow rate [veh/h]	1781	1870	1852	1781	3560	1589	1363	1628	468
c, Capacity [veh/h]	150	500	496	81	814	364	302	200	243
d1, Uniform Delay [s]	10.70	7.04	7.04	11.37	8.26	7.62	9.95	9.75	10.63
k, delay calibration	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
d2, Incremental Delay [s]	2.43	0.26	0.27	3.45	0.51	0.26	0.39	0.77	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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.25	0.25	0.42	0.52	0.20	0.23	0.28	0.24
d, Delay for Lane Group [s/veh]	13.12	7.30	7.31	14.81	8.77	7.89	10.34	10.52	11.13
Lane Group LOS	B	A	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.35	0.32	0.32	0.20	0.61	0.20	0.26	0.22	0.22
50th-Percentile Queue Length [ft/ln]	8.81	7.91	7.88	5.02	15.37	5.05	6.44	5.56	5.41
95th-Percentile Queue Length [veh/ln]	0.63	0.57	0.57	0.36	1.11	0.36	0.46	0.40	0.39
95th-Percentile Queue Length [ft/ln]	15.86	14.24	14.18	9.04	27.67	9.10	11.59	10.01	9.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.12	7.30	7.31	14.81	8.77	7.89	10.34	10.52	10.52	11.13	11.13	11.13
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	8.61			9.04			10.42			11.13		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	9.19											
Intersection LOS	A											
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]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.475	2.690	2.028	1.763
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]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	1.828	1.995	1.769	1.655
Bicycle LOS	A	A	A	A

Sequence

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



Appendix D-4

Horizon Year Conditions (2035)

Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Horizon AM NP.pdf

Scenario 9 Cumulative Horizon AM NP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Left	0.607	25.7	C
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	EB Right	0.947	51.3	D
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	WB Right	0.716	14.4	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	SB Right	0.502	15.2	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.535	9.1	A

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: Limonite/Pats Ranch

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):	0.607

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	395	29	86	1	28	90	50	725	147	89	1067	1
Base Volume Adjustment Factor	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324
Heavy Vehicles Percentage [%]	2.00	2.00	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]	566	42	123	1	40	129	72	1038	211	127	1528	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	142	11	31	0	10	32	18	260	53	32	382	0
Total Analysis Volume [veh/h]	566	42	123	1	40	129	72	1038	211	127	1528	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]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	78	78	78	78	78	78	78	78	78	78	78
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	16	26	26	0	10	4	27	27	5	27	27
g / C, Green / Cycle	0.20	0.33	0.33	0.00	0.13	0.05	0.35	0.35	0.06	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.16	0.02	0.08	0.00	0.10	0.04	0.20	0.13	0.04	0.30	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1648	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	702	616	524	3	211	95	1760	549	213	1801	562
d1, Uniform Delay [s]	29.56	17.91	18.98	38.84	33.00	36.34	20.94	19.23	35.58	23.23	16.27
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
I, Upstream 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]	2.24	0.05	0.23	76.63	6.97	11.42	0.32	0.44	2.64	1.19	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	0.81	0.07	0.23	0.39	0.80	0.76	0.59	0.38	0.60	0.85	0.00
d, Delay for Lane Group [s/veh]	31.80	17.96	19.20	115.46	39.97	47.76	21.26	19.67	38.22	24.42	16.27
Lane Group LOS	C	B	B	F	D	D	C	B	D	C	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.06	0.51	1.58	0.07	3.41	1.62	4.94	2.80	1.22	8.25	0.01
50th-Percentile Queue Length [ft/ln]	126.60	12.65	39.48	1.83	85.26	40.47	123.42	70.06	30.58	206.20	0.28
95th-Percentile Queue Length [veh/ln]	8.75	0.91	2.84	0.13	6.14	2.91	8.58	5.04	2.20	12.96	0.02
95th-Percentile Queue Length [ft/ln]	218.86	22.78	71.07	3.29	153.46	72.85	214.52	126.11	55.04	323.95	0.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.80	17.96	19.20	115.46	39.97	39.97	47.76	21.26	19.67	38.22	24.42	16.27
Movement LOS	C	B	B	F	D	D	D	C	B	D	C	B
d_A, Approach Delay [s/veh]	28.89			40.42			22.45			25.47		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	25.74											
Intersection LOS	C											
Intersection V/C	0.607											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.760	2.212	3.169	3.166
Crosswalk LOS	C	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.766	1.840	2.286	2.470
Bicycle LOS	C	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 2: I-15 NB Ramp/Limonite Ave

Control Type:	Signalized	Delay (sec / veh):	51.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.947

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	269	1	575	0	0	0	0	1089	1180	0	1624	383
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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]	269	1	575	0	0	0	0	1089	1180	0	1624	383
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	0	144	0	0	0	0	272	295	0	406	96
Total Analysis Volume [veh/h]	269	1	575	0	0	0	0	1089	1180	0	1624	383
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	55	55	55		55	55	55	55
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	15	15	15		30	30	30	30
g / C, Green / Cycle	0.27	0.27	0.27		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.20		0.21	0.74	0.32	0.24
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	477	477	753		2757	860	2757	860
d1, Uniform Delay [s]	16.09	16.09	18.69		7.42	12.72	8.57	7.69
k, delay calibration	0.11	0.11	0.11		0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	0.32	1.64		0.09	174.70	0.20	0.36
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	0.28	0.28	0.76		0.40	1.37	0.59	0.45
d, Delay for Lane Group [s/veh]	16.41	16.41	20.33		7.51	187.42	8.77	8.05
Lane Group LOS	B	B	C		A	F	A	A
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.27	1.27	3.20		1.95	49.55	3.36	2.19
50th-Percentile Queue Length [ft/ln]	31.72	31.72	80.12		48.64	1238.69	83.99	54.68
95th-Percentile Queue Length [veh/ln]	2.28	2.28	5.77		3.50	75.44	6.05	3.94
95th-Percentile Queue Length [ft/ln]	57.09	57.10	144.22		87.55	1885.94	151.18	98.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.41	16.41	20.33	0.00	0.00	0.00	0.00	7.51	187.42	0.00	8.77	8.05
Movement LOS	B	B	C					A	F		A	A
d_A, Approach Delay [s/veh]	19.08			0.00			101.07			8.63		
Approach LOS	B			A			F			A		
d_I, Intersection Delay [s/veh]	51.31											
Intersection LOS	D											
Intersection V/C	0.947											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.953	2.046	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	2.954	4.132	2.808	2.663
Bicycle LOS	C	D	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite 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):	0.716

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	154	1	649	0	2115	629	0	1149	771
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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	154	1	649	0	2115	629	0	1149	771
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	39	0	162	0	529	157	0	287	193
Total Analysis Volume [veh/h]	0	0	0	154	1	649	0	2115	629	0	1149	771
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		57	57	57	57	57	57	57
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		16	16	16	30	30	30	30
g / C, Green / Cycle		0.29	0.29	0.29	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.04	0.04	0.23	0.42	0.40	0.23	0.49
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		515	516	814	2672	834	2672	834
d1, Uniform Delay [s]		15.04	15.04	18.69	11.01	10.66	8.32	12.51
k, delay calibration		0.11	0.11	0.11	0.11	0.25	0.11	0.37
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.13	0.13	1.84	0.55	3.18	0.11	13.83
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	0.80	0.79	0.75	0.43	0.92
d, Delay for Lane Group [s/veh]		15.17	15.17	20.53	11.56	13.84	8.43	26.33
Lane Group LOS		B	B	C	B	B	A	C
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		0.70	0.70	3.73	5.71	5.55	2.31	10.13
50th-Percentile Queue Length [ft/ln]		17.41	17.41	93.34	142.78	138.78	57.86	253.15
95th-Percentile Queue Length [veh/ln]		1.25	1.25	6.72	9.63	9.42	4.17	15.34
95th-Percentile Queue Length [ft/ln]		31.33	31.34	168.02	240.76	235.38	104.14	383.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.17	15.17	20.53	0.00	11.56	13.84	0.00	8.43	26.33
Movement LOS				B	B	C		B	B		A	C
d_A, Approach Delay [s/veh]	0.00			19.50			12.09			15.62		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	14.42											
Intersection LOS	B											
Intersection V/C	0.716											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.126	2.898	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	2.886	3.069	2.616
Bicycle LOS	D	C	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

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):	0.502

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	77	67	17	34	13	199	275	363	40	15	332	52
Base Volume Adjustment Factor	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562
Heavy Vehicles Percentage [%]	2.00	2.00	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	91	23	46	18	270	373	492	54	20	450	71
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	23	6	12	5	68	93	123	14	5	113	18
Total Analysis Volume [veh/h]	104	91	23	46	18	270	373	492	54	20	450	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]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	49	49	49	49	49	49	49	49	49	49	49
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	18	12	18	11	11	23	18	18	23	9	9
g / C, Green / Cycle	0.37	0.24	0.37	0.22	0.22	0.46	0.36	0.36	0.46	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.07	0.06	0.03	0.01	0.17	0.27	0.15	0.15	0.02	0.13	0.04
s, saturation flow rate [veh/h]	1516	1806	1397	1870	1589	1375	1870	1806	989	3560	1589
c, Capacity [veh/h]	776	443	676	403	343	746	672	649	583	655	292
d1, Uniform Delay [s]	10.32	15.07	10.04	15.39	18.36	9.54	11.93	11.93	7.48	18.89	17.27
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
I, Upstream 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]	0.08	0.30	0.04	0.05	4.04	0.52	0.41	0.42	0.02	1.29	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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	0.13	0.26	0.07	0.04	0.79	0.50	0.41	0.41	0.03	0.69	0.24
d, Delay for Lane Group [s/veh]	10.40	15.38	10.08	15.44	22.40	10.06	12.34	12.36	7.50	20.18	17.70
Lane Group LOS	B	B	B	B	C	B	B	B	A	C	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.65	0.95	0.28	0.15	2.95	2.21	2.00	1.94	0.09	2.26	0.65
50th-Percentile Queue Length [ft/ln]	16.20	23.70	6.94	3.71	73.75	55.35	50.11	48.46	2.35	56.51	16.32
95th-Percentile Queue Length [veh/ln]	1.17	1.71	0.50	0.27	5.31	3.99	3.61	3.49	0.17	4.07	1.18
95th-Percentile Queue Length [ft/ln]	29.16	42.65	12.50	6.68	132.74	99.63	90.19	87.23	4.24	101.72	29.38

Movement, Approach, & Intersection Results

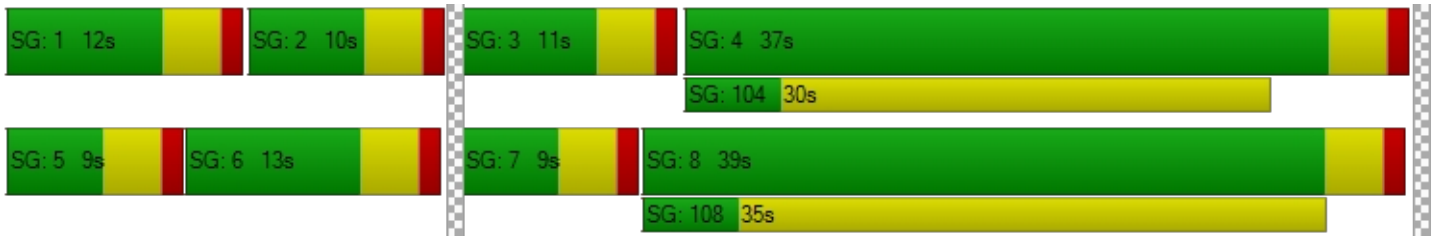
d_M, Delay for Movement [s/veh]	10.40	15.38	15.38	10.08	15.44	22.40	10.06	12.35	12.36	7.50	20.18	17.70
Movement LOS	B	B	B	B	B	C	B	B	B	A	C	B
d_A, Approach Delay [s/veh]	13.00			20.33			11.42			19.39		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	15.21											
Intersection LOS	B											
Intersection V/C	0.502											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.666	2.639
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.919	2.111	2.318	2.006
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 5: Project Driveway

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	47	359	27	21	237	2	21	1	17	32	2	23
Base Volume Adjustment Factor	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562
Heavy Vehicles Percentage [%]	2.00	2.00	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]	64	487	37	28	321	3	28	1	23	43	3	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	122	9	7	80	1	7	0	6	11	1	8
Total Analysis Volume [veh/h]	64	487	37	28	321	3	28	1	23	43	3	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	23	23	23	23	23	23	23	23	23
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	6	6	1	5	5	2	2	2
g / C, Green / Cycle	0.07	0.25	0.25	0.04	0.22	0.22	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.14	0.02	0.09	0.00	0.02	0.02	0.38
s, saturation flow rate [veh/h]	1781	1870	1824	1781	3560	1589	1374	1599	204
c, Capacity [veh/h]	132	476	464	65	772	345	313	177	266
d1, Uniform Delay [s]	10.26	7.47	7.47	10.88	7.77	7.09	9.32	9.26	11.48
k, delay calibration	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
d2, Incremental Delay [s]	2.76	1.02	1.05	4.53	0.36	0.01	0.12	0.34	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
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.56	0.56	0.43	0.42	0.01	0.09	0.14	0.29
d, Delay for Lane Group [s/veh]	13.02	8.49	8.52	15.42	8.13	7.10	9.44	9.60	12.08
Lane Group LOS	B	A	A	B	A	A	A	A	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.30	0.71	0.70	0.17	0.41	0.01	0.09	0.09	0.32
50th-Percentile Queue Length [ft/ln]	7.54	17.77	17.50	4.35	10.25	0.18	2.27	2.13	8.03
95th-Percentile Queue Length [veh/ln]	0.54	1.28	1.26	0.31	0.74	0.01	0.16	0.15	0.58
95th-Percentile Queue Length [ft/ln]	13.56	31.98	31.51	7.83	18.46	0.33	4.09	3.83	14.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.02	8.50	8.52	15.42	8.13	7.10	9.44	9.60	9.60	12.08	12.08	12.08
Movement LOS	B	A	A	B	A	A	A	A	A	B	B	B
d_A, Approach Delay [s/veh]	9.00			8.70			9.51			12.08		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	9.15											
Intersection LOS	A											
Intersection V/C	0.535											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.547	2.634	1.976	1.780
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	2.045	1.850	1.645	1.687
Bicycle LOS	B	A	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Horizon AM WP.pdf

Scenario 11 Cumulative Horizon AM WP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Left	0.623	26.9	C
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	EB Right	0.950	51.4	D
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	WB Right	0.716	14.4	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	SB Right	0.510	15.5	B
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.375	9.4	A

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: Limonite/Pats Ranch

Control Type:	Signalized	Delay (sec / veh):	26.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.623

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	395	29	86	1	28	90	50	725	147	89	1067	1
Base Volume Adjustment Factor	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324	1.4324
Heavy Vehicles Percentage [%]	2.00	2.00	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]	56	0	8	0	0	0	0	0	17	2	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	622	42	131	1	40	129	72	1038	228	129	1528	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	156	11	33	0	10	32	18	260	57	32	382	0
Total Analysis Volume [veh/h]	622	42	131	1	40	129	72	1038	228	129	1528	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]	110
Coordination Type	Time of Day 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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	18	28	28	0	10	4	27	27	5	28	28
g / C, Green / Cycle	0.22	0.34	0.34	0.00	0.13	0.05	0.34	0.34	0.06	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.18	0.02	0.08	0.00	0.10	0.04	0.20	0.14	0.04	0.30	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1648	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	756	644	547	3	209	95	1729	539	214	1771	553
d1, Uniform Delay [s]	30.00	17.73	18.88	40.19	34.20	37.61	22.08	20.53	36.83	24.48	17.15
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
I, Upstream 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]	2.33	0.04	0.22	76.99	7.17	11.46	0.34	0.53	2.72	1.35	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	0.82	0.07	0.24	0.39	0.81	0.76	0.60	0.42	0.60	0.86	0.00
d, Delay for Lane Group [s/veh]	32.33	17.77	19.11	117.19	41.37	49.07	22.42	21.05	39.54	25.83	17.15
Lane Group LOS	C	B	B	F	D	D	C	C	D	C	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.77	0.51	1.71	0.07	3.55	1.67	5.21	3.24	1.29	8.72	0.01
50th-Percentile Queue Length [ft/ln]	144.30	12.84	42.87	1.85	88.67	41.84	130.35	80.99	32.29	218.09	0.30
95th-Percentile Queue Length [veh/ln]	9.71	0.92	3.09	0.13	6.38	3.01	8.96	5.83	2.33	13.57	0.02
95th-Percentile Queue Length [ft/ln]	242.81	23.10	77.17	3.33	159.60	75.30	223.97	145.78	58.13	339.18	0.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.33	17.77	19.11	117.19	41.37	41.37	49.07	22.42	21.05	39.54	25.83	17.15
Movement LOS	C	B	B	F	D	D	D	C	C	D	C	B
d_A, Approach Delay [s/veh]	29.38			41.82			23.62			26.89		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	26.93											
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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.771	2.212	3.177	3.167
Crosswalk LOS	C	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.871	1.840	2.296	2.472
Bicycle LOS	C	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 2: I-15 NB Ramp/Limonite Ave

Control Type:	Signalized	Delay (sec / veh):	51.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.950

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	269	1	575	0	0	0	0	1089	1180	0	1624	383
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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	9	0	0	0	0	8	0	0	34	23
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	269	1	584	0	0	0	0	1097	1180	0	1658	406
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	0	146	0	0	0	0	274	295	0	415	102
Total Analysis Volume [veh/h]	269	1	584	0	0	0	0	1097	1180	0	1658	406
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	56	56	56		56	56	56	56
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	15	15	15		30	30	30	30
g / C, Green / Cycle	0.27	0.27	0.27		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.21		0.22	0.74	0.33	0.26
s, saturation flow rate [veh/h]	1781	1782	2813		5094	1589	5094	1589
c, Capacity [veh/h]	482	482	762		2745	857	2745	857
d1, Uniform Delay [s]	16.02	16.02	18.68		7.54	12.83	8.77	7.95
k, delay calibration	0.11	0.11	0.11		0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.31	1.65		0.09	177.27	0.22	0.41
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	0.28	0.28	0.77		0.40	1.38	0.60	0.47
d, Delay for Lane Group [s/veh]	16.33	16.33	20.34		7.64	190.10	8.99	8.36
Lane Group LOS	B	B	C		A	F	A	A
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.27	1.27	3.27		1.99	50.03	3.52	2.40
50th-Percentile Queue Length [ft/ln]	31.70	31.70	81.70		49.86	1250.80	87.98	60.07
95th-Percentile Queue Length [veh/ln]	2.28	2.28	5.88		3.59	76.25	6.33	4.32
95th-Percentile Queue Length [ft/ln]	57.06	57.06	147.05		89.75	1906.24	158.36	108.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.33	16.33	20.34	0.00	0.00	0.00	0.00	7.64	190.10	0.00	8.99	8.36
Movement LOS	B	B	C					A	F		A	A
d_A, Approach Delay [s/veh]	19.07			0.00			102.19			8.87		
Approach LOS	B			A			F			A		
d_I, Intersection Delay [s/veh]	51.45											
Intersection LOS	D											
Intersection V/C	0.950											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.954	2.053	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	2.969	4.132	2.812	2.695
Bicycle LOS	C	D	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite 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):	0.716

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	154	1	649	0	2115	629	0	1149	771
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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	7	0	0	0	1	0	30	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]	0	0	0	161	1	649	0	2116	629	30	1153	771
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	40	0	162	0	529	157	8	288	193
Total Analysis Volume [veh/h]	0	0	0	161	1	649	0	2116	629	30	1153	771
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		57	57	57	57	57	57	57
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		16	16	16	30	30	30	30
g / C, Green / Cycle		0.29	0.29	0.29	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.05	0.05	0.23	0.42	0.40	0.23	0.49
s, saturation flow rate [veh/h]		1781	1782	2813	5094	1589	5094	1589
c, Capacity [veh/h]		516	516	815	2671	833	2671	833
d1, Uniform Delay [s]		15.06	15.06	18.69	11.03	10.67	8.33	12.52
k, delay calibration		0.11	0.11	0.11	0.11	0.25	0.11	0.37
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	1.83	0.55	3.19	0.11	13.86
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		0.16	0.16	0.80	0.79	0.75	0.43	0.93
d, Delay for Lane Group [s/veh]		15.20	15.20	20.52	11.58	13.86	8.44	26.38
Lane Group LOS		B	B	C	B	B	A	C
Critical Lane Group		No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]		0.73	0.73	3.73	5.72	5.56	2.33	10.14
50th-Percentile Queue Length [ft/ln]		18.24	18.24	93.33	143.05	138.94	58.18	253.52
95th-Percentile Queue Length [veh/ln]		1.31	1.31	6.72	9.65	9.42	4.19	15.36
95th-Percentile Queue Length [ft/ln]		32.82	32.83	168.00	241.13	235.59	104.72	384.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.20	15.20	20.52	0.00	11.58	13.86	0.00	8.44	26.38
Movement LOS				B	B	C		B	B		A	C
d_A, Approach Delay [s/veh]	0.00			19.46			12.10			15.63		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	14.43											
Intersection LOS	B											
Intersection V/C	0.716											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.126	2.899	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	2.898	3.069	2.618
Bicycle LOS	D	C	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

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):	0.510

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	77	67	17	34	13	199	275	363	40	15	332	52
Base Volume Adjustment Factor	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562
Heavy Vehicles Percentage [%]	2.00	2.00	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	11	3	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	91	23	46	18	281	376	492	54	20	450	71
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	23	6	12	5	70	94	123	14	5	113	18
Total Analysis Volume [veh/h]	104	91	23	46	18	281	376	492	54	20	450	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]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	50	50	50	50	50	50	50	50	50	50	50
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	19	13	19	11	11	23	18	18	23	9	9
g / C, Green / Cycle	0.38	0.25	0.38	0.22	0.22	0.46	0.36	0.36	0.46	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.07	0.06	0.03	0.01	0.18	0.27	0.15	0.15	0.02	0.13	0.04
s, saturation flow rate [veh/h]	1513	1806	1394	1870	1589	1377	1870	1806	988	3560	1589
c, Capacity [veh/h]	778	454	678	416	354	741	673	649	577	651	291
d1, Uniform Delay [s]	10.37	15.10	10.08	15.41	18.54	9.80	12.16	12.16	7.66	19.30	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
I, Upstream 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]	0.08	0.29	0.04	0.04	4.08	0.54	0.41	0.42	0.02	1.32	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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	0.13	0.25	0.07	0.04	0.79	0.51	0.41	0.41	0.03	0.69	0.24
d, Delay for Lane Group [s/veh]	10.45	15.39	10.13	15.45	22.62	10.34	12.56	12.58	7.69	20.62	18.08
Lane Group LOS	B	B	B	B	C	B	B	B	A	C	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.66	0.96	0.28	0.15	3.13	2.32	2.06	1.99	0.10	2.32	0.67
50th-Percentile Queue Length [ft/ln]	16.47	24.00	7.06	3.76	78.25	57.88	51.46	49.76	2.44	58.03	16.75
95th-Percentile Queue Length [veh/ln]	1.19	1.73	0.51	0.27	5.63	4.17	3.70	3.58	0.18	4.18	1.21
95th-Percentile Queue Length [ft/ln]	29.65	43.19	12.71	6.76	140.85	104.18	92.62	89.57	4.38	104.45	30.15

Movement, Approach, & Intersection Results

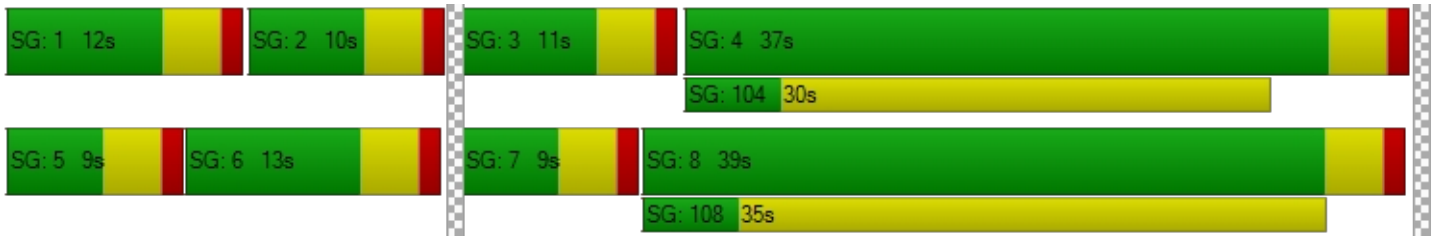
d_M, Delay for Movement [s/veh]	10.45	15.39	15.39	10.13	15.45	22.62	10.34	12.57	12.58	7.69	20.62	18.08
Movement LOS	B	B	B	B	B	C	B	B	B	A	C	B
d_A, Approach Delay [s/veh]	13.03			20.58			11.66			19.81		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	15.50											
Intersection LOS	B											
Intersection V/C	0.510											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.670	2.640
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.919	2.129	2.320	2.006
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 5: Project Driveway

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):	0.375

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	47	359	27	21	237	2	21	1	17	32	2	23
Base Volume Adjustment Factor	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562	1.3562
Heavy Vehicles Percentage [%]	2.00	2.00	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	0	0	0	0	19	64	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	487	37	28	321	22	92	1	34	43	3	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	122	9	7	80	6	23	0	9	11	1	8
Total Analysis Volume [veh/h]	67	487	37	28	321	22	92	1	34	43	3	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]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	24	24	24	24	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	6	6	1	5	5	3	3	3
g / C, Green / Cycle	0.08	0.25	0.25	0.04	0.21	0.21	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.14	0.02	0.09	0.01	0.07	0.02	0.22
s, saturation flow rate [veh/h]	1781	1870	1824	1781	3560	1589	1374	1596	355
c, Capacity [veh/h]	142	480	468	69	767	342	310	199	280
d1, Uniform Delay [s]	10.46	7.66	7.66	11.17	8.05	7.42	9.80	9.32	11.67
k, delay calibration	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
d2, Incremental Delay [s]	2.42	0.99	1.03	3.83	0.36	0.08	0.53	0.42	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
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	0.47	0.55	0.55	0.41	0.42	0.06	0.30	0.18	0.27
d, Delay for Lane Group [s/veh]	12.89	8.65	8.69	15.00	8.41	7.50	10.33	9.73	12.19
Lane Group LOS	B	A	A	B	A	A	B	A	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.32	0.75	0.74	0.17	0.44	0.06	0.33	0.13	0.32
50th-Percentile Queue Length [ft/ln]	7.88	18.73	18.45	4.26	10.97	1.45	8.22	3.14	8.11
95th-Percentile Queue Length [veh/ln]	0.57	1.35	1.33	0.31	0.79	0.10	0.59	0.23	0.58
95th-Percentile Queue Length [ft/ln]	14.19	33.72	33.21	7.68	19.74	2.61	14.79	5.65	14.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.89	8.67	8.69	15.00	8.41	7.50	10.33	9.73	9.73	12.19	12.19	12.19
Movement LOS	B	A	A	B	A	A	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	9.15			8.85			10.16			12.19		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	9.37											
Intersection LOS	A											
Intersection V/C	0.375											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.550	2.739	2.007	1.780
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]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	2.047	1.866	1.769	1.687
Bicycle LOS	B	A	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Horizon PM NP.pdf

Scenario 10 Cumulative Horizon PM NP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Right	0.667	32.0	C
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	EB Right	0.675	15.3	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.662	14.4	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	SB Right	0.671	26.9	C
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.539	10.3	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: Limonite/Pats Ranch

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	366	56	181	0	33	74	145	1316	246	196	885	2
Base Volume Adjustment Factor	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749
Heavy Vehicles Percentage [%]	2.00	2.00	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]	503	77	249	0	45	102	199	1809	338	269	1217	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	126	19	62	0	11	26	50	452	85	67	304	1
Total Analysis Volume [veh/h]	503	77	249	0	45	102	199	1809	338	269	1217	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	84	84	84	84	84	84	84	84	84	84	84
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	15	24	24	0	9	11	30	30	9	28	28
g / C, Green / Cycle	0.18	0.29	0.29	0.00	0.11	0.14	0.36	0.36	0.11	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.15	0.04	0.16	0.00	0.09	0.11	0.36	0.21	0.08	0.24	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1666	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	625	545	463	0	184	244	1821	568	374	1675	523
d1, Uniform Delay [s]	32.97	21.99	25.00	0.00	36.40	35.21	26.87	22.01	36.20	24.84	18.94
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.14	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.50	0.12	0.97	0.00	7.64	6.60	8.42	1.26	2.62	0.61	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	0.80	0.14	0.54	0.00	0.80	0.82	0.99	0.59	0.72	0.73	0.01
d, Delay for Lane Group [s/veh]	35.46	22.11	25.97	0.00	44.04	41.81	35.28	23.26	38.82	25.46	18.95
Lane Group LOS	D	C	C	A	D	D	D	C	D	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.98	1.11	4.15	0.00	3.27	4.31	12.70	5.38	2.74	6.88	0.04
50th-Percentile Queue Length [ft/ln]	124.61	27.81	103.74	0.00	81.65	107.64	317.58	134.48	68.62	172.07	0.97
95th-Percentile Queue Length [veh/ln]	8.65	2.00	7.47	0.00	5.88	7.71	18.55	9.18	4.94	11.19	0.07
95th-Percentile Queue Length [ft/ln]	216.15	50.06	186.73	0.00	146.97	192.71	463.72	229.58	123.52	279.63	1.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.46	22.11	25.97	0.00	44.04	44.04	41.81	35.28	23.26	38.82	25.46	18.95
Movement LOS	D	C	C	A	D	D	D	D	C	D	C	B
d_A, Approach Delay [s/veh]	31.37			44.04			34.11			27.86		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	32.00											
Intersection LOS	C											
Intersection V/C	0.667											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.811	2.246	3.245	3.245
Crosswalk LOS	C	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.927	1.802	2.850	2.379
Bicycle LOS	C	A	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-15 NB Ramp/Limonite Ave

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):	0.675

Intersection Setup

Name	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	611	2	829	0	0	0	0	1387	604	0	1915	273
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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]	611	2	829	0	0	0	0	1387	604	0	1915	273
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	153	1	207	0	0	0	0	347	151	0	479	68
Total Analysis Volume [veh/h]	611	2	829	0	0	0	0	1387	604	0	1915	273
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	62	62	62		62	62	62	62
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	22	22	22		29	29	29	29
g / C, Green / Cycle	0.36	0.36	0.36		0.47	0.47	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.29		0.27	0.38	0.38	0.17
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	645	645	1018		2381	743	2381	743
d1, Uniform Delay [s]	15.28	15.28	17.93		12.11	14.21	14.12	10.64
k, delay calibration	0.11	0.11	0.11		0.11	0.27	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]	0.55	0.55	1.64		0.23	5.38	0.67	0.30
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	0.81		0.58	0.81	0.80	0.37
d, Delay for Lane Group [s/veh]	15.83	15.82	19.57		12.34	19.59	14.79	10.94
Lane Group LOS	B	B	B		B	B	B	B
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.11	3.11	5.01		4.05	7.24	6.58	2.14
50th-Percentile Queue Length [ft/ln]	77.65	77.64	125.18		101.16	180.95	164.52	53.40
95th-Percentile Queue Length [veh/ln]	5.59	5.59	8.68		7.28	11.65	10.79	3.84
95th-Percentile Queue Length [ft/ln]	139.77	139.76	216.92		182.09	291.26	269.70	96.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.82	15.82	19.57	0.00	0.00	0.00	0.00	12.34	19.59	0.00	14.79	10.94
Movement LOS	B	B	B					B	B		B	B
d_A, Approach Delay [s/veh]	17.98			0.00			14.54			14.31		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	15.33											
Intersection LOS	B											
Intersection V/C	0.675											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.955	2.010	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	3.939	4.132	2.655	2.763
Bicycle LOS	D	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite 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):	0.662

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	197	0	773	0	1815	601	0	1970	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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	197	0	773	0	1815	601	0	1970	556
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	49	0	193	0	454	150	0	493	139
Total Analysis Volume [veh/h]	0	0	0	197	0	773	0	1815	601	0	1970	556
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		20	20	20	29	29	29	29
g / C, Green / Cycle		0.33	0.33	0.33	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.27	0.36	0.38	0.39	0.35
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		594	594	938	2496	779	2496	779
d1, Uniform Delay [s]		14.11	14.11	18.38	12.12	12.54	12.72	12.00
k, delay calibration		0.11	0.11	0.11	0.11	0.25	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]		0.13	0.13	1.90	0.41	3.77	0.58	2.38
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		0.17	0.17	0.82	0.73	0.77	0.79	0.71
d, Delay for Lane Group [s/veh]		14.24	14.24	20.28	12.53	16.31	13.30	14.38
Lane Group LOS		B	B	C	B	B	B	B
Critical Lane Group		No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		0.88	0.88	4.63	5.35	6.22	6.12	5.30
50th-Percentile Queue Length [ft/ln]		21.96	21.96	115.68	133.84	155.53	153.10	132.45
95th-Percentile Queue Length [veh/ln]		1.58	1.58	8.16	9.15	10.31	10.18	9.07
95th-Percentile Queue Length [ft/ln]		39.53	39.53	203.88	228.70	257.79	254.56	226.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.24	14.24	20.28	0.00	12.53	16.31	0.00	13.30	14.38
Movement LOS				B	B	C		B	B		B	B
d_A, Approach Delay [s/veh]	0.00			19.05			13.47			13.54		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	14.42											
Intersection LOS	B											
Intersection V/C	0.662											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.116	2.892	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	3.160	2.888	2.949
Bicycle LOS	D	C	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

Control Type:	Signalized	Delay (sec / veh):	26.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	43	49	6	52	68	332	189	191	52	4	218	27
Base Volume Adjustment Factor	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029
Heavy Vehicles Percentage [%]	2.00	2.00	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]	78	88	11	94	123	599	341	344	94	7	393	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	22	3	24	31	150	85	86	24	2	98	12
Total Analysis Volume [veh/h]	78	88	11	94	123	599	341	344	94	7	393	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	74	74	74	74	74	74	74	74	74	74	74
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	37	29	37	29	29	28	24	24	28	11	11
g / C, Green / Cycle	0.51	0.39	0.51	0.40	0.40	0.38	0.32	0.32	0.38	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.06	0.05	0.07	0.07	0.38	0.24	0.12	0.12	0.01	0.11	0.03
s, saturation flow rate [veh/h]	1350	1834	1377	1870	1589	1424	1870	1734	1029	3560	1589
c, Capacity [veh/h]	778	724	800	745	633	589	601	557	453	523	233
d1, Uniform Delay [s]	9.47	14.32	9.53	14.32	21.47	17.92	19.36	19.37	14.36	30.24	27.76
k, delay calibration	0.11	0.11	0.11	0.11	0.40	0.15	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]	0.06	0.09	0.06	0.10	21.21	1.25	0.39	0.42	0.01	2.21	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	0.10	0.14	0.12	0.17	0.95	0.58	0.38	0.38	0.02	0.75	0.21
d, Delay for Lane Group [s/veh]	9.52	14.40	9.60	14.42	42.68	19.16	19.76	19.80	14.37	32.45	28.20
Lane Group LOS	A	B	A	B	D	B	B	B	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.60	1.01	0.73	1.26	12.80	4.30	2.91	2.71	0.07	3.38	0.77
50th-Percentile Queue Length [ft/ln]	15.02	25.33	18.26	31.60	320.10	107.54	72.77	67.81	1.75	84.59	19.16
95th-Percentile Queue Length [veh/ln]	1.08	1.82	1.31	2.28	18.67	7.70	5.24	4.88	0.13	6.09	1.38
95th-Percentile Queue Length [ft/ln]	27.03	45.59	32.87	56.89	466.81	192.57	130.99	122.06	3.15	152.26	34.49

Movement, Approach, & Intersection Results

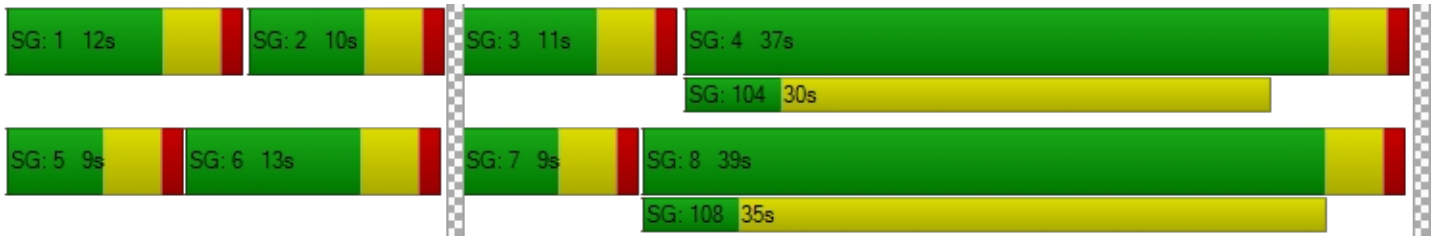
d_M, Delay for Movement [s/veh]	9.52	14.40	14.40	9.60	14.42	42.68	19.16	19.77	19.80	14.37	32.45	28.20
Movement LOS	A	B	B	A	B	D	B	B	B	B	C	C
d_A, Approach Delay [s/veh]	12.25			34.61			19.51			31.71		
Approach LOS	B			C			B			C		
d_I, Intersection Delay [s/veh]	26.94											
Intersection LOS	C											
Intersection V/C	0.671											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.696	2.644
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.852	2.906	2.202	1.930
Bicycle LOS	A	C	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 5: Project Driveway

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):	0.539

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	60	232	7	33	403	9	32	9	39	14	12	30
Base Volume Adjustment Factor	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029
Heavy Vehicles Percentage [%]	2.00	2.00	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]	108	418	13	59	727	16	58	16	70	25	22	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	105	3	15	182	4	15	4	18	6	6	14
Total Analysis Volume [veh/h]	108	418	13	59	727	16	58	16	70	25	22	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	29	29	29	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	10	10	2	9	9	4	4	4
g / C, Green / Cycle	0.10	0.35	0.35	0.07	0.31	0.31	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.12	0.03	0.20	0.01	0.04	0.05	0.27
s, saturation flow rate [veh/h]	1781	1870	1850	1781	3560	1589	1323	1635	369
c, Capacity [veh/h]	181	649	642	119	1111	496	245	196	196
d1, Uniform Delay [s]	12.71	7.14	7.14	13.32	8.80	7.08	12.02	12.10	13.70
k, delay calibration	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
d2, Incremental Delay [s]	3.10	0.30	0.30	3.14	0.66	0.03	0.49	1.54	2.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.33	0.33	0.49	0.65	0.03	0.24	0.44	0.52
d, Delay for Lane Group [s/veh]	15.81	7.44	7.45	16.46	9.46	7.10	12.51	13.64	15.80
Lane Group LOS	B	A	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.67	0.66	0.65	0.39	1.36	0.05	0.30	0.48	0.66
50th-Percentile Queue Length [ft/ln]	16.75	16.44	16.32	9.85	33.97	1.20	7.40	11.90	16.54
95th-Percentile Queue Length [veh/ln]	1.21	1.18	1.18	0.71	2.45	0.09	0.53	0.86	1.19
95th-Percentile Queue Length [ft/ln]	30.15	29.60	29.38	17.73	61.14	2.16	13.33	21.42	29.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.81	7.44	7.45	16.46	9.46	7.10	12.51	13.64	13.64	15.80	15.80	15.80
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	9.12			9.93			13.18			15.80		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	10.32											
Intersection LOS	B											
Intersection V/C	0.539											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.596	2.747	2.030	1.803
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]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	2.004	2.221	1.797	1.726
Bicycle LOS	B	B	A	A

Sequence

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



Vernola Market Place Apartment TIA

Vistro File: H:\...\Vistro_Model.vistro
Report File: H:\...\Horizon PM WP.pdf

Scenario 12 Cumulative Horizon PM WP
9/13/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Limonite/Pats Ranch	Signalized	HCM 6th Edition	SB Right	0.678	34.5	C
2	I-15 NB Ramp/Limonite Ave	Signalized	HCM 6th Edition	EB Right	0.685	15.9	B
3	I-15 SB Ramp/Limonite Ave	Signalized	HCM 6th Edition	SB Right	0.662	14.5	B
4	Pats Ranch/68th	Signalized	HCM 6th Edition	SB Right	0.680	28.2	C
5	Project Driveway	Signalized	HCM 6th Edition	SB Left	0.438	10.6	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: Limonite/Pats Ranch

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):	0.678

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	366	56	181	0	33	74	145	1316	246	196	885	2
Base Volume Adjustment Factor	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749	1.3749
Heavy Vehicles Percentage [%]	2.00	2.00	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]	33	0	4	0	0	0	0	0	56	7	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	536	77	253	0	45	102	199	1809	394	276	1217	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	134	19	63	0	11	26	50	452	99	69	304	1
Total Analysis Volume [veh/h]	536	77	253	0	45	102	199	1809	394	276	1217	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	4.3	4.3	0.0	4.3	4.3	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	50	0	10	42	0	11	38	0	12	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	40	0	0	32	0	0	27	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.9	2.9	0.0	2.9	2.9	0.0	3.3	3.3	0.0	3.3	3.3	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]	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	5.30	5.30	5.30	5.30	5.30	5.30
l1_p, Permitted Start-Up Lost 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]	2.90	2.90	2.90	2.90	2.90	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	16	26	26	0	9	12	30	30	9	28	28
g / C, Green / Cycle	0.19	0.30	0.30	0.00	0.11	0.14	0.35	0.35	0.11	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.15	0.04	0.16	0.00	0.09	0.11	0.36	0.25	0.08	0.24	0.00
s, saturation flow rate [veh/h]	3459	1870	1589	1781	1666	1781	5094	1589	3459	5094	1589
c, Capacity [veh/h]	657	562	477	0	184	243	1788	558	380	1653	516
d1, Uniform Delay [s]	33.17	21.82	24.88	0.00	37.09	35.88	27.73	23.92	36.80	25.62	19.54
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.21	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]	2.54	0.11	0.91	0.00	7.74	6.72	12.89	3.25	2.67	0.65	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	0.82	0.14	0.53	0.00	0.80	0.82	1.01	0.71	0.73	0.74	0.01
d, Delay for Lane Group [s/veh]	35.71	21.93	25.79	0.00	44.82	42.60	40.62	27.17	39.48	26.27	19.54
Lane Group LOS	D	C	C	A	D	D	F	C	D	C	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.41	1.12	4.25	0.00	3.33	4.40	13.61	7.05	2.87	7.09	0.04
50th-Percentile Queue Length [ft/ln]	135.24	27.97	106.21	0.00	83.30	109.89	340.24	176.19	71.86	177.35	1.00
95th-Percentile Queue Length [veh/ln]	9.22	2.01	7.63	0.00	6.00	7.83	19.81	11.40	5.17	11.46	0.07
95th-Percentile Queue Length [ft/ln]	230.61	50.34	190.72	0.00	149.93	195.85	495.22	285.04	129.36	286.55	1.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.71	21.93	25.79	0.00	44.82	44.82	42.60	40.62	27.17	39.48	26.27	19.54
Movement LOS	D	C	C	A	D	D	D	F	C	D	C	B
d_A, Approach Delay [s/veh]	31.59			44.82			38.58			28.70		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	34.52											
Intersection LOS	C											
Intersection V/C	0.678											

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]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersection	2.825	2.246	3.255	3.246
Crosswalk LOS	C	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]	820	675	595	613
d_b, Bicycle Delay [s]	19.15	24.16	27.16	26.46
l_b,int, Bicycle LOS Score for Intersection	2.989	1.802	2.881	2.382
Bicycle LOS	C	A	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-15 NB Ramp/Limonite 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):	0.685

Intersection Setup

Name	I-15 NB Ramp				Limonite Ave				Limonite Ave			
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	0	0	0	1	0	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	3	0	0	0	0	0	2	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	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	I-15 NB Ramp						Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	611	2	829	0	0	0	0	1387	604	0	1915	273
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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	30	0	0	0	0	26	0	0	20	13
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	2	859	0	0	0	0	1413	604	0	1935	286
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	153	1	215	0	0	0	0	353	151	0	484	72
Total Analysis Volume [veh/h]	611	2	859	0	0	0	0	1413	604	0	1935	286
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	31	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	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	63	63	63		63	63	63	63
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30		5.30	5.30	5.30	5.30
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]	3.30	3.30	3.30		3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]	23	23	23		29	29	29	29
g / C, Green / Cycle	0.37	0.37	0.37		0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.31		0.28	0.38	0.38	0.18
s, saturation flow rate [veh/h]	1781	1781	2813		5094	1589	5094	1589
c, Capacity [veh/h]	659	659	1041		2356	735	2356	735
d1, Uniform Delay [s]	15.17	15.17	18.08		12.66	14.75	14.75	11.15
k, delay calibration	0.11	0.11	0.11		0.11	0.28	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]	0.51	0.51	1.72		0.25	5.93	0.75	0.34
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	0.46	0.83		0.60	0.82	0.82	0.39
d, Delay for Lane Group [s/veh]	15.68	15.68	19.80		12.90	20.68	15.50	11.49
Lane Group LOS	B	B	B		B	C	B	B
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.13	3.13	5.31		4.32	7.59	6.98	2.35
50th-Percentile Queue Length [ft/ln]	78.17	78.16	132.87		108.06	189.78	174.39	58.82
95th-Percentile Queue Length [veh/ln]	5.63	5.63	9.10		7.73	12.11	11.31	4.23
95th-Percentile Queue Length [ft/ln]	140.70	140.69	227.38		193.30	302.74	282.67	105.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.68	15.68	19.80	0.00	0.00	0.00	0.00	12.90	20.68	0.00	15.50	11.49
Movement LOS	B	B	B					B	C		B	B
d_A, Approach Delay [s/veh]	18.09			0.00			15.23			14.98		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	15.87											
Intersection LOS	B											
Intersection V/C	0.685											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.959	2.014	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]	423	0	1223	1223
d_b, Bicycle Delay [s]	18.64	30.00	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	3.988	4.132	2.669	2.781
Bicycle LOS	D	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 3: I-15 SB Ramp/Limonite Ave

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):	0.662

Intersection Setup

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	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	3	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	I-15 SB Ramp			I-15 SB Ramp			Limonite Ave			Limonite Ave		
Base Volume Input [veh/h]	0	0	0	197	0	773	0	1815	601	0	1970	556
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	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	22	0	0	0	4	0	18	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	219	0	773	0	1819	601	18	1972	556
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	55	0	193	0	455	150	5	493	139
Total Analysis Volume [veh/h]	0	0	0	219	0	773	0	1819	601	18	1972	556
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]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	4.3	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	18	0	0	42	0	0	42	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	17	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	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	3.3	0.0
Minimum Recall					No			No			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		5.30	5.30	5.30	5.30	5.30	5.30	5.30
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]		3.30	3.30	3.30	3.30	3.30	3.30	3.30
g_i, Effective Green Time [s]		20	20	20	29	29	29	29
g / C, Green / Cycle		0.33	0.33	0.33	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.27	0.36	0.38	0.39	0.35
s, saturation flow rate [veh/h]		1781	1781	2813	5094	1589	5094	1589
c, Capacity [veh/h]		595	595	939	2494	778	2494	778
d1, Uniform Delay [s]		14.20	14.20	18.37	12.16	12.57	12.76	12.03
k, delay calibration		0.11	0.11	0.11	0.11	0.25	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]		0.15	0.15	1.88	0.42	3.79	0.59	2.39
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	0.82	0.73	0.77	0.79	0.71
d, Delay for Lane Group [s/veh]		14.34	14.34	20.25	12.58	16.36	13.35	14.42
Lane Group LOS		B	B	C	B	B	B	B
Critical Lane Group		No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		0.98	0.98	4.63	5.39	6.24	6.15	5.31
50th-Percentile Queue Length [ft/ln]		24.59	24.59	115.69	134.68	156.01	153.80	132.85
95th-Percentile Queue Length [veh/ln]		1.77	1.77	8.16	9.19	10.34	10.22	9.09
95th-Percentile Queue Length [ft/ln]		44.27	44.27	203.89	229.84	258.43	255.49	227.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.34	14.34	20.25	0.00	12.58	16.36	0.00	13.35	14.42
Movement LOS				B	B	C		B	B		B	B
d_A, Approach Delay [s/veh]	0.00			18.95			13.52			13.58		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	14.45											
Intersection LOS	B											
Intersection V/C	0.662											

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]	21.68	21.68	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.116	2.895	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	423	1223	1223
d_b, Bicycle Delay [s]	30.00	18.64	4.52	4.52
l_b,int, Bicycle LOS Score for Intersection	4.132	3.196	2.891	2.950
Bicycle LOS	D	C	C	C

Sequence

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



Intersection Level Of Service Report
Intersection 4: Pats Ranch/68th

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	0	0	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	No			No			Yes			Yes		

Volumes

Name	Pats Ranch Rd			Pats Ranch Rd			68th St			68th St		
Base Volume Input [veh/h]	43	49	6	52	68	332	189	191	52	4	218	27
Base Volume Adjustment Factor	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029
Heavy Vehicles Percentage [%]	2.00	2.00	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	7	11	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	88	11	94	123	606	352	344	94	7	393	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	22	3	24	31	152	88	86	24	2	98	12
Total Analysis Volume [veh/h]	78	88	11	94	123	606	352	344	94	7	393	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	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	ProtPer	Permiss	Permiss	ProtPer	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	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	39	0	9	37	0	9	10	0	12	13	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	30	0	0	25	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
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]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	38	30	38	30	30	29	24	24	29	11	11
g / C, Green / Cycle	0.51	0.40	0.51	0.40	0.40	0.39	0.33	0.33	0.39	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.06	0.05	0.07	0.07	0.38	0.25	0.12	0.12	0.01	0.11	0.03
s, saturation flow rate [veh/h]	1350	1834	1377	1870	1589	1429	1870	1734	1029	3560	1589
c, Capacity [veh/h]	770	723	792	744	633	595	609	564	454	522	233
d1, Uniform Delay [s]	9.72	14.61	9.78	14.62	22.08	18.20	19.52	19.52	14.47	30.85	28.32
k, delay calibration	0.11	0.11	0.11	0.11	0.42	0.17	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]	0.06	0.09	0.07	0.10	24.02	1.49	0.38	0.41	0.01	2.23	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	0.10	0.14	0.12	0.17	0.96	0.59	0.37	0.37	0.02	0.75	0.21
d, Delay for Lane Group [s/veh]	9.78	14.70	9.85	14.72	46.10	19.69	19.90	19.93	14.49	33.07	28.76
Lane Group LOS	A	B	A	B	D	B	B	B	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.62	1.04	0.75	1.30	13.70	4.59	2.96	2.76	0.07	3.46	0.78
50th-Percentile Queue Length [ft/ln]	15.47	25.95	18.82	32.39	342.47	114.79	74.05	68.97	1.78	86.61	19.62
95th-Percentile Queue Length [veh/ln]	1.11	1.87	1.35	2.33	19.77	8.11	5.33	4.97	0.13	6.24	1.41
95th-Percentile Queue Length [ft/ln]	27.85	46.70	33.87	58.30	494.22	202.65	133.28	124.15	3.21	155.90	35.32

Movement, Approach, & Intersection Results

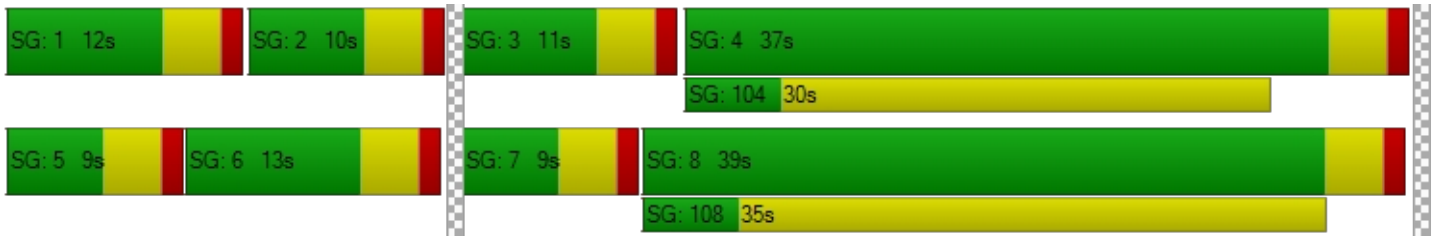
d_M, Delay for Movement [s/veh]	9.78	14.70	14.70	9.85	14.72	46.10	19.69	19.91	19.93	14.49	33.07	28.76
Movement LOS	A	B	B	A	B	D	B	B	B	B	C	C
d_A, Approach Delay [s/veh]	12.53			37.27			19.81			32.31		
Approach LOS	B			D			B			C		
d_I, Intersection Delay [s/veh]	28.16											
Intersection LOS	C											
Intersection V/C	0.680											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	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]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.700	2.644
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	943	171	257
d_b, Bicycle Delay [s]	8.75	9.78	29.26	26.58
l_b,int, Bicycle LOS Score for Intersection	1.852	2.918	2.211	1.930
Bicycle LOS	A	C	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 5: Project Driveway

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

Name	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	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	Pats Ranch Rd			Pats Ranch Rd			65th			65th		
Base Volume Input [veh/h]	60	232	7	33	403	9	32	9	39	14	12	30
Base Volume Adjustment Factor	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029	1.8029
Heavy Vehicles Percentage [%]	2.00	2.00	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	63	37	0	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	418	13	59	727	79	95	16	77	25	22	54
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	105	3	15	182	20	24	4	19	6	6	14
Total Analysis Volume [veh/h]	119	418	13	59	727	79	95	16	77	25	22	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	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	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.9	3.9	0.0	3.9	3.9	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	28	0	16	32	0	0	36	0	0	36	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	18	0	0	22	0	0	25	0	0	27	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]	2.9	2.9	0.0	2.9	2.9	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	31	31	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.90	4.90	4.90	4.90	4.90	4.90	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.90	2.90	2.90	2.90	2.90	2.90	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	11	11	2	10	10	4	4	4
g / C, Green / Cycle	0.11	0.35	0.35	0.07	0.31	0.31	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.12	0.03	0.20	0.05	0.07	0.06	0.17
s, saturation flow rate [veh/h]	1781	1870	1850	1781	3560	1589	1323	1632	604
c, Capacity [veh/h]	189	660	653	118	1114	497	237	216	226
d1, Uniform Delay [s]	13.17	7.29	7.29	13.86	9.12	7.64	12.57	12.28	13.45
k, delay calibration	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
d2, Incremental Delay [s]	3.42	0.29	0.29	3.22	0.65	0.15	1.09	1.36	1.39
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	0.63	0.33	0.33	0.50	0.65	0.16	0.40	0.43	0.45
d, Delay for Lane Group [s/veh]	16.59	7.58	7.58	17.08	9.77	7.79	13.66	13.64	14.84
Lane Group LOS	B	A	A	B	A	A	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.78	0.70	0.69	0.41	1.46	0.27	0.54	0.53	0.65
50th-Percentile Queue Length [ft/ln]	19.54	17.40	17.27	10.36	36.39	6.67	13.39	13.13	16.19
95th-Percentile Queue Length [veh/ln]	1.41	1.25	1.24	0.75	2.62	0.48	0.96	0.95	1.17
95th-Percentile Queue Length [ft/ln]	35.18	31.32	31.08	18.66	65.50	12.01	24.11	23.63	29.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.59	7.58	7.58	17.08	9.77	7.79	13.66	13.64	13.64	14.84	14.84	14.84
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	9.53			10.09			13.65			14.84		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	10.58											
Intersection LOS	B											
Intersection V/C	0.438											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersection	2.600	2.816	2.068	1.803
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]	578	678	800	800
d_b, Bicycle Delay [s]	20.24	17.49	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	2.013	2.273	1.870	1.726
Bicycle LOS	B	B	A	A

Sequence

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



Appendix E

Cumulative Project Information

Agency	Project	Location	Land Use #	Land Use	Unit	AM				PM			
						Rate	In	Out	Total	Rate	In	Out	Total
City of Jurupa Valley	Tacos More Restaurant (Restaurnt & Sports Bar)	5322 Etiwanda	932	High-Turnover (Sit-Down) Restaurant	4.5 ksf	9.94	**25**	**20**	**45**	9.77	**27**	**17**	**44**
	Wineville Marketplave Apartments	SEC Limonite Ave. & Wineville Ave.	210	Single-Family Detached Housing	130 du	0.74	24	72	96	0.99	81	48	129
	Wineville Marketplave Commercial	SEC Limonite Ave. & Wineville Ave.	820	Shopping Center	37.6 ksf	0.94	22	13	35	3.81	69	74	143
	Total (2)	SEC Limonite Ave. & Wineville Ave.					**46**	**85**	**131**		**150**	**122**	**272**
	Express Car Wash (Drive tru with 17 stalls)	6168 Etiwanda Ave	948	Automated Car Wash	4.7 ksf		**0**	**0**	**0**	14.2	**33**	**34**	**67**
	Mixed Use Development (retail/restauranr)	5560 Etiwanda Ave	820	Shopping Center	9.5 ksf	0.94	6	3	9	3.81	17	19	36
	Mixed Use Development (apartment units)	5560 Etiwanda Ave	220	Multifamily Housing (Low Rise)	45 du	0.46	5	16	21	0.56	16	9	25
	Total (4)	5560 Etiwanda Ave					**11**	**19**	**30**		**33**	**28**	**61**
City of Eastvale	Summer Place Mixed Use Development (Apartment)	SE corner of Summer Ave and Schleisman Rd	220	Multifamily Housing (Low Rise)	216 du	0.46	22	77	99	0.56	76	45	121
	Summer Place Mixed Use Development (Commercial)	SE corner of Summer Ave and Schleisman Rd	820	Shopping Center	5 ksf	0.94	3	2	5	3.81	9	10	19
	Total (5)	SE corner of Summer Ave and Schleisman Rd					**25**	**79**	**104**		**85**	**55**	**140**
	Hamner Place Retail Center (Gas Station with Convenience Store)	7180 Hamner Ave	945	Gas Service Station with Convenience Market	6.5 ksf	75.99	252	242	494	88.35	293	281	574
	Hamner Place (Tony's Chophouse Restaurant Portion)	SE corner of Hamner Ave and Schleisman Rd	932	High-Turnover (Sit-Down) Restaurant	5.9 ksf	9.94	32	27	59	9.77	36	22	58
	Hamner Place (Tony's Chophouse Retail Portion)	SE corner of Hamner Ave and Schleisman Rd	820	Shopping Center	2.3 ksf	0.94	1	1	2	3.81	4	5	9
	Hotel Suites at Hamner Place	SE corner of Hamner Ave and Schleisman Rd	310	Hotel	96 ksf, 130 rooms	0.67	52	35	87	0.89	62	54	116
	Total (7)						**337**	**305**	**642**		**395**	**362**	**757**