



Traffic Study

for:

Perris Newcastle Ellis
Warehouse
DPR 22-00018

In the City of Perris



July 2023

Kimley»»Horn

**TRANSPORTATION ANALYSIS
FOR THE PROPOSED
NEWCASTLE ELLIS AVENUE WAREHOUSE PROJECT
IN THE CITY OF PERRIS
DPR 22-00018**

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**TRANSPORTATION ANALYSIS
FOR THE PROPOSED
NEWCASTLE ELLIS AVENUE WAREHOUSE PROJECT
IN THE CITY OF PERRIS**

INTRODUCTION

Purpose and Study Objectives

This transportation analysis has been prepared to address the traffic-related effects of the proposed Newcastle Ellis Avenue Warehouse project in the City of Perris. This analysis has been conducted in accordance with the City of Perris *LOS Standards and Traffic Criteria for Traffic Studies, and Transportation Impact Analysis Guidelines for CEQA*.

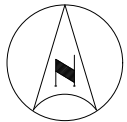
This report includes a description of existing traffic conditions in the surrounding area, estimated project trip generation and distribution, future traffic growth, and an assessment of project-related effects on the transportation system. Where necessary, circulation system improvements have been identified to address project-related deficiencies at the study locations.

Project Overview

The project is located approximately 1,400 feet east of the intersection of Redlands Avenue at Ellis Avenue. The project site is shown in its regional setting on **Figure 1**. The project site (approximately 33.51 acres) is currently vacant and bounded by Ellis Avenue to the north, a train track to the south, a paintball course to the east, and vacant land to the west.

The project consists of the construction of a 643,419 square-foot (SF) warehouse building. A copy of the project site plan is provided on **Figure 2**.

Vehicular access for the project site would be via two unsignalized full-movement driveways on Ellis Avenue. The west driveway would only be used by passenger cars and the east driveway would only be used by trucks.



NOT TO SCALE

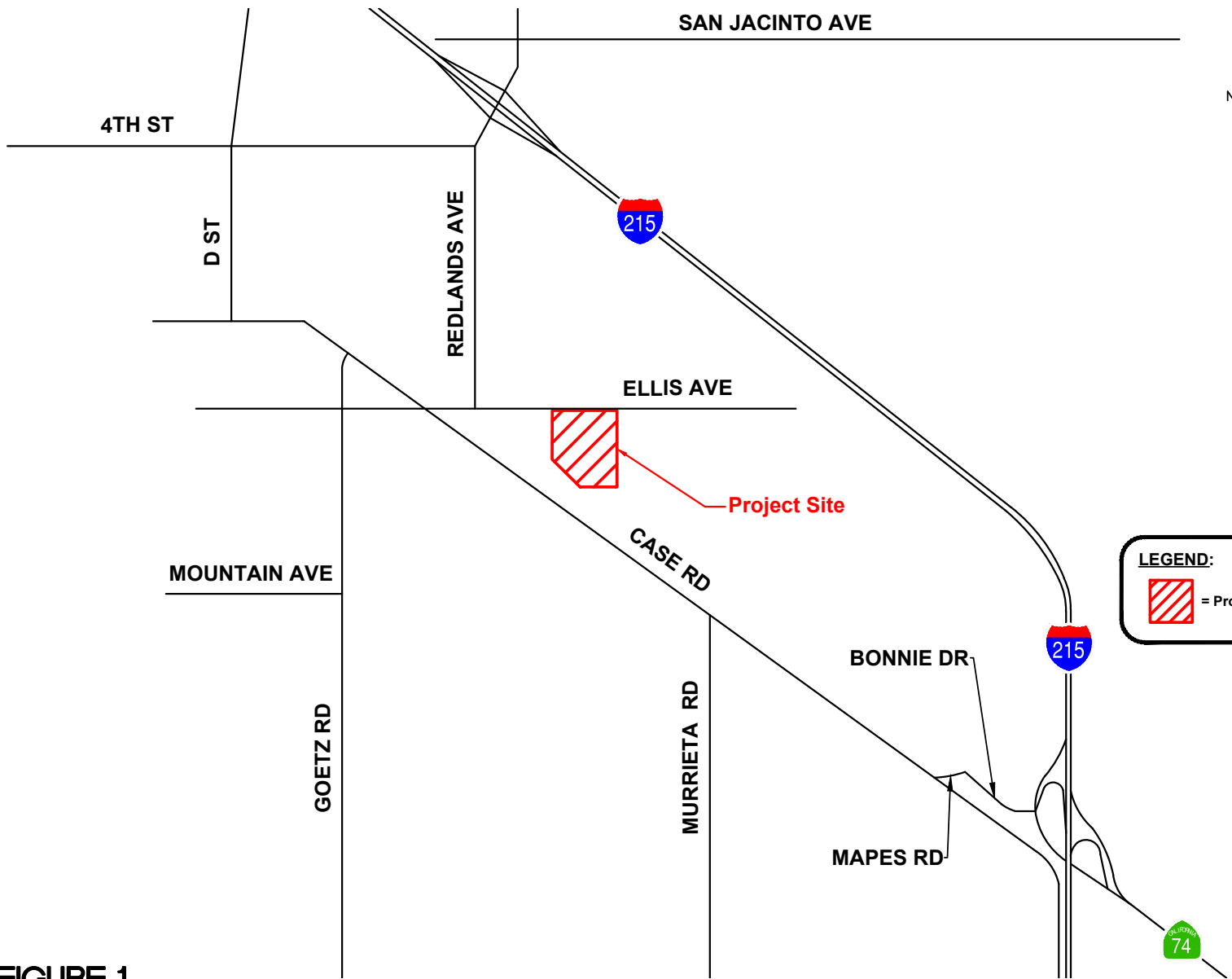


FIGURE 1
VICINITY MAP





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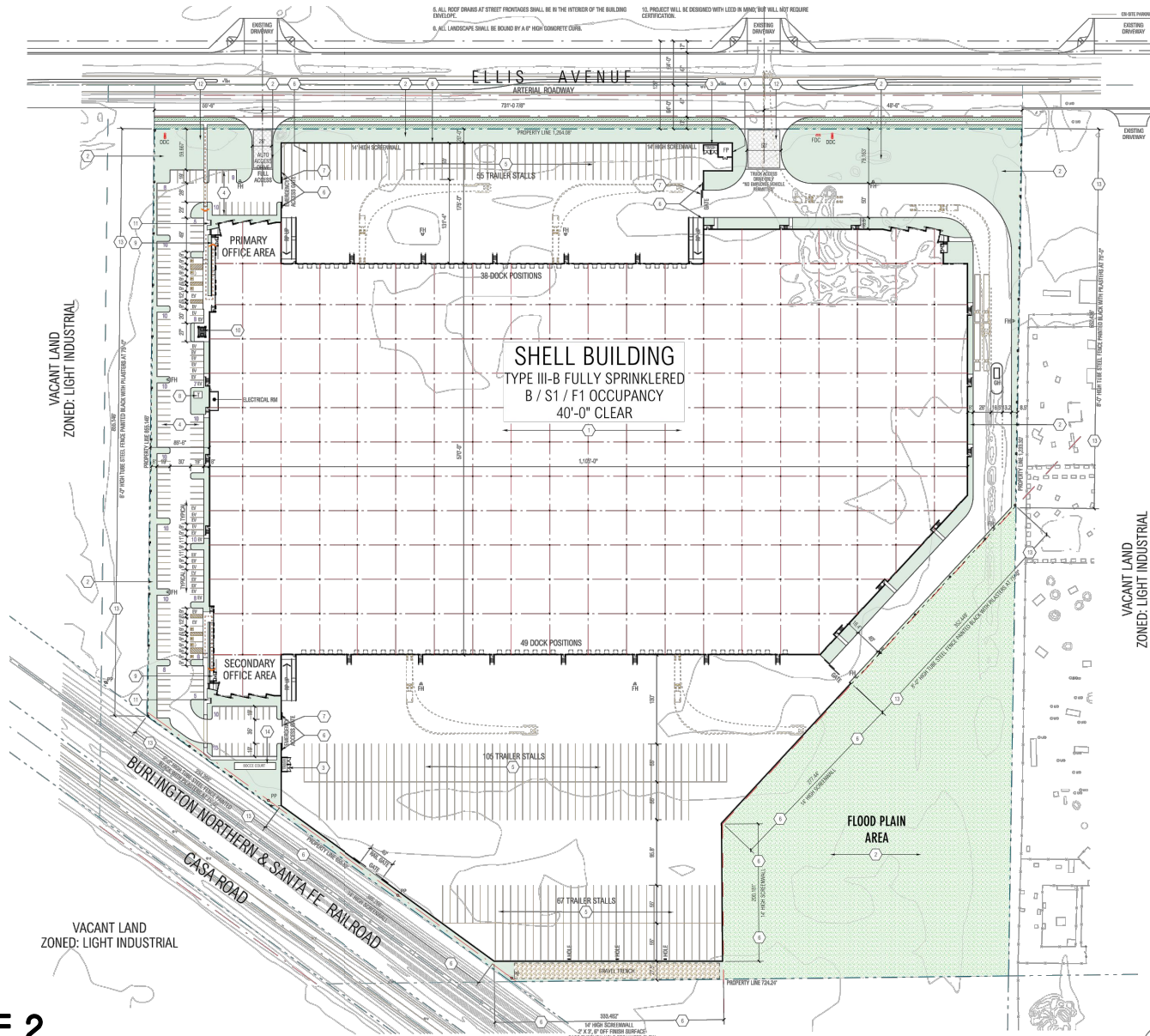


FIGURE 2
SITE PLAN



LEVEL OF SERVICE (LOS) ANALYSIS

This Level of Service analysis has been prepared in coordination with the City of Perris LOS Standards and Traffic Criteria for Traffic Studies.

Analysis Scenarios

The project will be evaluated for the following conditions:

- Existing Conditions
- Existing Plus Project
- Opening Year 2025 Cumulative
- Opening Year 2025 Cumulative Plus Project

Study Location

The LOS analysis will be conducted at the following study intersections:

1. I-215 NB Ramps at Redlands Avenue
2. I-215 SB Ramps at Redlands Avenue
3. Redlands Avenue at 4th Street
4. Redlands Avenue at Ellis Avenue
5. Case Road at Ellis Avenue
6. Case Road at Murrieta Road
7. Case Road at Mapes
8. Mapes Road at Bonnie Drive/Perris Metrolink Station Road
9. I-215 SB Ramps at SR-74/Bonnie Drive
10. I-215 NB Ramps at SR-74
- D1. Ellis Avenue at West Driveway
- D2. Ellis Avenue at East Driveway

The study locations were established in consultation with City staff through the memorandum process. A copy of the approved memorandum is provided in **Appendix A**. Existing lane configurations and traffic control for the study intersections are shown on **Figure 3**.

Analysis Methodology

Peak hour intersection operations at the study intersections were evaluated using the methods prescribed in the Highway Capacity Manual (HCM) 7th Edition, consistent with the requirements of the City of Perris.

The intersection analysis for the proposed project has been accomplished using the VISTRO software program and using the specified input parameters outlined in the *County's Traffic Impact Analysis Guidelines*.

For signalized intersections, the HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, considering a number of factors, including number of lanes, volume of traffic, cycle length, and signal timing and phasing.

For unsignalized intersections, the HCM methodology determines the average total delay, expressed in seconds of delay per vehicle for left turns from the major street and from the stop-controlled minor street traffic stream for a two-way stop controlled (TWSC) intersection. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable “gaps” in this stream through which conflicting traffic movements can be made. For TWSC intersections the LOS is based on the turning movement with the highest average delay. For an all-way stop controlled (AWSC) intersection the LOS is based on the overall intersection delay.

The HCM delay forecast translates to an LOS designation, ranging from LOS A to LOS F. A summary description of each LOS and the corresponding delay is provided in the following charts:

LEVEL OF SERVICE DEFINITIONS	
Level of Service	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	This level encompasses a zone of increasing restriction, approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS		
Level of Service	Signalized Intersection (Average delay per vehicle, in seconds) ¹	Unsignalized Intersections (Average delay per vehicle, in seconds) ²
A	≤ 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

¹ Source: Highway Capacity Manual (HCM 7th Edition), Exhibit 19-8.

² Source: Highway Capacity Manual (HCM 7th Edition), Exhibit 20-2.

Level of Service Standards

The City of Perris Circulation Element has established the following standards regarding minimum acceptable level of service (LOS):

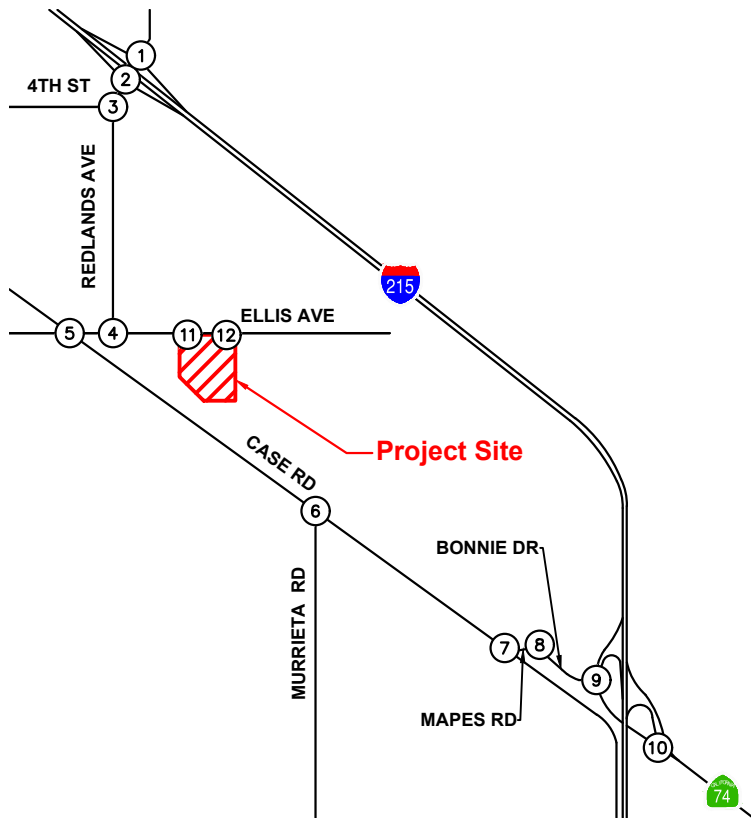
- LOS “D” along all City maintained roads (including intersections) and LOS “D” along I-215 and SR-74 (including intersections with local streets and roads). An exception to the local road standard is LOS “E”, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway, or at I-215 freeway ramps.
- LOS “E” may be allowed within the boundaries of the Downtown Specific Plan Area to the extent that it would support transit-oriented development and walkable communities. Increased congestion in this area will facilitate an increase in transit ridership and encourage development of a complementary mix of land uses within a comfortable walking distance from light rail stations.

Performance Criteria

The City of Perris Level of Service standard for intersection operation is Level of Service D or better. A project-related effect would be considered direct based on the following criteria:

- A project-related traffic effect is considered direct when a study intersection operates at an acceptable Level of Service for existing conditions (without the project) and the addition of 50 or more AM or PM peak hour project trips causes the intersection delay to increase by 2 seconds or more and causes the intersection to operate at an unacceptable Level of Service for existing plus project conditions.

- A project-related traffic effect is considered direct when a study intersection operates at an unacceptable Level of Service for existing conditions (without the project) and the addition of 50 or more AM or PM peak hour project trips causes the intersection delay to increase by 2 seconds or more.
- A cumulative effect is considered direct when a study intersection is forecast to operate at an acceptable Level of Service without the project and with the addition of 50 or more AM or PM peak hour project trips causes the intersection delay to increase by 2 seconds or more and causes the intersection to operate at an unacceptable Level of Service.
- A cumulative effect is considered an indirect traffic effect when a study intersection is forecast to operate at an unacceptable Level of Service with the addition of cumulative/background traffic and the project contributes 50 or more AM or PM peak hour project trips and causes the intersection delay to increase by 2 seconds or more.



NOT TO SCALE

1. I-215 NB Ramps at Redlands Ave	2. I-215 SB Ramps at Redlands Ave	3. Redlands Ave at 4th St	4. Redlands Ave at Ellis Ave	5. Case Rd at Ellis Ave
6. Case Rd at Murrieta Rd	7. Case Rd at Mapes Rd	8. Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	9. I-215 SB Ramps at Bonnie Dr	10. I-215 NB Ramps at SR-74
11. Ellis Ave at West Project Driveway	12. Ellis Ave at East Project Driveway			
FUTURE INTERSECTION	FUTURE INTERSECTION			

LEGEND:

- = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign
- D = Defacto Right Turn
- F = Free Right Turn

**FIGURE 3
EXISTING LANE CONFIGURATION
AND TRAFFIC CONTROL**

AREA CONDITIONS

Existing Street System

Regional access to the site is provided primarily by the Escondido Freeway (I-215) and the State Route 74 (SR-74). Direct access to the project site is provided via Ellis Avenue.

Existing lane configurations and intersection controls at the study intersections are shown on **Figure 3**. A copy of the City of Perris Circulation Plan is provided on **Figure 4**. A copy of the City of Perris truck routes map is provided as **Appendix B**. The following provides a description of the roadways surrounding the project site.

Case Road is an east-west undivided roadway with one lane in each direction. The posted speed limit is 55 miles per hour (mph), and on-street parking is prohibited on both sides. In the City of Perris General Plan, Case Road is designated as a Secondary Arterial.

Mapes Road is a north-south undivided roadway with one lane in each direction. Parking is prohibited on both sides of the roadway. In the City of Perris General Plan, Mapes Road is designated as a Secondary Arterial.

Bonnie Drive is a north-south undivided roadway with one lane in each direction. Parking is prohibited on both sides of the roadway and the posted speed limit is 45 mph. In the City of Perris General Plan, Bonnie Drive is designated as a Secondary Arterial.

Redlands Avenue is a north-south roadway with two lanes in each direction. South of 4th Street, Redlands Avenue drops down to one lane in each direction. Parking is prohibited on both sides of the street and the posted speed limit is 40 mph within the project vicinity. In the City of Perris General Plan, Redlands Avenue is designated as a Secondary Arterial within the project vicinity.

Ellis Avenue is an east-west roadway with one lane in each direction east of Case Road, and two lanes in each direction west of Goetz Road. Parking is prohibited on both sides of the roadway east of Case Road. Parking is allowed along the westbound movement and prohibited on the eastbound movement west of Goetz Road. The posted speed limit is 25 mph. In the City of Perris General Plan, Ellis Avenue is designated as a Primary Arterial.

Murrieta Road is a north-south roadway with one lane in each direction. Parking is prohibited on both sides of the roadway and the posted speed limit is 55 mph within the project vicinity. In the City of Perris General Plan, Murrieta Road is designated as a Secondary Arterial within the project vicinity.

4th Street is an east-west roadway with two lanes in each direction. Parking is prohibited on both sides of the roadway and the posted speed limit is 35 mph. In the City of Perris General Plan, 4th Street is designated as a Secondary Arterial.

Existing Transit Service

Transit service to the project area is provided via the Metrolink 91/Perris Valley line, which serves Los Angeles County, Orange County, and Riverside County. The South Perris Metrolink Station is located along Case Road. A description of the train route serving the project area is provided below.

91/Perris Valley Line operates between L.A. Union Station, the City of Norwalk, the City of Santa Fe Springs, the City of Buena Park, the City of Fullerton, the City of Corona, the City of Riverside, the City of Moreno Valley, and the City of Perris, traveling through Perris along Case Road in the project vicinity. 91/Perris Valley Line operates on weekdays from approximately 4:30 AM to 8:30 PM with an average headway (the time between train arrivals) of 45 minutes. On weekends, Route 751 operates from approximately 7:00 AM to 10:30 PM with approximately 60-minute headways throughout the day from LA to Perris, and Route 752 operates from approximately 3:30 AM to 9:30 PM with approximately 240-minute headways throughout the day from Perris to LA.

Existing Traffic Volumes

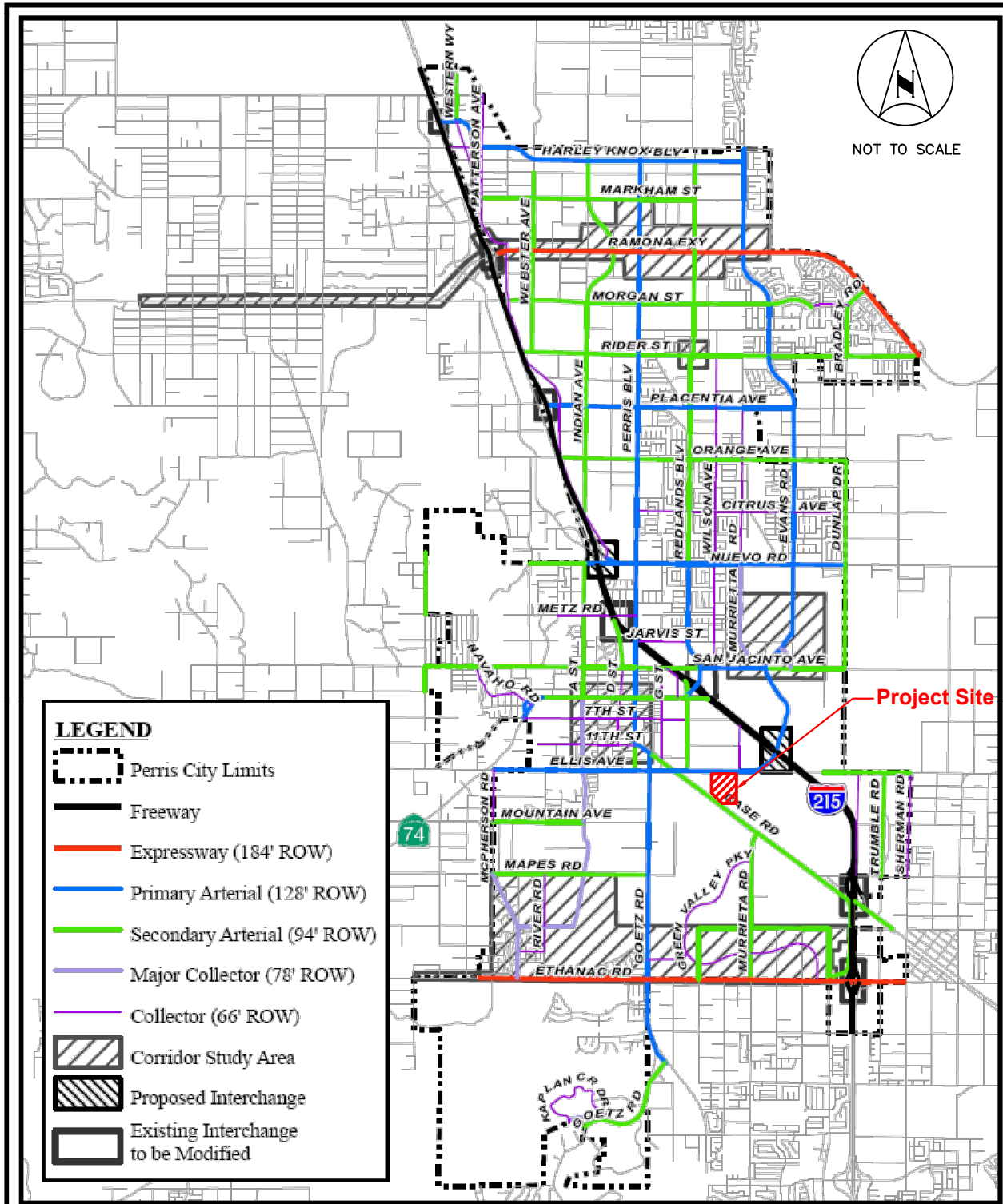
Existing morning peak hour and evening peak hour counts were conducted at the study intersections. Traffic count data included vehicle classifications for passenger vehicles and trucks. Vehicle classifications are necessary to compute Passenger Car Equivalent (PCE) volumes, which are used in the traffic analysis to address the effects of truck traffic on intersection operations. The counts were completed in March 2023. Peak hour intersection traffic count worksheets are provided in **Appendix C**.

The PCE volumes were developed by applying a PCE factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with 4 or more axles. PCE volumes worksheets are provided in **Appendix C**. Existing morning and evening peak hour volumes are presented on **Figure 5**.

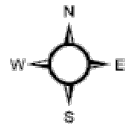
Intersection Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. The results of the intersection analysis for Existing Conditions are shown on **Table 1**. Copies of Existing Conditions intersection analysis worksheets are provided in **Appendix D**.

Review of this table indicates that all study intersections currently operate at an acceptable Level of Service.



Sources: City of Perris General Plan, 2005, Exhibit CE-12, as amended; Riverside Co. 2008.

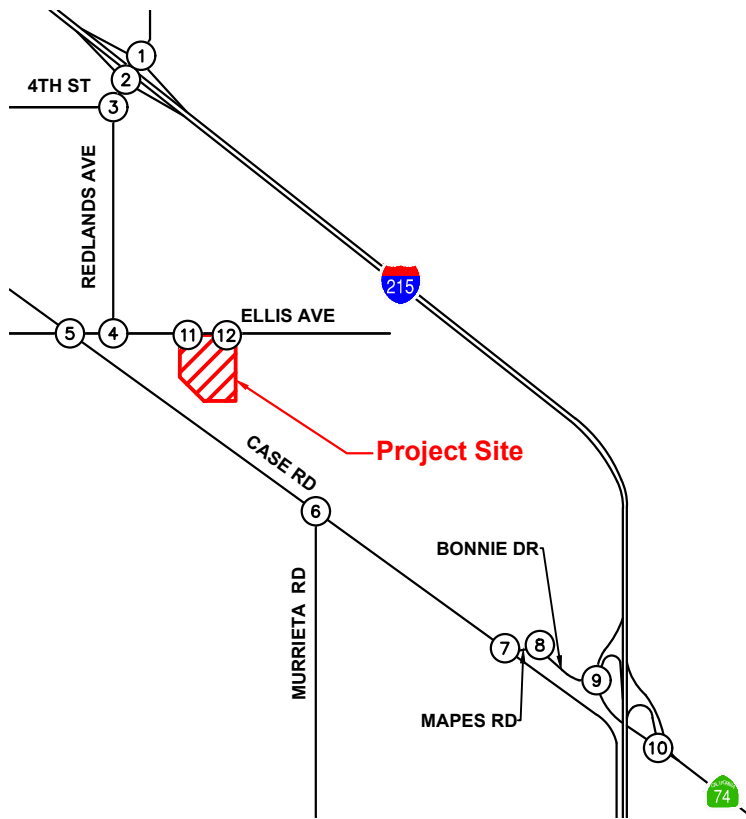


0 3,000 6,000 9,000 Feet

Future Roadway Network

FIGURE 4
CITY OF PERRIS CIRCULATION PLAN





1. I-215 NB Ramps at Redlands Ave	2. I-215 SB Ramps at Redlands Ave	3. Redlands Ave at 4th St	4. Redlands Ave at Ellis Ave	5. Case Rd at Ellis Ave
6. Case Rd at Murrieta Rd	7. Case Rd at Mapes Rd	8. Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	9. I-215 SB Ramps at Bonnie Dr	10. I-215 NB Ramps at SR-74
11. Ellis Ave at West Project Driveway	12. Ellis Ave at East Project Driveway	Note: Volumes reflect PCE adjustments.		
FUTURE INTERSECTION	FUTURE INTERSECTION			

LEGEND:

⊗ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 5
EXISTING TRAFFIC VOLUMES**

**TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS**

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	I-215 NB Ramps at Redlands Ave	S	23.7	C	24.8	C
2	I-215 SB Ramps at Redlands Ave	S	20.0	B	21.4	C
3	Redlands Ave at 4th St	S	27.8	C	33.9	C
4	Redlands Ave at Ellis Ave	U	8.8	A	8.7	A
5	Case Rd at Ellis Ave	S	22.0	C	21.8	C
6	Case Rd at Murrieta Rd	U	9.8	A	11.9	B
7	Case Rd at Mapes Rd	U	9.4	A	11.8	B
8	Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	S	21.4	C	23.3	C
9	I-215 SB Ramps at Bonnie Dr	S	13.5	B	16.3	B
10	I-215 NB Ramps at SR-74	S	10.4	B	12.9	B
11	Ellis Ave at West Project Driveway	U	Future Intersection			
12	Ellis Ave at East Project Driveway	U	Future Intersection			

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- Delay values for two-way stop-controlled unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- Delay values for all-way stop-controlled unsignalized intersections are based on the overall average intersection delay.
- S = Signalized
U = Unsignalized

PROJECT TRAFFIC

Project Trip Generation

Trip generation estimates for the project are based on daily and peak hourly trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition). ITE trip generation estimates for the project are based on the trip generation rate for Warehousing (Land Use 150).

Passenger vehicle and truck mix assumptions were applied to the project land uses based on the ITE Trip Generation Manual (10th Edition Supplement) and the City of Fontana Truck Trip Generation Study. Passenger car equivalent (PCE) factors were then applied to the truck types, based on number of axles (1.5 PCE for 2-axle trucks, 2.0 PCE for 3-axle trucks, and 3.0 PCE for 4+-axle trucks) to determine the total PCE volumes to be generated by the project. The trip generation rates, PCE factors, and the resulting trip generation estimates for the project are summarized on **Table 2**. Based on Table 2, the project is estimated to generate 1,693 daily PCE trips, with 129 PCE trips (99 inbound and 30 outbound) in the morning peak hour and 146 PCE trips (40 inbound and 106 outbound) in the evening peak hour.

Trip Distribution and Assignment

Project trip distribution assumptions for the project site were developed taking into account the proposed site uses, existing travel patterns, and routes to and from the freeway system. Separate distribution patterns were assumed for passenger car trips and truck trips.

Trip distribution assumptions for the proposed project are shown on **Figure 6**. Based on the trip distribution and assignment assumptions, the project trips to be added to the street system are shown on **Figure 7**.

**TABLE 2
SUMMARY OF PROJECT TRIP GENERATION
NEWCASTLE ELLIS AVENUE WAREHOUSE PROJECT**

TRIP GENERATION RATES ¹

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	150	KSF	1.710	0.131	0.039	0.170	0.050	0.130	0.180
Passenger Vehicles (64.9% Daily, 88.2% AM, 83.3% PM)			1.110	0.116	0.034	0.150	0.042	0.108	0.150
Trucks (35.1% Daily, 11.8% AM, 16.7% PM)			0.600	0.015	0.005	0.020	0.008	0.022	0.030

PROJECT TRIP GENERATION

Project Land Use	Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	643.419	KSF	1,100	84	25	109	32	84	116
Passenger Vehicles			714	74	22	96	27	70	97
Trucks			386	10	3	13	5	14	19

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

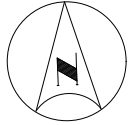
Vehicle Type	Truck Mix ²	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	--	714	1.0	714	74	22	96	27	70	97
2-Axle Trucks	16.7%	64	1.5	96	2	1	3	1	4	5
3-Axle Trucks	20.7%	80	2.0	160	4	1	5	2	6	8
4+ Axle Trucks	62.6%	241	3.0	723	19	6	25	10	26	36
Total Truck PCE Trips				979	25	8	33	13	36	49
Total Project PCE Trips				1,693	99	30	129	40	106	146

¹ Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

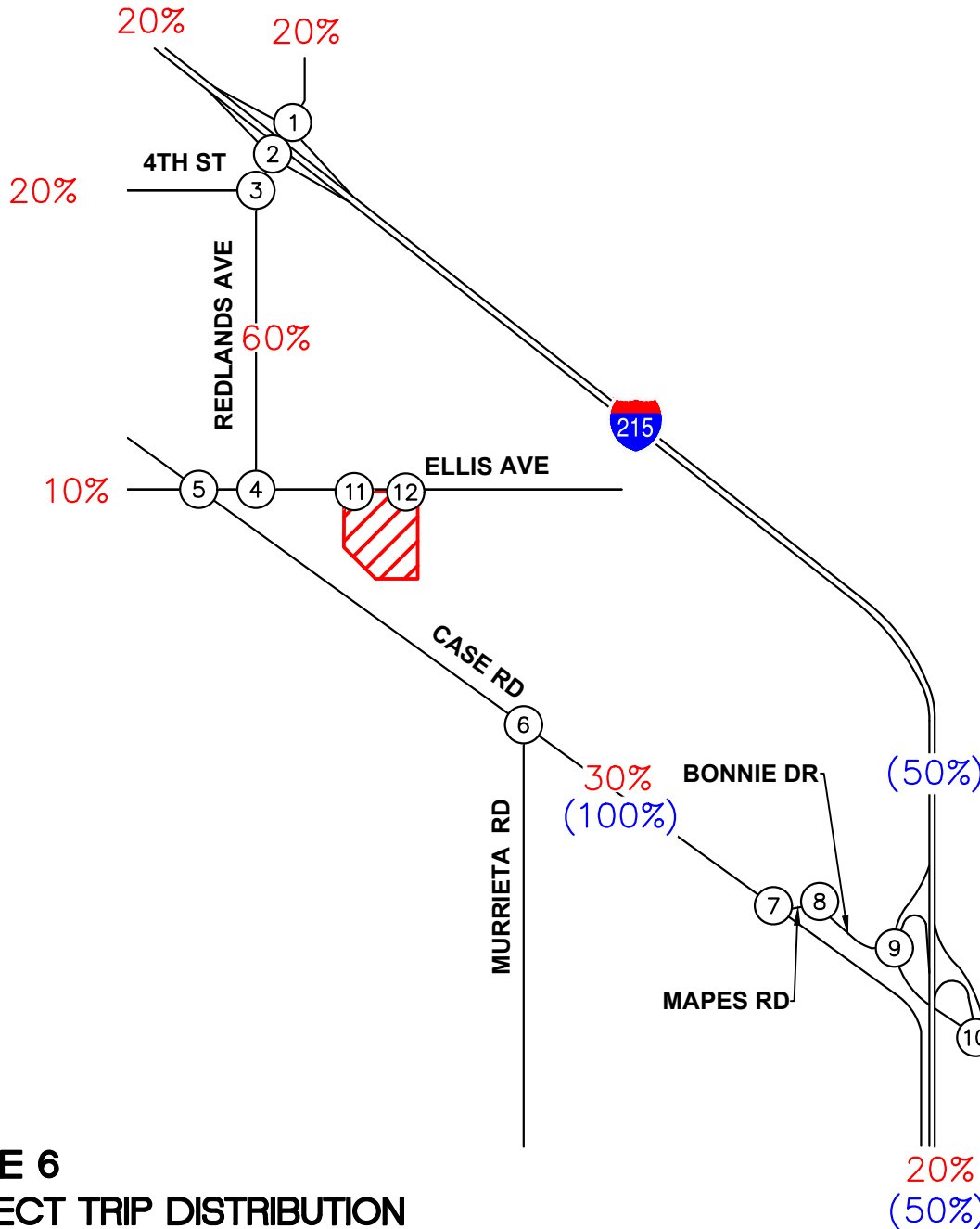
² Truck mix percentages based on the SCAQMD Warehouse Truck Study Truck Fleet Mix for "Without Cold Storage" Warehouse.

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet



NOT TO SCALE



Passenger Car Trip Distribution Percentage	
11. Ellis Ave at West Project Driveway	12. Ellis Ave at East Project Driveway
100%	(100%)

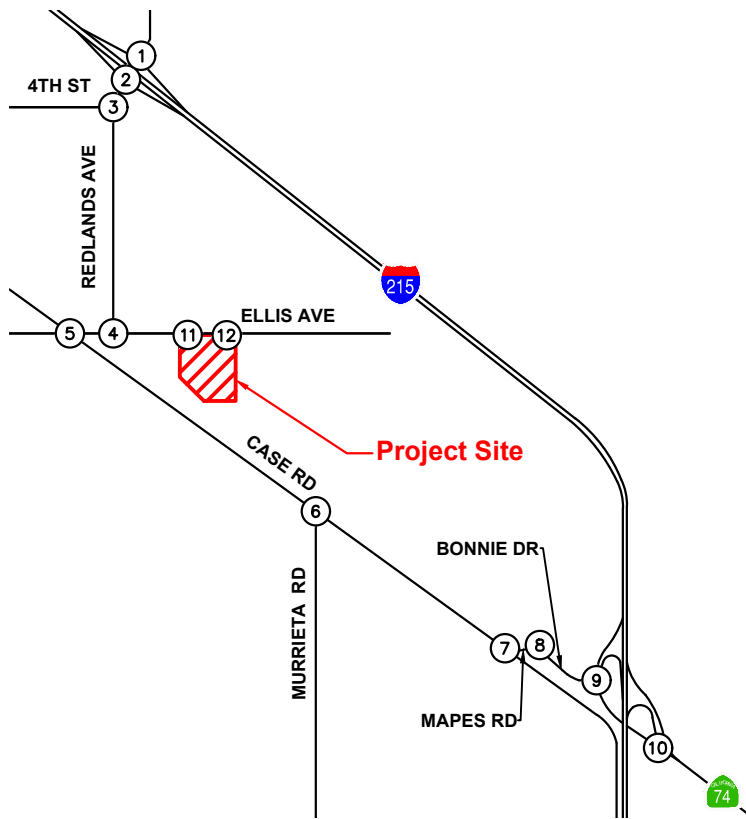
Truck Trip Distribution Percentage	
11. Ellis Ave at West Project Driveway	12. Ellis Ave at East Project Driveway
	100%
	(100%)

LEGEND:

- (X) = Study Intersection
- XX% = Passenger Cars Trip Distribution
- (YY%) = Trucks Trip Distribution
- xx% = Inbound Trip Distribution Percentage
- (yy%) = Outbound Trip Distribution Percentage

**FIGURE 6
PROJECT TRIP DISTRIBUTION**





1. I-215 NB Ramps at Redlands Ave	2. I-215 SB Ramps at Redlands Ave	3. Redlands Ave at 4th St	4. Redlands Ave at Ellis Ave	5. Case Rd at Ellis Ave
6. Case Rd at Murrieta Rd	7. Case Rd at Mapes Rd	8. Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	9. I-215 SB Ramps at Bonnie Dr	10. I-215 NB Ramps at SR-74
11. Ellis Ave at West Project Driveway	12. Ellis Ave at East Project Driveway	Note: Volumes reflect PCE adjustments.		

LEGEND:

- ⊗ = Study Intersection
- XX/YY = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 7
PROJECT-RELATED
TRAFFIC VOLUMES**

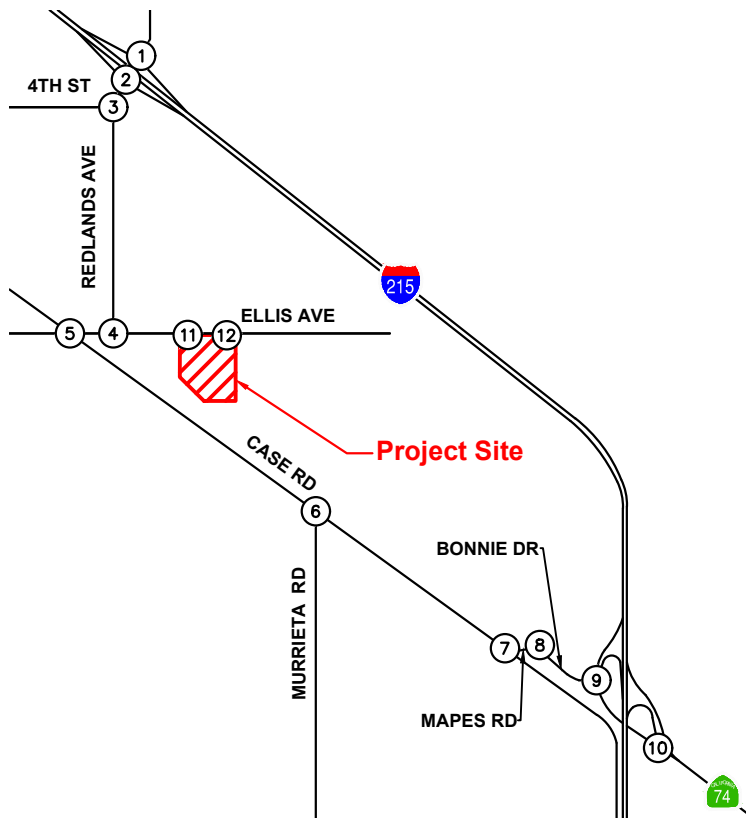
EXISTING PLUS PROJECT

Project-related traffic was added to the existing traffic volumes, and the resulting traffic volumes at the study locations are shown on **Figure 8**.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Existing Plus Project conditions. The results of the intersection analysis are shown on **Table 3**. Copies of Existing Plus Project conditions intersection analysis worksheets are provided in **Appendix D**.

Review of this Table indicates that, with the addition of project traffic, all intersections would continue to operate at an acceptable Level of Service under Existing Plus Project conditions.



1. I-215 NB Ramps at Redlands Ave	2. I-215 SB Ramps at Redlands Ave	3. Redlands Ave at 4th St	4. Redlands Ave at Ellis Ave	5. Case Rd at Ellis Ave
6. Case Rd at Murrieta Rd	7. Case Rd at Mapes Rd	8. Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	9. I-215 SB Ramps at Bonnie Dr	10. I-215 NB Ramps at SR-74
11. Ellis Ave at West Project Driveway	12. Ellis Ave at East Project Driveway	Note: Volumes reflect PCE adjustments.		

LEGEND:

⊗ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 8
EXISTING PLUS PROJECT
TRAFFIC VOLUMES**

**TABLE 3
SUMMARY OF INTERSECTION OPERATION
EXISTING PLUS PROJECT CONDITIONS**

Int. #	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Change in Delay	Sig Impact?	Without Project		With Project		Change in Delay	Sig Impact?
		Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	I-215 NB Ramps at Redlands Ave	23.7	C	23.7	C	0.0	No	24.8	C	25.0	C	0.2	No
2	I-215 SB Ramps at Redlands Ave	20.0	B	20.2	C	0.2	No	21.4	C	21.4	C	0.0	No
3	Redlands Ave at 4th St	27.8	C	27.8	C	0.0	No	33.9	C	34.9	C	1.0	No
4	Redlands Ave at Ellis Ave	8.8	A	9.8	A	1.0	No	8.7	A	9.3	A	0.6	No
5	Case Rd at Ellis Ave	22.0	C	22.2	C	0.2	No	21.8	C	24.7	C	2.9	No
6	Case Rd at Murrieta Rd	9.8	A	10.3	B	0.5	No	11.9	B	13.6	B	1.7	No
7	Case Rd at Mapes Rd	9.4	A	9.8	A	0.4	No	11.8	B	13.0	B	1.2	No
8	Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	21.4	C	22.4	C	1.0	No	23.3	C	23.8	C	0.5	No
9	I-215 SB Ramps at Bonnie Dr	13.5	B	15.3	B	1.8	No	16.3	B	19.1	B	2.8	No
10	I-215 NB Ramps at SR-74	10.4	B	11.8	B	1.4	No	12.9	B	14.1	B	1.2	No
11	Ellis Ave at West Project Driveway	-	-	9.3	A	-	No	-	-	10.0	B	-	No
12	Ellis Ave at East Project Driveway	-	-	8.9	A	-	No	-	-	9.4	A	-	No

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- Delay values for two-way stop-controlled unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- Delay values for all-way stop-controlled unsignalized intersections are based on the overall average intersection delay.

OPENING YEAR 2025 CUMULATIVE CONDITIONS

The Project Opening Year (the year the project would be constructed and occupied) is anticipated to be Year 2025. Based on consultation with City staff, an ambient growth rate of 3.0% per year (6% total) to Opening Year 2025 was applied to existing traffic volumes. Cumulative Project traffic was also added to Opening Year 2025 volumes and is explained below.

Cumulative Projects

Information about Cumulative Projects in the area was provided by the City of Perris and City of Menifee. Cumulative Projects consist of any project that has been approved but is not yet constructed/occupied, and projects that are in various stages of the application and approval process but have not yet been approved. A summary of Cumulative Projects in the project vicinity and the trip generation associated with each is provided on **Table 4**. The locations of the Cumulative Projects are shown on **Figure 9**.

Trip Generation

Trip generation information for Cumulative Projects was derived either from approved traffic studies, where available; or developed by Kimley-Horn if approved traffic studies were not available.

Trip Distribution and Assignment

Likewise, trip distribution and assignment for the Cumulative Projects were either derived from approved traffic studies, where available; or were developed by Kimley-Horn if approved traffic studies were not available. Project information and trip distribution assumptions for Cumulative Projects are provided in **Appendix E**. Traffic volumes associated with the Cumulative Projects were compiled for each of the study intersections and are shown on **Figure 10**.

Ambient growth and Cumulative Project trips were added to existing traffic to develop Opening Year 2025 Cumulative forecasts. The resulting peak hour turning movement volumes at the study locations are shown in **Figure 11**.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Opening Year 2025 Cumulative conditions. The results are shown on **Table 5**. Intersection analysis worksheets are provided in **Appendix D**.

Review of this table indicates that, with the addition of ambient growth and cumulative projects traffic, the following intersections would operate at an unacceptable Level of Service under Opening Year 2025 Cumulative conditions:

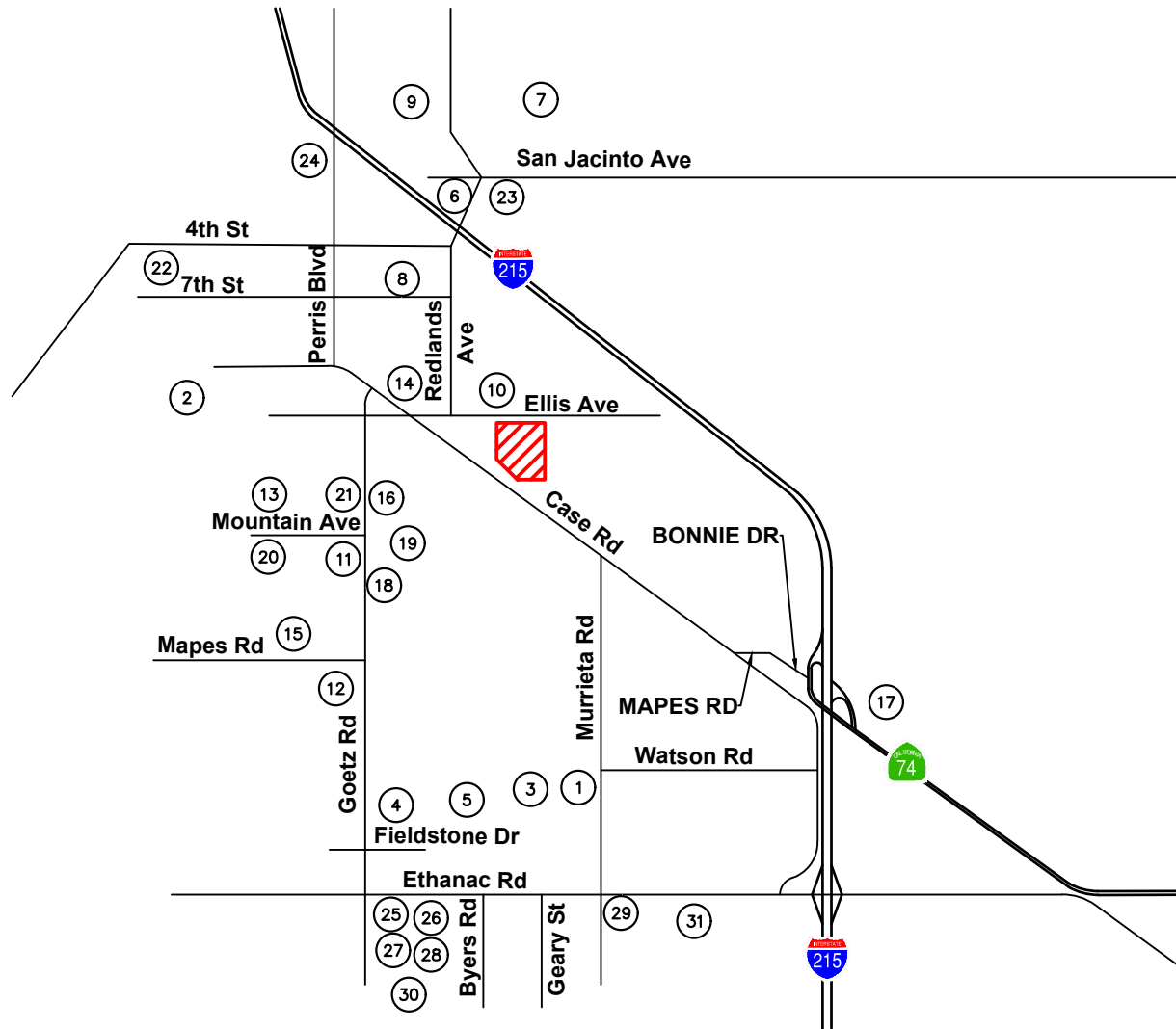
- #6 - Case Road at Murrieta Road: PM – LOS F
- #7 - Case Road at Mapes Road: PM – LOS F

**TABLE 4
SUMMARY OF CUMULATIVE PROJECTS**

Proj #	Description	Land Use	Quantity	Units	Trip Generation Estimates						
					AM Peak Hour				PM Peak Hour		
					Daily	In	Out	Total	In	Out	Total
1	Green Valley	Single-Family Detached Housing	312	DU	2,945	58	173	231	195	114	309
2	Senior Housing	Senior Adult Housing-Detached	141	DU	602	11	23	34	26	16	42
3	Green Valley	Multifamily Housing (Mid-Rise)	421	DU	2,290	40	112	152	113	72	185
4	Green Valley	Single-Family Detached Housing	311	DU	2,936	58	173	231	194	114	308
5	Green Valley	Multifamily Housing (Mid-Rise)	421	DU	2,290	40	112	152	113	72	185
6	DTSP	Multifamily Housing (Low-Rise)	39	DU	285	4	14	18	14	8	22
7	Prairie View	Multifamily Housing (Low-Rise)	287	DU	2,101	30	102	132	101	59	160
8	Multi-Family Residential	Multifamily Housing (Low-Rise)	188	DU	1,376	20	67	87	66	39	105
9	Townhomes	Multifamily Housing (Low-Rise)	128	DU	937	14	45	59	45	26	71
10	IDI Site 3	High-Cube Short-Term Storage Warehouse	2,840.836	KSF	5,937	260	81	341	101	281	382
11	IDI Site 1	Warehousing	784.000	KSF	1,364	103	31	134	40	109	149
12	IDI Site 2	Warehousing	3,448.734	KSF	6,001	452	135	587	176	479	655
13	Malbert Cultivation	Manufacturing	33.000	KSF	130	16	5	21	7	15	22
14	Perez Indus	Manufacturing	2.500	KSF	10	1	0	1	1	1	2
15	Marijuana Manufacturing	Manufacturing	30.000	KSF	118	14	4	18	6	14	20
16	Airport Logistics	Warehousing	742.000	KSF	1,291	97	29	126	38	103	141
17	Blue Indus	Warehousing	329.500	KSF	573	43	13	56	17	46	63
18	GAA Industrial	Warehousing	130.000	KSF	226	17	5	22	7	18	25
19	Self Storage	Warehousing	149.000	KSF	259	20	6	26	8	21	29
20	Scannell Industrial	Warehousing	319.700	KSF	772	60	17	77	23	60	83
21	New Industrial	Warehousing	54.720	KSF	95	7	2	9	3	8	11
22	Pharmacy	Pharmacy/Drugstore w/o Drive-Through Window	15.000	KSF	1,351	29	15	44	63	65	128
23	Perris Venue	Shopping Center	643.000	KSF	24,273	375	230	605	1,176	1,274	2,450
24	Vida Church	Church	25.000	KSF	174	5	3	8	6	7	13
25	Capstone Warehousing	Warehousing	700.037	KSF	1,218	92	27	119	36	97	133
26	Goetz Commercial	Gasoline/Service Station	8	FP	2,580	31	31	61	31	31	63
		Shopping Center	7.040	KSF	266	4	3	7	9	9	18
		Furniture Store	2.890	KSF	58	1	1	2	2	2	4
27	Corsica Business Park	Warehousing	264.372	KSF	640	49	14	63	18	48	66
28	Compass Northern Gateway	Warehousing	224.572	KSF	539	40	10	50	14	40	54
29	Ares Warehouse	Warehousing	551.685	KSF	960	72	22	94	28	77	105
30	CADO Warehouse	High-Cube Fulfillment Center Warehouse	700.037	KSF	4,716	517	122	639	343	536	879
31	NGCC Warehouse	Warehousing	1,316.750	KSF	3,176	243	71	314	93	242	335
Total Project Trips					72,489	2,823	1,698	4,520	3,113	4,103	7,217
DU = Dwelling Unit, KSF = 1,000 square feet, FP = Fueling Position											



NOT TO SCALE



LEGEND:



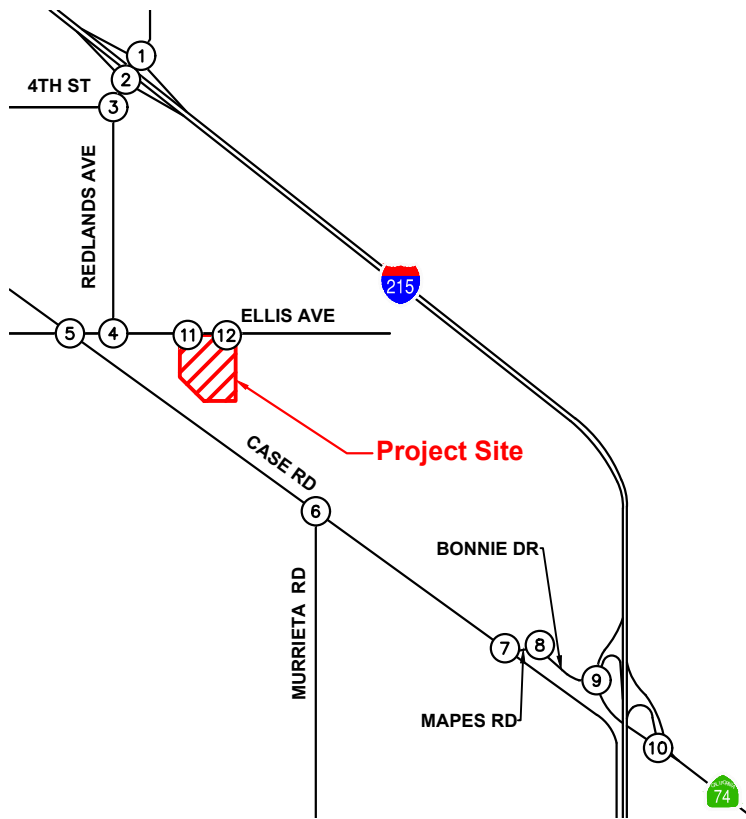
-  = Project Site
-  = Cumulative Project

FIGURE 9
LOCATION OF CUMULATIVE PROJECTS





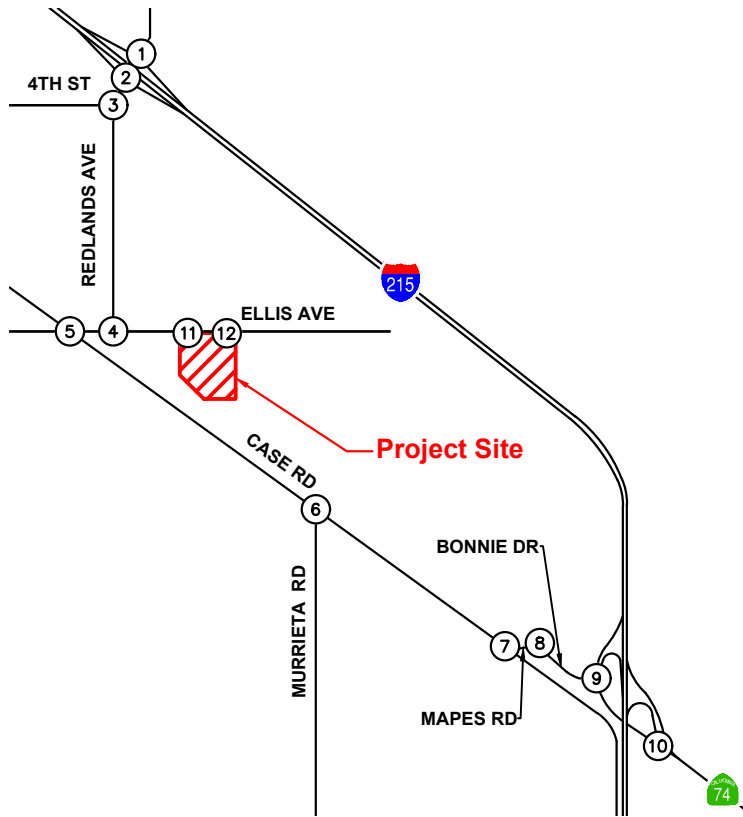
1. I-215 NB Ramps at Redlands Ave	2. I-215 SB Ramps at Redlands Ave	3. Redlands Ave at 4th St	4. Redlands Ave at Ellis Ave	5. Case Rd at Ellis Ave
6. Case Rd at Murrieta Rd	7. Case Rd at Mapes Rd	8. Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	9. I-215 SB Ramps at Bonnie Dr	10. I-215 NB Ramps at SR-74
11. Ellis Ave at West Project Driveway	12. Ellis Ave at East Project Driveway	Note: Volumes reflect PCE adjustments.		

LEGEND:

⊗ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 10
CUMULATIVE PROJECT
TRAFFIC VOLUMES**



1. I-215 NB Ramps at Redlands Ave	2. I-215 SB Ramps at Redlands Ave	3. Redlands Ave at 4th St	4. Redlands Ave at Ellis Ave	5. Case Rd at Ellis Ave
6. Case Rd at Murrieta Rd	7. Case Rd at Mapes Rd	8. Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	9. I-215 SB Ramps at Bonnie Dr	10. I-215 NB Ramps at SR-74
11. Ellis Ave at West Project Driveway	12. Ellis Ave at East Project Driveway	Note: Volumes reflect PCE adjustments.		

LEGEND:

- (X) = Study Intersection
- XX/YY = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 11
OPENING YEAR 2025 CUMULATIVE
TRAFFIC VOLUMES**

TABLE 5
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2025 CUMULATIVE

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	I-215 NB Ramps at Redlands Ave	S	25.4	C	32.8	C
2	I-215 SB Ramps at Redlands Ave	S	26.0	C	32.3	C
3	Redlands Ave at 4th St	S	28.9	C	47.2	D
4	Redlands Ave at Ellis Ave	U	19.6	C	16.2	C
5	Case Rd at Ellis Ave	S	28.2	C	31.2	C
6	Case Rd at Murrieta Rd	U	19.4	C	59.3	F
7	Case Rd at Mapes Rd	U	24.1	C	81.4	F
8	Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	S	31.9	C	30.1	C
9	I-215 SB Ramps at Bonnie Dr	S	29.7	C	46.1	D
10	I-215 NB Ramps at SR-74	S	22.3	C	21.6	C
11	Ellis Ave at West Project Driveway	U	Future Intersection			
12	Ellis Ave at East Project Driveway	U	Future Intersection			

Note:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- Delay values for two-way stop-controlled unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- Delay values for all-way stop-controlled unsignalized intersections are based on the overall average intersection delay.

OPENING YEAR 2025 CUMULATIVE PLUS PROJECT CONDITIONS

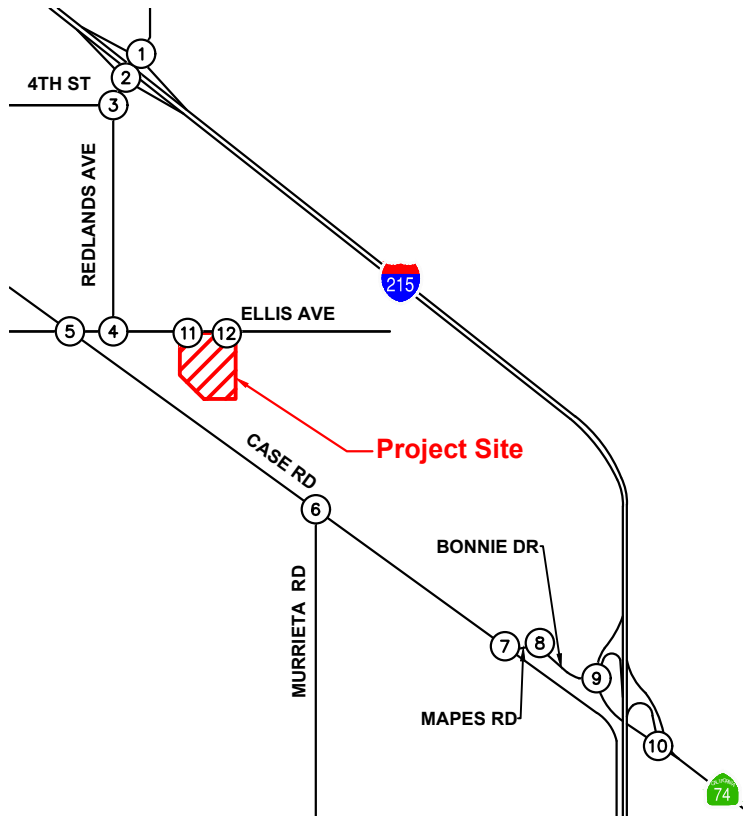
Project-related traffic was added to the Opening Year 2025 Cumulative traffic volumes, and the resulting morning and evening peak hour volumes and daily roadway volumes are presented on **Figure 12**.

Intersection Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Opening Year 2025 Cumulative Plus Project conditions. The results of the intersection analysis are shown on **Table 6**. Copies of intersection analysis worksheets for this scenario are provided in **Appendix D**.

Review of this Table indicates that, with the addition of project traffic, the following intersections would continue to operate at an unacceptable Level of Service under Opening Year 2025 Cumulative Plus Project conditions:

- #6 - Case Road at Murrieta Road: PM – LOS F
- #7 - Case Road at Mapes Road: PM – LOS F



1. I-215 NB Ramps at Redlands Ave	2. I-215 SB Ramps at Redlands Ave	3. Redlands Ave at 4th St	4. Redlands Ave at Ellis Ave	5. Case Rd at Ellis Ave
6. Case Rd at Murrieta Rd	7. Case Rd at Mapes Rd	8. Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	9. I-215 SB Ramps at Bonnie Dr	10. I-215 NB Ramps at SR-74
11. Ellis Ave at West Project Driveway	12. Ellis Ave at East Project Driveway	Note: Volumes reflect PCE adjustments.		

LEGEND:

- ⊗ = Study Intersection
- XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 12
OPENING YEAR 2025 CUMULATIVE
PLUS PROJECT TRAFFIC VOLUMES

**TABLE 6
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2025 CUMULATIVE PLUS PROJECT**

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Change in Delay	Sig Effect?	Without Project		With Project		Change in Delay	Sig Effect?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	I-215 NB Ramps at Redlands Ave	S	25.4	C	25.5	C	0.1	No	32.8	C	33.1	C	0.3	No
2	I-215 SB Ramps at Redlands Ave	S	26.0	C	26.2	C	0.2	No	32.3	C	32.4	C	0.1	No
3	Redlands Ave at 4th St	S	28.9	C	28.9	C	0.0	No	47.2	D	48.4	D	1.2	No
4	Redlands Ave at Ellis Ave	U	19.6	C	31.3	D	11.7	No	16.2	C	19.5	C	3.3	No
5	Case Rd at Ellis Ave	S	28.2	C	28.6	C	0.4	No	31.2	C	33.3	C	2.1	No
6	Case Rd at Murrieta Rd	U	19.4	C	24.7	C	5.3	No	59.3	F	82.1	F	22.8	No
7	Case Rd at Mapes Rd	U	24.1	C	31.7	D	7.6	No	81.4	F	111.9	F	30.5	Yes
8	Mapes Rd at Bonnie Dr/Perris Metrolink Station Rd	S	31.9	C	35.0	D	3.1	No	30.1	C	31.2	C	1.1	No
9	I-215 SB Ramps at Bonnie Dr	S	29.7	C	32.0	C	2.3	No	46.1	D	52.8	D	6.7	No
10	I-215 NB Ramps at SR-74	S	22.3	C	23.4	C	1.1	No	21.6	C	22.6	C	1.0	No
11	Ellis Ave at West Project Driveway	U	-	-	15.5	C	-	No	-	-	18.9	C	-	No
12	Ellis Ave at East Project Driveway	U	-	-	11.1	B	-	No	-	-	11.6	B	-	No

Notes:

- **Bold** and shaded values indicate intersections operating at an unacceptable Level of Service
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- Delay values for two-way stop-controlled unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- Delay values for all-way stop-controlled unsignalized intersections are based on the overall average intersection delay.

TRAFFIC SIGNAL WARRANT ANALYSIS

A signal warrant analysis was conducted based on the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD) for the following intersections:

- #6 - Case Road at Murrieta Road: PM – LOS F
- #7 - Case Road at Mapes Road: PM – LOS F

Signal warrants were based on the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD). The warrants were conducted using Warrant 3 (Peak Hour Warrant) for the following conditions:

- Existing Plus Project
- Opening Year 2025 Cumulative
- Opening Year 2025 Cumulative Plus Project

Traffic signal warrant analysis worksheets are provided in **Appendix F**.

Based on the signal warrant analysis, Signal Warrant 3 was met under the following conditions:

- Opening Year 2025 Cumulative
 - #6 - Case Road at Murrieta Road: PM
 - #7 - Case Road at Mapes Road: PM
- Opening Year 2025 Cumulative Plus Project
 - #6 - Case Road at Murrieta Road: PM
 - #7 - Case Road at Mapes Road: PM

The CA MUTCD specifically states that, “The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.” The reference document goes on to state a number of other factors to take into account when considering a signal for a specific location, including whether or not a signal would improve the overall safety of the intersection, whether it would benefit or disrupt progressive traffic flow (in this case, on Case Road), and consideration of queuing, signal spacing, and overall delay to the main street through movements.

The decision to install a traffic signal should be based on engineering judgment, and not solely upon satisfying a peak hour warrant. It is recommended that a decision about signalization at the intersection should be made based on future observations as well as engineering judgment, based on the factors listed above.

RECOMMENDED IMPROVEMENTS

Based on the Level of Service standards and requirements for improvements noted earlier in the report (see page 6), the project would cause a project-related effect at the following intersections:

- #6 - Case Road at Murrieta Road (Cumulative effect)
- #7 - Case Road at Mapes Road (Cumulative effect)

Implementation of the following improvements under Opening Year 2025 Cumulative Plus Project conditions are recommended to address the project-related effect at the study intersections:

#6 - Case Road at Murrieta Road

- Install traffic signal

#7 - Case Road at Mapes Road

- Install traffic signal
- Add dedicated EB left-turn lane with protected left-turn phasing

A summary of the intersection operation before and after implementation of recommended improvements is provided on **Table 7**.

Recommended improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair-share contribution toward future improvements, or a combination of these approaches. The project fair-share proportion for non-programmed improvements at the deficient study intersections under Opening Year 2025 Cumulative Plus Project conditions is shown on **Table 8**. The proposed project will pay fair share for non-programmed improvements at the deficient study intersections. For programmed improvements, the developer will pay into the regional transportation fee program.

**TABLE 7
SUMMARY OF INTERSECTION OPERATION
RECOMMENDED IMPROVEMENTS**

Int. #	Intersection	Improvements	Peak Hour	Proposed Traffic Control	OPENING YEAR 2025 CUMULATIVE					
					Without Project		With Project		With Improvements	
					Delay	LOS	Delay	LOS	Delay	LOS
6	Case Rd at Murrieta Rd	•Install traffic signal	AM	S	19.4	C	24.7	C	15.0	B
			PM		59.3	F	82.1	F	10.1	B
7	Case Rd at Mapes Rd	•Install traffic signal •Add dedicated EB left-turn lane with protected left-turn phasing	AM	S	24.1	C	31.7	D	28.7	C
			PM		81.4	F	111.9	F	54.5	D

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- Delay values for two-way stop-controlled unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- Delay values for all-way stop-controlled unsignalized intersections are based on the overall average intersection delay.

S = Signalized
U = Unsignalized

**TABLE 8
SUMMARY OF PROJECT FAIR SHARE
OPENING YEAR 2025 CUMULATIVE PLUS PROJECT**

Int. #	Intersection	AM Peak Hour					PM Peak Hour				
		Total Volume		Total Growth	Project Trips	Percentage of Growth	Total Volume		Total Growth	Project Trips	Percentage of Growth
		2023	2025				2023	2025			
6	Case Road at Murrieta Road	576	1,166	590	62	10.5%	799	1,466	667	79	11.8%
7	Case Road at Mapes Road	539	1,127	588	62	10.5%	768	1,433	665	79	11.9%

Notes:

- Fair Share percentage is to be applied to non-programmed improvements

SITE ACCESS ANALYSIS

Vehicular access for the project site would be via two unsignalized full-access driveways on Ellis Avenue. The west driveway would be approximately 28 feet wide and will only accommodate passenger cars, and the east driveway would be approximately 50 feet wide and only accommodate trucks. The project site would include 227 trailer stalls and 174 passenger car stalls. Truck turning diagrams are provided in **Appendix G**.

FUTURE ELLIS AVENUE/I-215 OVERPASS

Per discussion with City staff, an overpass connecting Ellis Avenue to the north and east sides of the I-215 Freeway is expected to be built in the future. When the Ellis Avenue overpass at I-215 project is built, it is anticipated that truck routing will not be affected, but passenger car routing may be affected.

For the left-turn queuing analysis noted below, as a conservative approach, all passenger car trips were assumed to use the overpass and travel westbound on Ellis Avenue to make a westbound left turn into the project site at the intersection of Ellis Avenue at West Driveway. As a result, all passenger cars trips were rerouted at the intersection of Ellis Avenue at West Driveway from making an eastbound right turn to making a westbound left turn. Queue lengths at the left-turn pockets for the two project driveways were assessed with the overpass assumed to be built and utilized by all passenger cars in the Opening Year 2025 Cumulative Plus Project conditions.

STORAGE CAPACITY AT LEFT-TURN POCKETS

Queue lengths at the left-turn pockets were assessed at the following locations under Opening Year 2025 Cumulative (With and Without Project) conditions:

- Ellis Avenue at West Driveway
 - Northbound Left Turn
 - Eastbound Left Turn
 - Westbound Left Turn

- Ellis Avenue at East Driveway
 - Northbound Left Turn
 - Eastbound Left Turn

A summary of the left-turn pocket storage capacity, as well as 50th and 95th percentile queue lengths at the locations noted above are summarized on **Table 9**. The table shows that all left-turn pockets would have adequate storage capacity for 95th percentile queues under the study scenarios.

The left-turn pocket capacities and queue lengths for the applicable scenarios noted above, with the rerouting of passenger cars as noted in the section above, are provided in **Appendix H** of this report.

**TABLE 9
SUMMARY OF LEFT-TURN POCKET STORAGE CAPACITY
PERRIS NEWCASTLE ELLIS WAREHOUSE PROJECT**

Intersection	Movement	Storage Capacity (ft/ln)	Peak Hour	Queue Length (ft/ln)			
				Opening Year 2025 Cumulative		Opening Year 2025 Cumulative Plus Project	
				50th Percentile	95th Percentile	50th Percentile	95th Percentile
Ellis Avenue at West Driveway	NBL	80	AM	N/A ¹	--	N/A ¹	6
			PM	N/A ¹	--	N/A ¹	23
	EBL	250	AM	N/A ¹	7	N/A ¹	7
			PM	N/A ¹	3	N/A ¹	4
	WBL	--	AM	N/A ¹	--	N/A ¹	3
			PM	N/A ¹	--	N/A ¹	1
Ellis Avenue at East Driveway	NBL	80	AM	N/A ¹	--	N/A ¹	1
			PM	N/A ¹	--	N/A ¹	5
	EBL	250	AM	N/A ¹	4	N/A ¹	4
			PM	N/A ¹	1	N/A ¹	2
Notes: ¹ 50th percentile queue not reported for unsignalized intersections							

SUMMARY OF FINDINGS AND CONCLUSIONS

- The project is located on the west side of the intersection of Newcastle Ellis Avenue in the City of Perris.
- The project consists of the construction of a 643,419 square-foot (SF) warehouse building.
- Vehicular access for the project site would be via two unsignalized full-movement driveways on Ellis Avenue. The west driveway would only be used by passenger cars and the east driveway would only be used by trucks.
- Morning and evening peak hour operating conditions were evaluated at nine study intersections for the following study scenarios:
 - Existing Conditions
 - Existing Plus Project
 - Opening Year 2025 Cumulative
 - Opening Year 2025 Cumulative Plus Project
- Existing peak hour traffic counts were collected in March 2023.
- Under Existing Conditions, all study intersections would operate at an acceptable Level of Service.
- The project is estimated to generate 1,693 net new PCE trips on a daily basis, with 129 net new PCE trips in the morning peak hour, and 146 net new PCE trips in the evening peak hour.
- Project traffic was added to Existing traffic volumes to establish the conditions for Existing Project condition. Under this condition, all study intersections would operate at an acceptable Level of Service.
- The project opening year is anticipated to be Year 2025. The Opening Year 2025 includes a 3% ambient annual growth rate. Cumulative Projects traffic was added to Opening Year 2025 traffic volumes to establish the conditions for Opening Year 2025 Cumulative condition. Under this condition, the following intersections would operate at an unacceptable Level of Service:
 - #6 - Case Road at Murrieta Road: PM – LOS F
 - #7 - Case Road at Mapes Road: PM – LOS F

- Project traffic was added to Opening Year 2025 traffic volumes to establish the conditions for Opening Year 2025 Cumulative Plus Project condition. Under this condition, the following intersections would continue to operate at an unacceptable Level of Service:
 - #6 - Case Road at Murrieta Road: PM – LOS F
 - #7 - Case Road at Mapes Road: PM – LOS F

- Based on the Riverside County *Transportation Analysis Guidelines* (TA Guidelines, December 2020) under Opening Year 2025 Cumulative Plus Project Conditions, the project would cause a project-related effect at the following intersections:
 - #6 - Case Road at Murrieta Road (Cumulative effect)
 - #7 - Case Road at Mapes Road (Cumulative effect)

- Recommended improvements under applicable Opening Year 2025 Cumulative Plus Project conditions were provided to address the project’s effect at study intersections.

- Recommended improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair-share contribution toward future improvements, or a combination of these approaches.

APPENDIX A

APPROVED SCOPING AGREEMENT

Exhibit B

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the Riverside County Transportation Department requirements for traffic impact analysis of the following project. The analysis must follow the Riverside County Transportation Department Traffic Study Guidelines dated February 2005.

Case No. DPR 22-00018
 Related Cases - _____
 SP No. Provide SP No. and list of other approved or active projects within the SP.
 EIR No. _____
 GPA No. _____
 CZ No. _____
 Project Name: Newcastle Ellis Avenue Warehouse
 Project Address: Approximately 2,000 ft east of the intersection of Ellis Avenue and Case Road
 Project Description: 643,419 sqft Warehouse

	<u>Consultant</u>	<u>Developer</u>
Name:	<u>Kimley-Horn & Associates Inc.</u>	<u>Newcastle Partners</u>
Address:	<u>3880 Lemon Street, Suite 420 Riverside, CA 92501</u>	<u>4740 Green River Road, #110 Corona, CA 92878</u>
Telephone:	<u>(951) 543-9869</u>	<u>(951) 267-2692</u>
Fax:	_____	_____

A. Trip Generation Source: ITE Trip Generation Manual, 11th Edition SEE ATTACHMENT B

Current GP Land Use	Proposed Land Use
<u>Vacant</u>	<u>Warehousing</u>
Current Zoning	Proposed Zoning
<u>Light Industrial</u>	<u>Light Industrial</u>
Current Trip Generation	Proposed Trip Generation
In Out Total	In Out Total
AM Trips <u> - - -</u>	<u>99 PCE 30 PCE 129 PCE</u>
PM Trips <u> - - -</u>	<u>40 PCE 106 PCE 146 PCE</u>
Internal Trip Allowance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	(<u> N/A % Trip Discount</u>)
Pass-By Trip Allowance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	(<u> N/A % Trip Discount</u>)

A passby trip discount of 25% is allowed for appropriate land uses. The passby trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: N PC 20 % S 40 % E 20 % W 20 %
 (attach exhibit for detailed assignment) Trucks 50% 50%
SEE ATTACHMENT C

C. Background Traffic

Project Build-out Year: 2025 Annual Ambient Growth Rate: 3 %
 Phase Year(s) N/A
 Other area projects to be analyzed: We will request a list of Cumulative Projects from Planning

Model/Forecast methodology Existing Conditions, Existing Plus Project, Opening Year 2025 Cumulative, and Opening Year 2025 Cumulative Plus Project

Exhibit B – Scoping Agreement – Page 2

D. Study intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

- | | |
|---|--|
| 1. <u>I-215 NB Ramps at Redlands Avenue</u> | 7. <u>Case Road at Mapes Road</u> |
| 2. <u>I-215 SB Ramps at Redlands Avenue</u> | 8. <u>Mapes Road at Bonnie Drive/Perris Metrolink Station Road</u> |
| 3. <u>Redlands Avenue at 4th Street</u> | 9. <u>I-215 SB Ramps at Bonnie Drive</u> |
| 4. <u>Redlands Avenue at Ellis Avenue</u> | 10. <u>I-215 NB Ramps at SR-74</u> |
| 5. <u>Case Road at Ellis Avenue</u> | 11. <u>Ellis Avenue at West Project Driveway</u> |
| 6. <u>Case Road at Murrieta Road</u> | 12. <u>Ellis Avenue at East Project Driveway</u> |

E. Study Roadway Segments: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

E. Other Jurisdictional Impacts

Is this project within a City’s Sphere of Influence or one-mile radius of City boundaries? Yes No

If so, name of City Jurisdiction: _____

F. Site Plan (please attach reduced copy) SEE ATTACHMENT A

G. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Transportation Department)

(NOTE: If the traffic study states that “a traffic signal is warranted” (or “a traffic signal appears to be warranted,” or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

Driveway spacing and access, Truck turning templates, Signal warrants (as needed), Left-turn queuing analysis

H. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.

Date of counts New counts will be collected.

***NOTE* Traffic Study Submittal Form and appropriate fee must be submitted with, or prior to submittal of this form. Transportation Department staff will not process the Scoping Agreement prior to receipt of the fee.**

Recommended by:

Trevor Briggs 02/14/2023
 Consultant’s Representative Date

Approved Scoping Agreement:

 City of Perris Date

Scoping Agreement Submitted on 12/09/2022

Revised on 02/14/2023

VACANT LAND
ZONED: LIGHT INDUSTRIAL

GENERAL NOTES

1. THE PROPOSED PROJECT SHALL COMPLY WITH THE PROVISIONS OF CITY OF PERRIS PLANNING SPECIFIC PLAN.
2. A LANDSCAPING PLAN SHALL BE SUBMITTED TO THE PLANNING DEPARTMENT FOR APPROVAL PRIOR TO ISSUANCE OF BUILDING PERMITS AND SHALL BE IMPLEMENTED PRIOR TO OCCUPANCY.
3. THE PROJECT DOES NOT PROPOSE ANY TENANT SIGNAGE AT THIS TIME.
4. THERE ARE NO PROTECTED PLANTS ON SITE.
5. ALL ROOF DRAINS AT STREET FRONTAGES SHALL BE IN THE INTERIOR OF THE BUILDING ENVELOPE.
6. ALL LANDSCAPE SHALL BE BOUND BY A 6" HIGH CONCRETE CURB.
7. A LIGHT PLAN SHALL BE SUBMITTED SHOWING CONFORMANCE WITH MINIMUM FOOTCANDLE LEVELS AND MARCH AIR BASE STANDARDS. FIXTURES SHALL BE SHIELDED HIGH PRESSURE SODIUM.
8. A SIGN PROGRAM SHALL BE DEVELOPED IN ACCORDANCE WITH MUNICIPAL CODE 19.75.100 FOR APPROVAL BY THE PLANNING DIVISION. THE SIGN PROGRAM SHALL BE INCLUDED AS PART OF THE CCR&S.
9. FUTURE TENANT OFFICE BUILD-OUTS TO INCLUDE INDOOR EMPLOYEE AMENITY AREAS PER CITY GUIDELINES.
10. PROJECT WILL BE DESIGNED WITH LEED IN MIND, BUT WILL NOT REQUIRE CERTIFICATION.

SUSTAINABILITY FEATURES

11. PROVIDE LIGHT COLORED ROOFING OVER THE OFFICE AREAS.
12. PROVIDE "TURN-OFF ENGINE" SIGNS WITHIN THE TRUCK COURT.
13. FORKLIFTS WITHIN THE BUILDING SHALL BE ELECTRIC OR COMPRESSED NATURAL GAS-POWERED.

SITE LEGEND:

- ON-SITE LANDSCAPED AREA
- OFF-SITE LANDSCAPED AREA
- DECORATIVE AUTO / TRUCK DRIVEWAYS
- SITE PROPERTY LINES
- CITY CURB AND GUTTER LINES
- STREET CENTERLINES
- ON-SITE CURB LINES
- ON-SITE PARKING AND TRAILER STRIPPING
- EXISTING DRIVEWAY

PROJECT DATA

INDUSTRIAL SITE AREA:	1,459,927 SF / 33.51 AC
NET SITE AREA:	
BUILDING AREA:	
FOOTPRINT	632,964 SF
FIRE PUMP HOUSE	455 SF
OFFICE MEZZANINE	10,000 SF
GUARD HOUSE	00 SF
TOTAL	643,419 SF
TOTAL INCLUDED PLANNED OFFICE AREA	20,000 SF
LOT COVERAGE: (50% MAX)	43.38 %
FAR COVERAGE:	44.07 %

AUTO PARKING REQUIRED: (HIGH CUBE PARKING STANDARDS)	
20,000 OFFICE PARKING (LESS THAN 10%)	00 STALLS
WAREHOUSE	
0-20,000 SF (1/1000 SF)	20 STALLS
20K - 40K (1/2000 SF)	10 STALLS
ABOVE 40K (1/5000 SF)	121 STALLS
TOTAL	151 STALLS

AUTO PARKING PROVIDED	
ACCESSIBLE STALLS	8 STALLS
STANDARD STALLS	145 STALLS
EV/CARPOOL PARKING STALLS	21 STALLS
TOTAL PROVIDED	174 STALLS

REQUIRED BICYCLE PARKING (5% OF REQUIRED AUTO PARKING)	8 BIKE LOCATIONS
PROVIDED BICYCLE PARKING	8 BIKE LOCATIONS

DOCK DOORS PROVIDED	83 DOORS
GRADE DOORS PROVIDED	3 DOOR

TRAILER PARKING 1/5,000 SF: (128 REQUIRED)	227 TRAILERS
LANDSCAPE AREA PROVIDED ON DEVELOPED SITE	315,700 SF / 21.62 %

ASSESSOR'S PARCEL NUMBERS

330-090-006, 330-090-007, 330-090-009

APPLICATION TYPE

DEVELOPMENT PLAN REVIEW 00-00-0000
TENTATIVE PARCEL MAP 00-00-0000
ZONING: LIGHT INDUSTRIAL
PERMITTED LAND USE: WAREHOUSE, OFFICE AS PERMITTED

PROJECT DESCRIPTION

NEW INDUSTRIAL WAREHOUSE BUILDING WITH AUTO AND TRAILER PARKING AREAS. PROVIDING FUTURE GUARD SHACK LOCATION ON WEST TRUCK COURT ENTRIES.

LAND OWNER

NEWCASTLE PARTNERS, INC.
4740 GREEN RIVER, SUITE 118
CORONA, CA 92880
JACKSON SMITH, 951-582-9800

APPLICANT

NEWCASTLE PARTNERS, INC.
4740 GREEN RIVER, SUITE 118
CORONA, CA 92880
JACKSON SMITH, 951-582-9800

PLAN PREPARER

ROA, OFFICE OF ARCHITECTURAL DESIGN, INC.
15231 ALTON PARKWAY, SUITE 100
IRVINE, CA 92618
CONTACT: MIKE GILL

UTILITIES & SERVICES

SEE CIVIL DRAWINGS

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN IS SITUATED IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF FRACTIONAL SECTION 5, TOWNSHIP 5 SOUTH, RANGE 3 WEST, SAN BERNARDINO BASE AND MERIDIAN.

PARCEL 2 THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF FRACTIONAL SECTION 5, TOWNSHIP 5 SOUTH, RANGE 3 WEST, SAN BERNARDINO BASE AND MERIDIAN, LYING SOUTHWESTERLY LINE OF THAT 60 FOOT STRIP OF LAND CONVEYED TO THE COUNTY OF RIVERSIDE, SAID 60 FOOT STRIP OF LAND LYING SOUTHWESTERLY OF THE 100 FOOT WIDE STRIP OF LAND CONVEYED TO THE CALIFORNIA CENTRAL RAILWAY COMPANY, A CORPORATION.

KEYNOTES

1. PAINTED CONCRETE TILT-UP WAREHOUSE / OFFICE / MANUFACTURING FACILITY.
2. SHADDED AREA: PROPOSED IRRIGATED LANDSCAPING PER GUIDELINES WITH MIN 6" CONCRETE CURBS AT ALL PERIMETERS.
3. PAINTED CONCRETE TRASH ENCLOSURE. SCREEN WALLS SHALL BE MIN. 6'-0" HIGH WITH CANOPY TOP. SEE SHEET A4-1P FOR ELEVATIONS AND SECTIONS.
4. TYPICAL STANDARD PARKING STALL MIN. 9' X 19' - STRIPE PER CITY STANDARDS.
5. TRUCK TRAILER PARKING
6. NEW 14'-0" CONCRETE TILT-UP SCREEN WALLS AT TRUCK YARD. SEE PLAN FOR MINIMUM HEIGHTS AS MEASURED FROM INSIDE THE TRUCK YARD.
7. ROLLING 8'-0" HIGH WROUGHT IRON FENCE INTO THE TRUCK COURT.
8. TRANSFORMER PAD LOCATION.
9. ACCESSIBLE PRIMARY ENTRANCE TO THE BUILDING.
10. CONCRETE COVERED LUNCH PATIO WITH LANDSCAPE FURNITURE. SEE SHEET A4-1P
11. CALGREEN REQUIRED BIKE RACKS. SEE TABULATIONS FOR NUMBER OF BIKE RACKS
12. DECORATIVE PAVING AT ENTRY DRIVEWAY.
13. NEW 8'-0" TUBE STEEL FENCE, PAINTED BLACK WITH PILASTERS AT 75'-0" CENTERS.
14. EXTERIOR OUTDOOR REST AREA AND BOOCE COURT / PLAY COURT.

VICINITY MAP



RG A
Office of Architectural Design
15231 Alton Parkway, Suite 100
Irvine, CA 92618
T 949-341-0920
FX 949-341-0922

CONSULTANT

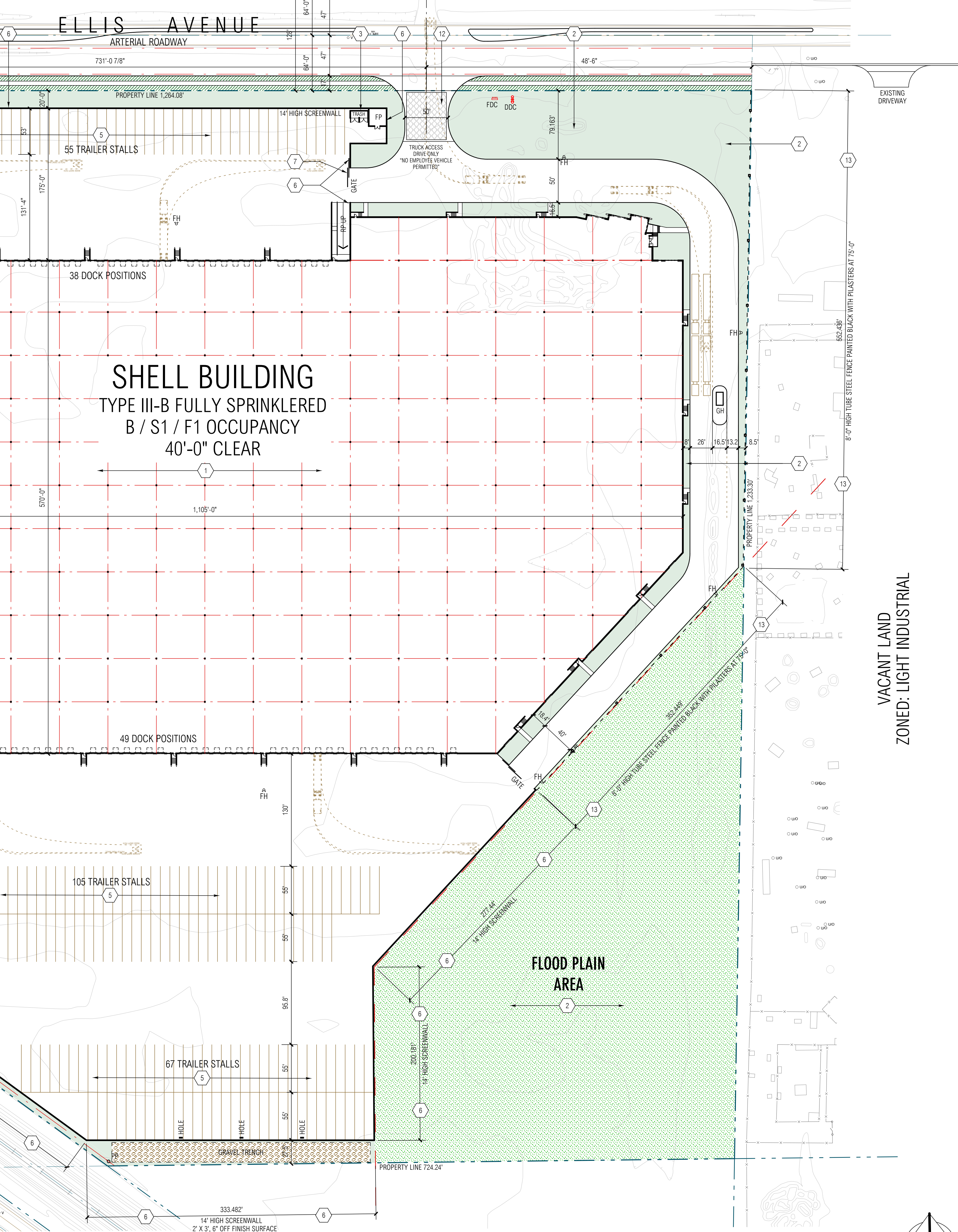
PROFESSIONAL SEALS	
--------------------	--

ELLIS STREET DEVELOPMENT
0000 ELLIS STREET
CITY OF PERRIS, CA

NEWCASTLE PARTNERS, INC.
4740 GREEN RIVER
SUITE 118
CORONA, CA 92880
951-582-9800

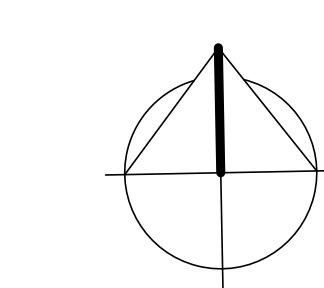
CD		
BID		
PC		
DD		
SD	5/25/22	SCHEMATIC DESIGN
MARK	DATE	DESCRIPTION

RG A PROJECT NO:	21137-00
OWNER PROJECT NO:	00000.00
CAD FILE NAME:	21137-00-A1-1P
DRAWN BY:	MG
CHK'D BY:	CS
COPYRIGHT	RG A, OFFICE OF ARCHITECTURAL DESIGN
SHEET TITLE	SITE PLAN



SITE PLAN
SCALE: 1" = 60'-0"

ATTACHMENT A



ATTACHMENT B
SUMMARY OF PROJECT TRIP GENERATION
NEWCASTLE ELLIS AVENUE WAREHOUSE PROJECT

TRIP GENERATION RATES ¹

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	150	KSF	1.710	0.131	0.039	0.170	0.050	0.130	0.180
Passenger Vehicles (64.9% Daily, 88.2% AM, 83.3% PM)			1.110	0.116	0.034	0.150	0.042	0.108	0.150
Trucks (35.1% Daily, 11.8% AM, 16.7% PM)			0.600	0.015	0.005	0.020	0.008	0.022	0.030

PROJECT TRIP GENERATION

Project Land Use	Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	643.419	KSF	1,100	84	25	109	32	84	116
Passenger Vehicles			714	74	22	96	27	70	97
Trucks			386	10	3	13	5	14	19

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Truck Mix ²	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	--	714	1.0	714	74	22	96	27	70	97
2-Axle Trucks	16.7%	64	1.5	96	2	1	3	1	4	5
3-Axle Trucks	20.7%	80	2.0	160	4	1	5	2	6	8
4+ Axle Trucks	62.6%	241	3.0	723	19	6	25	10	26	36
Total Truck PCE Trips				979	25	8	33	13	36	49
Total Project PCE Trips				1,693	99	30	129	40	106	146

¹ Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

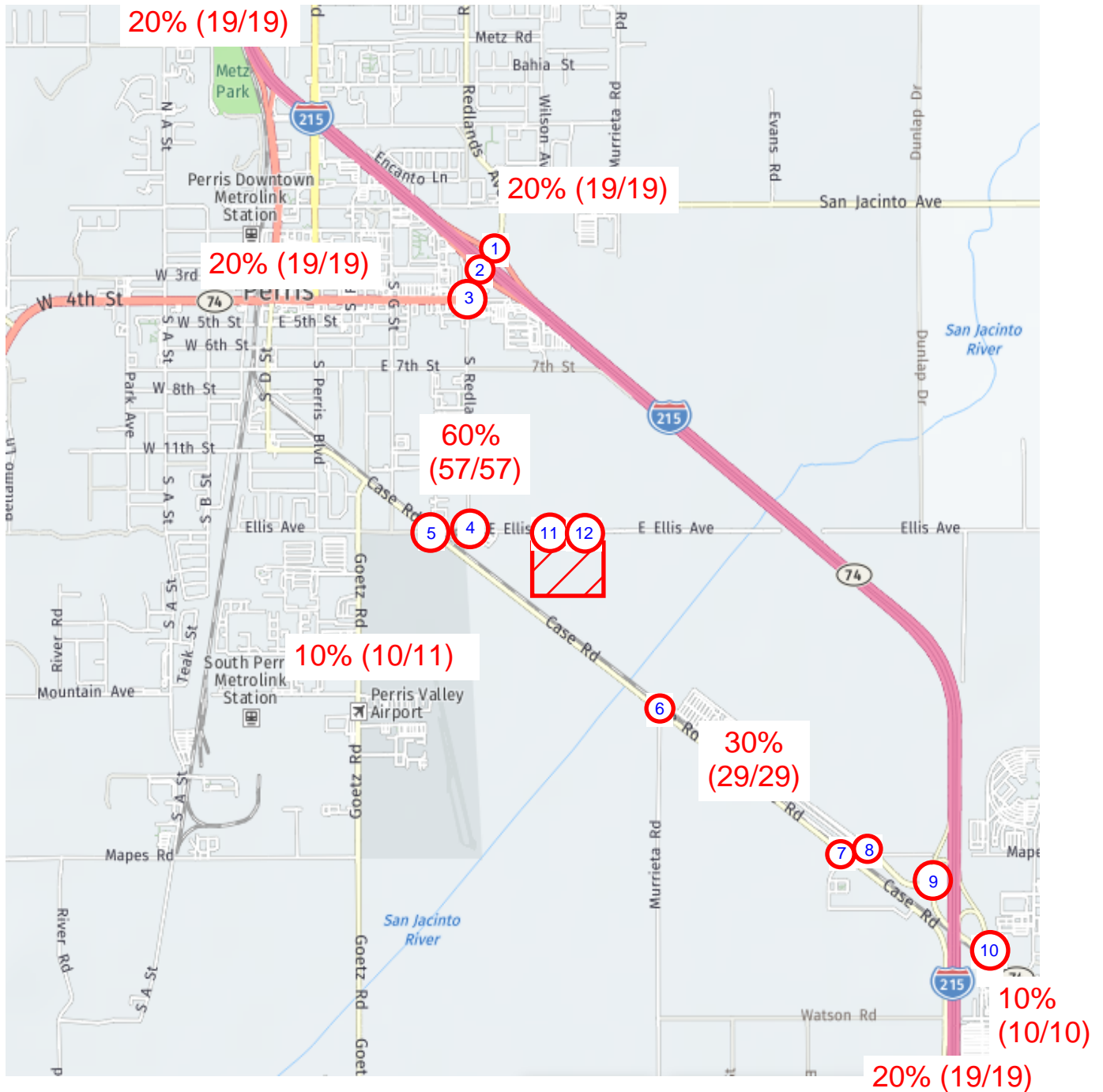
² Truck mix percentages based on the SCAQMD Warehouse Truck Study Truck Fleet Mix for "Without Cold Storage" Warehouse.

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

ATTACHMENT C-1

PASSENGER CAR TRIP DISTRIBUTION



PROJECT SITE



STUDY INTERSECTION

XX%

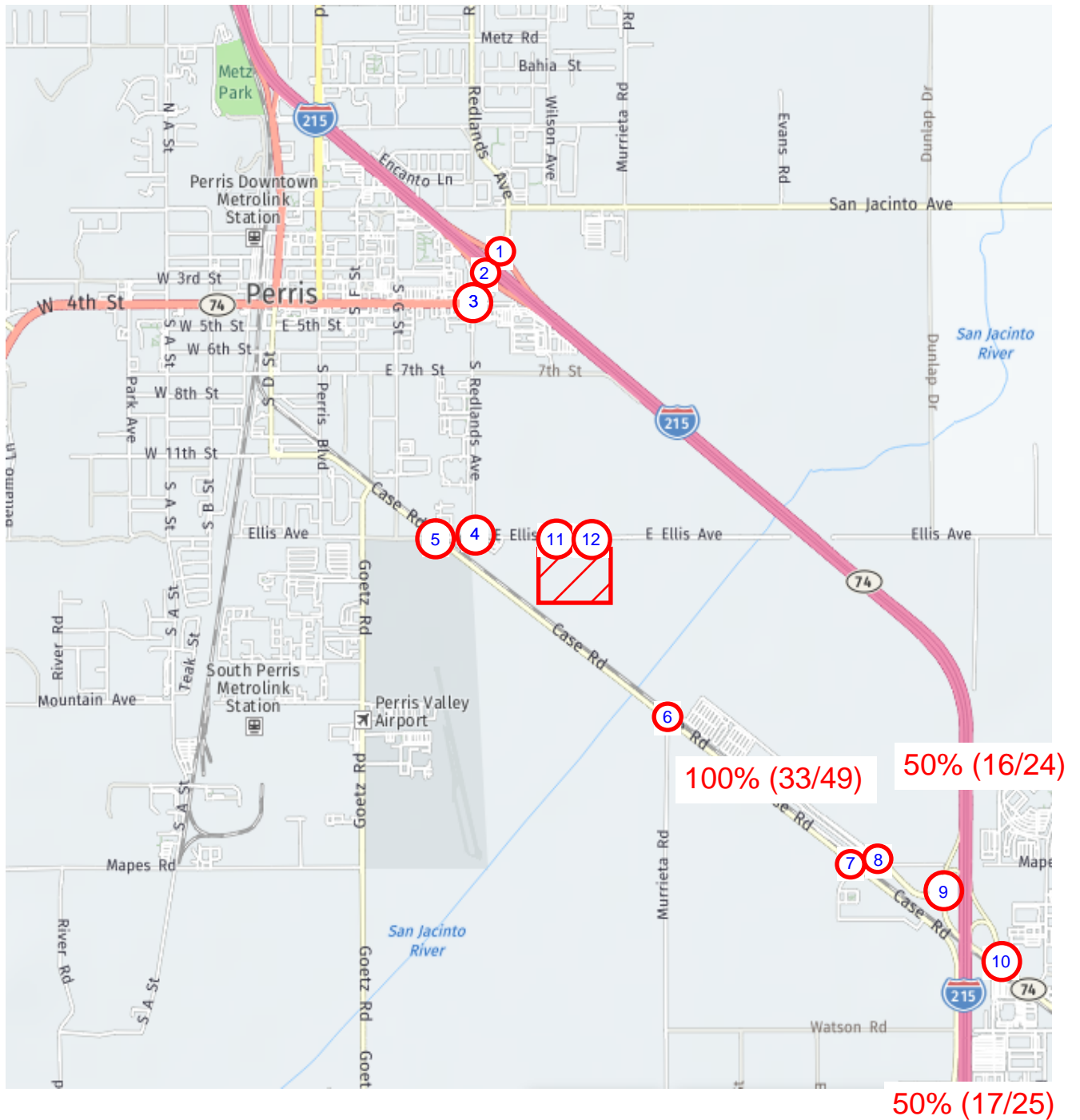
PASSENGER CAR TRIP DISTRIBUTION

(XX/YY)

AM/PM PRIMARY TOTAL (NET NEW) PCE TRIPS

ATTACHMENT C-2

TRUCK TRIP DISTRIBUTION



PROJECT SITE



STUDY INTERSECTION

XX%

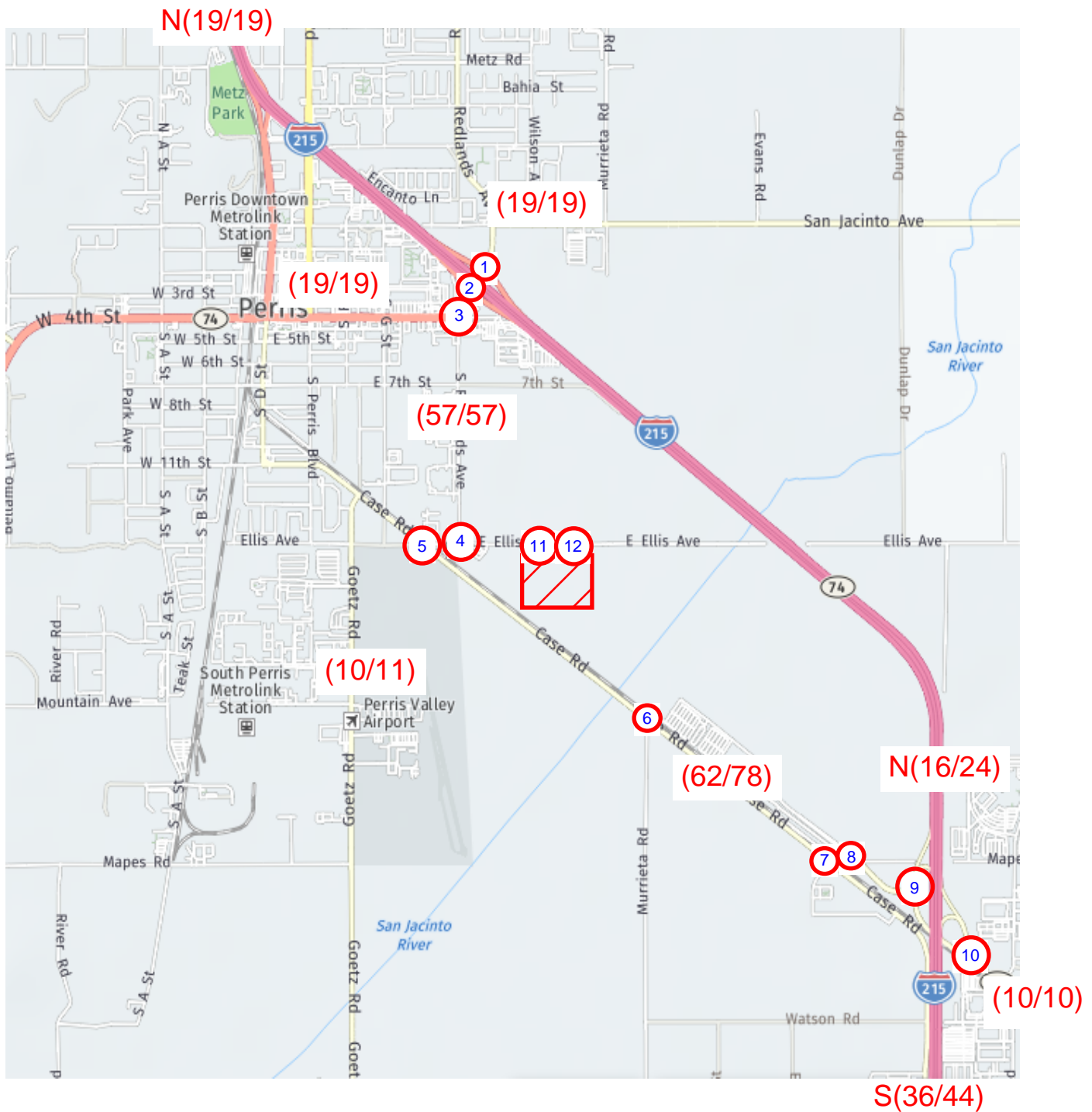
TRUCK TRIP DISTRIBUTION

(XX/YY)

AM/PM PRIMARY TOTAL (NET NEW) PCE TRIPS

ATTACHMENT C-3

PROJECT TRIP ASSIGNMENT



PROJECT SITE



STUDY INTERSECTION

(XX/YY)

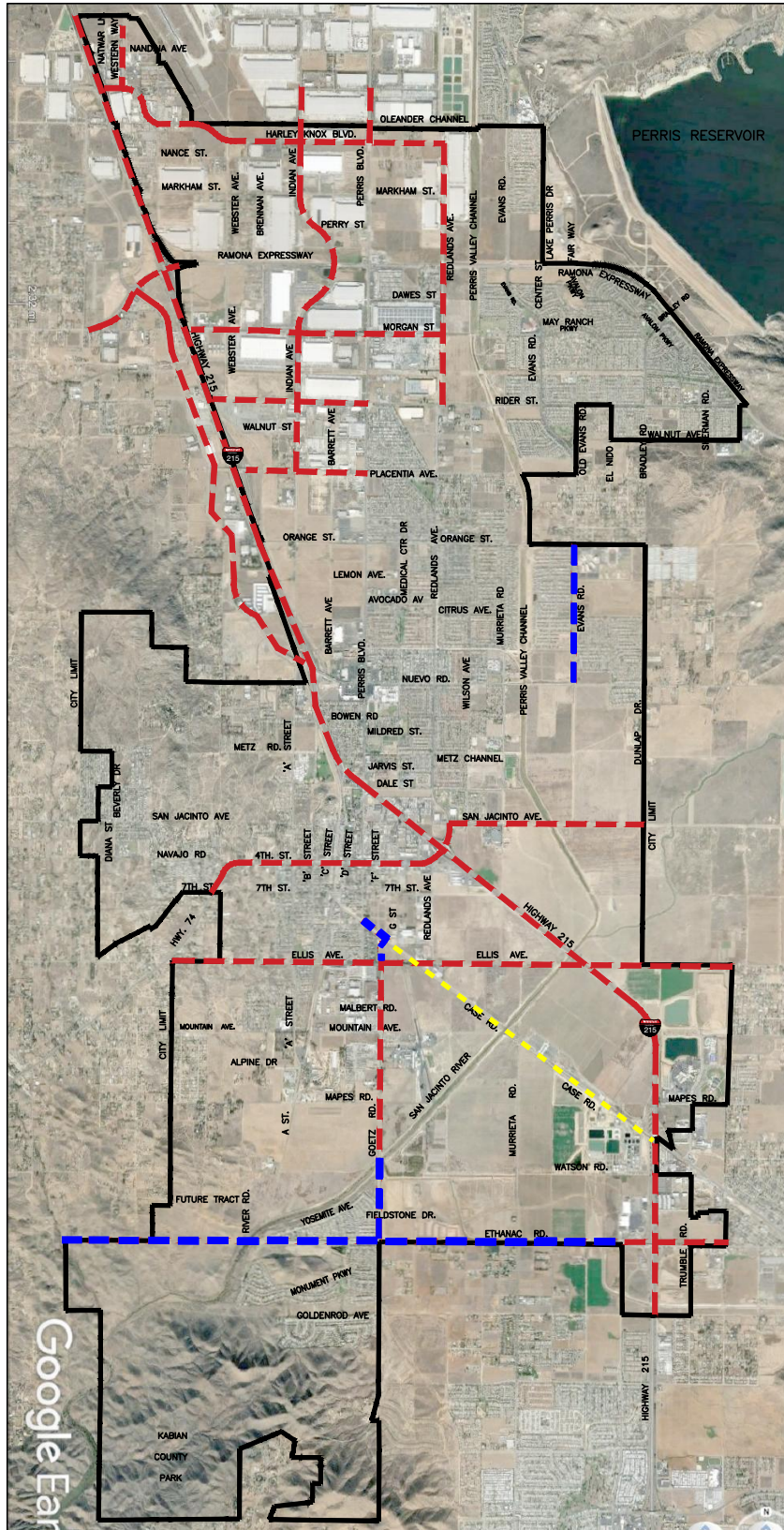
AM/PM PRIMARY
TOTAL (NET NEW)
PCE TRIPS

N = North

S = South

ATTACHMENT D

CITY OF PERRIS TRUCK ROUTES GPA22-05068 & OA22-05069



Google Earth

LEGEND:	
	PERRIS CITY LIMITS
	TRUCK ROUTES TO REMAIN IN PLACE
	NEW TRUCK ROUTE
	REMOVED TRUCK ROUTES





**CITY OF PERRIS
VMT SCOPING FORM FOR LAND USE PROJECTS**

This Scoping Form acknowledges the City of Perris requirements for the evaluation of transportation impacts under CEQA. The analysis provided in this form should follow the City of Perris TIA Guidelines, dated May 12, 2020.

I. Project Description

Tract/Case No.

Project Name:

Project Location:

Project Description:

(Please attach a copy of the project Site Plan)

Current GP Land Use:

Proposed GP Land Use:

Current Zoning:

Proposed Zoning:

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RHNA and RTP/SCS Strategies.

II. VMT Screening Criteria

A. Is the Project 100% affordable housing?

YES		NO	X
-----	--	----	---

 Attachments:

B. Is the Project within 1/2 mile of qualifying transit?

YES		NO	X
-----	--	----	---

 Attachments:

C. Is the Project a local serving land use?

YES		NO	X
-----	--	----	---

 Attachments:

D. Is the Project in a low VMT area?

YES	X	NO	
-----	---	----	--

 Attachments:

E. Are the Project's Net Daily Trips less than 500 ADT?

YES		NO	X
-----	--	----	---

 Attachments:

Low VMT Area Evaluation:

Citywide VMT Averages ¹		
Citywide Home-Based VMT =	15.05	VMT/Capita
Citywide Employment-Based VMT =	11.62	VMT/Employee

[WRCOG VMT MAP](#)

Project TAZ	VMT Rate for Project TAZ ¹		Type of Project	
3826	15.96	VMT/Capita	Residential:	
	11.29	VMT/Employee	Non-Residential:	X

¹ Base year (2012) projections from RIVTAM.

Trip Generation Evaluation:

Source of Trip Generation:

Project Trip Generation:

1,693	Average Daily Trips (ADT)
-------	---------------------------

Internal Trip Credit:	YES	<input type="text"/>	NO	<input checked="" type="checkbox"/>	% Trip Credit:	<input type="text"/>
Pass-By Trip Credit:	YES	<input type="text"/>	NO	<input checked="" type="checkbox"/>	% Trip Credit:	<input type="text"/>
Affordable Housing Credit:	YES	<input type="text"/>	NO	<input checked="" type="checkbox"/>	% Trip Credit:	<input type="text"/>
Existing Land Use Trip Credit:	YES	<input type="text"/>	NO	<input checked="" type="checkbox"/>	Trip Credit:	<input type="text"/>

Net Project Daily Trips:

1,693	Average Daily Trips (ADT)
-------	---------------------------

 Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?

YES	X	NO	
-----	---	----	--

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT?

A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

Less Than Significant

B. Is mitigation required?

If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

No Mitigation Required

C. Is additional VMT modeling required to evaluate Project impacts?

YES		NO	X
-----	--	----	---

If the Project requires a zone change and/or General Plan Amendment AND generates 2,500 or more net daily trips, then additional VMT modeling using RIVTAM/RIVCOM is required. If the project generates less than 2,500 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:

N/A	N/A
-----	-----

B. Unmitigated Project TAZ VMT Rate:

N/A	N/A
-----	-----

C. Percentage Reduction Required to Achieve the Citywide Average VMT:

N/A

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates: _____

Project Location Setting _____

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		0.00%

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:

N/A	N/A
-----	-----

F. Is the project presumed to have a less than significant impact with mitigation?

N/A

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
Company:	Kimley-Horn and Associates, Inc.	Company:	Newcastle Partners
Contact:	Trevor Briggs	Contact:	Courtney Smith
Address:	3880 Lemon St, Ste 420 Riverside, CA 92501	Address:	4740 Green River Rd, #110, Corona, CA 92878
Phone:	(951) 543-9869	Phone:	(951) 267-2692
Email:	trevor.briggs@kimley-horn.com	Email:	courtney@newcastlepartners.com
Date:	2/14/2023	Date:	2/14/2023
Approved by:			
Perris Planning Division	Date	Perris City Engineer	Date

March 8, 2023

Mr. Alfredo Garcia
CITY OF PERRIS (Planning Division)
135 North "D" Street
Perris, CA 92570

**Subject: Newcastle Ellis Avenue Warehouse (DPR 22-00018) Scoping and
VMT Analysis Review #2, City of Perris**

Dear Mr. Garcia,

Introduction

RK ENGINEERING GROUP, INC. (RK) has reviewed the Scoping Agreement and VMT Analysis #2 for the Newcastle Ellis Avenue Warehouse (DPR 22-00018) project located in the City of Perris. The proposed project would consist of a 643,419 square foot (SF) warehouse building located south of Ellis Avenue and north of Case Road in the City of Perris. The project will have two (2) driveways located along Ellis Avenue. The western driveway is designated for passenger vehicle traffic only and the eastern driveway is designated for truck traffic only. It doesn't appear that the easterly driveway has sufficient space to provide a westbound left turn lane for the truck only access driveway and the spacing between driveways is only 731 feet which may be a potential issue. The solution to this could be the provision for two-way left turn lane within Ellis Avenue to accommodate the left turning vehicles. This will need to be reviewed as part of the traffic study.

RK has reviewed the Scoping Agreement and VMT Analysis #2, dated February 14, 2023, prepared by Kimley-Horn and Associates, Inc. RK has reviewed the Scoping Agreement and VMT Analysis #2 pursuant to City of Perris requirements. Based upon this review, it is acceptable as currently written.

Comments

Scoping Agreement

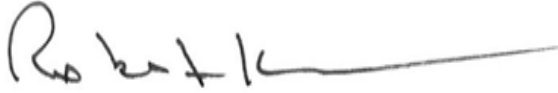
1. The Scoping Agreement and VMT Analysis #2 is acceptable as currently written.

Conclusions

RK has reviewed the Newcastle Ellis Avenue Warehouse (DPR 22 – 00018) Scoping Agreement and VMT Analysis #2. Based upon this review, the scoping agreement is acceptable. The traffic engineer can begin on the traffic impact study and submit to the City when completed.

RK appreciates this opportunity to work with the City of Perris on this project and if you have any questions, please contact me at 949-293-9639.

Sincerely,



Robert Kahn, PE
Founding Principal



Justin Tucker, P.E.
Principal Engineer

Registered Civil Engineer 92866
Registered Traffic Engineer No. 0555

XC: Kenneth Phung, City of Perris
Patricia Brenes, City of Perris
Stuart McKibbin, City of Perris
John Pourkazemi, Tri-Lake Consultants



RK 18007
JN: 2126-2023-01

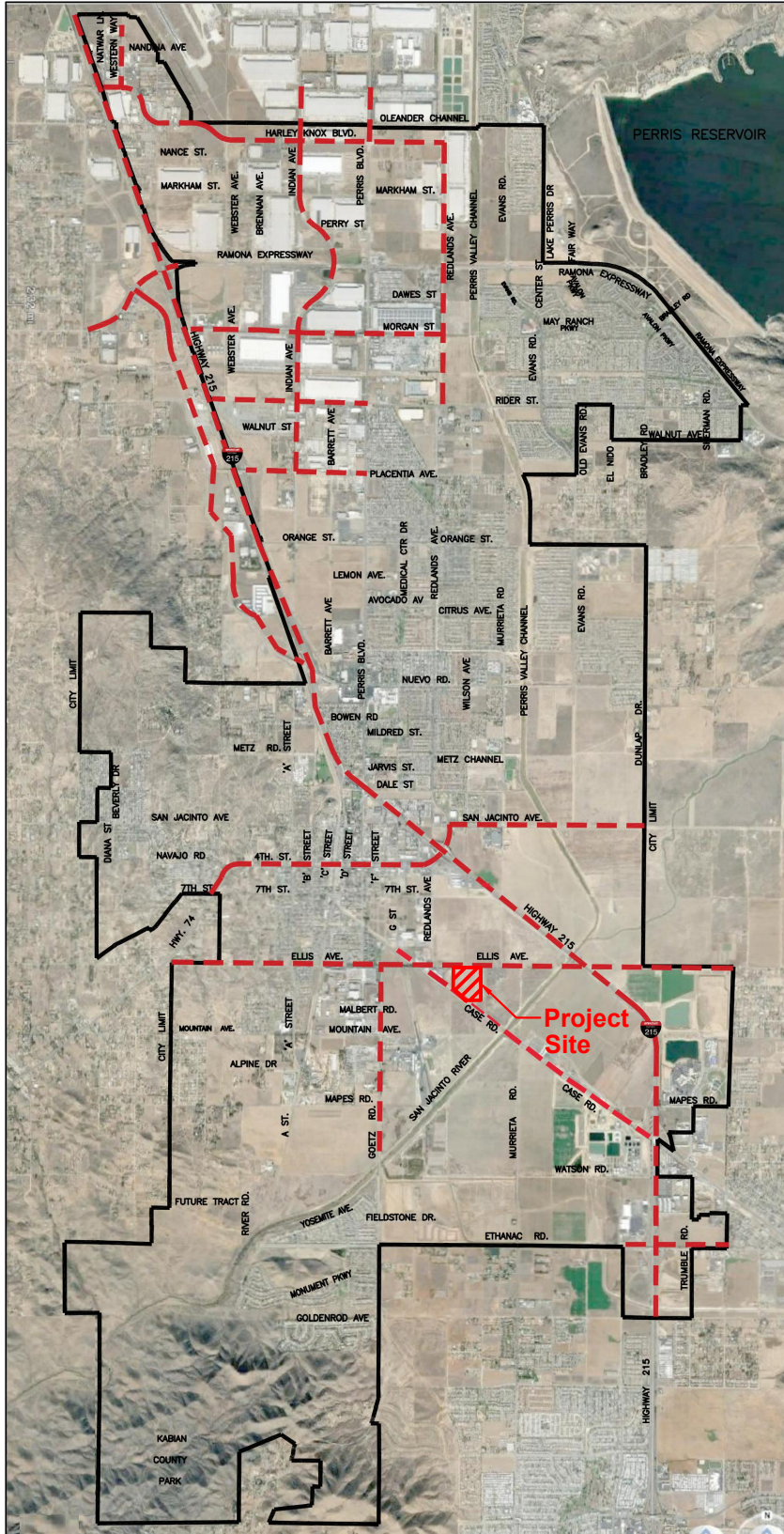
APPENDIX B

CITY OF PERRIS TRUCK ROUTES MAP

CITY OF PERRIS TRUCK ROUTES
CITY COUNCIL APPROVED JULY 26, 2022 - EFFECTIVE AUGUST 26, 2022



NOT TO SCALE



APPENDIX B
CITY OF PERRIS TRUCK ROUTES

APPENDIX C

TRAFFIC COUNT DATA SHEETS

Int	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1	133	611	0	0	949	132	0	0	0	409	2	393	1. I-215 NB Ramps at Redlands Avenue
2	0	616	290	507	914	0	118	3	141	0	0	0	2. I-215 SB Ramps at Redlands Avenue
3	23	297	10	34	274	739	611	21	23	5	10	20	3. Redlands Avenue at 4th Street
4	0	0	0	21	0	112	192	7	2	3	6	9	4. Redlands Avenue at Ellis Avenue
5	0	212	80	135	218	0	0	1	2	21	4	79	5. Case Road at Ellis Avenue
6	132	0	19	0	0	0	0	189	48	19	169	0	6. Case Road at Murrieta Road
7	0	139	72	65	162	0	0	0	0	56	0	45	7. Case Road at Mapes Road
8	207	1	0	0	0	0	3	0	194	0	0	0	8. Mapes Road at Bonnie Drive/Perris Metrolink Station Road
9	173	551	0	0	598	28	40	0	155	0	0	0	9. I-215 SB Ramps at Bonnie Drive
10	0	0	0	168	0	10	9	727	0	0	687	843	10. I-215 NB Ramps at SR-74

Int	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1	169	650	0	0	785	122	0	0	0	298	2	481	1. I-215 NB Ramps at Redlands Avenue
2	0	620	435	415	702	0	157	0	198	0	0	0	2. I-215 SB Ramps at Redlands Avenue
3	69	272	9	18	215	652	781	21	78	10	16	46	3. Redlands Avenue at 4th Street
4	0	0	0	23	0	176	155	15	0	20	3	61	4. Redlands Avenue at Ellis Avenue
5	0	278	67	102	327	0	0	2	0	95	3	97	5. Case Road at Ellis Avenue
6	86	0	16	0	0	0	0	314	101	16	266	0	6. Case Road at Murrieta Road
7	0	252	96	86	184	0	0	0	0	81	0	69	7. Case Road at Mapes Road
8	262	3	0	0	0	2	0	0	311	0	0	0	8. Mapes Road at Bonnie Drive/Perris Metrolink Station Road
9	226	339	0	0	849	33	23	0	303	0	0	0	9. I-215 SB Ramps at Bonnie Drive
10	0	0	0	227	0	25	14	1034	65	0	596	832	10. I-215 NB Ramps at SR-74

Existing Peak Hour Volumes - Classification Counts

1. I-215 NB Ramps at Redlands Avenue

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE		
NL	84	7	1	12	20	19.2%	49	2.5	133	128	6	1	10	17	11.7%	41	2.4	169
NT	591	9	3	0	12	2.0%	20	1.7	611	634	5	1	2	8	1.2%	16	2.0	650
NR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
SL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ST	918	14	2	2	18	1.9%	31	1.7	949	759	11	3	1	15	1.9%	26	1.7	785
SR	128	1	1	0	2	1.5%	4	2.0	132	119	2	0	0	2	1.7%	3	1.5	122
EL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ET	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ER	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WL	375	15	1	3	19	4.8%	34	1.8	409	283	7	2	0	9	3.1%	15	1.7	298
WT	2	0	0	0	0	0.0%	0	0.0	2	2	0	0	0	0	0.0%	0	0.0	2
WR	378	6	0	2	8	2.1%	15	1.9	393	467	9	0	0	9	1.9%	14	1.6	481
									2,629									2,507
North Leg Volumes																		
Approach	1,046	15	3	2	20		35		1,081	878	13	3	1	17		29		907
Depart	969	15	3	2	20		35		1,004	1,101	14	1	2	17		30		1,131
Total	2,015	30	6	4	40	1.9%	70	1.8	2,085	1,979	27	4	3	34	1.7%	59	1.7	2,038
South Leg Volumes																		
Approach	675	16	4	12	32		69		744	762	11	2	12	25		57		819
Depart	1,293	29	3	5	37		65		1,358	1,042	18	5	1	24		41		1,083
Total	1,968	45	7	17	69	3.4%	134	1.9	2,102	1,804	29	7	13	49	2.6%	98	2.0	1,902
East Leg Volumes																		
Approach	755	21	1	5	27		49		804	752	16	2	0	18		29		781
Depart	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Total	755	21	1	5	27	3.5%	49	1.8	804	752	16	2	0	18	2.3%	29	1.6	781
West Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	214	8	2	12	22		53		267	249	8	1	10	19		44		293
Total	214	8	2	12	22	9.3%	53	2.4	267	249	8	1	10	19	7.1%	44	2.3	293
All Legs																		
Approach	2,476	52	8	19	79		153		2,629	2,392	40	7	13	60		115		2,507
Depart	2,476	52	8	19	79		153		2,629	2,392	40	7	13	60		115		2,507
Total	4,952	104	16	38	158	3.1%	306	1.9	5,258	4,784	80	14	26	120	2.4%	230	1.9	5,014

Existing Peak Hour Volumes - Classification Counts

2. I-215 SB Ramps at Redlands Avenue

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE		
NL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NT	553	14	3	12	29	5.0%	63	2.2	616	581	5	2	9	16	2.7%	39	2.4	620
NR	250	16	2	4	22	8.1%	40	1.8	290	419	9	1	0	10	2.3%	16	1.6	435
SL	488	9	1	1	11	2.2%	19	1.7	507	402	7	1	0	8	2.0%	13	1.6	415
ST	853	24	2	7	33	3.7%	61	1.8	914	668	11	4	3	18	2.6%	34	1.9	702
SR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
EL	113	3	0	0	3	2.6%	5	1.7	118	151	4	0	0	4	2.6%	6	1.5	157
ET	0	0	0	1	1	100.0%	3	3.0	3	0	0	0	0	0.0%	0	0.0	0	
ER	111	8	3	4	15	11.9%	30	2.0	141	166	4	1	8	13	7.3%	32	2.5	198
WL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
WT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
WR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
									2,589									2,527
North Leg Volumes																		
Approach	1,341	33	3	8	44		80		1,421	1,070	18	5	3	26		47		1,117
Depart	666	17	3	12	32		68		734	732	9	2	9	20		45		777
Total	2,007	50	6	20	76	3.6%	148	1.9	2,155	1,802	27	7	12	46	2.5%	92	2.0	1,894
South Leg Volumes																		
Approach	803	30	5	16	51		103		906	1,000	14	3	9	26		55		1,055
Depart	964	32	5	11	48		91		1,055	834	15	5	11	31		66		900
Total	1,767	62	10	27	99	5.3%	194	2.0	1,961	1,834	29	8	20	57	3.0%	121	2.1	1,955
East Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	738	25	3	6	34		62		800	821	16	2	0	18		29		850
Total	738	25	3	6	34	4.4%	62	1.8	800	821	16	2	0	18	2.1%	29	1.6	850
West Leg Volumes																		
Approach	224	11	3	5	19		38		262	317	8	1	8	17		38		355
Depart	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Total	224	11	3	5	19	7.8%	38	2.0	262	317	8	1	8	17	5.1%	38	2.2	355
All Legs																		
Approach	2,368	74	11	29	114		221		2,589	2,387	40	9	20	69		140		2,527
Depart	2,368	74	11	29	114		221		2,589	2,387	40	9	20	69		140		2,527
Total	4,736	148	22	58	228	4.6%	442	1.9	5,178	4,774	80	18	40	138	2.8%	280	2.0	5,054

Existing Peak Hour Volumes - Classification Counts

3. Redlands Avenue at 4th Street

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE		
NL	17	0	0	2	2	10.5%	6	3.0	23	64	0	1	1	2	3.0%	5	2.5	69
NT	255	9	2	8	19	6.9%	42	2.2	297	238	6	2	7	15	5.9%	34	2.3	272
NR	7	0	0	1	1	12.5%	3	3.0	10	6	2	0	0	2	25.0%	3	1.5	9
SL	34	0	0	0	0	0.0%	0	0.0	34	18	0	0	0	0	0.0%	0	0.0	18
ST	239	13	0	5	18	7.0%	35	1.9	274	185	8	0	6	14	7.0%	30	2.1	215
SR	677	27	3	5	35	4.9%	62	1.8	739	614	16	4	2	22	3.5%	38	1.7	652
EL	545	28	3	6	37	6.4%	66	1.8	611	741	15	1	5	21	2.8%	40	1.9	781
ET	21	0	0	0	0	0.0%	0	0.0	21	21	0	0	0	0	0.0%	0	0.0	21
ER	17	0	0	2	2	10.5%	6	3.0	23	73	2	1	0	3	3.9%	5	1.7	78
WL	2	0	0	1	1	33.3%	3	3.0	5	8	1	0	0	1	11.1%	2	2.0	10
WT	10	0	0	0	0	0.0%	0	0.0	10	16	0	0	0	0	0.0%	0	0.0	16
WR	18	0	1	0	1	5.3%	2	2.0	20	43	2	0	0	2	4.4%	3	1.5	46
									2,067									2,187
North Leg Volumes																		
Approach	950	40	3	10	53		97		1,047	817	24	4	8	36		68		885
Depart	818	37	6	14	57		110		928	1,022	23	3	12	38		77		1,099
Total	1,768	77	9	24	110	5.9%	207	1.9	1,975	1,839	47	7	20	74	3.9%	145	2.0	1,984
South Leg Volumes																		
Approach	279	9	2	11	22		51		330	308	8	3	8	19		42		350
Depart	258	13	0	8	21		44		302	266	11	1	6	18		37		303
Total	537	22	2	19	43	7.4%	95	2.2	632	574	19	4	14	37	6.1%	79	2.1	653
East Leg Volumes																		
Approach	30	0	1	1	2		5		35	67	3	0	0	3		5		72
Depart	62	0	0	1	1		3		65	45	2	0	0	2		3		48
Total	92	0	1	2	3	3.2%	8	2.7	100	112	5	0	0	5	4.3%	8	1.6	120
West Leg Volumes																		
Approach	583	28	3	8	39		72		655	835	17	2	5	24		45		880
Depart	704	27	3	7	37		68		772	694	16	5	3	24		43		737
Total	1,287	55	6	15	76	5.6%	140	1.8	1,427	1,529	33	7	8	48	3.0%	88	1.8	1,617
All Legs																		
Approach	1,842	77	9	30	116		225		2,067	2,027	52	9	21	82		160		2,187
Depart	1,842	77	9	30	116		225		2,067	2,027	52	9	21	82		160		2,187
Total	3,684	154	18	60	232	5.9%	450	1.9	4,134	4,054	104	18	42	164	3.9%	320	2.0	4,374

Existing Peak Hour Volumes - Classification Counts

4. Redlands Avenue at Ellis Avenue

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE		
NL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
SL	13	3	0	1	4	23.5%	8	2.0	21	23	0	0	0	0.0%	0	0.0	23	
ST	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
SR	95	5	0	3	8	7.8%	17	2.1	112	152	4	0	6	10	6.2%	24	2.4	176
EL	168	3	2	5	10	5.6%	24	2.4	192	121	4	2	8	14	10.4%	34	2.4	155
ET	5	1	0	0	1	16.7%	2	2.0	7	9	0	0	2	2	18.2%	6	3.0	15
ER	0	0	1	0	1	100.0%	2	2.0	2	0	0	0	0	0	0.0%	0	0.0	0
WL	0	0	0	1	1	100.0%	3	3.0	3	20	0	0	0	0	0.0%	0	0.0	20
WT	3	2	0	0	2	40.0%	3	1.5	6	0	0	0	1	1	100.0%	3	3.0	3
WR	3	2	0	1	3	50.0%	6	2.0	9	61	0	0	0	0	0.0%	0	0.0	61
									352									453
North Leg Volumes																		
Approach	108	8	0	4	12		25		133	175	4	0	6	10		24		199
Depart	171	5	2	6	13		30		201	182	4	2	8	14		34		216
Total	279	13	2	10	25	8.2%	55	2.2	334	357	8	2	14	24	6.3%	58	2.4	415
South Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	0	0	1	1	2		5		5	20	0	0	0	0		0		20
Total	0	0	1	1	2	100.0%	5	2.5	5	20	0	0	0	0	0.0%	0	0.0	20
East Leg Volumes																		
Approach	6	4	0	2	6		12		18	81	0	0	1	1		3		84
Depart	18	4	0	1	5		10		28	32	0	0	2	2		6		38
Total	24	8	0	3	11	31.4%	22	2.0	46	113	0	0	3	3	2.6%	9	3.0	122
West Leg Volumes																		
Approach	173	4	3	5	12		28		201	130	4	2	10	16		40		170
Depart	98	7	0	3	10		20		118	152	4	0	7	11		27		179
Total	271	11	3	8	22	7.5%	48	2.2	319	282	8	2	17	27	8.7%	67	2.5	349
All Legs																		
Approach	287	16	3	11	30		65		352	386	8	2	17	27		67		453
Depart	287	16	3	11	30		65		352	386	8	2	17	27		67		453
Total	574	32	6	22	60	9.5%	130	2.2	704	772	16	4	34	54	6.5%	134	2.5	906

Existing Peak Hour Volumes - Classification Counts

5. Case Road at Ellis Avenue

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE		
NL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NT	203	6	0	0	6	2.9%	9	1.5	212	241	18	5	0	23	8.7%	37	1.6	278
NR	78	1	0	0	1	1.3%	2	2.0	80	67	0	0	0	0	0.0%	0	0.0	67
SL	116	1	1	5	7	5.7%	19	2.7	135	63	1	2	11	14	18.2%	39	2.8	102
ST	185	9	5	3	17	8.4%	33	1.9	218	318	6	0	0	6	1.9%	9	1.5	327
SR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
EL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ET	1	0	0	0	0	0.0%	0	0.0	1	2	0	0	0	0	0.0%	0	0.0	2
ER	2	0	0	0	0	0.0%	0	0.0	2	0	0	0	0	0	0.0%	0	0.0	0
WL	19	1	0	0	1	5.0%	2	2.0	21	92	2	0	0	2	2.1%	3	1.5	95
WT	4	0	0	0	0	0.0%	0	0.0	4	3	0	0	0	0	0.0%	0	0.0	3
WR	64	4	0	3	7	9.9%	15	2.1	79	76	2	0	6	8	9.5%	21	2.6	97
									752									971
North Leg Volumes																		
Approach	301	10	6	8	24		52		353	381	7	2	11	20		48		429
Depart	267	10	0	3	13		24		291	317	20	5	6	31		58		375
Total	568	20	6	11	37	6.1%	76	2.1	644	698	27	7	17	51	6.8%	106	2.1	804
South Leg Volumes																		
Approach	281	7	0	0	7		11		292	308	18	5	0	23		37		345
Depart	206	10	5	3	18		35		241	410	8	0	0	8		12		422
Total	487	17	5	3	25	4.9%	46	1.8	533	718	26	5	0	31	4.1%	49	1.6	767
East Leg Volumes																		
Approach	87	5	0	3	8		17		104	171	4	0	6	10		24		195
Depart	195	2	1	5	8		21		216	132	1	2	11	14		39		171
Total	282	7	1	8	16	5.4%	38	2.4	320	303	5	2	17	24	7.3%	63	2.6	366
West Leg Volumes																		
Approach	3	0	0	0	0		0		3	2	0	0	0	0		0		2
Depart	4	0	0	0	0		0		4	3	0	0	0	0		0		3
Total	7	0	0	0	0	0.0%	0	0.0	7	5	0	0	0	0	0.0%	0	0.0	5
All Legs																		
Approach	672	22	6	11	39		80		752	862	29	7	17	53		109		971
Depart	672	22	6	11	39		80		752	862	29	7	17	53		109		971
Total	1,344	44	12	22	78	5.5%	160	2.1	1,504	1,724	58	14	34	106	5.8%	218	2.1	1,942

Existing Peak Hour Volumes - Classification Counts

6. Case Road at Murrieta Road

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE		
NL	129	2	0	0	2	1.5%	3	1.5	132	81	3	0	0	3	3.6%	5	1.7	86
NT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
NR	17	1	0	0	1	5.6%	2	2.0	19	11	3	0	0	3	21.4%	5	1.7	16
SL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ST	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
SR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
EL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ET	153	11	5	3	19	11.0%	36	1.9	189	299	10	0	0	10	3.2%	15	1.5	314
ER	43	3	0	0	3	6.5%	5	1.7	48	95	4	0	0	4	4.0%	6	1.5	101
WL	16	2	0	0	2	11.1%	3	1.5	19	16	0	0	0	0	0.0%	0	0.0	16
WT	148	14	0	0	14	8.6%	21	1.5	169	227	19	5	0	24	9.6%	39	1.6	266
WR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
									576									799
North Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	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	0.0%	0	0.0	0
South Leg Volumes																		
Approach	146	3	0	0	3		5		151	92	6	0	0	6		10		102
Depart	59	5	0	0	5		8		67	111	4	0	0	4		6		117
Total	205	8	0	0	8	3.8%	13	1.6	218	203	10	0	0	10	4.7%	16	1.6	219
East Leg Volumes																		
Approach	164	16	0	0	16		24		188	243	19	5	0	24		39		282
Depart	170	12	5	3	20		38		208	310	13	0	0	13		20		330
Total	334	28	5	3	36	9.7%	62	1.7	396	553	32	5	0	37	6.3%	59	1.6	612
West Leg Volumes																		
Approach	196	14	5	3	22		41		237	394	14	0	0	14		21		415
Depart	277	16	0	0	16		24		301	308	22	5	0	27		44		352
Total	473	30	5	3	38	7.4%	65	1.7	538	702	36	5	0	41	5.5%	65	1.6	767
All Legs																		
Approach	506	33	5	3	41		70		576	729	39	5	0	44		70		799
Depart	506	33	5	3	41		70		576	729	39	5	0	44		70		799
Total	1,012	66	10	6	82	7.5%	140	1.7	1,152	1,458	78	10	0	88	5.7%	140	1.6	1,598

Existing Peak Hour Volumes - Classification Counts

7. Case Road at Mapes Road

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE		
NL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NT	117	11	1	1	13	10.0%	22	1.7	139	241	7	0	0	7	2.8%	11	1.6	252
NR	61	7	0	0	7	10.3%	11	1.6	72	91	3	0	0	3	3.2%	5	1.7	96
SL	60	2	1	0	3	4.8%	5	1.7	65	83	2	0	0	2	2.4%	3	1.5	86
ST	139	10	1	2	13	8.6%	23	1.8	162	147	15	7	0	22	13.0%	37	1.7	184
SR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
EL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ET	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ER	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WL	47	4	0	1	5	9.6%	9	1.8	56	78	2	0	0	2	2.5%	3	1.5	81
WT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WR	39	2	0	1	3	7.1%	6	2.0	45	66	2	0	0	2	2.9%	3	1.5	69
									539									768
North Leg Volumes																		
Approach	199	12	2	2	16		28		227	230	17	7	0	24		40		270
Depart	156	13	1	2	16		28		184	307	9	0	0	9		14		321
Total	355	25	3	4	32	8.3%	56	1.8	411	537	26	7	0	33	5.8%	54	1.6	591
South Leg Volumes																		
Approach	178	18	1	1	20		33		211	332	10	0	0	10		16		348
Depart	186	14	1	3	18		32		218	225	17	7	0	24		40		265
Total	364	32	2	4	38	9.5%	65	1.7	429	557	27	7	0	34	5.8%	56	1.6	613
East Leg Volumes																		
Approach	86	6	0	2	8		15		101	144	4	0	0	4		6		150
Depart	121	9	1	0	10		16		137	174	5	0	0	5		8		182
Total	207	15	1	2	18	8.0%	31	1.7	238	318	9	0	0	9	2.8%	14	1.6	332
West Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	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	0.0%	0	0.0	0
All Legs																		
Approach	463	36	3	5	44		76		539	706	31	7	0	38		62		768
Depart	463	36	3	5	44		76		539	706	31	7	0	38		62		768
Total	926	72	6	10	88	8.7%	152	1.7	1,078	1,412	62	14	0	76	5.1%	124	1.6	1,536

Existing Peak Hour Volumes - Classification Counts

8. Mapes Road at Bonnie Drive/Perris Metrolink Station Road

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE		
NL	185	6	2	3	11	5.6%	22	2.0	207	225	15	7	0	22	8.9%	37	1.7	262
NT	1	0	0	0	0	0.0%	0	0.0	1	3	0	0	0	0	0.0%	0	0.0	3
NR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
SL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ST	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
SR	0	0	0	0	0	0.0%	0	0.0	0	2	0	0	0	0	0.0%	0	0.0	2
EL	3	0	0	0	0	0.0%	0	0.0	3	0	0	0	0	0	0.0%	0	0.0	0
ET	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ER	168	9	3	2	14	7.7%	26	1.9	194	300	7	0	0	7	2.3%	11	1.6	311
WL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
									405									578
North Leg Volumes																		
Approach	0	0	0	0	0		0		0	2	0	0	0	0		0		2
Depart	4	0	0	0	0		0		4	3	0	0	0	0		0		3
Total	4	0	0	0	0	0.0%	0	0.0	4	5	0	0	0	0	0.0%	0	0.0	5
South Leg Volumes																		
Approach	186	6	2	3	11		22		208	228	15	7	0	22		37		265
Depart	168	9	3	2	14		26		194	300	7	0	0	7		11		311
Total	354	15	5	5	25	6.6%	48	1.9	402	528	22	7	0	29	5.2%	48	1.7	576
East Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	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	0.0%	0	0.0	0
West Leg Volumes																		
Approach	171	9	3	2	14		26		197	300	7	0	0	7		11		311
Depart	185	6	2	3	11		22		207	227	15	7	0	22		37		264
Total	356	15	5	5	25	6.6%	48	1.9	404	527	22	7	0	29	5.2%	48	1.7	575
All Legs																		
Approach	357	15	5	5	25		48		405	530	22	7	0	29		48		578
Depart	357	15	5	5	25		48		405	530	22	7	0	29		48		578
Total	714	30	10	10	50	6.5%	96	1.9	810	1,060	44	14	0	58	5.2%	96	1.7	1,156

Existing Peak Hour Volumes - Classification Counts

9. I-215 SB Ramps at Bonnie Drive

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %age	PCE		
NL	159	9	0	0	9	5.4%	14	1.6	173	192	11	7	1	19	9.0%	34	1.8	226
NT	418	37	1	25	63	13.1%	133	2.1	551	330	6	0	0	6	1.8%	9	1.5	339
NR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
SL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ST	483	37	7	15	59	10.9%	115	1.9	598	796	21	0	7	28	3.4%	53	1.9	849
SR	25	0	0	1	1	3.8%	3	3.0	28	30	2	0	0	2	6.3%	3	1.5	33
EL	31	1	2	1	4	11.4%	9	2.3	40	21	1	0	0	1	4.5%	2	2.0	23
ET	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ER	118	9	4	5	18	13.2%	37	2.1	155	289	7	0	1	8	2.7%	14	1.8	303
WL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
									1,545									1,773
North Leg Volumes																		
Approach	508	37	7	16	60		118		626	826	23	0	7	30		56		882
Depart	449	38	3	26	67		142		591	351	7	0	0	7		11		362
Total	957	75	10	42	127	11.7%	260	2.0	1,217	1,177	30	0	7	37	3.0%	67	1.8	1,244
South Leg Volumes																		
Approach	577	46	1	25	72		147		724	522	17	7	1	25		43		565
Depart	601	46	11	20	77		152		753	1,085	28	0	8	36		67		1,152
Total	1,178	92	12	45	149	11.2%	299	2.0	1,477	1,607	45	7	9	61	3.7%	110	1.8	1,717
East Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	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	0.0%	0	0.0	0
West Leg Volumes																		
Approach	149	10	6	6	22		46		195	310	8	0	1	9		16		326
Depart	184	9	0	1	10		17		201	222	13	7	1	21		37		259
Total	333	19	6	7	32	8.8%	63	2.0	396	532	21	7	2	30	5.3%	53	1.8	585
All Legs																		
Approach	1,234	93	14	47	154		311		1,545	1,658	48	7	9	64		115		1,773
Depart	1,234	93	14	47	154		311		1,545	1,658	48	7	9	64		115		1,773
Total	2,468	186	28	94	308	11.1%	622	2.0	3,090	3,316	96	14	18	128	3.7%	230	1.8	3,546

Existing Peak Hour Volumes - Classification Counts

10 10. I-215 NB Ramps at SR-74

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE		
NL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
SL	146	7	1	3	11	7.0%	22	2.0	168	199	14	2	1	17	7.9%	28	1.6	227
ST	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	0
SR	10	0	0	0	0	0.0%	0	0.0	10	22	2	0	0	2	8.3%	3	1.5	25
EL	9	0	0	0	0	0.0%	0	0.0	9	10	1	1	0	2	16.7%	4	2.0	14
ET	566	54	13	18	85	13.1%	161	1.9	727	1,011	0	4	5	9	0.9%	23	2.6	1,034
ER	0	0	0	0	0	0.0%	0	0.0	0	0	43	0	0	43	100.0%	65	1.5	65
WL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WT	560	79	1	2	82	12.8%	127	1.5	687	543	26	4	2	32	5.6%	53	1.7	596
WR	734	42	5	12	59	7.4%	109	1.8	843	722	33	15	10	58	7.4%	110	1.9	832
									2,444									2,793
North Leg Volumes																		
Approach	156	7	1	3	11		22		178	221	16	2	1	19		31		252
Depart	743	42	5	12	59		109		852	732	34	16	10	60		114		846
Total	899	49	6	15	70	7.2%	131	1.9	1,030	953	50	18	11	79	7.7%	145	1.8	1,098
South Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	0	0	0	0	0		0		0	0	43	0	0	43		65		65
Total	0	0	0	0	0	0.0%	0	0.0	0	0	43	0	0	43	100.0%	65	1.5	65
East Leg Volumes																		
Approach	1,294	121	6	14	141		236		1,530	1,265	59	19	12	90		163		1,428
Depart	712	61	14	21	96		183		895	1,210	14	6	6	26		51		1,261
Total	2,006	182	20	35	237	10.6%	419	1.8	2,425	2,475	73	25	18	116	4.5%	214	1.8	2,689
West Leg Volumes																		
Approach	575	54	13	18	85		161		736	1,021	44	5	5	54		92		1,113
Depart	570	79	1	2	82		127		697	565	28	4	2	34		56		621
Total	1,145	133	14	20	167	12.7%	288	1.7	1,433	1,586	72	9	7	88	5.3%	148	1.7	1,734
All Legs																		
Approach	2,025	182	20	35	237		419		2,444	2,507	119	26	18	163		286		2,793
Depart	2,025	182	20	35	237		419		2,444	2,507	119	26	18	163		286		2,793
Total	4,050	364	40	70	474	10.5%	838	1.8	4,888	5,014	238	52	36	326	6.1%	572	1.8	5,586

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
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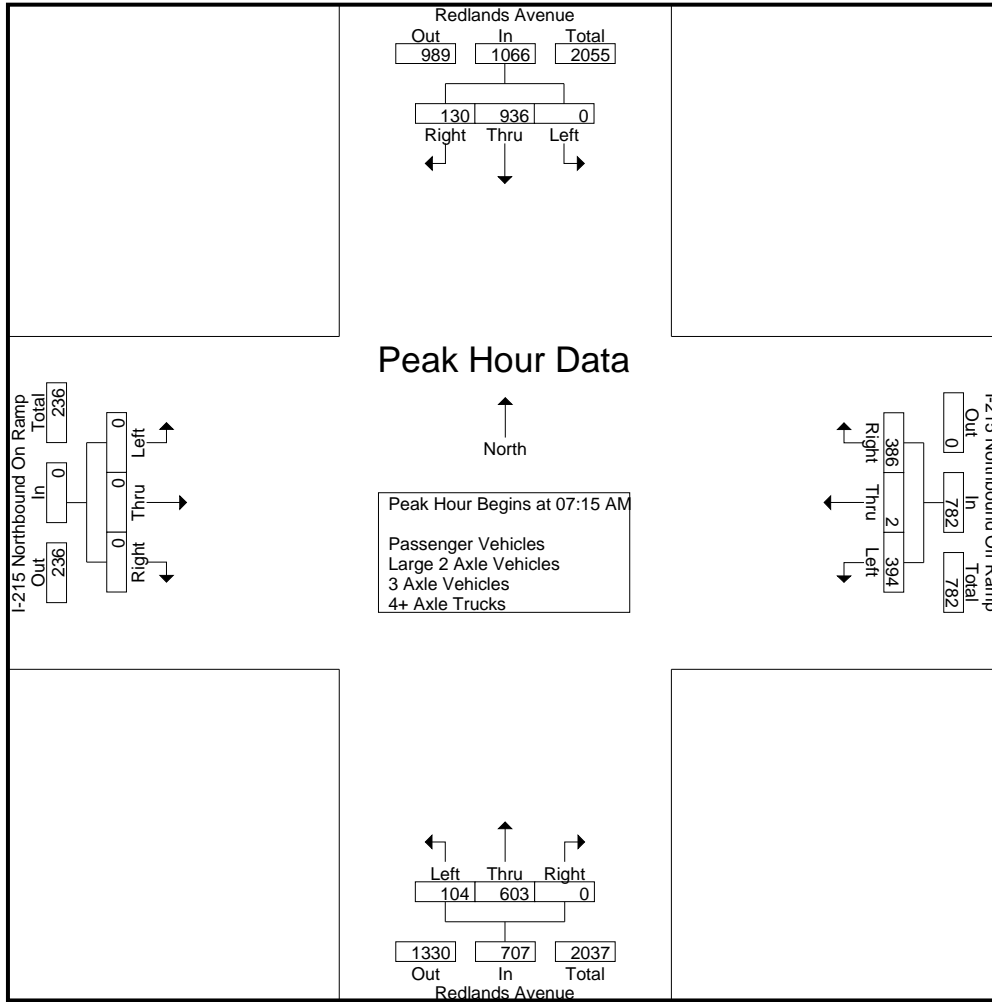
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	148	24	172	98	0	70	168	26	59	0	85	0	0	0	0	425
07:15 AM	0	202	19	221	99	0	117	216	22	120	0	142	0	0	0	0	579
07:30 AM	0	263	41	304	112	0	85	197	30	149	0	179	0	0	0	0	680
07:45 AM	0	237	28	265	93	1	102	196	23	187	0	210	0	0	0	0	671
Total	0	850	112	962	402	1	374	777	101	515	0	616	0	0	0	0	2355
08:00 AM	0	234	42	276	90	1	82	173	29	147	0	176	0	0	0	0	625
08:15 AM	0	230	39	269	82	0	80	162	20	125	0	145	0	0	0	0	576
08:30 AM	0	212	36	248	80	1	59	140	20	89	0	109	0	0	0	0	497
08:45 AM	0	147	24	171	89	0	61	150	28	75	0	103	0	0	0	0	424
Total	0	823	141	964	341	2	282	625	97	436	0	533	0	0	0	0	2122
Grand Total	0	1673	253	1926	743	3	656	1402	198	951	0	1149	0	0	0	0	4477
Apprch %	0	86.9	13.1		53	0.2	46.8		17.2	82.8	0		0	0	0		
Total %	0	37.4	5.7	43	16.6	0.1	14.7	31.3	4.4	21.2	0	25.7	0	0	0	0	
Passenger Vehicles	0	1646	247	1893	711	3	640	1354	164	923	0	1087	0	0	0	0	4334
% Passenger Vehicles	0	98.4	97.6	98.3	95.7	100	97.6	96.6	82.8	97.1	0	94.6	0	0	0	0	96.8
Large 2 Axle Vehicles	0	20	4	24	20	0	11	31	10	21	0	31	0	0	0	0	86
% Large 2 Axle Vehicles	0	1.2	1.6	1.2	2.7	0	1.7	2.2	5.1	2.2	0	2.7	0	0	0	0	1.9
3 Axle Vehicles	0	3	2	5	5	0	2	7	2	6	0	8	0	0	0	0	20
% 3 Axle Vehicles	0	0.2	0.8	0.3	0.7	0	0.3	0.5	1	0.6	0	0.7	0	0	0	0	0.4
4+ Axle Trucks	0	4	0	4	7	0	3	10	22	1	0	23	0	0	0	0	37
% 4+ Axle Trucks	0	0.2	0	0.2	0.9	0	0.5	0.7	11.1	0.1	0	2	0	0	0	0	0.8

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	202	19	221	99	0	117	216	22	120	0	142	0	0	0	0	579
07:30 AM	0	263	41	304	112	0	85	197	30	149	0	179	0	0	0	0	680
07:45 AM	0	237	28	265	93	1	102	196	23	187	0	210	0	0	0	0	671
08:00 AM	0	234	42	276	90	1	82	173	29	147	0	176	0	0	0	0	625
Total Volume	0	936	130	1066	394	2	386	782	104	603	0	707	0	0	0	0	2555
% App. Total	0	87.8	12.2		50.4	0.3	49.4		14.7	85.3	0		0	0	0		
PHF	.000	.890	.774	.877	.879	.500	.825	.905	.867	.806	.000	.842	.000	.000	.000	.000	.939

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



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

	07:30 AM				07:15 AM				07:30 AM				07:00 AM			
+0 mins.	0	263	41	304	99	0	117	216	30	149	0	179	0	0	0	0
+15 mins.	0	237	28	265	112	0	85	197	23	187	0	210	0	0	0	0
+30 mins.	0	234	42	276	93	1	102	196	29	147	0	176	0	0	0	0
+45 mins.	0	230	39	269	90	1	82	173	20	125	0	145	0	0	0	0
Total Volume	0	964	150	1114	394	2	386	782	102	608	0	710	0	0	0	0
% App. Total	0	86.5	13.5		50.4	0.3	49.4		14.4	85.6	0		0	0	0	
PHF	.000	.916	.893	.916	.879	.500	.825	.905	.850	.813	.000	.845	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	147	24	171	95	0	68	163	21	54	0	75	0	0	0	0	409
07:15 AM	0	198	19	217	91	0	113	204	16	117	0	133	0	0	0	0	554
07:30 AM	0	260	40	300	107	0	84	191	24	144	0	168	0	0	0	0	659
07:45 AM	0	232	28	260	89	1	99	189	20	185	0	205	0	0	0	0	654
Total	0	837	111	948	382	1	364	747	81	500	0	581	0	0	0	0	2276
08:00 AM	0	228	41	269	88	1	82	171	24	145	0	169	0	0	0	0	609
08:15 AM	0	223	35	258	79	0	80	159	17	119	0	136	0	0	0	0	553
08:30 AM	0	211	36	247	74	1	56	131	19	87	0	106	0	0	0	0	484
08:45 AM	0	147	24	171	88	0	58	146	23	72	0	95	0	0	0	0	412
Total	0	809	136	945	329	2	276	607	83	423	0	506	0	0	0	0	2058
Grand Total	0	1646	247	1893	711	3	640	1354	164	923	0	1087	0	0	0	0	4334
Apprch %	0	87	13		52.5	0.2	47.3		15.1	84.9	0		0	0	0		
Total %	0	38	5.7	43.7	16.4	0.1	14.8	31.2	3.8	21.3	0	25.1	0	0	0	0	

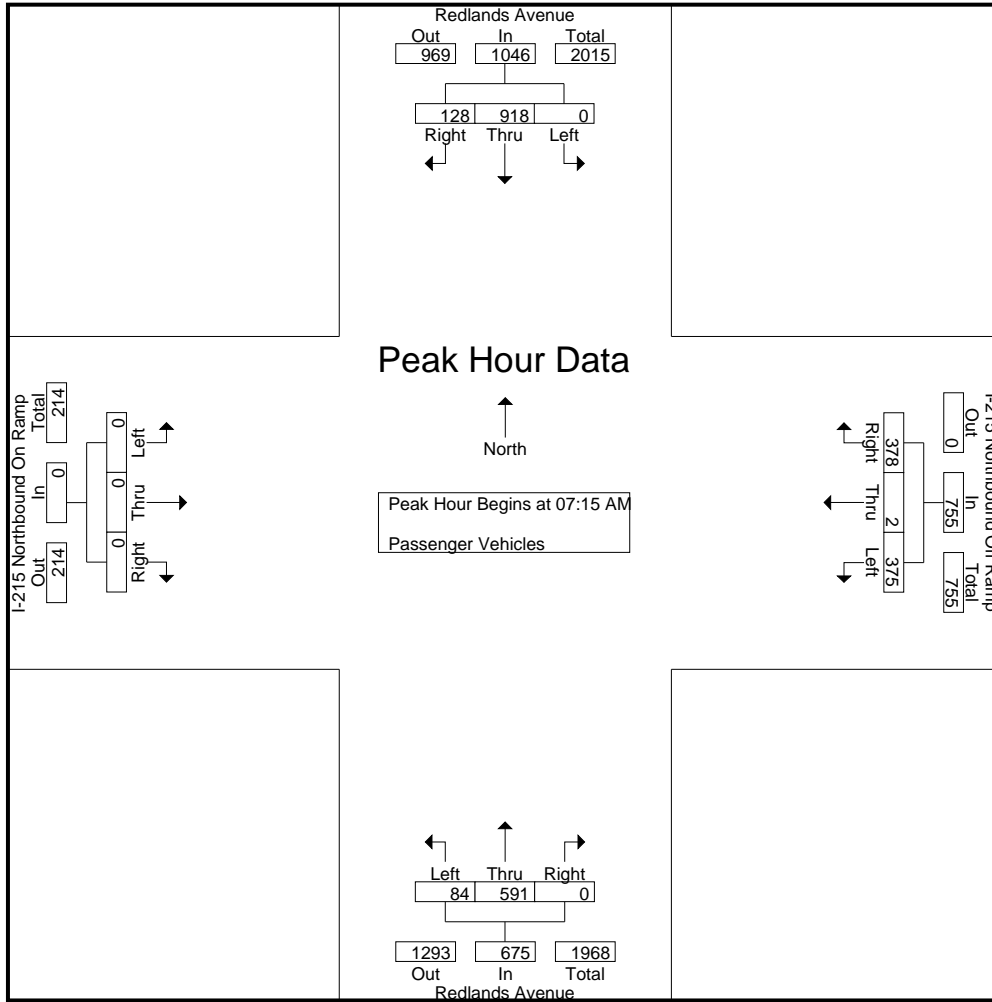
Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	198	19	217	91	0	113	204	16	117	0	133	0	0	0	0	554
07:30 AM	0	260	40	300	107	0	84	191	24	144	0	168	0	0	0	0	659
07:45 AM	0	232	28	260	89	1	99	189	20	185	0	205	0	0	0	0	654
08:00 AM	0	228	41	269	88	1	82	171	24	145	0	169	0	0	0	0	609
Total Volume	0	918	128	1046	375	2	378	755	84	591	0	675	0	0	0	0	2476
% App. Total	0	87.8	12.2		49.7	0.3	50.1		12.4	87.6	0		0	0	0		
PHF	.000	.883	.780	.872	.876	.500	.836	.925	.875	.799	.000	.823	.000	.000	.000	.000	.939

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	198	19	217	91	0	113	204	16	117	0	133	0	0	0	0
+15 mins.	0	260	40	300	107	0	84	191	24	144	0	168	0	0	0	0
+30 mins.	0	232	28	260	89	1	99	189	20	185	0	205	0	0	0	0
+45 mins.	0	228	41	269	88	1	82	171	24	145	0	169	0	0	0	0
Total Volume	0	918	128	1046	375	2	378	755	84	591	0	675	0	0	0	0
% App. Total	0	87.8	12.2		49.7	0.3	50.1		12.4	87.6	0		0	0	0	
PHF	.000	.883	.780	.872	.876	.500	.836	.925	.875	.799	.000	.823	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	2	0	2	4	1	1	0	2	0	0	0	0	6
07:15 AM	0	4	0	4	7	0	4	11	3	2	0	5	0	0	0	0	20
07:30 AM	0	2	1	3	3	0	0	3	2	3	0	5	0	0	0	0	11
07:45 AM	0	5	0	5	3	0	2	5	1	2	0	3	0	0	0	0	13
Total	0	11	1	12	15	0	8	23	7	8	0	15	0	0	0	0	50
08:00 AM	0	3	0	3	2	0	0	2	1	2	0	3	0	0	0	0	8
08:15 AM	0	6	3	9	1	0	0	1	1	6	0	7	0	0	0	0	17
08:30 AM	0	0	0	0	2	0	1	3	0	2	0	2	0	0	0	0	5
08:45 AM	0	0	0	0	0	0	2	2	1	3	0	4	0	0	0	0	6
Total	0	9	3	12	5	0	3	8	3	13	0	16	0	0	0	0	36
Grand Total	0	20	4	24	20	0	11	31	10	21	0	31	0	0	0	0	86
Apprch %	0	83.3	16.7		64.5	0	35.5		32.3	67.7	0		0	0	0		
Total %	0	23.3	4.7	27.9	23.3	0	12.8	36	11.6	24.4	0	36	0	0	0	0	

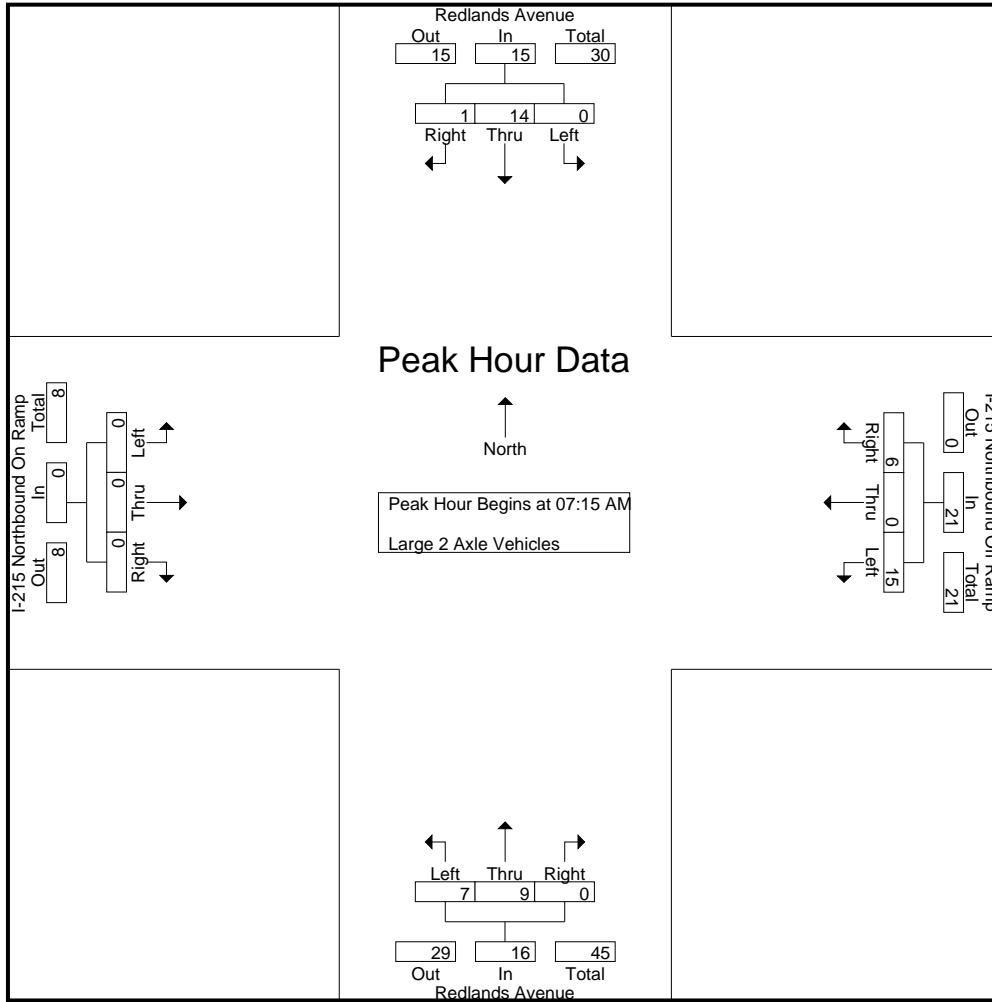
Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	4	0	4	7	0	4	11	3	2	0	5	0	0	0	0	20
07:30 AM	0	2	1	3	3	0	0	3	2	3	0	5	0	0	0	0	11
07:45 AM	0	5	0	5	3	0	2	5	1	2	0	3	0	0	0	0	13
08:00 AM	0	3	0	3	2	0	0	2	1	2	0	3	0	0	0	0	8
Total Volume	0	14	1	15	15	0	6	21	7	9	0	16	0	0	0	0	52
% App. Total	0	93.3	6.7		71.4	0	28.6		43.8	56.2	0		0	0	0		
PHF	.000	.700	.250	.750	.536	.000	.375	.477	.583	.750	.000	.800	.000	.000	.000	.000	.650

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	4	0	4	7	0	4	11	3	2	0	5	0	0	0	0
+15 mins.	0	2	1	3	3	0	0	3	2	3	0	5	0	0	0	0
+30 mins.	0	5	0	5	3	0	2	5	1	2	0	3	0	0	0	0
+45 mins.	0	3	0	3	2	0	0	2	1	2	0	3	0	0	0	0
Total Volume	0	14	1	15	15	0	6	21	7	9	0	16	0	0	0	0
% App. Total	0	93.3	6.7		71.4	0	28.6		43.8	56.2	0		0	0	0	
PHF	.000	.700	.250	.750	.536	.000	.375	.477	.583	.750	.000	.800	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	1	0	0	1	0	3	0	3	0	0	0	0	4
07:15 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
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	2	0	0	2	0	6	0	6	0	0	0	0	8
08:00 AM	0	2	1	3	0	0	0	0	1	0	0	1	0	0	0	0	4
08:15 AM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
08:30 AM	0	1	0	1	1	0	1	2	0	0	0	0	0	0	0	0	3
08:45 AM	0	0	0	0	1	0	1	2	1	0	0	1	0	0	0	0	3
Total	0	3	2	5	3	0	2	5	2	0	0	2	0	0	0	0	12
Grand Total	0	3	2	5	5	0	2	7	2	6	0	8	0	0	0	0	20
Apprch %	0	60	40		71.4	0	28.6		25	75	0		0	0	0		
Total %	0	15	10	25	25	0	10	35	10	30	0	40	0	0	0	0	

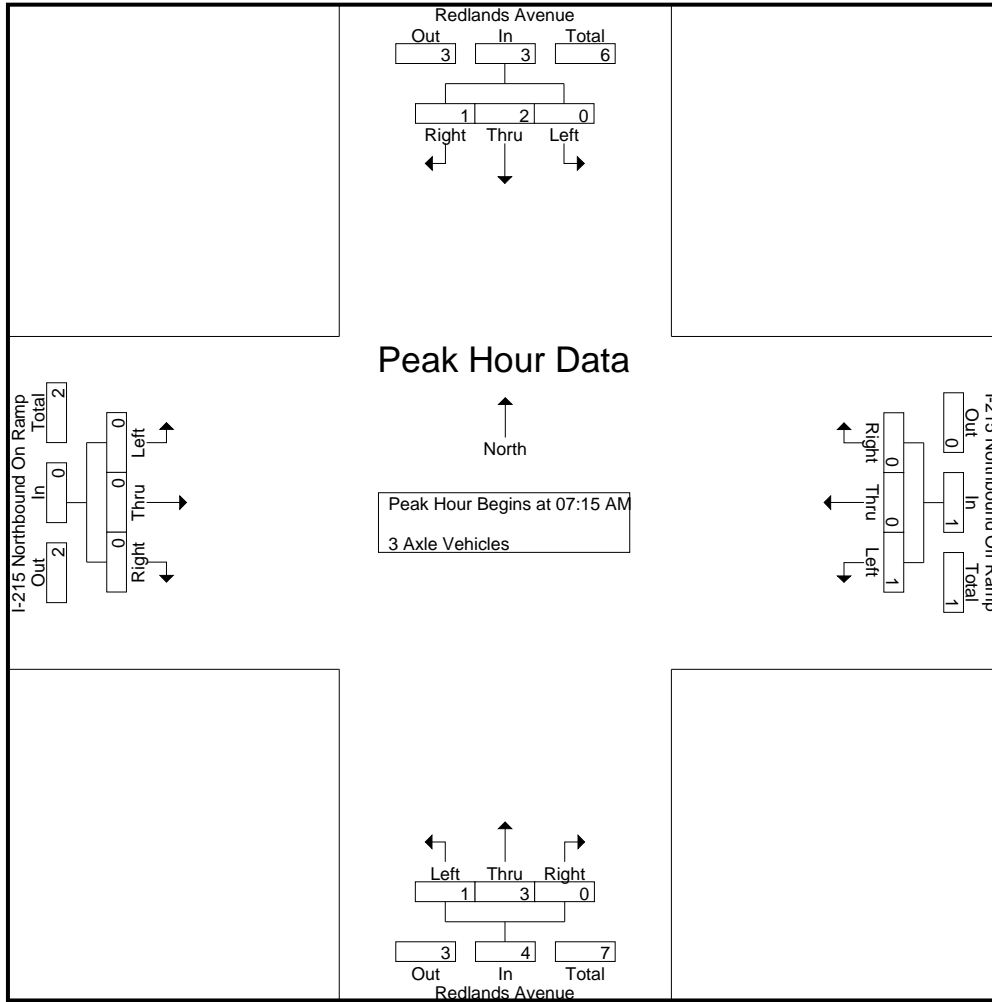
Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	2	1	3	0	0	0	0	1	0	0	1	0	0	0	0	4
Total Volume	0	2	1	3	1	0	0	1	1	3	0	4	0	0	0	0	8
% App. Total	0	66.7	33.3		100	0	0		25	75	0		0	0	0		
PHF	.000	.250	.250	.250	.250	.000	.000	.250	.250	.375	.000	.500	.000	.000	.000	.000	.500

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0
+15 mins.	0	0	0	0	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	1	3	0	0	0	0	1	0	0	1	0	0	0	0
Total Volume	0	2	1	3	1	0	0	1	1	3	0	4	0	0	0	0
% App. Total	0	66.7	33.3		100	0	0		25	75	0		0	0	0	
PHF	.000	.250	.250	.250	.250	.000	.000	.250	.250	.375	.000	.500	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	0	1	0	0	0	0	4	1	0	5	0	0	0	0	6
07:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
07:30 AM	0	1	0	1	2	0	1	3	4	0	0	4	0	0	0	0	8
07:45 AM	0	0	0	0	1	0	1	2	2	0	0	2	0	0	0	0	4
Total	0	2	0	2	3	0	2	5	13	1	0	14	0	0	0	0	21
08:00 AM	0	1	0	1	0	0	0	0	3	0	0	3	0	0	0	0	4
08:15 AM	0	1	0	1	1	0	0	1	2	0	0	2	0	0	0	0	4
08:30 AM	0	0	0	0	3	0	1	4	1	0	0	1	0	0	0	0	5
08:45 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
Total	0	2	0	2	4	0	1	5	9	0	0	9	0	0	0	0	16
Grand Total	0	4	0	4	7	0	3	10	22	1	0	23	0	0	0	0	37
Apprch %	0	100	0		70	0	30		95.7	4.3	0		0	0	0		
Total %	0	10.8	0	10.8	18.9	0	8.1	27	59.5	2.7	0	62.2	0	0	0	0	

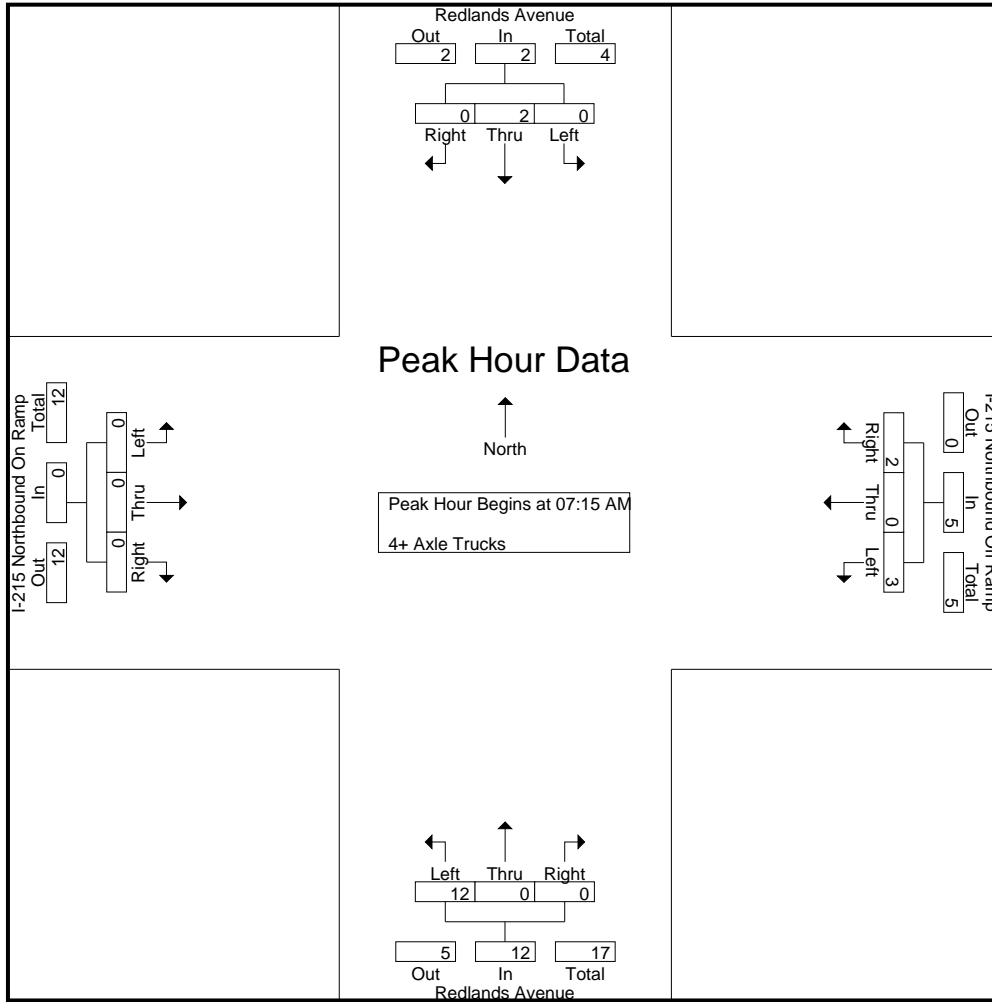
Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
07:30 AM	0	1	0	1	2	0	1	3	4	0	0	4	0	0	0	0	8
07:45 AM	0	0	0	0	1	0	1	2	2	0	0	2	0	0	0	0	4
08:00 AM	0	1	0	1	0	0	0	0	3	0	0	3	0	0	0	0	4
Total Volume	0	2	0	2	3	0	2	5	12	0	0	12	0	0	0	0	19
% App. Total	0	100	0		60	0	40		100	0	0		0	0	0		
PHF	.000	.500	.000	.500	.375	.000	.500	.417	.750	.000	.000	.750	.000	.000	.000	.000	.594

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0
+15 mins.	0	1	0	1	2	0	1	3	4	0	0	0	4	0	0	0
+30 mins.	0	0	0	0	1	0	1	2	2	0	0	0	2	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	3	0	0	0	3	0	0	0
Total Volume	0	2	0	2	3	0	2	5	12	0	0	12	0	0	0	0
% App. Total	0	100	0	0	60	0	40	0	100	0	0	0	0	0	0	0
PHF	.000	.500	.000	.500	.375	.000	.500	.417	.750	.000	.000	.750	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

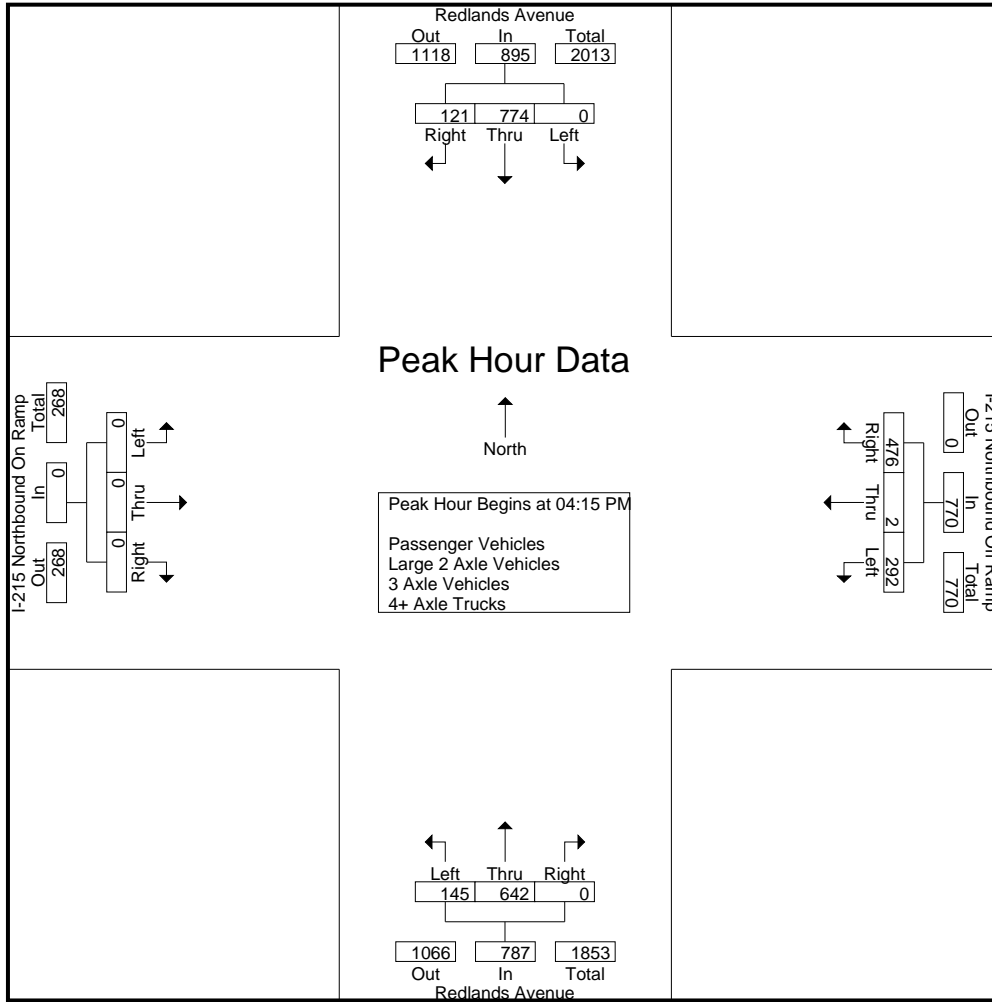
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	183	29	212	78	1	124	203	41	158	0	199	0	0	0	0	614
04:15 PM	0	180	35	215	63	0	123	186	42	180	0	222	0	0	0	0	623
04:30 PM	0	202	27	229	78	1	115	194	43	145	0	188	0	0	0	0	611
04:45 PM	0	186	27	213	73	1	127	201	27	148	0	175	0	0	0	0	589
Total	0	751	118	869	292	3	489	784	153	631	0	784	0	0	0	0	2437
05:00 PM	0	206	32	238	78	0	111	189	33	169	0	202	0	0	0	0	629
05:15 PM	0	176	29	205	87	0	140	227	32	157	0	189	0	0	0	0	621
05:30 PM	0	181	57	238	80	0	111	191	25	146	0	171	0	0	0	0	600
05:45 PM	0	156	17	173	88	2	105	195	30	157	0	187	0	0	0	0	555
Total	0	719	135	854	333	2	467	802	120	629	0	749	0	0	0	0	2405
Grand Total	0	1470	253	1723	625	5	956	1586	273	1260	0	1533	0	0	0	0	4842
Apprch %	0	85.3	14.7		39.4	0.3	60.3		17.8	82.2	0		0	0	0		
Total %	0	30.4	5.2	35.6	12.9	0.1	19.7	32.8	5.6	26	0	31.7	0	0	0	0	
Passenger Vehicles	0	1450	249	1699	603	5	941	1549	250	1240	0	1490	0	0	0	0	4738
% Passenger Vehicles	0	98.6	98.4	98.6	96.5	100	98.4	97.7	91.6	98.4	0	97.2	0	0	0	0	97.9
Large 2 Axle Vehicles	0	14	3	17	17	0	14	31	11	13	0	24	0	0	0	0	72
% Large 2 Axle Vehicles	0	1	1.2	1	2.7	0	1.5	2	4	1	0	1.6	0	0	0	0	1.5
3 Axle Vehicles	0	5	0	5	2	0	0	2	1	4	0	5	0	0	0	0	12
% 3 Axle Vehicles	0	0.3	0	0.3	0.3	0	0	0.1	0.4	0.3	0	0.3	0	0	0	0	0.2
4+ Axle Trucks	0	1	1	2	3	0	1	4	11	3	0	14	0	0	0	0	20
% 4+ Axle Trucks	0	0.1	0.4	0.1	0.5	0	0.1	0.3	4	0.2	0	0.9	0	0	0	0	0.4

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	180	35	215	63	0	123	186	42	180	0	222	0	0	0	0	623
04:30 PM	0	202	27	229	78	1	115	194	43	145	0	188	0	0	0	0	611
04:45 PM	0	186	27	213	73	1	127	201	27	148	0	175	0	0	0	0	589
05:00 PM	0	206	32	238	78	0	111	189	33	169	0	202	0	0	0	0	629
Total Volume	0	774	121	895	292	2	476	770	145	642	0	787	0	0	0	0	2452
% App. Total	0	86.5	13.5		37.9	0.3	61.8		18.4	81.6	0		0	0	0		
PHF	.000	.939	.864	.940	.936	.500	.937	.958	.843	.892	.000	.886	.000	.000	.000	.000	.975

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	0	180	35	215	78	1	115	194	42	180	0	222	0	0	0	0
+15 mins.	0	202	27	229	73	1	127	201	43	145	0	188	0	0	0	0
+30 mins.	0	186	27	213	78	0	111	189	27	148	0	175	0	0	0	0
+45 mins.	0	206	32	238	87	0	140	227	33	169	0	202	0	0	0	0
Total Volume	0	774	121	895	316	2	493	811	145	642	0	787	0	0	0	0
% App. Total	0	86.5	13.5		39	0.2	60.8		18.4	81.6	0		0	0	0	
PHF	.000	.939	.864	.940	.908	.500	.880	.893	.843	.892	.000	.886	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	182	28	210	78	1	119	198	40	151	0	191	0	0	0	0	599
04:15 PM	0	174	34	208	60	0	122	182	38	177	0	215	0	0	0	0	605
04:30 PM	0	199	26	225	75	1	114	190	36	142	0	178	0	0	0	0	593
04:45 PM	0	183	27	210	71	1	124	196	25	148	0	173	0	0	0	0	579
Total	0	738	115	853	284	3	479	766	139	618	0	757	0	0	0	0	2376
05:00 PM	0	203	32	235	77	0	107	184	29	167	0	196	0	0	0	0	615
05:15 PM	0	174	28	202	83	0	140	223	28	156	0	184	0	0	0	0	609
05:30 PM	0	180	57	237	74	0	111	185	24	143	0	167	0	0	0	0	589
05:45 PM	0	155	17	172	85	2	104	191	30	156	0	186	0	0	0	0	549
Total	0	712	134	846	319	2	462	783	111	622	0	733	0	0	0	0	2362
Grand Total	0	1450	249	1699	603	5	941	1549	250	1240	0	1490	0	0	0	0	4738
Apprch %	0	85.3	14.7		38.9	0.3	60.7		16.8	83.2	0		0	0	0		
Total %	0	30.6	5.3	35.9	12.7	0.1	19.9	32.7	5.3	26.2	0	31.4	0	0	0	0	

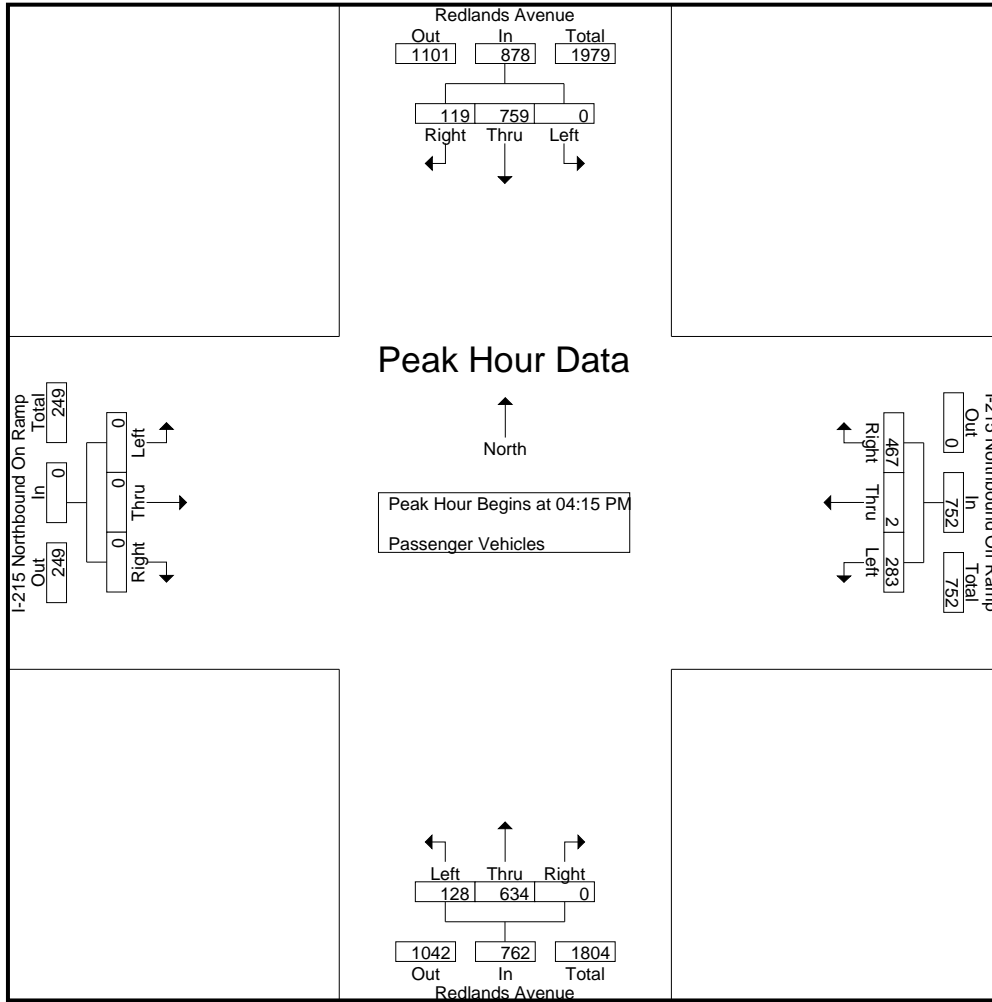
Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	174	34	208	60	0	122	182	38	177	0	215	0	0	0	0	605
04:30 PM	0	199	26	225	75	1	114	190	36	142	0	178	0	0	0	0	593
04:45 PM	0	183	27	210	71	1	124	196	25	148	0	173	0	0	0	0	579
05:00 PM	0	203	32	235	77	0	107	184	29	167	0	196	0	0	0	0	615
Total Volume	0	759	119	878	283	2	467	752	128	634	0	762	0	0	0	0	2392
% App. Total	0	86.4	13.6		37.6	0.3	62.1		16.8	83.2	0		0	0	0		
PHF	.000	.935	.875	.934	.919	.500	.942	.959	.842	.895	.000	.886	.000	.000	.000	.000	.972

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	174	34	208	60	0	122	182	38	177	0	215	0	0	0	0
+15 mins.	0	199	26	225	75	1	114	190	36	142	0	178	0	0	0	0
+30 mins.	0	183	27	210	71	1	124	196	25	148	0	173	0	0	0	0
+45 mins.	0	203	32	235	77	0	107	184	29	167	0	196	0	0	0	0
Total Volume	0	759	119	878	283	2	467	752	128	634	0	762	0	0	0	0
% App. Total	0	86.4	13.6		37.6	0.3	62.1		16.8	83.2	0		0	0	0	
PHF	.000	.935	.875	.934	.919	.500	.942	.959	.842	.895	.000	.886	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	1	0	1	0	0	4	4	1	5	0	6	0	0	0	0	11
04:15 PM	0	4	1	5	2	0	1	3	0	2	0	2	0	0	0	0	10
04:30 PM	0	2	1	3	2	0	1	3	4	2	0	6	0	0	0	0	12
04:45 PM	0	3	0	3	2	0	3	5	0	0	0	0	0	0	0	0	8
Total	0	10	2	12	6	0	9	15	5	9	0	14	0	0	0	0	41
05:00 PM	0	2	0	2	1	0	4	5	2	1	0	3	0	0	0	0	10
05:15 PM	0	1	1	2	4	0	0	4	3	0	0	3	0	0	0	0	9
05:30 PM	0	0	0	0	5	0	0	5	1	3	0	4	0	0	0	0	9
05:45 PM	0	1	0	1	1	0	1	2	0	0	0	0	0	0	0	0	3
Total	0	4	1	5	11	0	5	16	6	4	0	10	0	0	0	0	31
Grand Total	0	14	3	17	17	0	14	31	11	13	0	24	0	0	0	0	72
Apprch %	0	82.4	17.6		54.8	0	45.2		45.8	54.2	0		0	0	0		
Total %	0	19.4	4.2	23.6	23.6	0	19.4	43.1	15.3	18.1	0	33.3	0	0	0	0	

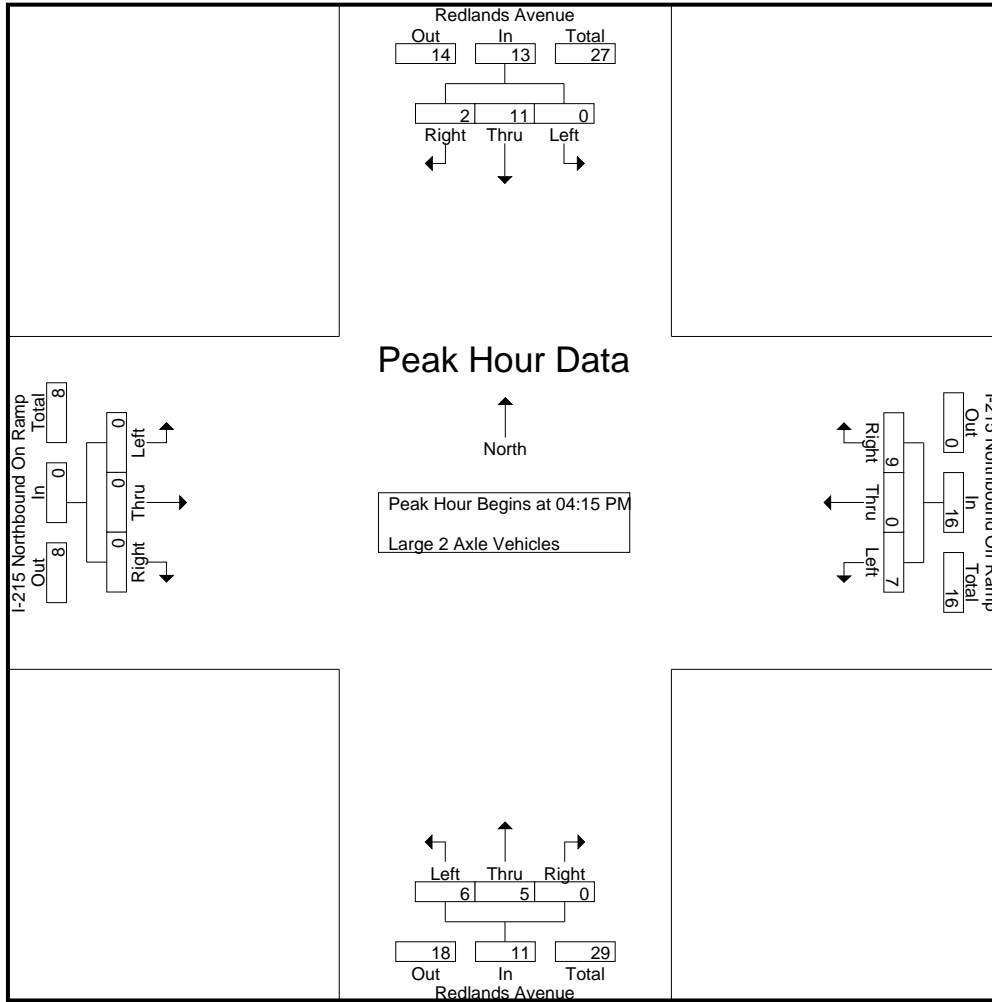
Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	4	1	5	2	0	1	3	0	2	0	2	0	0	0	0	10
04:30 PM	0	2	1	3	2	0	1	3	4	2	0	6	0	0	0	0	12
04:45 PM	0	3	0	3	2	0	3	5	0	0	0	0	0	0	0	0	8
05:00 PM	0	2	0	2	1	0	4	5	2	1	0	3	0	0	0	0	10
Total Volume	0	11	2	13	7	0	9	16	6	5	0	11	0	0	0	0	40
% App. Total	0	84.6	15.4		43.8	0	56.2		54.5	45.5	0		0	0	0		
PHF	.000	.688	.500	.650	.875	.000	.563	.800	.375	.625	.000	.458	.000	.000	.000	.000	.833

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	4	1	5	2	0	1	3	0	2	0	2	0	0	0	0
+15 mins.	0	2	1	3	2	0	1	3	4	2	0	6	0	0	0	0
+30 mins.	0	3	0	3	2	0	3	5	0	0	0	0	0	0	0	0
+45 mins.	0	2	0	2	1	0	4	5	2	1	0	3	0	0	0	0
Total Volume	0	11	2	13	7	0	9	16	6	5	0	11	0	0	0	0
% App. Total	0	84.6	15.4		43.8	0	56.2		54.5	45.5	0		0	0	0	
PHF	.000	.688	.500	.650	.875	.000	.563	.800	.375	.625	.000	.458	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
04:15 PM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	0	3
04:30 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	2	0	0	2	0	2	0	2	0	0	0	0	0	6
05:00 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	2
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	1	2	0	3	0	0	0	0	0	6
Grand Total	0	5	0	5	2	0	0	2	1	4	0	5	0	0	0	0	0	12
Apprch %	0	100	0		100	0	0		20	80	0		0	0	0	0		
Total %	0	41.7	0	41.7	16.7	0	0	16.7	8.3	33.3	0	41.7	0	0	0	0		

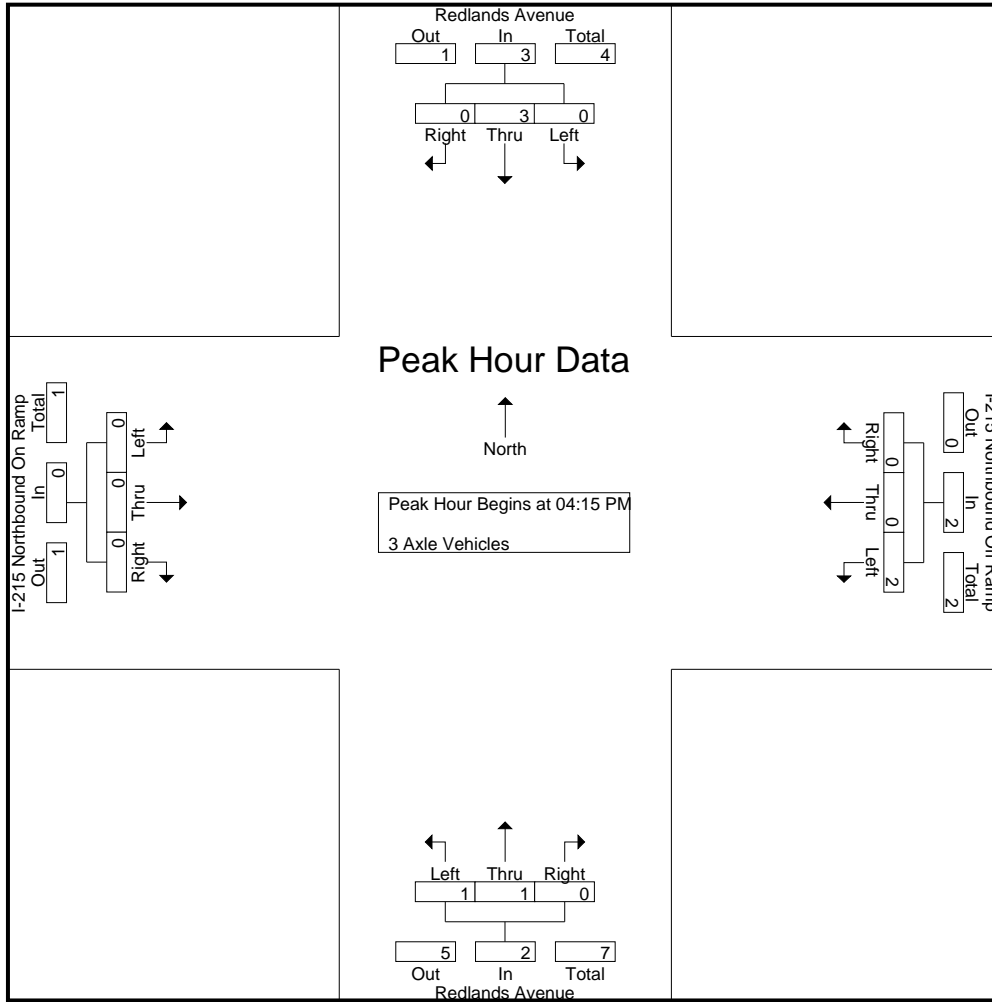
Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:15 PM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	0	3
04:30 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total Volume	0	3	0	3	2	0	0	2	1	1	0	2	0	0	0	0	0	7
% App. Total	0	100	0		100	0	0		50	50	0		0	0	0			
PHF	.000	.750	.000	.750	.500	.000	.000	.500	.250	.250	.000	.500	.000	.000	.000	.000	.000	.583

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0
+15 mins.	0	1	0	1	1	0	0	1	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	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0
Total Volume	0	3	0	3	2	0	0	2	1	1	0	2	0	0	0	0
% App. Total	0	100	0	100	100	0	0	100	50	50	0	100	0	0	0	0
PHF	.000	.750	.000	.750	.500	.000	.000	.500	.250	.250	.000	.500	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	1	1	0	0	1	1	0	1	0	1	0	0	0	0	3
04:15 PM	0	1	0	1	0	0	0	0	4	0	0	4	0	0	0	0	5
04:30 PM	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
Total	0	1	1	2	0	0	1	1	9	2	0	11	0	0	0	0	14
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	3	0	0	3	2	1	0	3	0	0	0	0	6
Grand Total	0	1	1	2	3	0	1	4	11	3	0	14	0	0	0	0	20
Apprch %	0	50	50		75	0	25		78.6	21.4	0		0	0	0		
Total %	0	5	5	10	15	0	5	20	55	15	0	70	0	0	0	0	

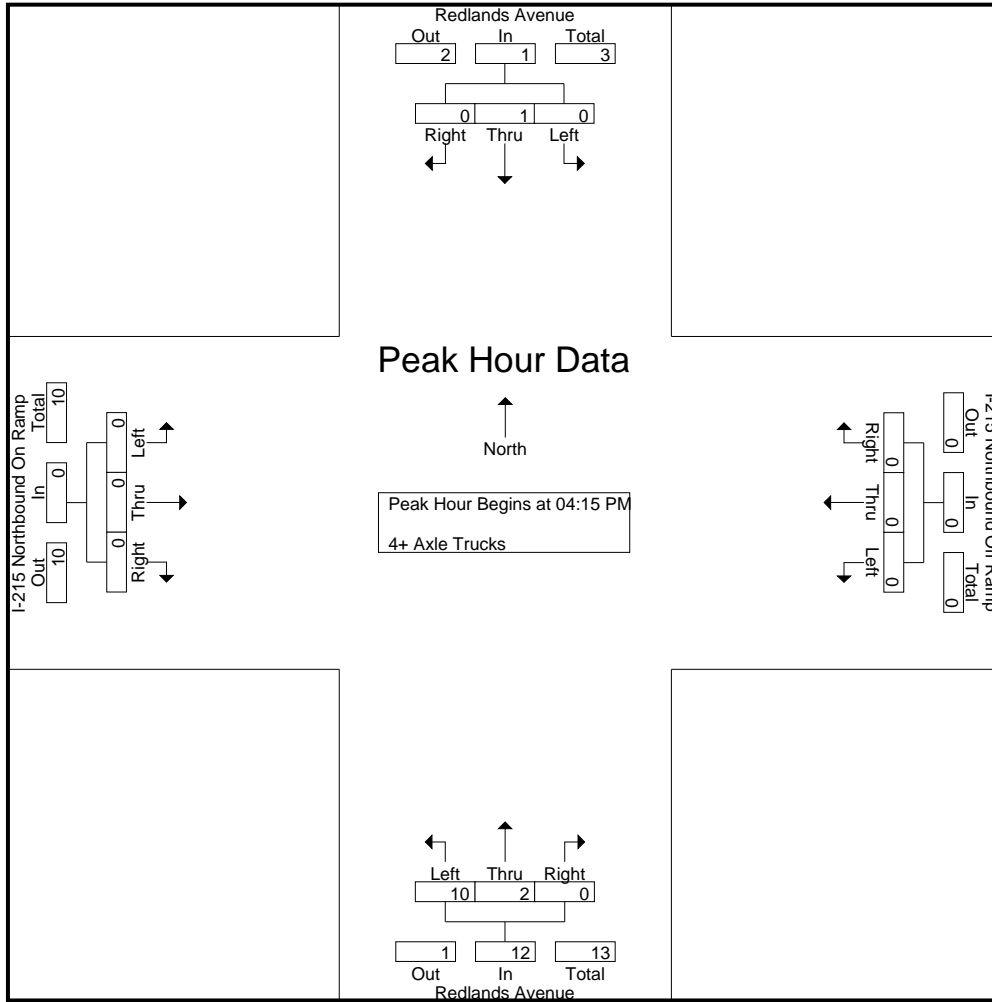
Start Time	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	1	0	1	0	0	0	0	4	0	0	4	0	0	0	0	5
04:30 PM	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
Total Volume	0	1	0	1	0	0	0	0	10	2	0	12	0	0	0	0	13
% App. Total	0	100	0		0	0	0		83.3	16.7	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.625	.500	.000	.750	.000	.000	.000	.000	.650

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Northbound Ramps
 Weather: Clear

File Name : 01_PER_Red_215N PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	1	0	1	0	0	0	0	4	0	0	4	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	10	2	0	12	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	83.3	16.7	0	0	0	0	0	0
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.625	.500	.000	.750	.000	.000	.000	.000

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

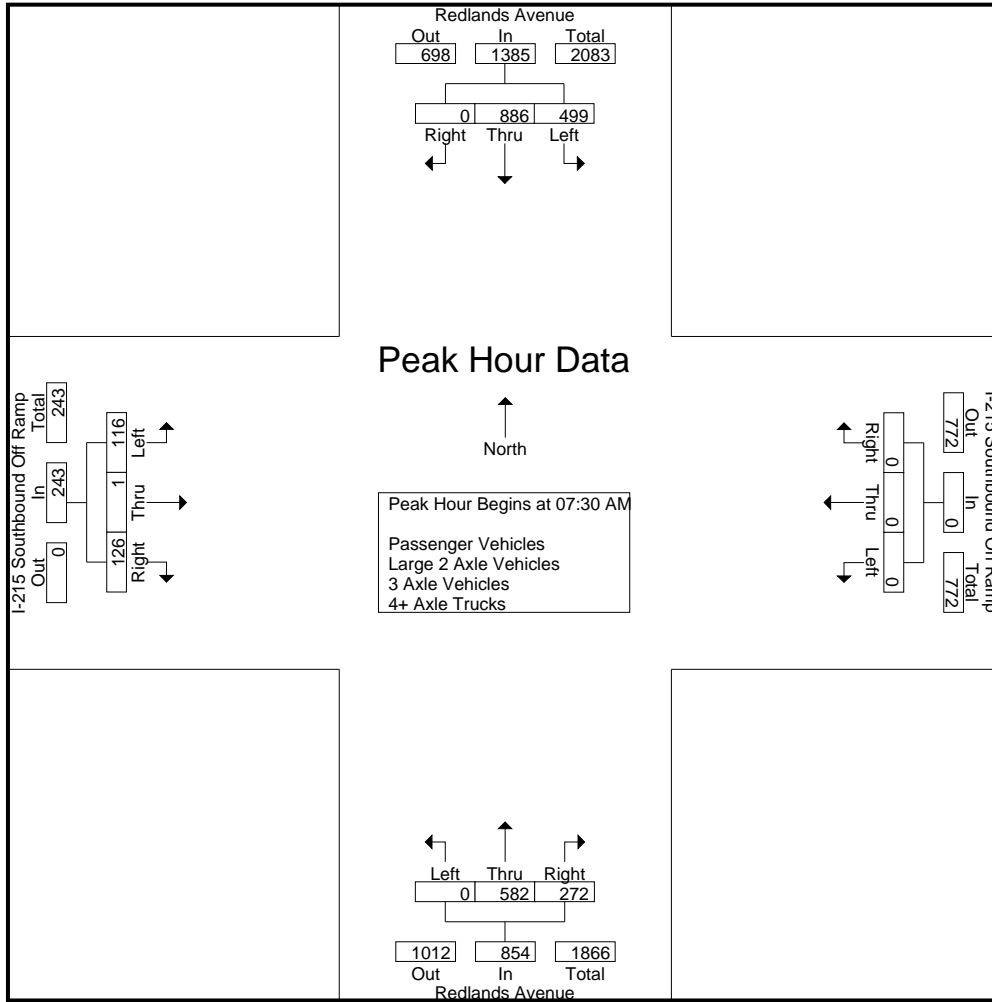
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	101	154	0	255	0	0	0	0	0	81	54	135	11	0	28	39	429
07:15 AM	111	179	0	290	0	0	0	0	0	105	61	166	28	0	28	56	512
07:30 AM	146	229	0	375	0	0	0	0	0	149	67	216	29	0	41	70	661
07:45 AM	136	231	0	367	0	0	0	0	0	167	82	249	40	1	29	70	686
Total	494	793	0	1287	0	0	0	0	0	502	264	766	108	1	126	235	2288
08:00 AM	113	220	0	333	0	0	0	0	0	136	55	191	31	0	22	53	577
08:15 AM	104	206	0	310	0	0	0	0	0	130	68	198	16	0	34	50	558
08:30 AM	100	194	0	294	0	0	0	0	0	99	75	174	15	0	28	43	511
08:45 AM	74	166	0	240	0	0	0	0	0	81	45	126	8	0	30	38	404
Total	391	786	0	1177	0	0	0	0	0	446	243	689	70	0	114	184	2050
Grand Total	885	1579	0	2464	0	0	0	0	0	948	507	1455	178	1	240	419	4338
Apprch %	35.9	64.1	0		0	0	0		0	65.2	34.8		42.5	0.2	57.3		
Total %	20.4	36.4	0	56.8	0	0	0	0	0	21.9	11.7	33.5	4.1	0	5.5	9.7	
Passenger Vehicles	870	1524	0	2394	0	0	0	0	0	889	464	1353	173	0	209	382	4129
% Passenger Vehicles	98.3	96.5	0	97.2	0	0	0	0	0	93.8	91.5	93	97.2	0	87.1	91.2	95.2
Large 2 Axle Vehicles	12	38	0	50	0	0	0	0	0	25	29	54	4	0	13	17	121
% Large 2 Axle Vehicles	1.4	2.4	0	2	0	0	0	0	0	2.6	5.7	3.7	2.2	0	5.4	4.1	2.8
3 Axle Vehicles	1	6	0	7	0	0	0	0	0	7	6	13	1	0	6	7	27
% 3 Axle Vehicles	0.1	0.4	0	0.3	0	0	0	0	0	0.7	1.2	0.9	0.6	0	2.5	1.7	0.6
4+ Axle Trucks	2	11	0	13	0	0	0	0	0	27	8	35	0	1	12	13	61
% 4+ Axle Trucks	0.2	0.7	0	0.5	0	0	0	0	0	2.8	1.6	2.4	0	100	5	3.1	1.4

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	146	229	0	375	0	0	0	0	0	149	67	216	29	0	41	70	661
07:45 AM	136	231	0	367	0	0	0	0	0	167	82	249	40	1	29	70	686
08:00 AM	113	220	0	333	0	0	0	0	0	136	55	191	31	0	22	53	577
08:15 AM	104	206	0	310	0	0	0	0	0	130	68	198	16	0	34	50	558
Total Volume	499	886	0	1385	0	0	0	0	0	582	272	854	116	1	126	243	2482
% App. Total	36	64	0		0	0	0		0	68.1	31.9		47.7	0.4	51.9		
PHF	.854	.959	.000	.923	.000	.000	.000	.000	.000	.871	.829	.857	.725	.250	.768	.868	.905

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:30 AM				07:15 AM			
+0 mins.	146	229	0	375	0	0	0	0	0	149	67	216	28	0	28	56
+15 mins.	136	231	0	367	0	0	0	0	0	167	82	249	29	0	41	70
+30 mins.	113	220	0	333	0	0	0	0	0	136	55	191	40	1	29	70
+45 mins.	104	206	0	310	0	0	0	0	0	130	68	198	31	0	22	53
Total Volume	499	886	0	1385	0	0	0	0	0	582	272	854	128	1	120	249
% App. Total	36	64	0		0	0	0	0	0	68.1	31.9		51.4	0.4	48.2	
PHF	.854	.959	.000	.923	.000	.000	.000	.000	.000	.871	.829	.857	.800	.250	.732	.889

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

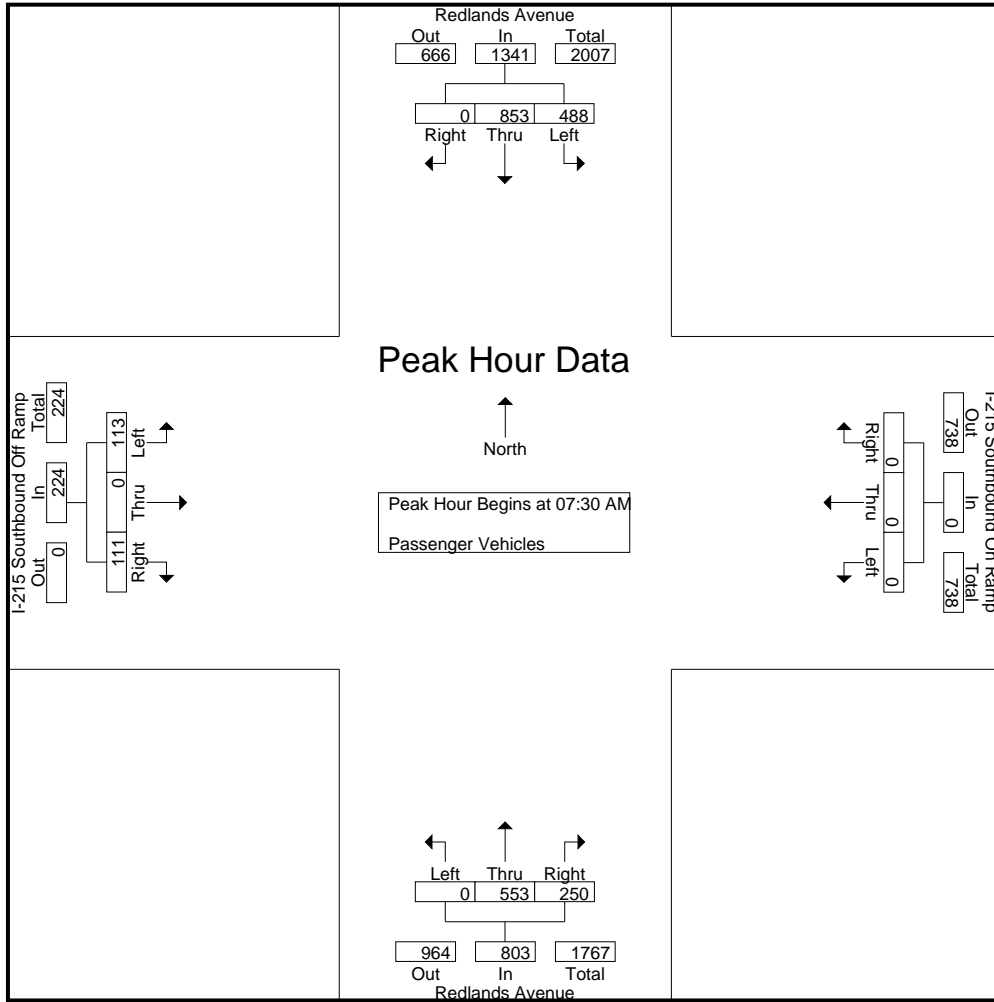
Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	99	150	0	249	0	0	0	0	0	69	49	118	11	0	22	33	400
07:15 AM	109	169	0	278	0	0	0	0	0	99	53	152	26	0	26	52	482
07:30 AM	143	218	0	361	0	0	0	0	0	140	63	203	29	0	38	67	631
07:45 AM	134	223	0	357	0	0	0	0	0	163	73	236	38	0	28	66	659
Total	485	760	0	1245	0	0	0	0	0	471	238	709	104	0	114	218	2172
08:00 AM	110	212	0	322	0	0	0	0	0	128	53	181	31	0	21	52	555
08:15 AM	101	200	0	301	0	0	0	0	0	122	61	183	15	0	24	39	523
08:30 AM	100	187	0	287	0	0	0	0	0	94	68	162	15	0	25	40	489
08:45 AM	74	165	0	239	0	0	0	0	0	74	44	118	8	0	25	33	390
Total	385	764	0	1149	0	0	0	0	0	418	226	644	69	0	95	164	1957
Grand Total	870	1524	0	2394	0	0	0	0	0	889	464	1353	173	0	209	382	4129
Apprch %	36.3	63.7	0		0	0	0		0	65.7	34.3		45.3	0	54.7		
Total %	21.1	36.9	0	58	0	0	0		0	21.5	11.2	32.8	4.2	0	5.1	9.3	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	143	218	0	361	0	0	0	0	0	140	63	203	29	0	38	67	631
07:45 AM	134	223	0	357	0	0	0	0	0	163	73	236	38	0	28	66	659
08:00 AM	110	212	0	322	0	0	0	0	0	128	53	181	31	0	21	52	555
08:15 AM	101	200	0	301	0	0	0	0	0	122	61	183	15	0	24	39	523
Total Volume	488	853	0	1341	0	0	0	0	0	553	250	803	113	0	111	224	2368
% App. Total	36.4	63.6	0		0	0	0		0	68.9	31.1		50.4	0	49.6		
PHF	.853	.956	.000	.929	.000	.000	.000	.000	.000	.848	.856	.851	.743	.000	.730	.836	.898

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	143	218	0	361	0	0	0	0	0	140	63	203	29	0	38	67
+15 mins.	134	223	0	357	0	0	0	0	0	163	73	236	38	0	28	66
+30 mins.	110	212	0	322	0	0	0	0	0	128	53	181	31	0	21	52
+45 mins.	101	200	0	301	0	0	0	0	0	122	61	183	15	0	24	39
Total Volume	488	853	0	1341	0	0	0	0	0	553	250	803	113	0	111	224
% App. Total	36.4	63.6	0		0	0	0	0	0	68.9	31.1		50.4	0	49.6	
PHF	.853	.956	.000	.929	.000	.000	.000	.000	.000	.848	.856	.851	.743	.000	.730	.836

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

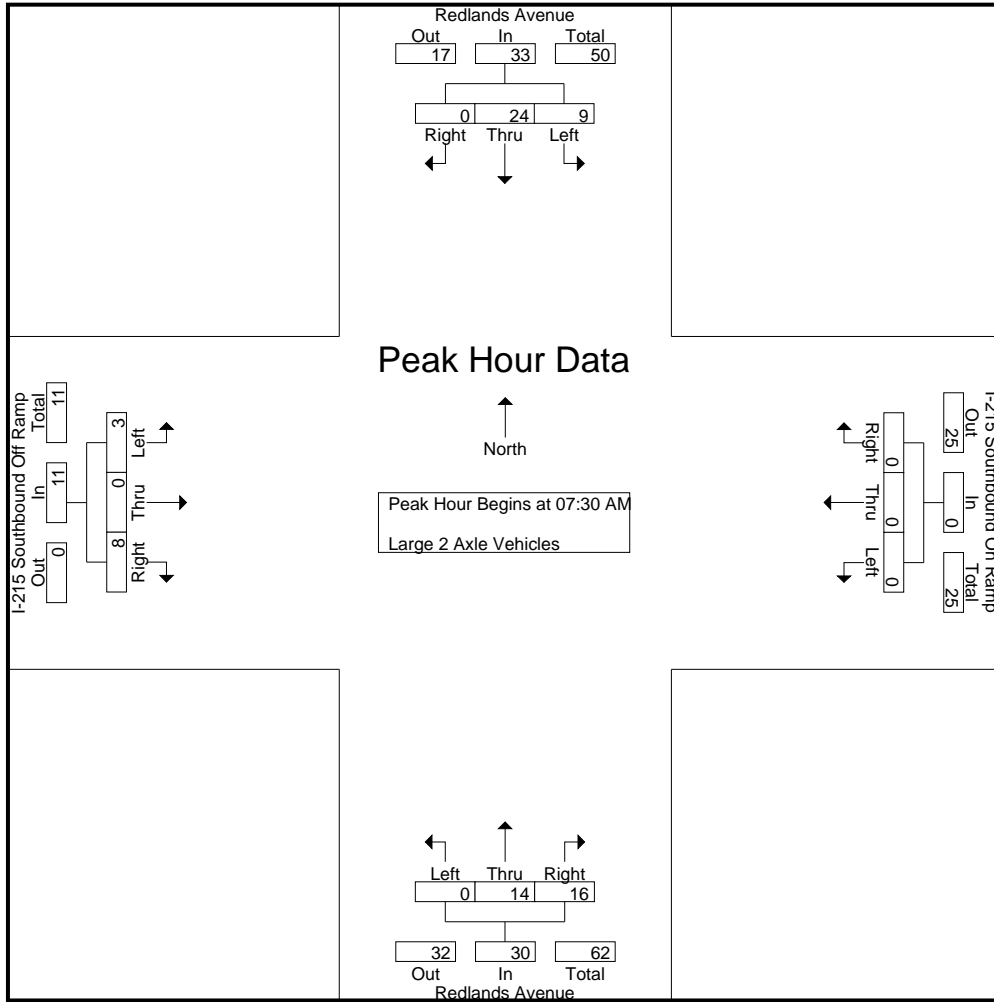
Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	3	0	4	0	0	0	0	0	2	3	5	0	0	2	2	11
07:15 AM	2	9	0	11	0	0	0	0	0	3	5	8	1	0	1	2	21
07:30 AM	3	8	0	11	0	0	0	0	0	3	4	7	0	0	1	1	19
07:45 AM	2	6	0	8	0	0	0	0	0	3	8	11	2	0	0	2	21
Total	8	26	0	34	0	0	0	0	0	11	20	31	3	0	4	7	72
08:00 AM	2	6	0	8	0	0	0	0	0	2	1	3	0	0	0	0	11
08:15 AM	2	4	0	6	0	0	0	0	0	6	3	9	1	0	7	8	23
08:30 AM	0	2	0	2	0	0	0	0	0	3	4	7	0	0	1	1	10
08:45 AM	0	0	0	0	0	0	0	0	0	3	1	4	0	0	1	1	5
Total	4	12	0	16	0	0	0	0	0	14	9	23	1	0	9	10	49
Grand Total	12	38	0	50	0	0	0	0	0	25	29	54	4	0	13	17	121
Apprch %	24	76	0		0	0	0		0	46.3	53.7		23.5	0	76.5		
Total %	9.9	31.4	0	41.3	0	0	0	0	0	20.7	24	44.6	3.3	0	10.7	14	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	3	8	0	11	0	0	0	0	0	3	4	7	0	0	1	1	19
07:45 AM	2	6	0	8	0	0	0	0	0	3	8	11	2	0	0	2	21
08:00 AM	2	6	0	8	0	0	0	0	0	2	1	3	0	0	0	0	11
08:15 AM	2	4	0	6	0	0	0	0	0	6	3	9	1	0	7	8	23
Total Volume	9	24	0	33	0	0	0	0	0	14	16	30	3	0	8	11	74
% App. Total	27.3	72.7	0		0	0	0		0	46.7	53.3		27.3	0	72.7		
PHF	.750	.750	.000	.750	.000	.000	.000	.000	.000	.583	.500	.682	.375	.000	.286	.344	.804

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	3	8	0	11	0	0	0	0	0	3	4	7	0	0	1	1
+15 mins.	2	6	0	8	0	0	0	0	0	3	8	11	2	0	0	2
+30 mins.	2	6	0	8	0	0	0	0	0	2	1	3	0	0	0	0
+45 mins.	2	4	0	6	0	0	0	0	0	6	3	9	1	0	7	8
Total Volume	9	24	0	33	0	0	0	0	0	14	16	30	3	0	8	11
% App. Total	27.3	72.7	0		0	0	0		0	46.7	53.3		27.3	0	72.7	
PHF	.750	.750	.000	.750	.000	.000	.000	.000	.000	.583	.500	.682	.375	.000	.286	.344

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	0	1	0	0	0	0	0	3	1	4	0	0	0	0	5
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
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	5	2	7	1	0	0	1	9
08:00 AM	1	1	0	2	0	0	0	0	0	1	1	2	0	0	0	0	4
08:15 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	3	3	5
08:30 AM	0	2	0	2	0	0	0	0	0	0	2	2	0	0	2	2	6
08:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
Total	1	5	0	6	0	0	0	0	0	2	4	6	0	0	6	6	18
Grand Total	1	6	0	7	0	0	0	0	0	7	6	13	1	0	6	7	27
Apprch %	14.3	85.7	0		0	0	0		0	53.8	46.2		14.3	0	85.7		
Total %	3.7	22.2	0	25.9	0	0	0	0	0	25.9	22.2	48.1	3.7	0	22.2	25.9	

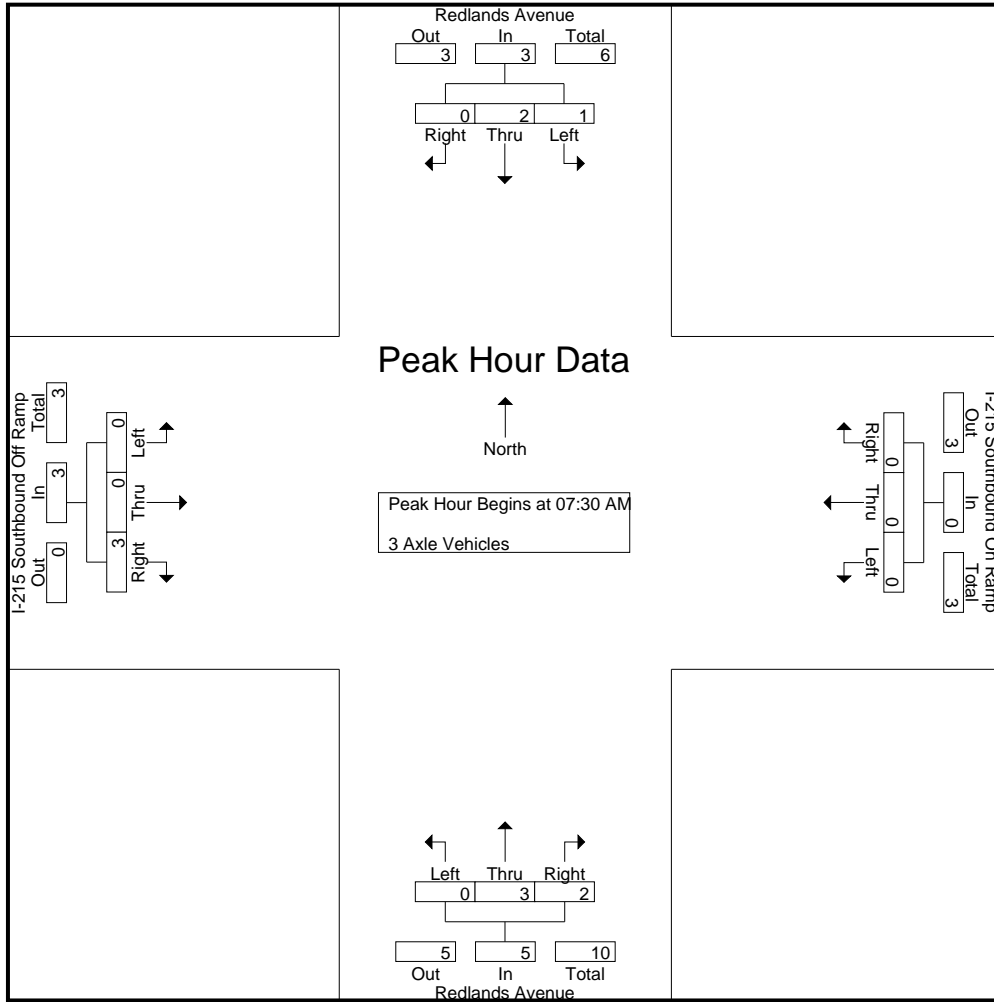
Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	1	1	0	2	0	0	0	0	0	1	1	2	0	0	0	0	4
08:15 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	3	3	5
Total Volume	1	2	0	3	0	0	0	0	0	3	2	5	0	0	3	3	11
% App. Total	33.3	66.7	0		0	0	0		0	60	40		0	0	100		
PHF	.250	.500	.000	.375	.000	.000	.000	.000	.000	.375	.500	.625	.000	.000	.250	.250	.550

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	1	1	0	2	0	0	0	0	0	1	1	2	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	1	1	0	0	3	3
Total Volume	1	2	0	3	0	0	0	0	0	3	2	5	0	0	3	3
% App. Total	33.3	66.7	0		0	0	0		0	60	40		0	0	100	
PHF	.250	.500	.000	.375	.000	.000	.000	.000	.000	.375	.500	.625	.000	.000	.250	.250

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

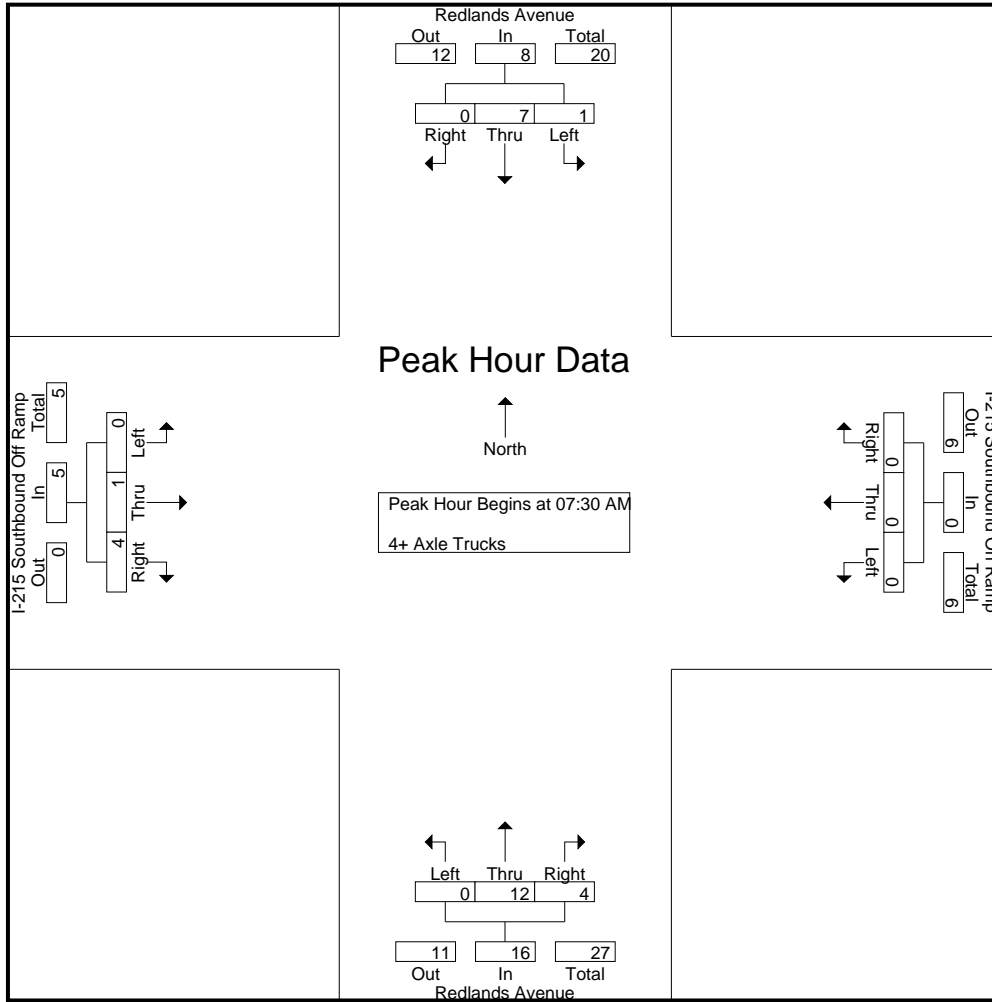
Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	0	0	1	0	0	0	0	0	7	1	8	0	0	4	4	13
07:15 AM	0	1	0	1	0	0	0	0	0	3	2	5	0	0	1	1	7
07:30 AM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	2	2	9
07:45 AM	0	2	0	2	0	0	0	0	0	1	1	2	0	1	1	2	6
Total	1	6	0	7	0	0	0	0	0	15	4	19	0	1	8	9	35
08:00 AM	0	1	0	1	0	0	0	0	0	5	0	5	0	0	1	1	7
08:15 AM	1	1	0	2	0	0	0	0	0	2	3	5	0	0	0	0	7
08:30 AM	0	3	0	3	0	0	0	0	0	2	1	3	0	0	0	0	6
08:45 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	3	3	6
Total	1	5	0	6	0	0	0	0	0	12	4	16	0	0	4	4	26
Grand Total	2	11	0	13	0	0	0	0	0	27	8	35	0	1	12	13	61
Apprch %	15.4	84.6	0		0	0	0		0	77.1	22.9		0	7.7	92.3		
Total %	3.3	18	0	21.3	0	0	0	0	0	44.3	13.1	57.4	0	1.6	19.7	21.3	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	2	2	9
07:45 AM	0	2	0	2	0	0	0	0	0	1	1	2	0	1	1	2	6
08:00 AM	0	1	0	1	0	0	0	0	0	5	0	5	0	0	1	1	7
08:15 AM	1	1	0	2	0	0	0	0	0	2	3	5	0	0	0	0	7
Total Volume	1	7	0	8	0	0	0	0	0	12	4	16	0	1	4	5	29
% App. Total	12.5	87.5	0		0	0	0		0	75	25		0	20	80		
PHF	.250	.583	.000	.667	.000	.000	.000	.000	.000	.600	.333	.800	.000	.250	.500	.625	.806

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	3	0	3	0	0	0	0	0	4	0	4	0	0	2	2
+15 mins.	0	2	0	2	0	0	0	0	0	1	1	2	0	1	1	2
+30 mins.	0	1	0	1	0	0	0	0	0	5	0	5	0	0	1	1
+45 mins.	1	1	0	2	0	0	0	0	0	2	3	5	0	0	0	0
Total Volume	1	7	0	8	0	0	0	0	0	12	4	16	0	1	4	5
% App. Total	12.5	87.5	0		0	0	0		0	75	25		0	20	80	
PHF	.250	.583	.000	.667	.000	.000	.000	.000	.000	.600	.333	.800	.000	.250	.500	.625

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S PM
 Site Code : 10823257
 Start Date : 3/23/2023
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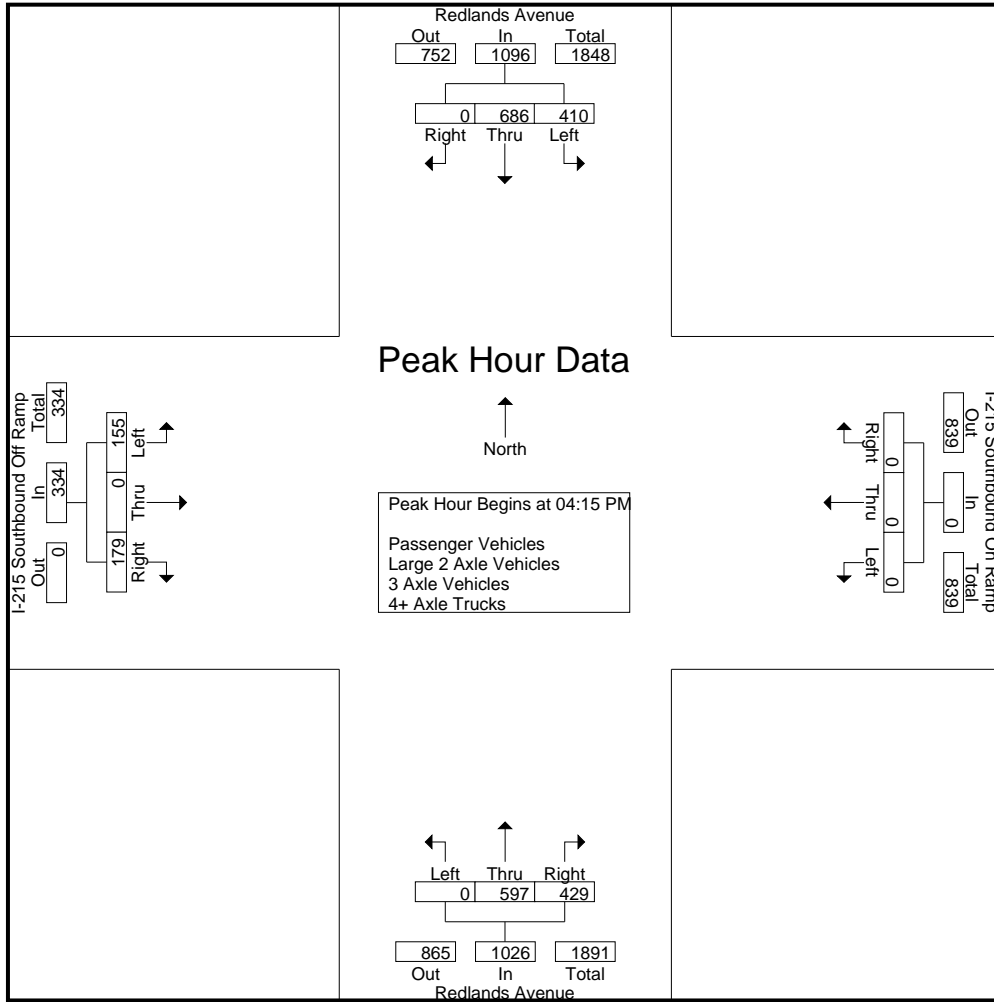
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	85	191	0	276	0	0	0	0	0	160	101	261	37	0	37	74	611
04:15 PM	91	163	0	254	0	0	0	0	0	179	93	272	37	0	46	83	609
04:30 PM	111	167	0	278	0	0	0	0	0	139	101	240	31	0	42	73	591
04:45 PM	92	174	0	266	0	0	0	0	0	125	110	235	52	0	48	100	601
Total	379	695	0	1074	0	0	0	0	0	603	405	1008	157	0	173	330	2412
05:00 PM	116	182	0	298	0	0	0	0	0	154	125	279	35	0	43	78	655
05:15 PM	90	173	0	263	0	0	0	0	0	153	107	260	27	0	29	56	579
05:30 PM	95	177	0	272	0	0	0	0	0	141	86	227	36	2	37	75	574
05:45 PM	86	161	0	247	0	0	0	0	0	158	91	249	35	2	34	71	567
Total	387	693	0	1080	0	0	0	0	0	606	409	1015	133	4	143	280	2375
Grand Total	766	1388	0	2154	0	0	0	0	0	1209	814	2023	290	4	316	610	4787
Apprch %	35.6	64.4	0		0	0	0		0	59.8	40.2		47.5	0.7	51.8		
Total %	16	29	0	45	0	0	0	0	0	25.3	17	42.3	6.1	0.1	6.6	12.7	
Passenger Vehicles	754	1352	0	2106	0	0	0	0	0	1178	793	1971	283	4	290	577	4654
% Passenger Vehicles	98.4	97.4	0	97.8	0	0	0	0	0	97.4	97.4	97.4	97.6	100	91.8	94.6	97.2
Large 2 Axle Vehicles	11	24	0	35	0	0	0	0	0	16	17	33	6	0	6	12	80
% Large 2 Axle Vehicles	1.4	1.7	0	1.6	0	0	0	0	0	1.3	2.1	1.6	2.1	0	1.9	2	1.7
3 Axle Vehicles	1	6	0	7	0	0	0	0	0	5	2	7	0	0	2	2	16
% 3 Axle Vehicles	0.1	0.4	0	0.3	0	0	0	0	0	0.4	0.2	0.3	0	0	0.6	0.3	0.3
4+ Axle Trucks	0	6	0	6	0	0	0	0	0	10	2	12	1	0	18	19	37
% 4+ Axle Trucks	0	0.4	0	0.3	0	0	0	0	0	0.8	0.2	0.6	0.3	0	5.7	3.1	0.8

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	91	163	0	254	0	0	0	0	0	179	93	272	37	0	46	83	609
04:30 PM	111	167	0	278	0	0	0	0	0	139	101	240	31	0	42	73	591
04:45 PM	92	174	0	266	0	0	0	0	0	125	110	235	52	0	48	100	601
05:00 PM	116	182	0	298	0	0	0	0	0	154	125	279	35	0	43	78	655
Total Volume	410	686	0	1096	0	0	0	0	0	597	429	1026	155	0	179	334	2456
% App. Total	37.4	62.6	0		0	0	0		0	58.2	41.8		46.4	0	53.6		
PHF	.884	.942	.000	.919	.000	.000	.000	.000	.000	.834	.858	.919	.745	.000	.932	.835	.937

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S PM
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:15 PM				04:15 PM			
+0 mins.	111	167	0	278	0	0	0	0	0	179	93	272	37	0	46	83
+15 mins.	92	174	0	266	0	0	0	0	0	139	101	240	31	0	42	73
+30 mins.	116	182	0	298	0	0	0	0	0	125	110	235	52	0	48	100
+45 mins.	90	173	0	263	0	0	0	0	0	154	125	279	35	0	43	78
Total Volume	409	696	0	1105	0	0	0	0	0	597	429	1026	155	0	179	334
% App. Total	37	63	0		0	0	0		0	58.2	41.8		46.4	0	53.6	
PHF	.881	.956	.000	.927	.000	.000	.000	.000	.000	.834	.858	.919	.745	.000	.932	.835

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S PM
 Site Code : 10823257
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Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	83	189	0	272	0	0	0	0	0	155	100	255	35	0	31	66	593
04:15 PM	90	155	0	245	0	0	0	0	0	172	91	263	37	0	43	80	588
04:30 PM	108	161	0	269	0	0	0	0	0	133	101	234	30	0	38	68	571
04:45 PM	89	172	0	261	0	0	0	0	0	125	103	228	50	0	44	94	583
Total	370	677	0	1047	0	0	0	0	0	585	395	980	152	0	156	308	2335
05:00 PM	115	180	0	295	0	0	0	0	0	151	124	275	34	0	41	75	645
05:15 PM	90	167	0	257	0	0	0	0	0	149	105	254	27	0	25	52	563
05:30 PM	95	171	0	266	0	0	0	0	0	136	82	218	36	2	35	73	557
05:45 PM	84	157	0	241	0	0	0	0	0	157	87	244	34	2	33	69	554
Total	384	675	0	1059	0	0	0	0	0	593	398	991	131	4	134	269	2319
Grand Total	754	1352	0	2106	0	0	0	0	0	1178	793	1971	283	4	290	577	4654
Apprch %	35.8	64.2	0		0	0	0		0	59.8	40.2		49	0.7	50.3		
Total %	16.2	29.1	0	45.3	0	0	0	0	0	25.3	17	42.4	6.1	0.1	6.2	12.4	

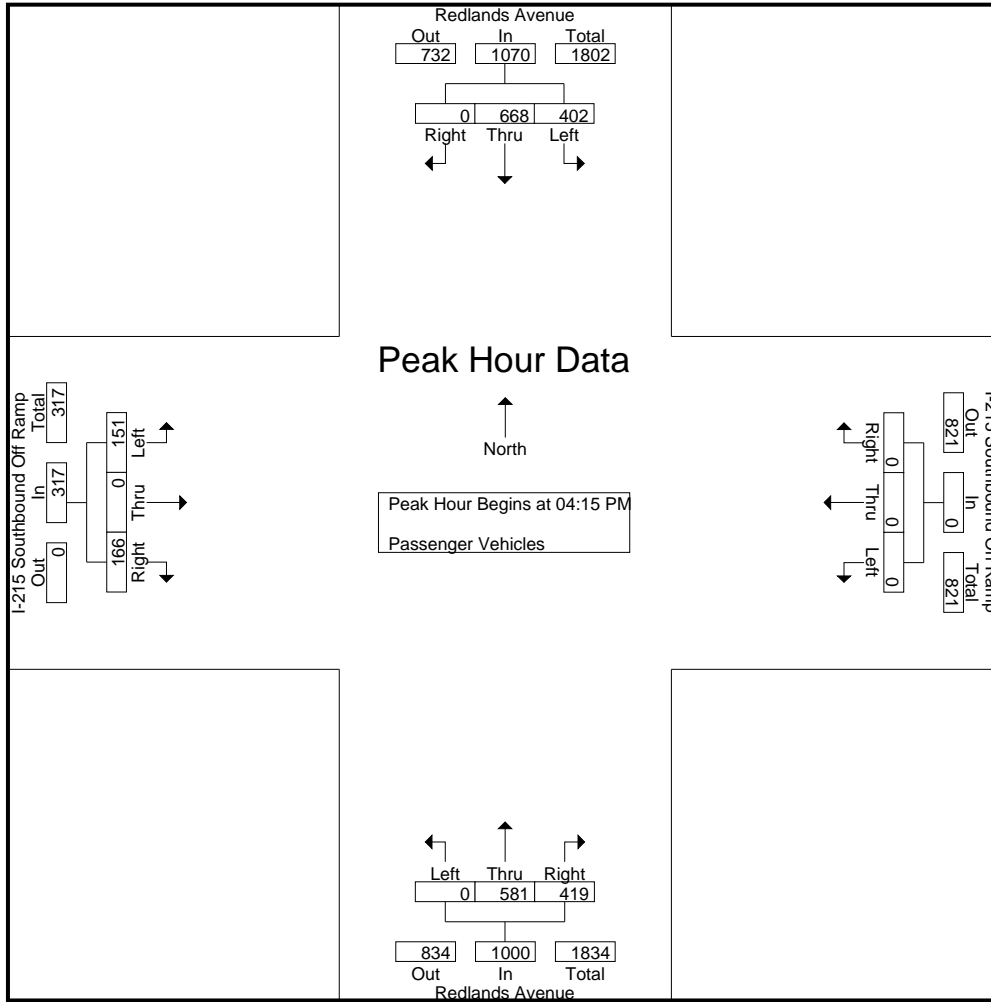
Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	90	155	0	245	0	0	0	0	0	172	91	263	37	0	43	80	588
04:30 PM	108	161	0	269	0	0	0	0	0	133	101	234	30	0	38	68	571
04:45 PM	89	172	0	261	0	0	0	0	0	125	103	228	50	0	44	94	583
05:00 PM	115	180	0	295	0	0	0	0	0	151	124	275	34	0	41	75	645
Total Volume	402	668	0	1070	0	0	0	0	0	581	419	1000	151	0	166	317	2387
% App. Total	37.6	62.4	0		0	0	0		0	58.1	41.9		47.6	0	52.4		
PHF	.874	.928	.000	.907	.000	.000	.000	.000	.000	.844	.845	.909	.755	.000	.943	.843	.925

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	90	155	0	245	0	0	0	0	0	172	91	263	37	0	43	80
+15 mins.	108	161	0	269	0	0	0	0	0	133	101	234	30	0	38	68
+30 mins.	89	172	0	261	0	0	0	0	0	125	103	228	50	0	44	94
+45 mins.	115	180	0	295	0	0	0	0	0	151	124	275	34	0	41	75
Total Volume	402	668	0	1070	0	0	0	0	0	581	419	1000	151	0	166	317
% App. Total	37.6	62.4	0		0	0	0		0	58.1	41.9		47.6	0	52.4	
PHF	.874	.928	.000	.907	.000	.000	.000	.000	.000	.844	.845	.909	.755	.000	.943	.843

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	2	2	0	4	0	0	0	0	0	4	0	4	1	0	2	3	11
04:15 PM	1	4	0	5	0	0	0	0	0	2	2	4	0	0	1	1	10
04:30 PM	2	4	0	6	0	0	0	0	0	2	0	2	1	0	0	1	9
04:45 PM	3	2	0	5	0	0	0	0	0	0	6	6	2	0	2	4	15
Total	8	12	0	20	0	0	0	0	0	8	8	16	4	0	5	9	45
05:00 PM	1	1	0	2	0	0	0	0	0	1	1	2	1	0	1	2	6
05:15 PM	0	5	0	5	0	0	0	0	0	2	2	4	0	0	0	0	9
05:30 PM	0	4	0	4	0	0	0	0	0	5	2	7	0	0	0	0	11
05:45 PM	2	2	0	4	0	0	0	0	0	0	4	4	1	0	0	1	9
Total	3	12	0	15	0	0	0	0	0	8	9	17	2	0	1	3	35
Grand Total	11	24	0	35	0	0	0	0	0	16	17	33	6	0	6	12	80
Apprch %	31.4	68.6	0		0	0	0		0	48.5	51.5		50	0	50		
Total %	13.8	30	0	43.8	0	0	0	0	0	20	21.2	41.2	7.5	0	7.5	15	

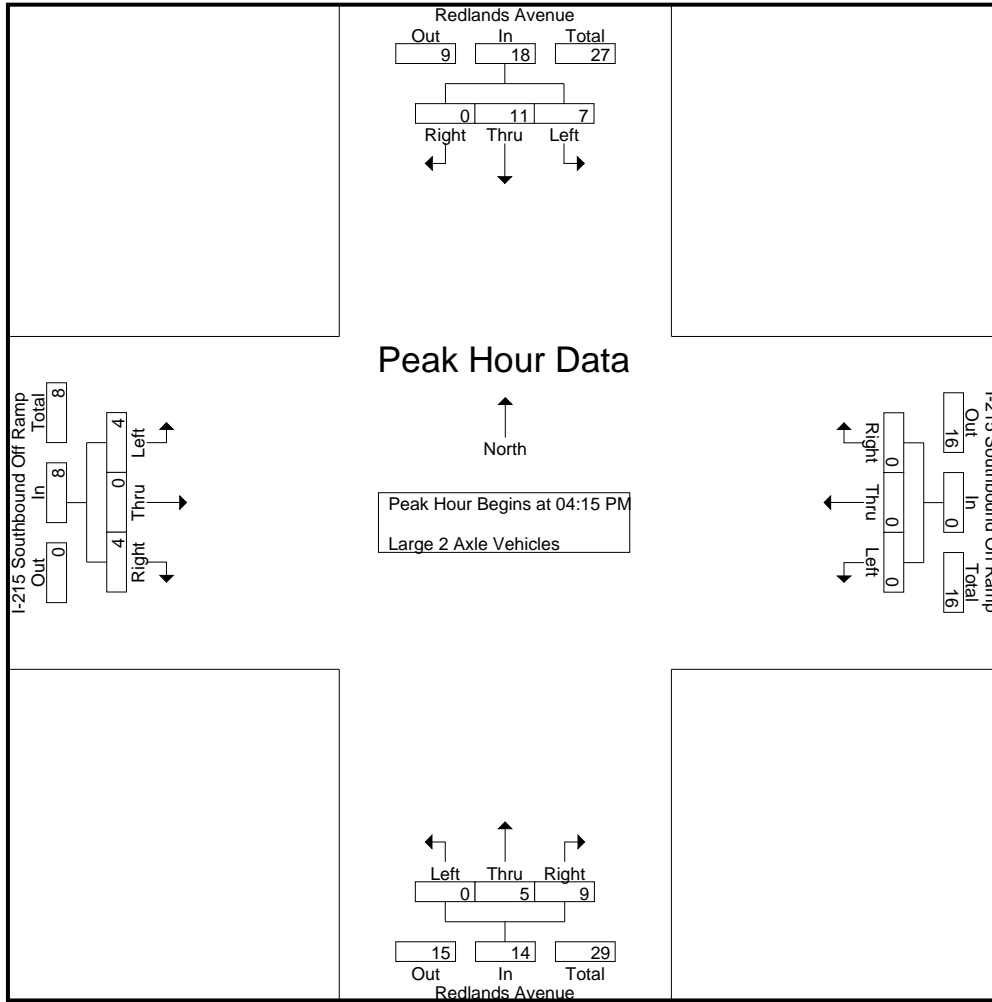
Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	1	4	0	5	0	0	0	0	0	2	2	4	0	0	1	1	10
04:30 PM	2	4	0	6	0	0	0	0	0	2	0	2	1	0	0	1	9
04:45 PM	3	2	0	5	0	0	0	0	0	0	6	6	2	0	2	4	15
05:00 PM	1	1	0	2	0	0	0	0	0	1	1	2	1	0	1	2	6
Total Volume	7	11	0	18	0	0	0	0	0	5	9	14	4	0	4	8	40
% App. Total	38.9	61.1	0		0	0	0		0	35.7	64.3		50	0	50		
PHF	.583	.688	.000	.750	.000	.000	.000	.000	.000	.625	.375	.583	.500	.000	.500	.500	.667

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	1	4	0	5	0	0	0	0	0	2	2	4	0	0	1	1
+15 mins.	2	4	0	6	0	0	0	0	0	2	0	2	1	0	0	1
+30 mins.	3	2	0	5	0	0	0	0	0	0	6	6	2	0	2	4
+45 mins.	1	1	0	2	0	0	0	0	0	1	1	2	1	0	1	2
Total Volume	7	11	0	18	0	0	0	0	0	5	9	14	4	0	4	8
% App. Total	38.9	61.1	0		0	0	0	0	0	35.7	64.3		50	0	50	
PHF	.583	.688	.000	.750	.000	.000	.000	.000	.000	.625	.375	.583	.500	.000	.500	.500

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
04:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:30 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	1	3	0	4	0	0	0	0	0	2	2	4	0	0	1	1	9
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	0	3	0	3	0	0	1	1	7
Grand Total	1	6	0	7	0	0	0	0	0	5	2	7	0	0	2	2	16
Apprch %	14.3	85.7	0		0	0	0		0	71.4	28.6		0	0	100		
Total %	6.2	37.5	0	43.8	0	0	0		0	31.2	12.5	43.8	0	0	12.5	12.5	

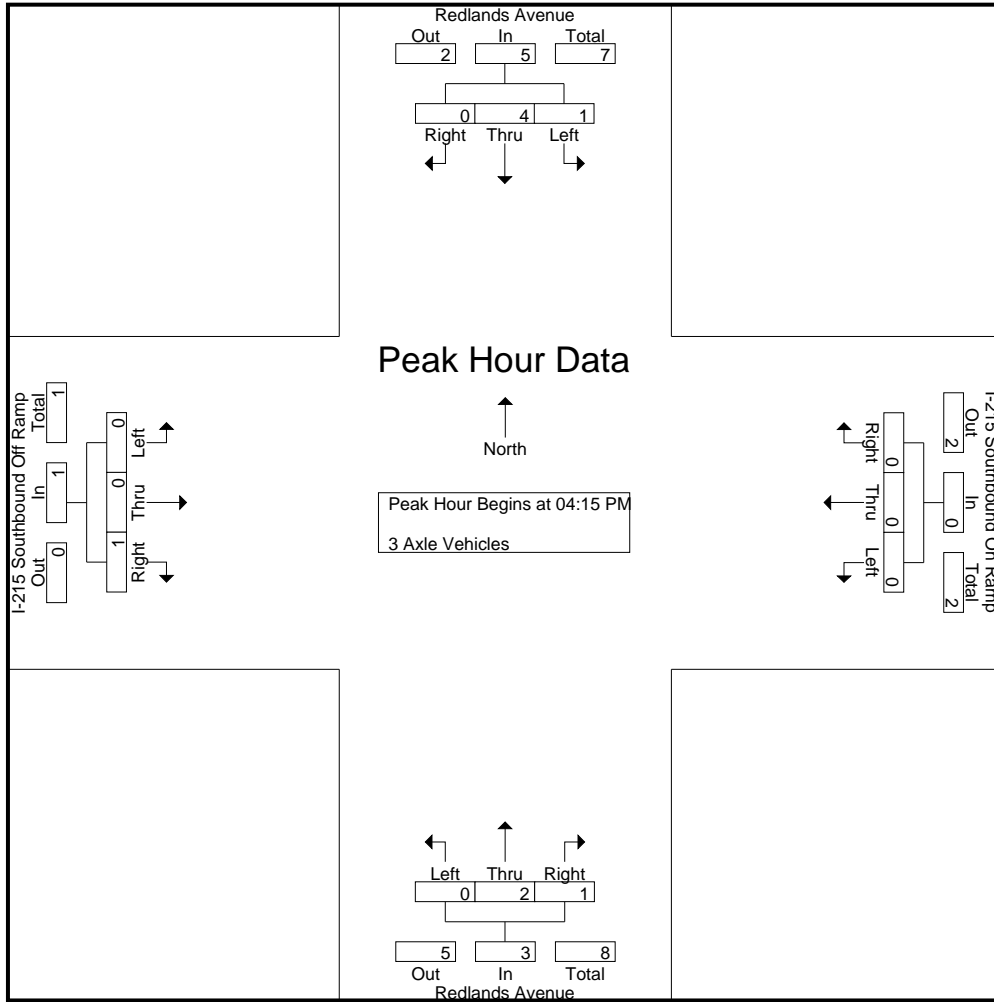
Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:30 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	1	4	0	5	0	0	0	0	0	2	1	3	0	0	1	1	9
% App. Total	20	80	0		0	0	0		0	66.7	33.3		0	0	100		
PHF	.250	.500	.000	.625	.000	.000	.000	.000	.000	.500	.250	.750	.000	.000	.250	.250	.750

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	1	4	0	5	0	0	0	0	0	2	1	3	0	0	1	1
% App. Total	20	80	0		0	0	0		0	66.7	33.3		0	0	100	
PHF	.250	.500	.000	.625	.000	.000	.000	.000	.000	.500	.250	.750	.000	.000	.250	.250

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- 4+ Axle Trucks

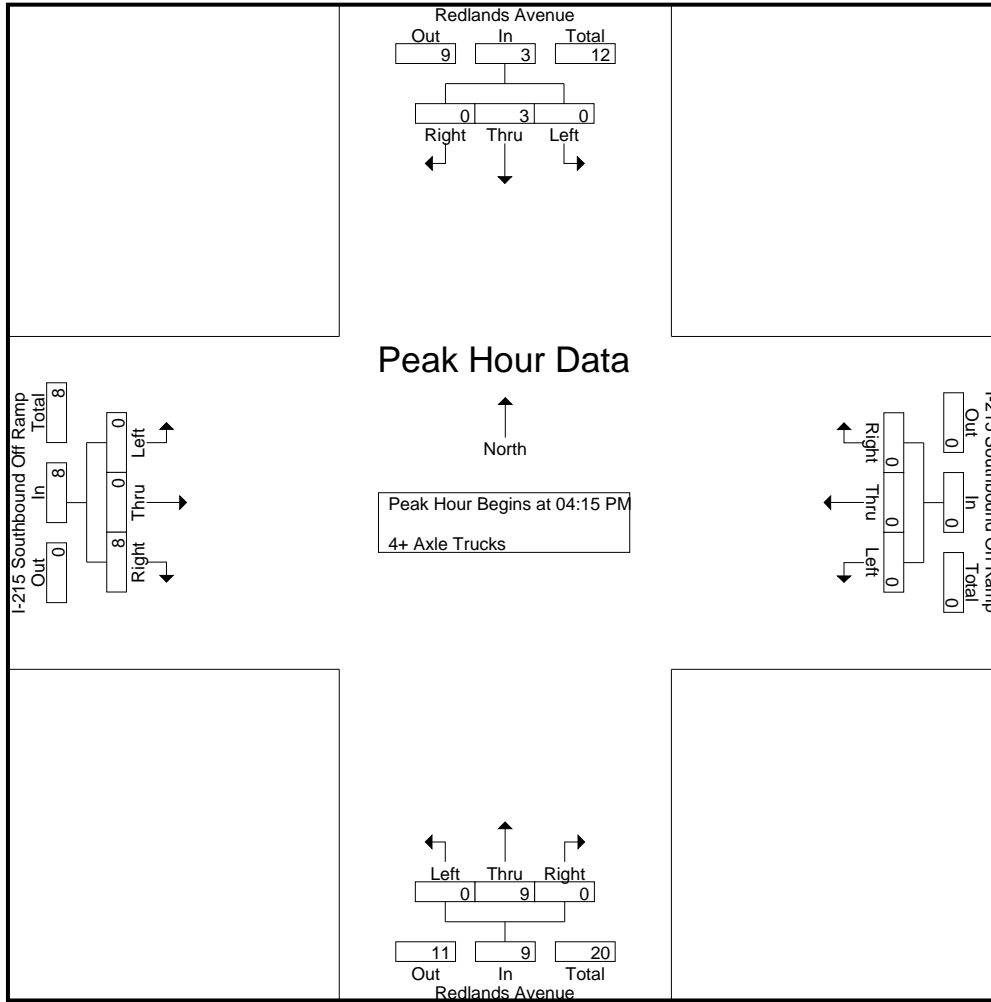
Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	5	5	
04:15 PM	0	2	0	2	0	0	0	0	0	0	4	0	4	0	0	2	2	8
04:30 PM	0	1	0	1	0	0	0	0	0	0	4	0	4	0	3	3	8	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	
Total	0	3	0	3	0	0	0	0	0	0	8	0	8	1	0	11	12	23
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	3	3	4
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	2	2	0	0	2	2	5
05:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	3
Total	0	3	0	3	0	0	0	0	0	0	2	2	4	0	0	7	7	14
Grand Total	0	6	0	6	0	0	0	0	0	0	10	2	12	1	0	18	19	37
Apprch %	0	100	0		0	0	0		0	83.3	16.7			5.3	0	94.7		
Total %	0	16.2	0	16.2	0	0	0	0	0	0	27	5.4	32.4	2.7	0	48.6	51.4	

Start Time	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:15 PM	0	2	0	2	0	0	0	0	0	0	4	0	4	0	0	2	2	8
04:30 PM	0	1	0	1	0	0	0	0	0	0	4	0	4	0	0	3	3	8
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Total Volume	0	3	0	3	0	0	0	0	0	0	9	0	9	0	0	8	8	20
% App. Total	0	100	0		0	0	0		0	100	0			0	0	100		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.000	.563	.000	.563	.000	.000	.667	.667	.625

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: I-215 Southbound Ramps
 Weather: Clear

File Name : 02_PER_Red_215S PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	2	0	2	0	0	0	0	0	4	0	4	0	0	2	2
+15 mins.	0	1	0	1	0	0	0	0	0	4	0	4	0	0	3	3
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1
Total Volume	0	3	0	3	0	0	0	0	0	9	0	9	0	0	8	8
% App. Total	0	100	0	0	0	0	0	0	0	100	0	0	0	0	100	0
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.563	.000	.563	.000	.000	.667	.667

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

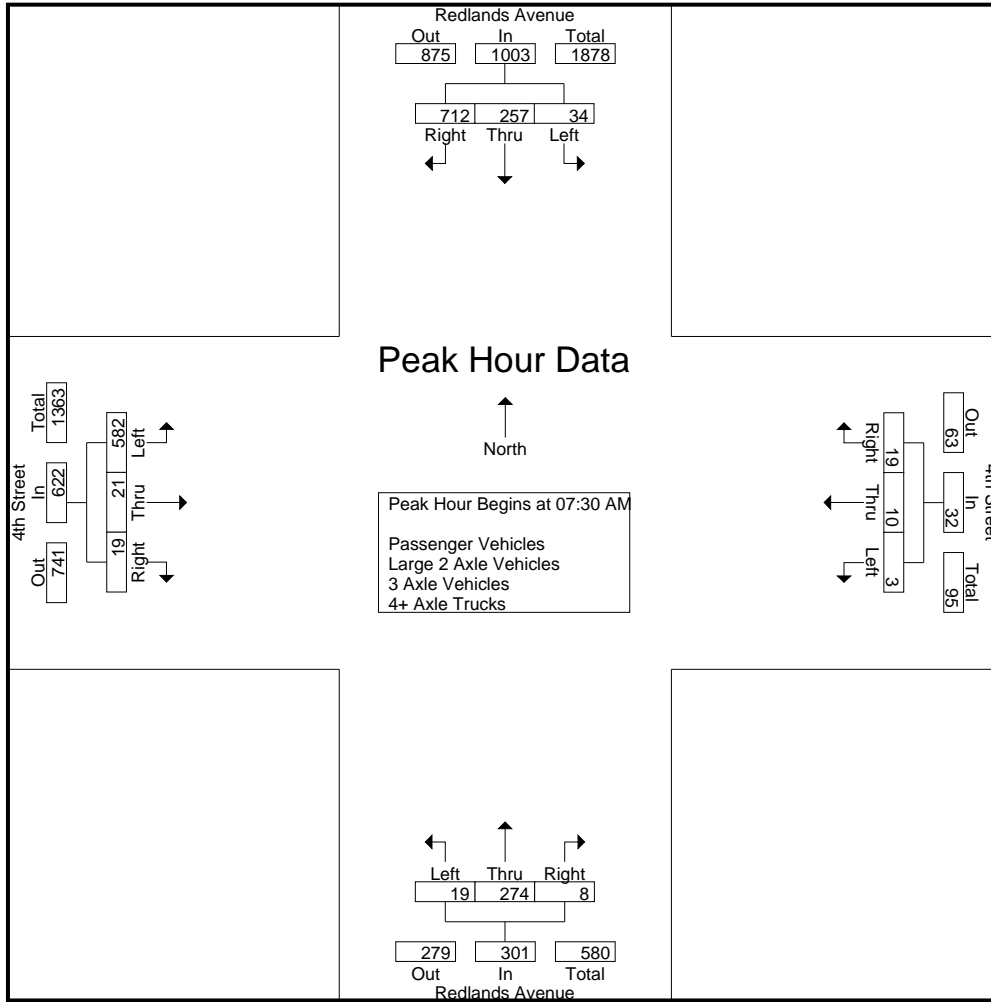
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	5	35	144	184	0	1	0	1	1	47	2	50	95	0	2	97	332
07:15 AM	10	44	153	207	1	1	8	10	2	52	4	58	114	3	3	120	395
07:30 AM	5	70	187	262	1	1	5	7	6	74	2	82	146	6	4	156	507
07:45 AM	13	68	186	267	0	3	4	7	3	80	4	87	171	2	4	177	538
Total	33	217	670	920	2	6	17	25	12	253	12	277	526	11	13	550	1772
08:00 AM	7	61	170	238	2	5	5	12	4	73	2	79	132	10	5	147	476
08:15 AM	9	58	169	236	0	1	5	6	6	47	0	53	133	3	6	142	437
08:30 AM	16	51	153	220	0	2	6	8	7	28	2	37	138	3	7	148	413
08:45 AM	8	37	145	190	3	3	3	9	6	30	1	37	99	6	4	109	345
Total	40	207	637	884	5	11	19	35	23	178	5	206	502	22	22	546	1671
Grand Total	73	424	1307	1804	7	17	36	60	35	431	17	483	1028	33	35	1096	3443
Apprch %	4	23.5	72.5		11.7	28.3	60		7.2	89.2	3.5		93.8	3	3.2		
Total %	2.1	12.3	38	52.4	0.2	0.5	1	1.7	1	12.5	0.5	14	29.9	1	1	31.8	
Passenger Vehicles	72	393	1240	1705	6	17	34	57	31	400	16	447	949	32	32	1013	3222
% Passenger Vehicles	98.6	92.7	94.9	94.5	85.7	100	94.4	95	88.6	92.8	94.1	92.5	92.3	97	91.4	92.4	93.6
Large 2 Axle Vehicles	1	20	44	65	0	0	1	1	0	14	0	14	53	0	0	53	133
% Large 2 Axle Vehicles	1.4	4.7	3.4	3.6	0	0	2.8	1.7	0	3.2	0	2.9	5.2	0	0	4.8	3.9
3 Axle Vehicles	0	1	10	11	0	0	1	1	1	5	0	6	8	1	1	10	28
% 3 Axle Vehicles	0	0.2	0.8	0.6	0	0	2.8	1.7	2.9	1.2	0	1.2	0.8	3	2.9	0.9	0.8
4+ Axle Trucks	0	10	13	23	1	0	0	1	3	12	1	16	18	0	2	20	60
% 4+ Axle Trucks	0	2.4	1	1.3	14.3	0	0	1.7	8.6	2.8	5.9	3.3	1.8	0	5.7	1.8	1.7

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	70	187	262	1	1	5	7	6	74	2	82	146	6	4	156	507
07:45 AM	13	68	186	267	0	3	4	7	3	80	4	87	171	2	4	177	538
08:00 AM	7	61	170	238	2	5	5	12	4	73	2	79	132	10	5	147	476
08:15 AM	9	58	169	236	0	1	5	6	6	47	0	53	133	3	6	142	437
Total Volume	34	257	712	1003	3	10	19	32	19	274	8	301	582	21	19	622	1958
% App. Total	3.4	25.6	71		9.4	31.2	59.4		6.3	91	2.7		93.6	3.4	3.1		
PHF	.654	.918	.952	.939	.375	.500	.950	.667	.792	.856	.500	.865	.851	.525	.792	.879	.910

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



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

	07:30 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	5	70	187	262	1	1	8	10	2	52	4	58	146	6	4	156
+15 mins.	13	68	186	267	1	1	5	7	6	74	2	82	171	2	4	177
+30 mins.	7	61	170	238	0	3	4	7	3	80	4	87	132	10	5	147
+45 mins.	9	58	169	236	2	5	5	12	4	73	2	79	133	3	6	142
Total Volume	34	257	712	1003	4	10	22	36	15	279	12	306	582	21	19	622
% App. Total	3.4	25.6	71		11.1	27.8	61.1		4.9	91.2	3.9		93.6	3.4	3.1	
PHF	.654	.918	.952	.939	.500	.500	.688	.750	.625	.872	.750	.879	.851	.525	.792	.879

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	5	31	138	174	0	1	0	1	1	43	2	46	79	0	2	81	302
07:15 AM	10	40	142	192	1	1	7	9	1	49	4	54	103	2	3	108	363
07:30 AM	5	66	175	246	1	1	4	6	4	67	2	73	138	6	4	148	473
07:45 AM	13	64	180	257	0	3	4	7	3	78	3	84	159	2	4	165	513
Total	33	201	635	869	2	6	15	23	9	237	11	257	479	10	13	502	1651
08:00 AM	7	57	164	228	1	5	5	11	4	66	2	72	126	10	5	141	452
08:15 AM	9	52	158	219	0	1	5	6	6	44	0	50	122	3	4	129	404
08:30 AM	15	48	145	208	0	2	6	8	6	26	2	34	129	3	7	139	389
08:45 AM	8	35	138	181	3	3	3	9	6	27	1	34	93	6	3	102	326
Total	39	192	605	836	4	11	19	34	22	163	5	190	470	22	19	511	1571
Grand Total	72	393	1240	1705	6	17	34	57	31	400	16	447	949	32	32	1013	3222
Apprch %	4.2	23	72.7		10.5	29.8	59.6		6.9	89.5	3.6		93.7	3.2	3.2		
Total %	2.2	12.2	38.5	52.9	0.2	0.5	1.1	1.8	1	12.4	0.5	13.9	29.5	1	1	31.4	

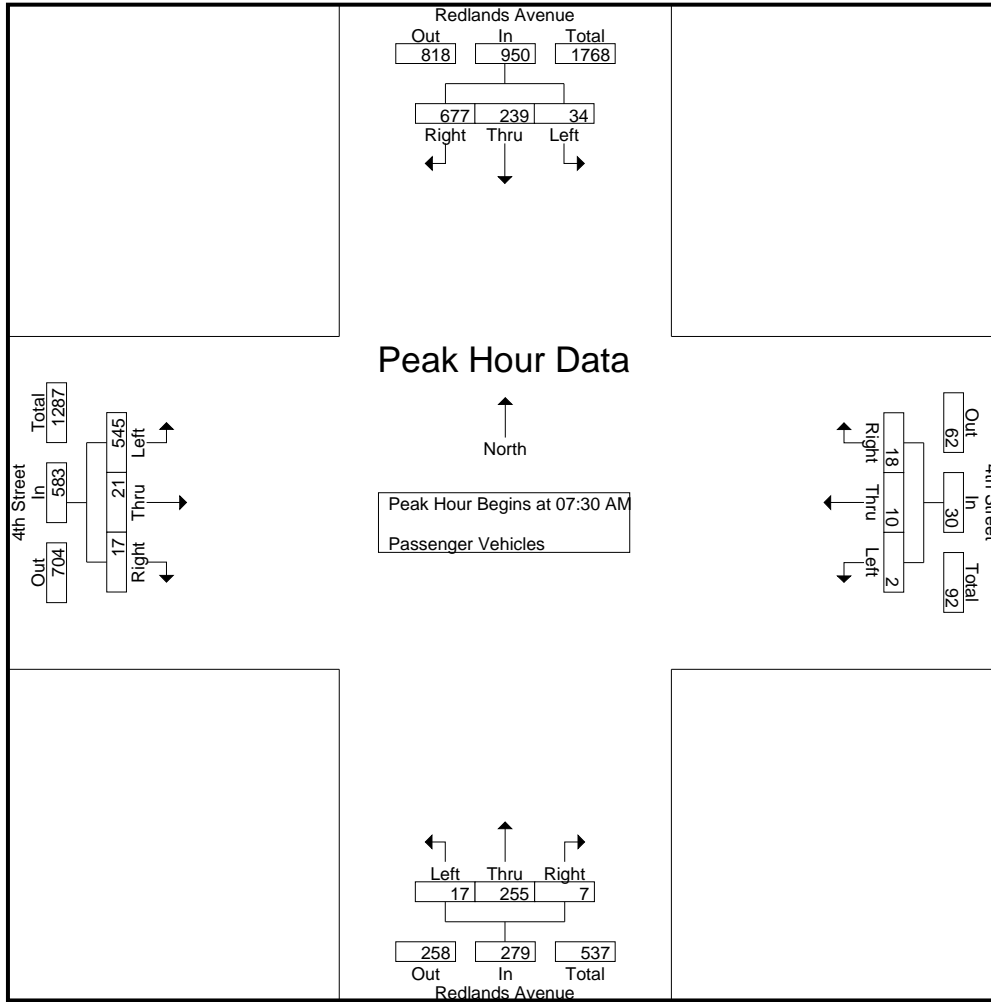
Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	5	66	175	246	1	1	4	6	4	67	2	73	138	6	4	148	473
07:45 AM	13	64	180	257	0	3	4	7	3	78	3	84	159	2	4	165	513
08:00 AM	7	57	164	228	1	5	5	11	4	66	2	72	126	10	5	141	452
08:15 AM	9	52	158	219	0	1	5	6	6	44	0	50	122	3	4	129	404
Total Volume	34	239	677	950	2	10	18	30	17	255	7	279	545	21	17	583	1842
% App. Total	3.6	25.2	71.3		6.7	33.3	60		6.1	91.4	2.5		93.5	3.6	2.9		
PHF	.654	.905	.940	.924	.500	.500	.900	.682	.708	.817	.583	.830	.857	.525	.850	.883	.898

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	5	66	175	246	1	1	4	6	4	67	2	73	138	6	4	148
+15 mins.	13	64	180	257	0	3	4	7	3	78	3	84	159	2	4	165
+30 mins.	7	57	164	228	1	5	5	11	4	66	2	72	126	10	5	141
+45 mins.	9	52	158	219	0	1	5	6	6	44	0	50	122	3	4	129
Total Volume	34	239	677	950	2	10	18	30	17	255	7	279	545	21	17	583
% App. Total	3.6	25.2	71.3		6.7	33.3	60		6.1	91.4	2.5		93.5	3.6	2.9	
PHF	.654	.905	.940	.924	.500	.500	.900	.682	.708	.817	.583	.830	.857	.525	.850	.883

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	4	5	0	0	0	0	0	2	0	2	7	0	0	7	14
07:15 AM	0	4	7	11	0	0	1	1	0	1	0	1	8	0	0	8	21
07:30 AM	0	2	9	11	0	0	0	0	0	2	0	2	8	0	0	8	21
07:45 AM	0	3	5	8	0	0	0	0	0	2	0	2	9	0	0	9	19
Total	0	10	25	35	0	0	1	1	0	7	0	7	32	0	0	32	75
08:00 AM	0	2	5	7	0	0	0	0	0	3	0	3	4	0	0	4	14
08:15 AM	0	6	8	14	0	0	0	0	0	2	0	2	7	0	0	7	23
08:30 AM	1	2	1	4	0	0	0	0	0	1	0	1	6	0	0	6	11
08:45 AM	0	0	5	5	0	0	0	0	0	1	0	1	4	0	0	4	10
Total	1	10	19	30	0	0	0	0	0	7	0	7	21	0	0	21	58
Grand Total	1	20	44	65	0	0	1	1	0	14	0	14	53	0	0	53	133
Apprch %	1.5	30.8	67.7		0	0	100		0	100	0		100	0	0		
Total %	0.8	15	33.1	48.9	0	0	0.8	0.8	0	10.5	0	10.5	39.8	0	0	39.8	

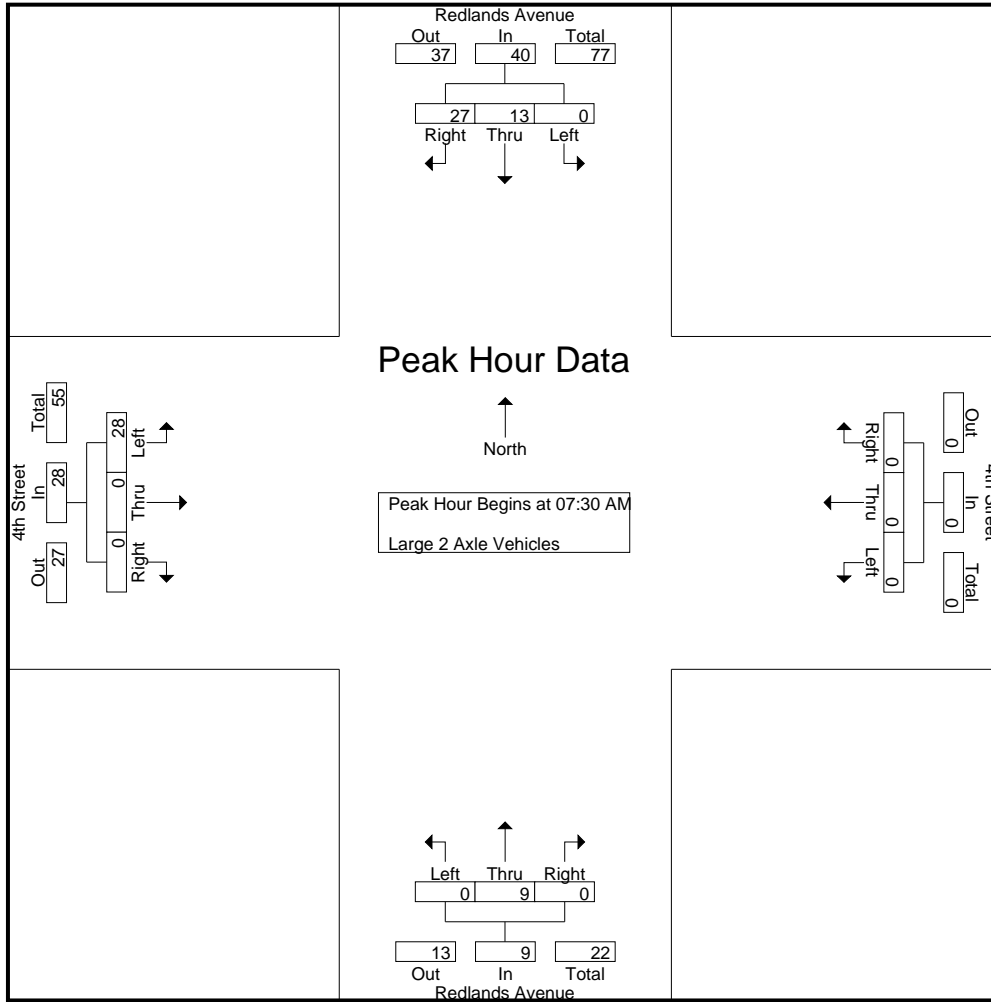
Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	2	9	11	0	0	0	0	0	2	0	2	8	0	0	8	21
07:45 AM	0	3	5	8	0	0	0	0	0	2	0	2	9	0	0	9	19
08:00 AM	0	2	5	7	0	0	0	0	0	3	0	3	4	0	0	4	14
08:15 AM	0	6	8	14	0	0	0	0	0	2	0	2	7	0	0	7	23
Total Volume	0	13	27	40	0	0	0	0	0	9	0	9	28	0	0	28	77
% App. Total	0	32.5	67.5		0	0	0		0	100	0		100	0	0		
PHF	.000	.542	.750	.714	.000	.000	.000	.000	.000	.750	.000	.750	.778	.000	.000	.778	.837

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	2	9	11	0	0	0	0	0	2	0	2	8	0	0	8
+15 mins.	0	3	5	8	0	0	0	0	0	2	0	2	9	0	0	9
+30 mins.	0	2	5	7	0	0	0	0	0	3	0	3	4	0	0	4
+45 mins.	0	6	8	14	0	0	0	0	0	2	0	2	7	0	0	7
Total Volume	0	13	27	40	0	0	0	0	0	9	0	9	28	0	0	28
% App. Total	0	32.5	67.5		0	0	0		0	100	0		100	0	0	
PHF	.000	.542	.750	.714	.000	.000	.000	.000	.000	.750	.000	.750	.778	.000	.000	.778

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

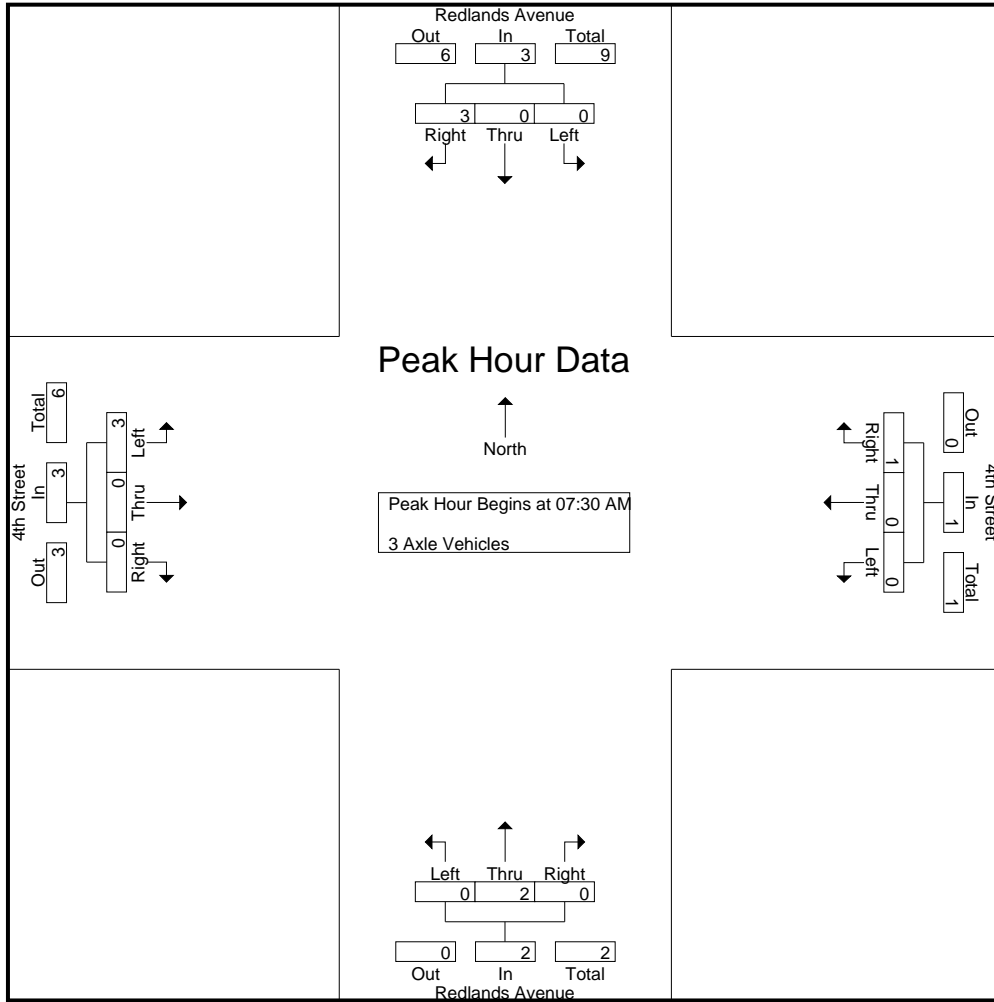
Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	1	1	0	0	0	0	0	2	0	2	2	0	0	2	5
07:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	2	3
07:30 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	2	2	0	0	1	1	0	3	0	3	3	1	0	4	10
08:00 AM	0	0	1	1	0	0	0	0	0	1	0	1	2	0	0	2	4
08:15 AM	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1	3
08:30 AM	0	1	4	5	0	0	0	0	1	0	0	1	2	0	0	2	8
08:45 AM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	1	1	3
Total	0	1	8	9	0	0	0	0	1	2	0	3	5	0	1	6	18
Grand Total	0	1	10	11	0	0	1	1	1	5	0	6	8	1	1	10	28
Apprch %	0	9.1	90.9		0	0	100		16.7	83.3	0		80	10	10		
Total %	0	3.6	35.7	39.3	0	0	3.6	3.6	3.6	17.9	0	21.4	28.6	3.6	3.6	35.7	

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	1	1	0	0	0	0	0	1	0	1	2	0	0	2	4
08:15 AM	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1	3
Total Volume	0	0	3	3	0	0	1	1	0	2	0	2	3	0	0	3	9
% App. Total	0	0	100		0	0	100		0	100	0		100	0	0		
PHF	.000	.000	.375	.375	.000	.000	.250	.250	.000	.500	.000	.500	.375	.000	.000	.375	.563

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	1	1	0	1	0	1	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	1	1	0	0	0	0	0	1	0	1	2	0	0	2
+45 mins.	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	0	0	3	3	0	0	1	1	0	2	0	2	3	0	0	3
% App. Total	0	0	100		0	0	100		0	100	0		100	0	0	
PHF	.000	.000	.375	.375	.000	.000	.250	.250	.000	.500	.000	.500	.375	.000	.000	.375

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

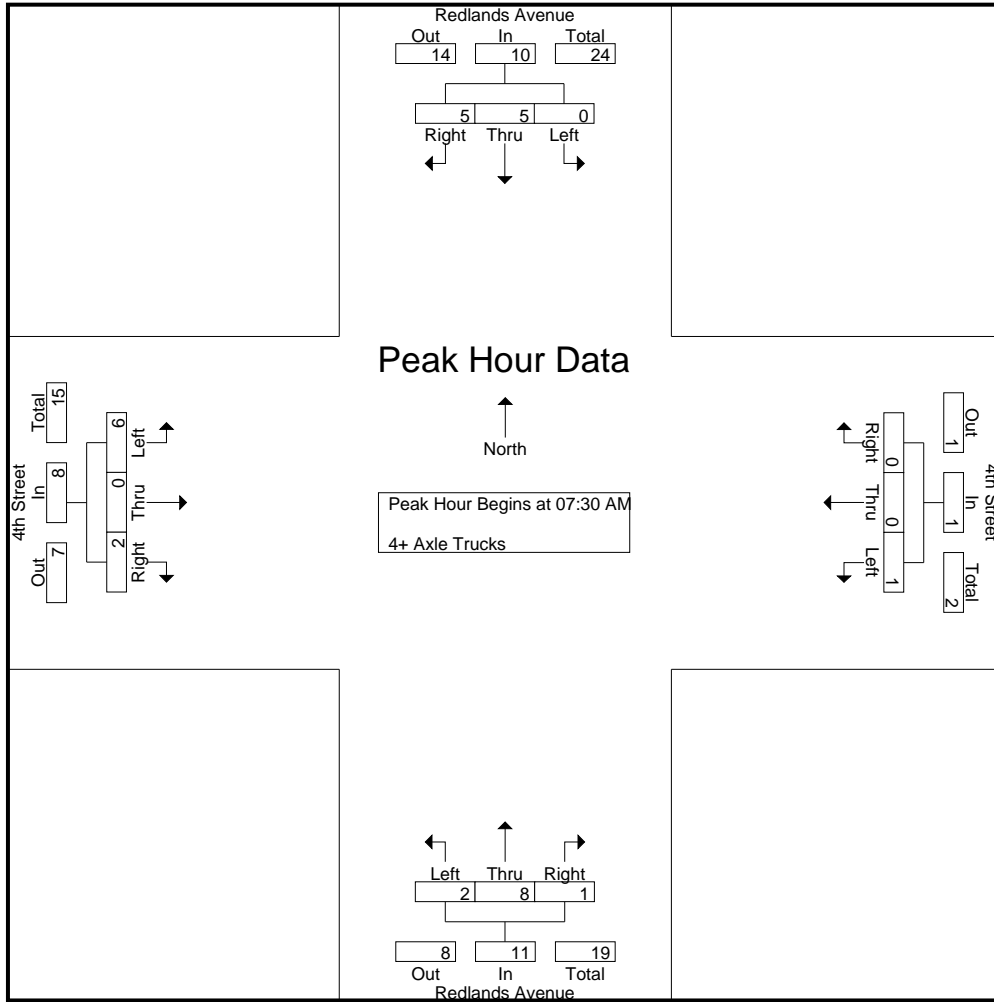
Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	3	1	4	0	0	0	0	0	0	0	0	7	0	0	7	11
07:15 AM	0	0	3	3	0	0	0	0	1	2	0	3	2	0	0	2	8
07:30 AM	0	2	3	5	0	0	0	0	2	4	0	6	0	0	0	0	11
07:45 AM	0	1	1	2	0	0	0	0	0	0	1	1	3	0	0	3	6
Total	0	6	8	14	0	0	0	0	3	6	1	10	12	0	0	12	36
08:00 AM	0	2	0	2	1	0	0	1	0	3	0	3	0	0	0	0	6
08:15 AM	0	0	1	1	0	0	0	0	0	1	0	1	3	0	2	5	7
08:30 AM	0	0	3	3	0	0	0	0	0	1	0	1	1	0	0	1	5
08:45 AM	0	2	1	3	0	0	0	0	0	1	0	1	2	0	0	2	6
Total	0	4	5	9	1	0	0	1	0	6	0	6	6	0	2	8	24
Grand Total	0	10	13	23	1	0	0	1	3	12	1	16	18	0	2	20	60
Apprch %	0	43.5	56.5		100	0	0		18.8	75	6.2		90	0	10		
Total %	0	16.7	21.7	38.3	1.7	0	0	1.7	5	20	1.7	26.7	30	0	3.3	33.3	

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	2	3	5	0	0	0	0	2	4	0	6	0	0	0	0	11
07:45 AM	0	1	1	2	0	0	0	0	0	0	1	1	3	0	0	3	6
08:00 AM	0	2	0	2	1	0	0	1	0	3	0	3	0	0	0	0	6
08:15 AM	0	0	1	1	0	0	0	0	0	1	0	1	3	0	2	5	7
Total Volume	0	5	5	10	1	0	0	1	2	8	1	11	6	0	2	8	30
% App. Total	0	50	50		100	0	0		18.2	72.7	9.1		75	0	25		
PHF	.000	.625	.417	.500	.250	.000	.000	.250	.250	.500	.250	.458	.500	.000	.250	.400	.682

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	2	3	5	0	0	0	0	2	4	0	6	0	0	0	0
+15 mins.	0	1	1	2	0	0	0	0	0	0	1	1	3	0	0	3
+30 mins.	0	2	0	2	1	0	0	1	0	3	0	3	0	0	0	0
+45 mins.	0	0	1	1	0	0	0	0	0	1	0	1	3	0	2	5
Total Volume	0	5	5	10	1	0	0	1	2	8	1	11	6	0	2	8
% App. Total	0	50	50	100	100	0	0	100	18.2	72.7	9.1	100	75	0	25	100
PHF	.000	.625	.417	.500	.250	.000	.000	.250	.250	.500	.250	.458	.500	.000	.250	.400

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

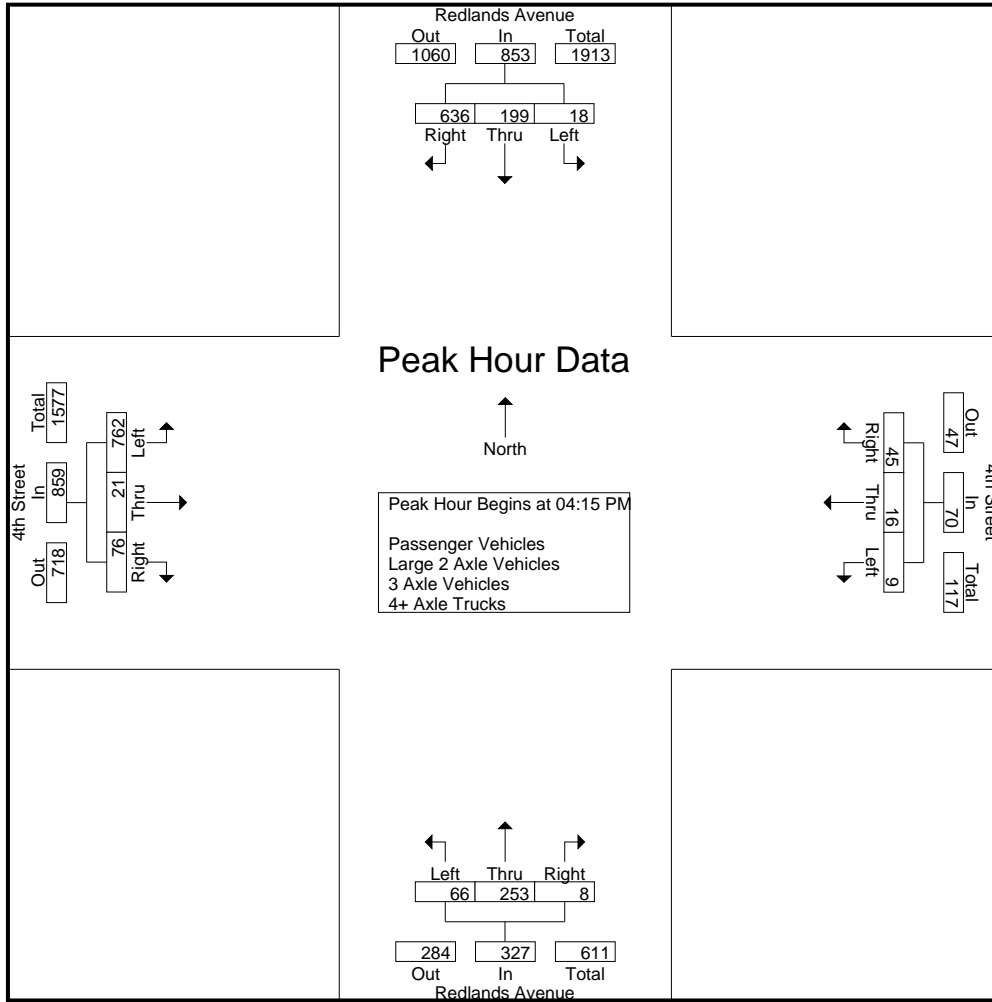
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	6	75	154	235	2	3	11	16	15	69	1	85	177	3	17	197	533
04:15 PM	5	44	148	197	3	4	12	19	14	56	2	72	213	12	16	241	529
04:30 PM	5	65	151	221	1	2	8	11	16	83	3	102	184	6	25	215	549
04:45 PM	4	47	162	213	3	3	12	18	15	48	1	64	154	2	15	171	466
Total	20	231	615	866	9	12	43	64	60	256	7	323	728	23	73	824	2077
05:00 PM	4	43	175	222	2	7	13	22	21	66	2	89	211	1	20	232	565
05:15 PM	6	38	158	202	2	5	7	14	12	54	0	66	199	5	14	218	500
05:30 PM	5	41	169	215	3	1	9	13	5	57	1	63	172	3	11	186	477
05:45 PM	4	39	143	186	1	1	4	6	20	45	1	66	188	0	8	196	454
Total	19	161	645	825	8	14	33	55	58	222	4	284	770	9	53	832	1996
Grand Total	39	392	1260	1691	17	26	76	119	118	478	11	607	1498	32	126	1656	4073
Apprch %	2.3	23.2	74.5		14.3	21.8	63.9		19.4	78.7	1.8		90.5	1.9	7.6		
Total %	1	9.6	30.9	41.5	0.4	0.6	1.9	2.9	2.9	11.7	0.3	14.9	36.8	0.8	3.1	40.7	
Passenger Vehicles	39	361	1220	1620	16	26	74	116	115	458	9	582	1449	32	123	1604	3922
% Passenger Vehicles	100	92.1	96.8	95.8	94.1	100	97.4	97.5	97.5	95.8	81.8	95.9	96.7	100	97.6	96.9	96.3
Large 2 Axle Vehicles	0	14	29	43	1	0	2	3	1	10	2	13	38	0	2	40	99
% Large 2 Axle Vehicles	0	3.6	2.3	2.5	5.9	0	2.6	2.5	0.8	2.1	18.2	2.1	2.5	0	1.6	2.4	2.4
3 Axle Vehicles	0	3	5	8	0	0	0	0	1	2	0	3	5	0	1	6	17
% 3 Axle Vehicles	0	0.8	0.4	0.5	0	0	0	0	0.8	0.4	0	0.5	0.3	0	0.8	0.4	0.4
4+ Axle Trucks	0	14	6	20	0	0	0	0	1	8	0	9	6	0	0	6	35
% 4+ Axle Trucks	0	3.6	0.5	1.2	0	0	0	0	0.8	1.7	0	1.5	0.4	0	0	0.4	0.9

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	5	44	148	197	3	4	12	19	14	56	2	72	213	12	16	241	529
04:30 PM	5	65	151	221	1	2	8	11	16	83	3	102	184	6	25	215	549
04:45 PM	4	47	162	213	3	3	12	18	15	48	1	64	154	2	15	171	466
05:00 PM	4	43	175	222	2	7	13	22	21	66	2	89	211	1	20	232	565
Total Volume	18	199	636	853	9	16	45	70	66	253	8	327	762	21	76	859	2109
% App. Total	2.1	23.3	74.6		12.9	22.9	64.3		20.2	77.4	2.4		88.7	2.4	8.8		
PHF	.900	.765	.909	.961	.750	.571	.865	.795	.786	.762	.667	.801	.894	.438	.760	.891	.933

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	6	75	154	235	3	4	12	19	14	56	2	72	213	12	16	241
+15 mins.	5	44	148	197	1	2	8	11	16	83	3	102	184	6	25	215
+30 mins.	5	65	151	221	3	3	12	18	15	48	1	64	154	2	15	171
+45 mins.	4	47	162	213	2	7	13	22	21	66	2	89	211	1	20	232
Total Volume	20	231	615	866	9	16	45	70	66	253	8	327	762	21	76	859
% App. Total	2.3	26.7	71		12.9	22.9	64.3		20.2	77.4	2.4		88.7	2.4	8.8	
PHF	.833	.770	.949	.921	.750	.571	.865	.795	.786	.762	.667	.801	.894	.438	.760	.891

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	6	66	153	225	2	3	11	16	15	68	1	84	169	3	17	189	514
04:15 PM	5	39	139	183	3	4	12	19	14	53	1	68	204	12	15	231	501
04:30 PM	5	61	144	210	0	2	7	9	15	77	2	94	181	6	24	211	524
04:45 PM	4	45	160	209	3	3	11	17	15	46	1	62	148	2	15	165	453
Total	20	211	596	827	8	12	41	61	59	244	5	308	702	23	71	796	1992
05:00 PM	4	40	171	215	2	7	13	22	20	62	2	84	208	1	19	228	549
05:15 PM	6	34	151	191	2	5	7	14	12	52	0	64	194	5	14	213	482
05:30 PM	5	37	163	205	3	1	9	13	5	57	1	63	161	3	11	175	456
05:45 PM	4	39	139	182	1	1	4	6	19	43	1	63	184	0	8	192	443
Total	19	150	624	793	8	14	33	55	56	214	4	274	747	9	52	808	1930
Grand Total	39	361	1220	1620	16	26	74	116	115	458	9	582	1449	32	123	1604	3922
Apprch %	2.4	22.3	75.3		13.8	22.4	63.8		19.8	78.7	1.5		90.3	2	7.7		
Total %	1	9.2	31.1	41.3	0.4	0.7	1.9	3	2.9	11.7	0.2	14.8	36.9	0.8	3.1	40.9	

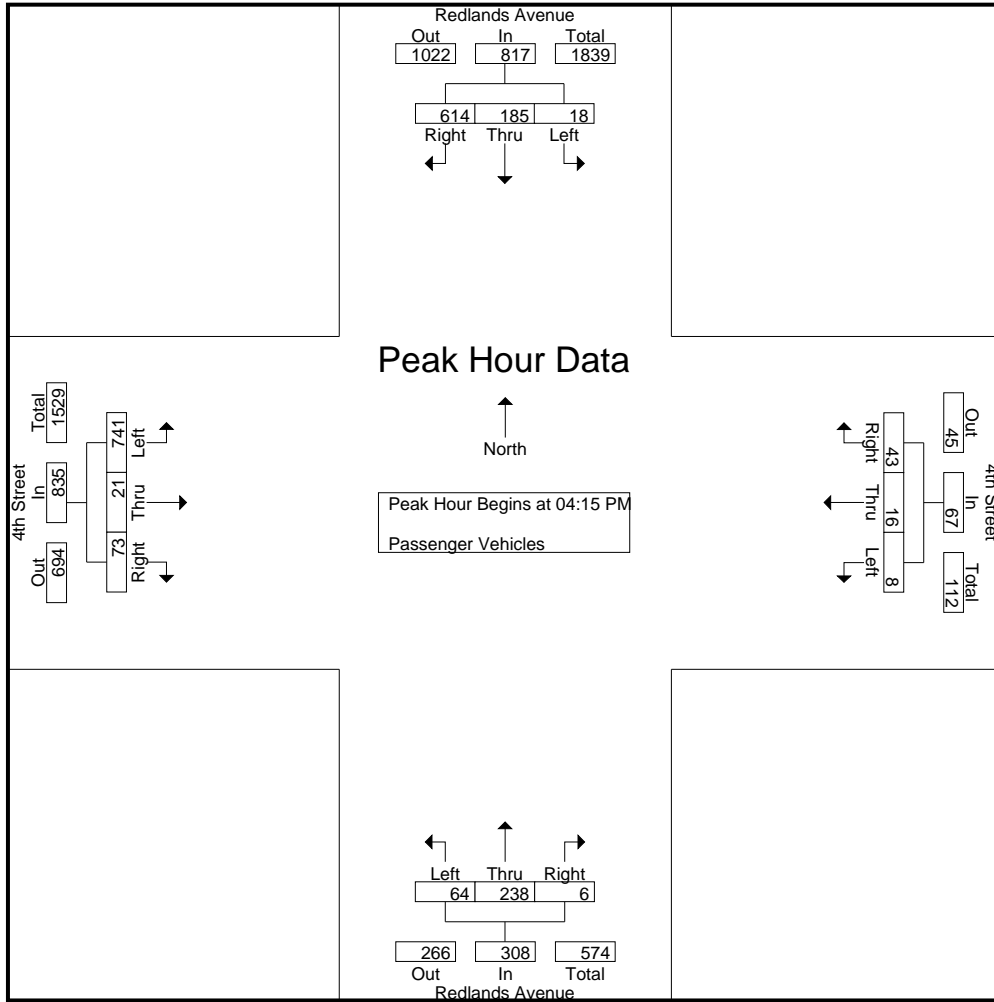
Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	5	39	139	183	3	4	12	19	14	53	1	68	204	12	15	231	501
04:30 PM	5	61	144	210	0	2	7	9	15	77	2	94	181	6	24	211	524
04:45 PM	4	45	160	209	3	3	11	17	15	46	1	62	148	2	15	165	453
05:00 PM	4	40	171	215	2	7	13	22	20	62	2	84	208	1	19	228	549
Total Volume	18	185	614	817	8	16	43	67	64	238	6	308	741	21	73	835	2027
% App. Total	2.2	22.6	75.2		11.9	23.9	64.2		20.8	77.3	1.9		88.7	2.5	8.7		
PHF	.900	.758	.898	.950	.667	.571	.827	.761	.800	.773	.750	.819	.891	.438	.760	.904	.923

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	5	39	139	183	3	4	12	19	14	53	1	68	204	12	15	231
+15 mins.	5	61	144	210	0	2	7	9	15	77	2	94	181	6	24	211
+30 mins.	4	45	160	209	3	3	11	17	15	46	1	62	148	2	15	165
+45 mins.	4	40	171	215	2	7	13	22	20	62	2	84	208	1	19	228
Total Volume	18	185	614	817	8	16	43	67	64	238	6	308	741	21	73	835
% App. Total	2.2	22.6	75.2		11.9	23.9	64.2		20.8	77.3	1.9		88.7	2.5	8.7	
PHF	.900	.758	.898	.950	.667	.571	.827	.761	.800	.773	.750	.819	.891	.438	.760	.904

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	5	1	6	0	0	0	0	0	1	0	1	6	0	0	6	13
04:15 PM	0	4	6	10	0	0	0	0	0	2	1	3	5	0	0	5	18
04:30 PM	0	2	4	6	1	0	1	2	0	3	1	4	2	0	1	3	15
04:45 PM	0	1	2	3	0	0	1	1	0	0	0	0	5	0	0	5	9
Total	0	12	13	25	1	0	2	3	0	6	2	8	18	0	1	19	55
05:00 PM	0	1	4	5	0	0	0	0	0	1	0	1	3	0	1	4	10
05:15 PM	0	0	5	5	0	0	0	0	0	1	0	1	4	0	0	4	10
05:30 PM	0	1	5	6	0	0	0	0	0	0	0	0	10	0	0	10	16
05:45 PM	0	0	2	2	0	0	0	0	1	2	0	3	3	0	0	3	8
Total	0	2	16	18	0	0	0	0	1	4	0	5	20	0	1	21	44
Grand Total	0	14	29	43	1	0	2	3	1	10	2	13	38	0	2	40	99
Apprch %	0	32.6	67.4		33.3	0	66.7		7.7	76.9	15.4		95	0	5		
Total %	0	14.1	29.3	43.4	1	0	2	3	1	10.1	2	13.1	38.4	0	2	40.4	

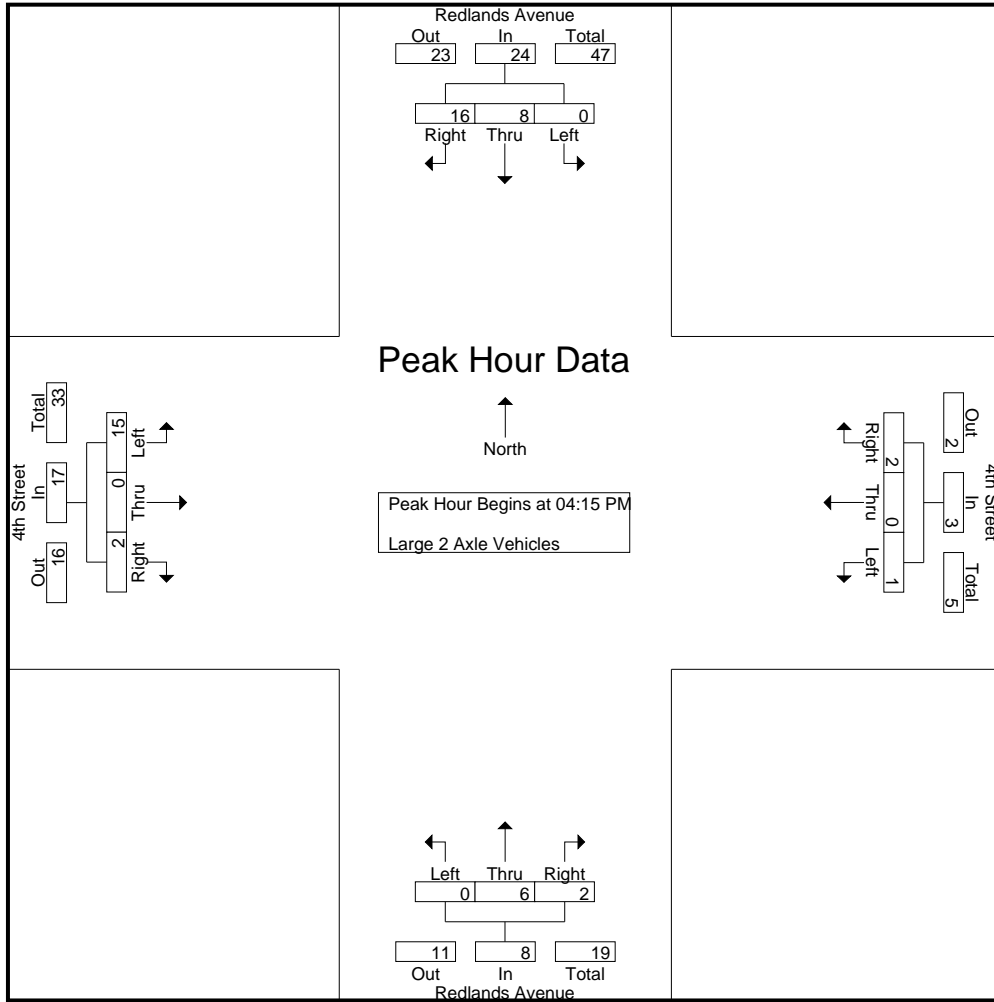
Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	4	6	10	0	0	0	0	0	2	1	3	5	0	0	5	18
04:30 PM	0	2	4	6	1	0	1	2	0	3	1	4	2	0	1	3	15
04:45 PM	0	1	2	3	0	0	1	1	0	0	0	0	5	0	0	5	9
05:00 PM	0	1	4	5	0	0	0	0	0	1	0	1	3	0	1	4	10
Total Volume	0	8	16	24	1	0	2	3	0	6	2	8	15	0	2	17	52
% App. Total	0	33.3	66.7		33.3	0	66.7		0	75	25		88.2	0	11.8		
PHF	.000	.500	.667	.600	.250	.000	.500	.375	.000	.500	.500	.500	.750	.000	.500	.850	.722

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	4	6	10	0	0	0	0	0	2	1	3	5	0	0	5
+15 mins.	0	2	4	6	1	0	1	2	0	3	1	4	2	0	1	3
+30 mins.	0	1	2	3	0	0	1	1	0	0	0	0	5	0	0	5
+45 mins.	0	1	4	5	0	0	0	0	0	1	0	1	3	0	1	4
Total Volume	0	8	16	24	1	0	2	3	0	6	2	8	15	0	2	17
% App. Total	0	33.3	66.7		33.3	0	66.7		0	75	25		88.2	0	11.8	
PHF	.000	.500	.667	.600	.250	.000	.500	.375	.000	.500	.500	.500	.750	.000	.500	.850

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
04:15 PM	0	0	2	2	0	0	0	0	0	0	1	1	0	0	1	1	4
04:30 PM	0	0	2	2	0	0	0	0	1	0	0	1	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	4	4	0	0	0	0	1	1	0	2	3	0	1	4	10
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	2	1	3	0	0	0	0	0	0	0	0	1	0	0	1	4
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	3	1	4	0	0	0	0	0	1	0	1	2	0	0	2	7
Grand Total	0	3	5	8	0	0	0	0	1	2	0	3	5	0	1	6	17
Apprch %	0	37.5	62.5		0	0	0		33.3	66.7	0		83.3	0	16.7		
Total %	0	17.6	29.4	47.1	0	0	0	0	5.9	11.8	0	17.6	29.4	0	5.9	35.3	

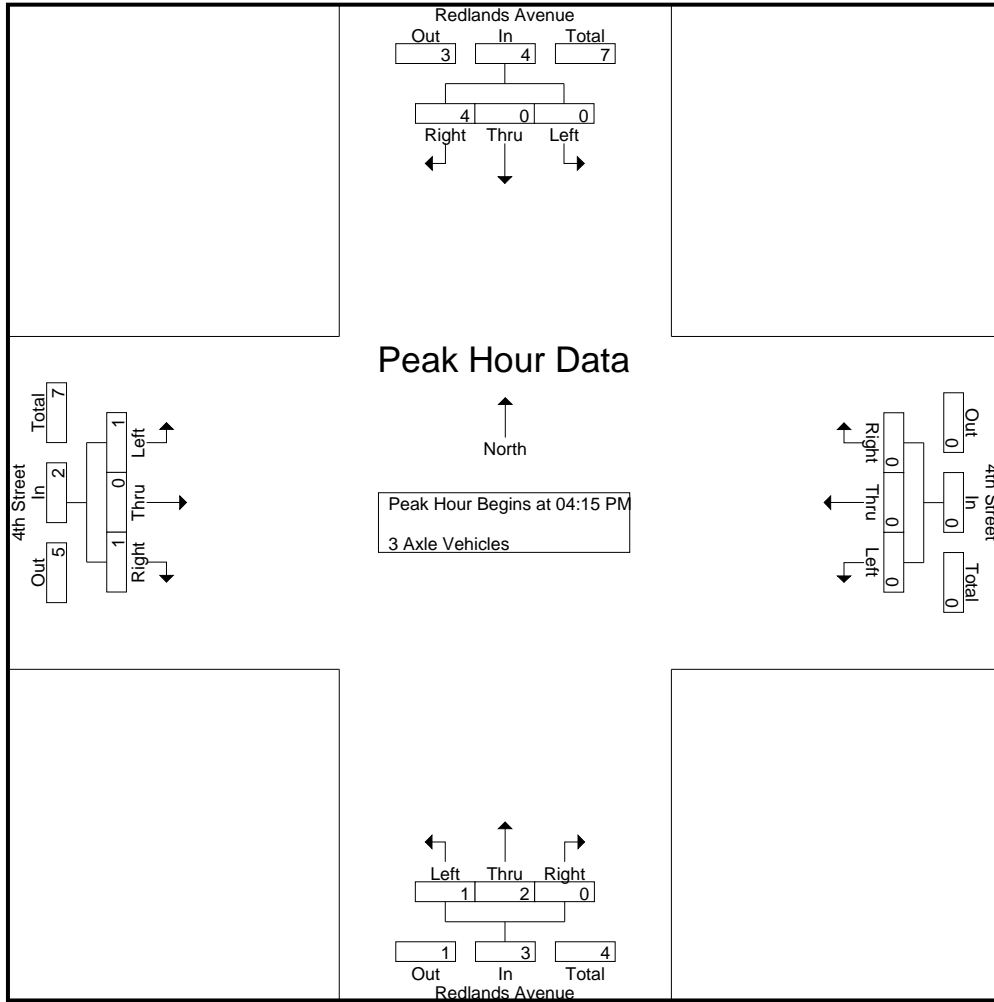
Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	0	2	2	0	0	0	0	0	1	0	1	0	0	1	1	4
04:30 PM	0	0	2	2	0	0	0	0	1	0	0	1	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	4	4	0	0	0	0	1	2	0	3	1	0	1	2	9
% App. Total	0	0	100		0	0	0		33.3	66.7	0		50	0	50		
PHF	.000	.000	.500	.500	.000	.000	.000	.000	.250	.500	.000	.750	.250	.000	.250	.500	.563

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	2	2	0	0	0	0	0	1	0	1	0	0	0	1
+15 mins.	0	0	2	2	0	0	0	0	1	0	0	1	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	1	0	1	0	0	0	0
Total Volume	0	0	4	4	0	0	0	0	1	2	0	3	1	0	1	2
% App. Total	0	0	100		0	0	0		33.3	66.7	0		50	0	50	
PHF	.000	.000	.500	.500	.000	.000	.000	.000	.250	.500	.000	.750	.250	.000	.250	.500

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- 4+ Axle Trucks

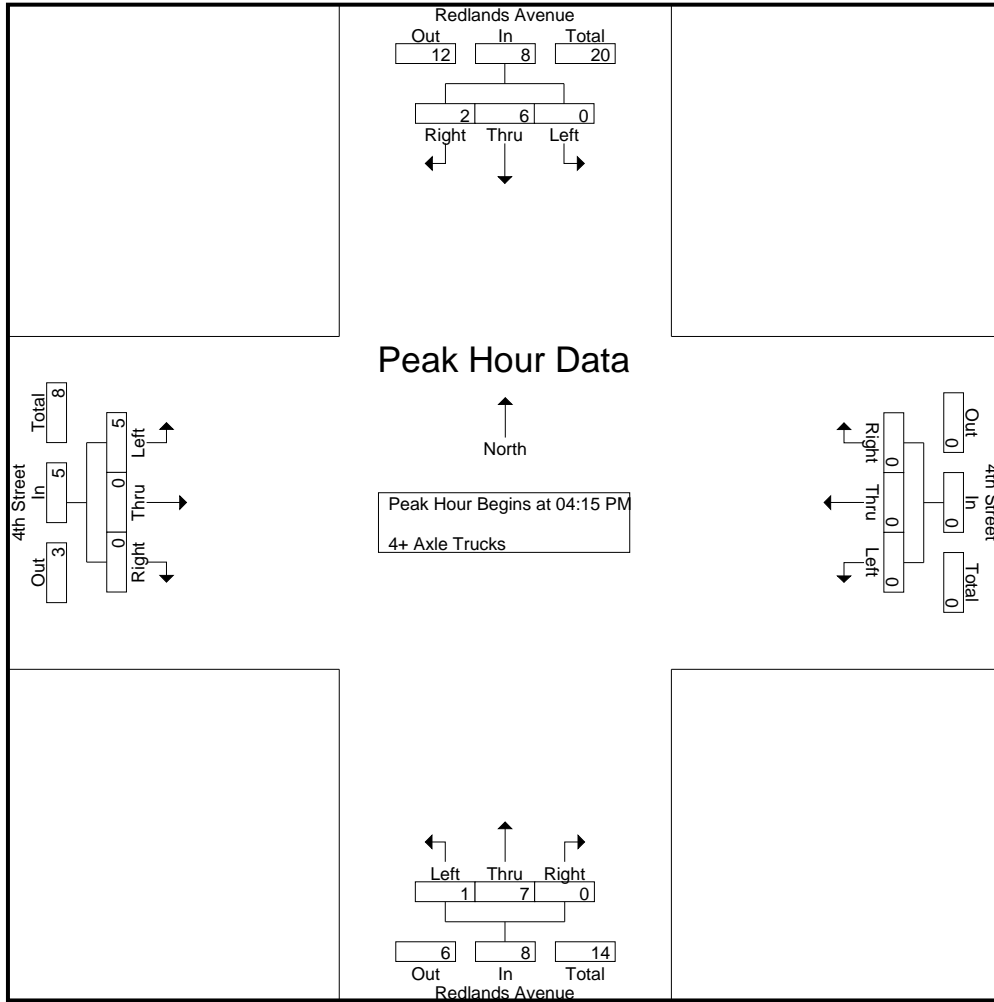
Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
04:00 PM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
04:15 PM	0	1	1	2	0	0	0	0	0	0	0	0	4	0	0	0	4	6
04:30 PM	0	2	1	3	0	0	0	0	0	0	3	0	3	1	0	0	4	7
04:45 PM	0	1	0	1	0	0	0	0	0	0	2	0	2	0	0	0	2	3
Total	0	8	2	10	0	0	0	0	0	0	5	0	5	5	0	0	5	20
05:00 PM	0	2	0	2	0	0	0	0	1	2	0	3	0	0	0	0	3	5
05:15 PM	0	2	1	3	0	0	0	0	0	1	0	1	0	0	0	0	1	4
05:30 PM	0	2	1	3	0	0	0	0	0	0	0	0	1	0	0	1	2	4
05:45 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	6	4	10	0	0	0	0	1	3	0	4	1	0	0	1	4	15
Grand Total	0	14	6	20	0	0	0	0	1	8	0	9	6	0	0	6	15	35
Apprch %	0	70	30		0	0	0		11.1	88.9	0		100	0	0			
Total %	0	40	17.1	57.1	0	0	0	0	2.9	22.9	0	25.7	17.1	0	0	17.1		

Start Time	Redlands Avenue Southbound				4th Street Westbound				Redlands Avenue Northbound				4th Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	1	1	2	0	0	0	0	0	0	0	0	4	0	0	4	6
04:30 PM	0	2	1	3	0	0	0	0	0	3	0	3	1	0	0	1	7
04:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:00 PM	0	2	0	2	0	0	0	0	1	2	0	3	0	0	0	0	5
Total Volume	0	6	2	8	0	0	0	0	1	7	0	8	5	0	0	5	21
% App. Total	0	75	25		0	0	0		12.5	87.5	0		100	0	0		
PHF	.000	.750	.500	.667	.000	.000	.000	.000	.250	.583	.000	.667	.313	.000	.000	.313	.750

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: 4th Street
 Weather: Clear

File Name : 03_PER_Red_4th PM
 Site Code : 10823257
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	1	1	2	0	0	0	0	0	0	0	0	4	0	0	4
+15 mins.	0	2	1	3	0	0	0	0	0	3	0	3	1	0	0	1
+30 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	1	2	0	3	0	0	0	0
Total Volume	0	6	2	8	0	0	0	0	1	7	0	8	5	0	0	5
% App. Total	0	75	25		0	0	0		12.5	87.5	0		100	0	0	
PHF	.000	.750	.500	.667	.000	.000	.000	.000	.250	.583	.000	.667	.313	.000	.000	.313

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

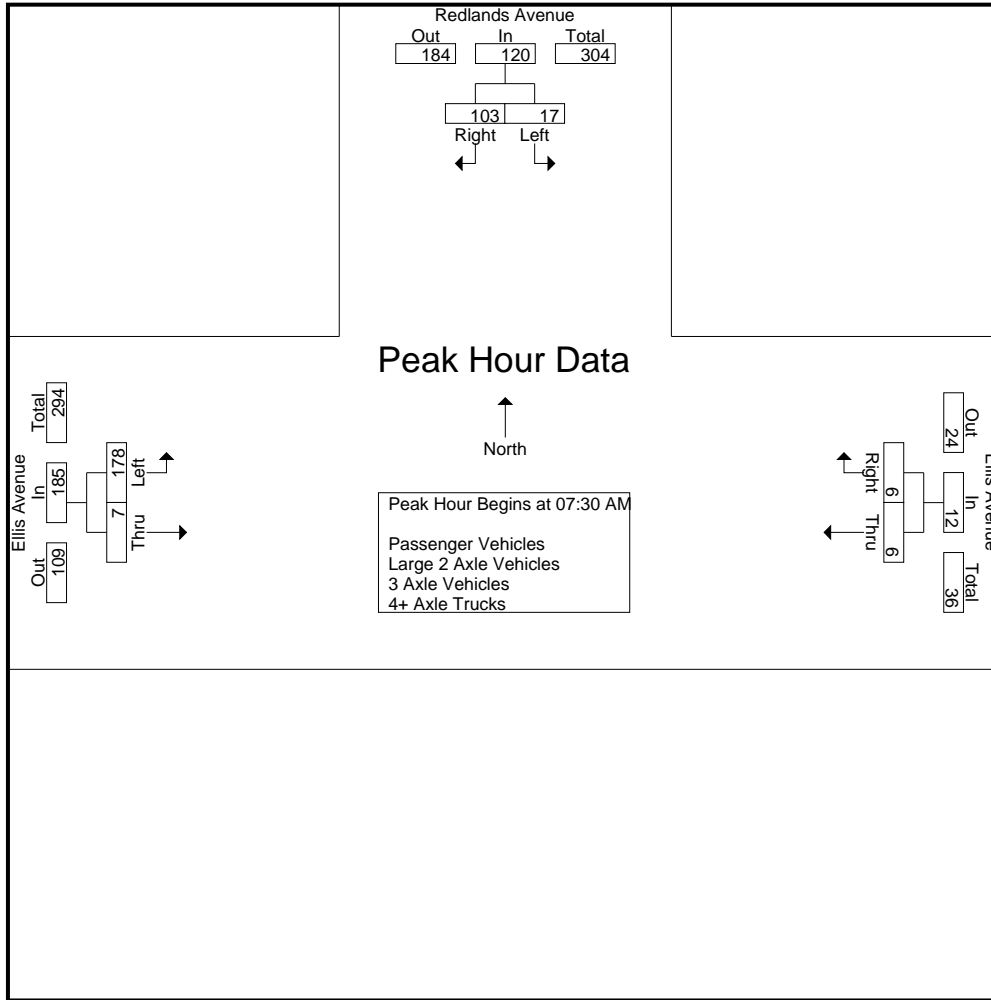
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	6	16	22	0	0	0	37	3	40	62
07:15 AM	8	17	25	0	0	0	36	0	36	61
07:30 AM	6	18	24	0	0	0	53	0	53	77
07:45 AM	6	31	37	0	1	1	46	3	49	87
Total	26	82	108	0	1	1	172	6	178	287
08:00 AM	3	31	34	4	3	7	46	4	50	91
08:15 AM	2	23	25	2	2	4	33	0	33	62
08:30 AM	4	23	27	1	3	4	25	3	28	59
08:45 AM	7	17	24	1	1	2	21	2	23	49
Total	16	94	110	8	9	17	125	9	134	261
Grand Total	42	176	218	8	10	18	297	15	312	548
Apprch %	19.3	80.7		44.4	55.6		95.2	4.8		
Total %	7.7	32.1	39.8	1.5	1.8	3.3	54.2	2.7	56.9	
Passenger Vehicles	36	160	196	3	6	9	280	10	290	495
% Passenger Vehicles	85.7	90.9	89.9	37.5	60	50	94.3	66.7	92.9	90.3
Large 2 Axle Vehicles	4	9	13	3	3	6	5	2	7	26
% Large 2 Axle Vehicles	9.5	5.1	6	37.5	30	33.3	1.7	13.3	2.2	4.7
3 Axle Vehicles	0	1	1	0	0	0	6	1	7	8
% 3 Axle Vehicles	0	0.6	0.5	0	0	0	2	6.7	2.2	1.5
4+ Axle Trucks	2	6	8	2	1	3	6	2	8	19
% 4+ Axle Trucks	4.8	3.4	3.7	25	10	16.7	2	13.3	2.6	3.5

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	6	18	24	0	0	0	53	0	53	77
07:45 AM	6	31	37	0	1	1	46	3	49	87
08:00 AM	3	31	34	4	3	7	46	4	50	91
08:15 AM	2	23	25	2	2	4	33	0	33	62
Total Volume	17	103	120	6	6	12	178	7	185	317
% App. Total	14.2	85.8		50	50		96.2	3.8		
PHF	.708	.831	.811	.375	.500	.429	.840	.438	.873	.871

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM			08:00 AM			07:15 AM		
+0 mins.	6	31	37	4	3	7	36	0	36
+15 mins.	3	31	34	2	2	4	53	0	53
+30 mins.	2	23	25	1	3	4	46	3	49
+45 mins.	4	23	27	1	1	2	46	4	50
Total Volume	15	108	123	8	9	17	181	7	188
% App. Total	12.2	87.8		47.1	52.9		96.3	3.7	
PHF	.625	.871	.831	.500	.750	.607	.854	.438	.887

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
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Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	4	13	17	0	0	0	33	2	35	52
07:15 AM	8	15	23	0	0	0	35	0	35	58
07:30 AM	5	17	22	0	0	0	48	0	48	70
07:45 AM	5	28	33	0	1	1	44	2	46	80
Total	22	73	95	0	1	1	160	4	164	260
08:00 AM	2	29	31	2	1	3	45	3	48	82
08:15 AM	1	21	22	1	1	2	31	0	31	55
08:30 AM	4	20	24	0	2	2	23	2	25	51
08:45 AM	7	17	24	0	1	1	21	1	22	47
Total	14	87	101	3	5	8	120	6	126	235
Grand Total	36	160	196	3	6	9	280	10	290	495
Apprch %	18.4	81.6		33.3	66.7		96.6	3.4		
Total %	7.3	32.3	39.6	0.6	1.2	1.8	56.6	2	58.6	

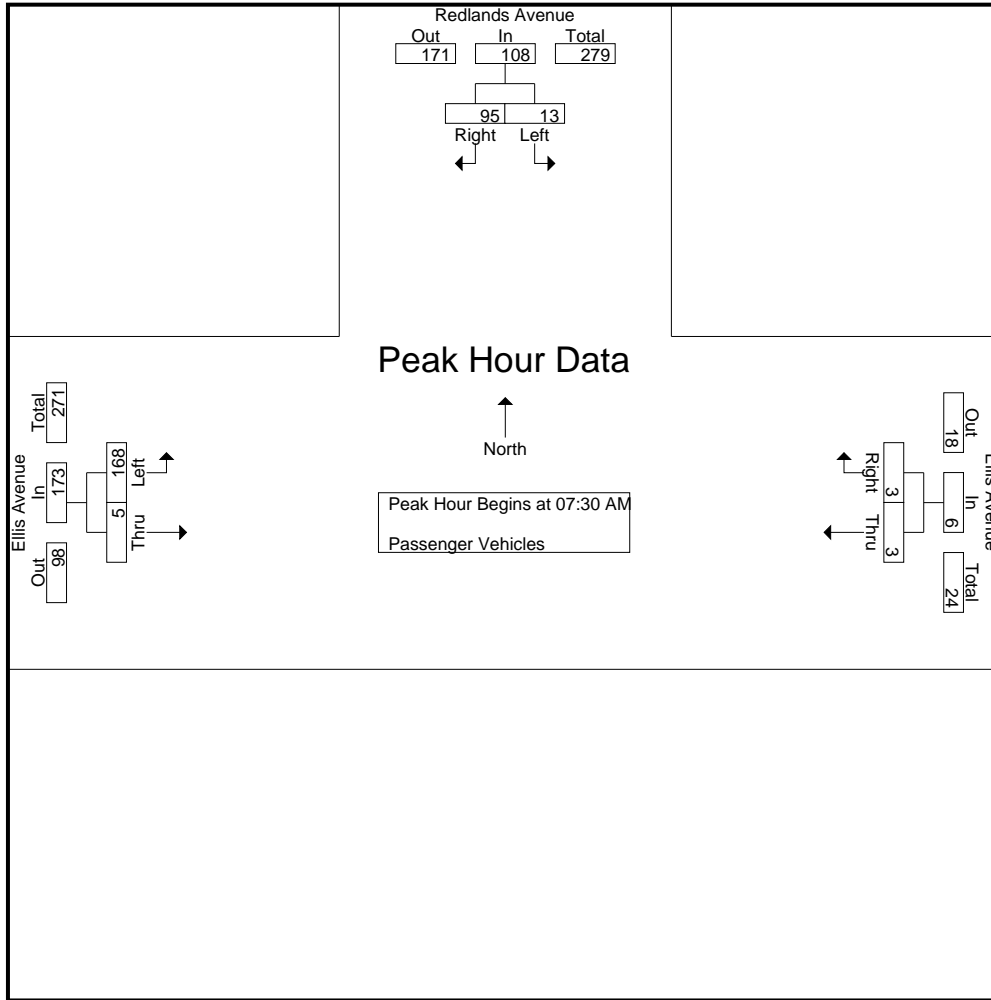
Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:30 AM	5	17	22	0	0	0	48	0	48	70
07:45 AM	5	28	33	0	1	1	44	2	46	80
08:00 AM	2	29	31	2	1	3	45	3	48	82
08:15 AM	1	21	22	1	1	2	31	0	31	55
Total Volume	13	95	108	3	3	6	168	5	173	287
% App. Total	12	88		50	50		97.1	2.9		
PHF	.650	.819	.818	.375	.750	.500	.875	.417	.901	.875

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	5	17	22	0	0	0	48	0	48
+15 mins.	5	28	33	0	1	1	44	2	46
+30 mins.	2	29	31	2	1	3	45	3	48
+45 mins.	1	21	22	1	1	2	31	0	31
Total Volume	13	95	108	3	3	6	168	5	173
% App. Total	12	88		50	50		97.1	2.9	
PHF	.650	.819	.818	.375	.750	.500	.875	.417	.901

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	1	1	2	0	0	0	1	0	1	3
07:15 AM	0	2	2	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	2	0	2	2
07:45 AM	1	2	3	0	0	0	0	1	1	4
Total	2	5	7	0	0	0	3	1	4	11
08:00 AM	1	1	2	1	1	2	0	0	0	4
08:15 AM	1	2	3	1	1	2	1	0	1	6
08:30 AM	0	1	1	0	1	1	1	1	2	4
08:45 AM	0	0	0	1	0	1	0	0	0	1
Total	2	4	6	3	3	6	2	1	3	15
Grand Total	4	9	13	3	3	6	5	2	7	26
Apprch %	30.8	69.2		50	50		71.4	28.6		
Total %	15.4	34.6	50	11.5	11.5	23.1	19.2	7.7	26.9	

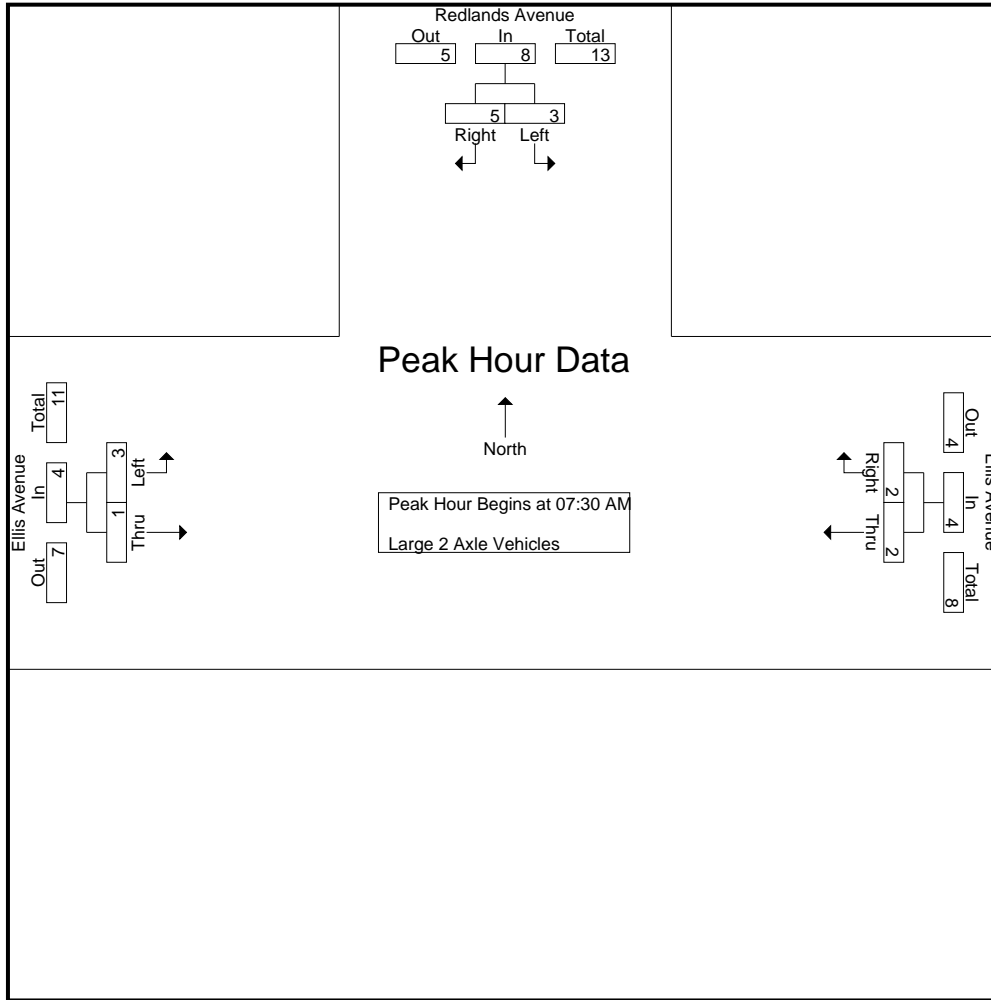
Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:30 AM	0	0	0	0	0	0	2	0	2	2
07:45 AM	1	2	3	0	0	0	0	1	1	4
08:00 AM	1	1	2	1	1	2	0	0	0	4
08:15 AM	1	2	3	1	1	2	1	0	1	6
Total Volume	3	5	8	2	2	4	3	1	4	16
% App. Total	37.5	62.5		50	50		75	25		
PHF	.750	.625	.667	.500	.500	.500	.375	.250	.500	.667

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	2	0	2
+15 mins.	1	2	3	0	0	0	0	1	1
+30 mins.	1	1	2	1	1	2	0	0	0
+45 mins.	1	2	3	1	1	2	1	0	1
Total Volume	3	5	8	2	2	4	3	1	4
% App. Total	37.5	62.5		50	50		75	25	
PHF	.750	.625	.667	.500	.500	.500	.375	.250	.500

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	0	0	0	3	0	3	3
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	5	0	5	5
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	1	2	3
Grand Total	0	1	1	0	0	0	6	1	7	8
Apprch %	0	100		0	0		85.7	14.3		
Total %	0	12.5	12.5	0	0	0	75	12.5	87.5	

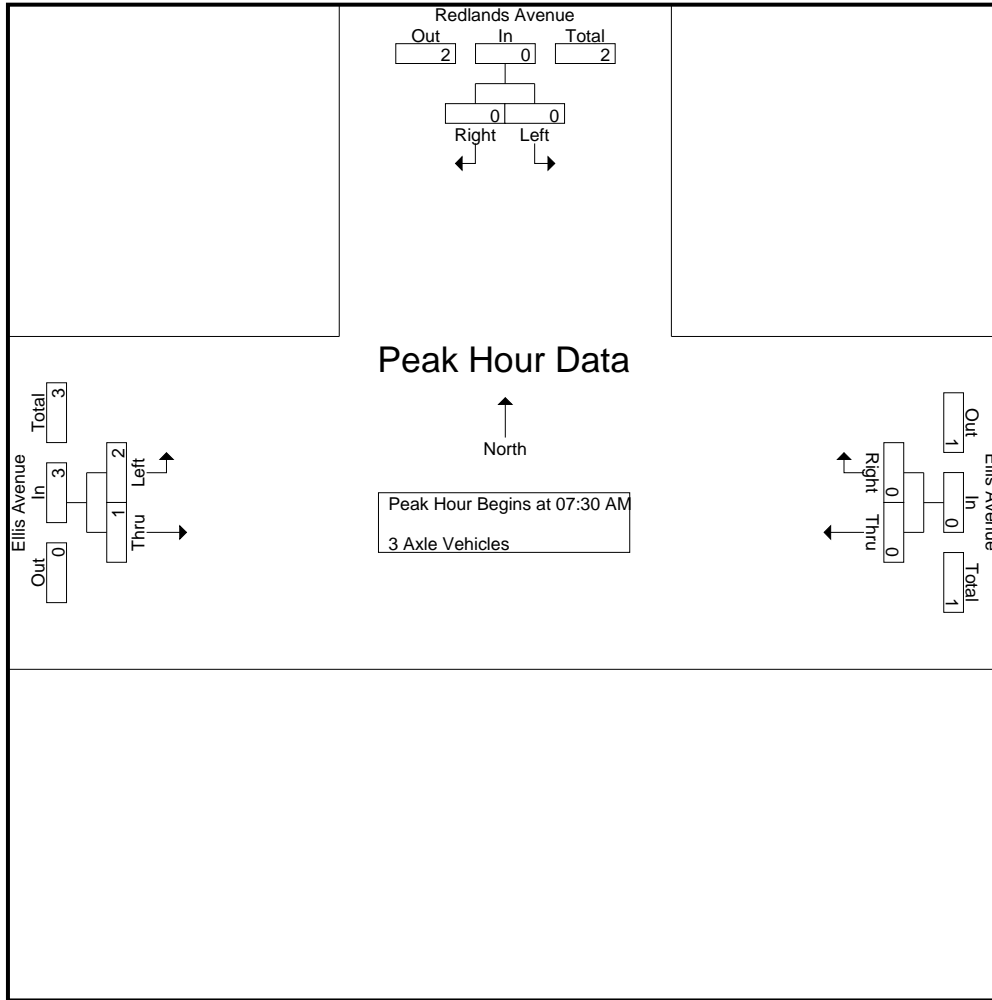
Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	2	1	3	3
% App. Total	0	0		0	0		66.7	33.3		
PHF	.000	.000	.000	.000	.000	.000	.500	.250	.750	.750

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	2	1	3
% App. Total	0	0	0	0	0	0	66.7	33.3	
PHF	.000	.000	.000	.000	.000	.000	.500	.250	.750

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	1	2	3	0	0	0	0	1	1	4
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	1	1	2	0	0	0	2	0	2	4
07:45 AM	0	1	1	0	0	0	2	0	2	3
Total	2	4	6	0	0	0	4	1	5	11
08:00 AM	0	1	1	1	1	2	1	0	1	4
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	1	0	1	1	0	1	3
08:45 AM	0	0	0	0	0	0	0	1	1	1
Total	0	2	2	2	1	3	2	1	3	8
Grand Total	2	6	8	2	1	3	6	2	8	19
Apprch %	25	75		66.7	33.3		75	25		
Total %	10.5	31.6	42.1	10.5	5.3	15.8	31.6	10.5	42.1	

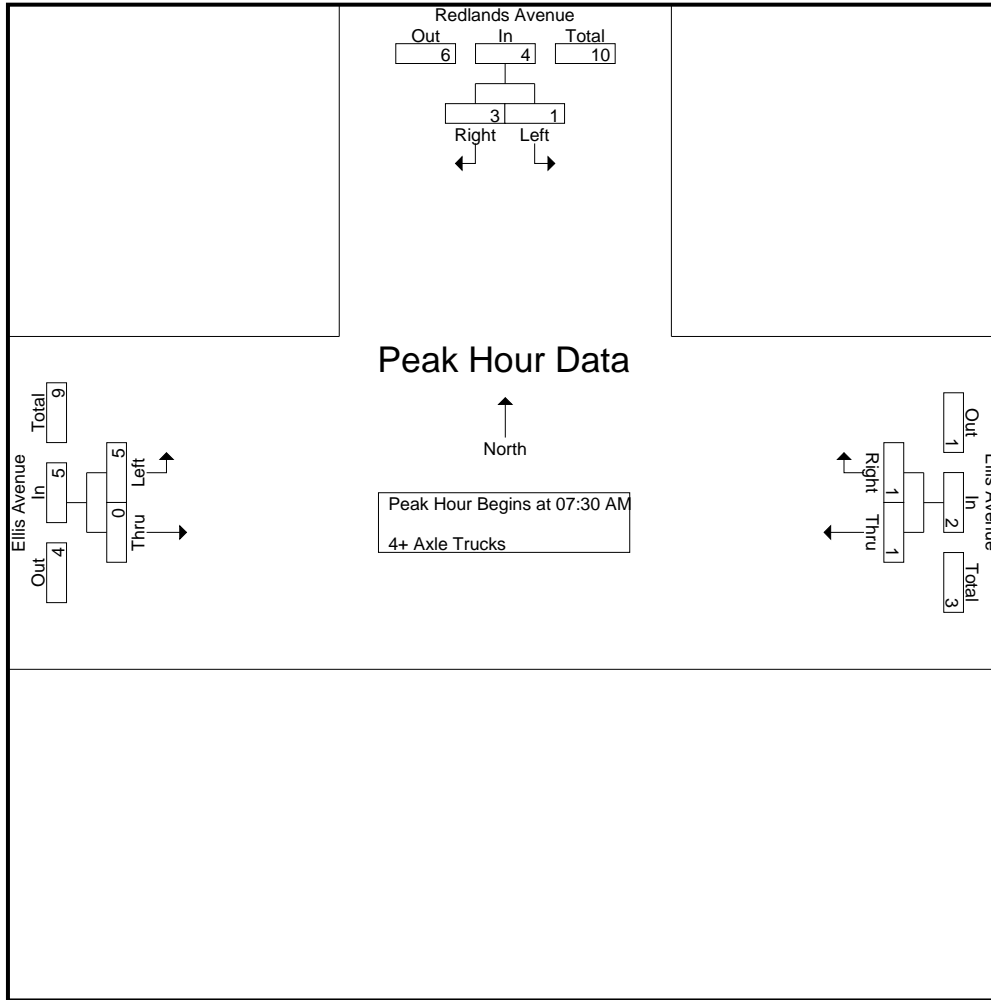
Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:30 AM	1	1	2	0	0	0	2	0	2	4
07:45 AM	0	1	1	0	0	0	2	0	2	3
08:00 AM	0	1	1	1	1	2	1	0	1	4
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	1	3	4	1	1	2	5	0	5	11
% App. Total	25	75		50	50		100	0		
PHF	.250	.750	.500	.250	.250	.250	.625	.000	.625	.688

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	1	1	2	0	0	0	2	0	2
+15 mins.	0	1	1	0	0	0	2	0	2
+30 mins.	0	1	1	1	1	2	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	1	3	4	1	1	2	5	0	5
% App. Total	25	75		50	50		100	0	
PHF	.250	.750	.500	.250	.250	.250	.625	.000	.625

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

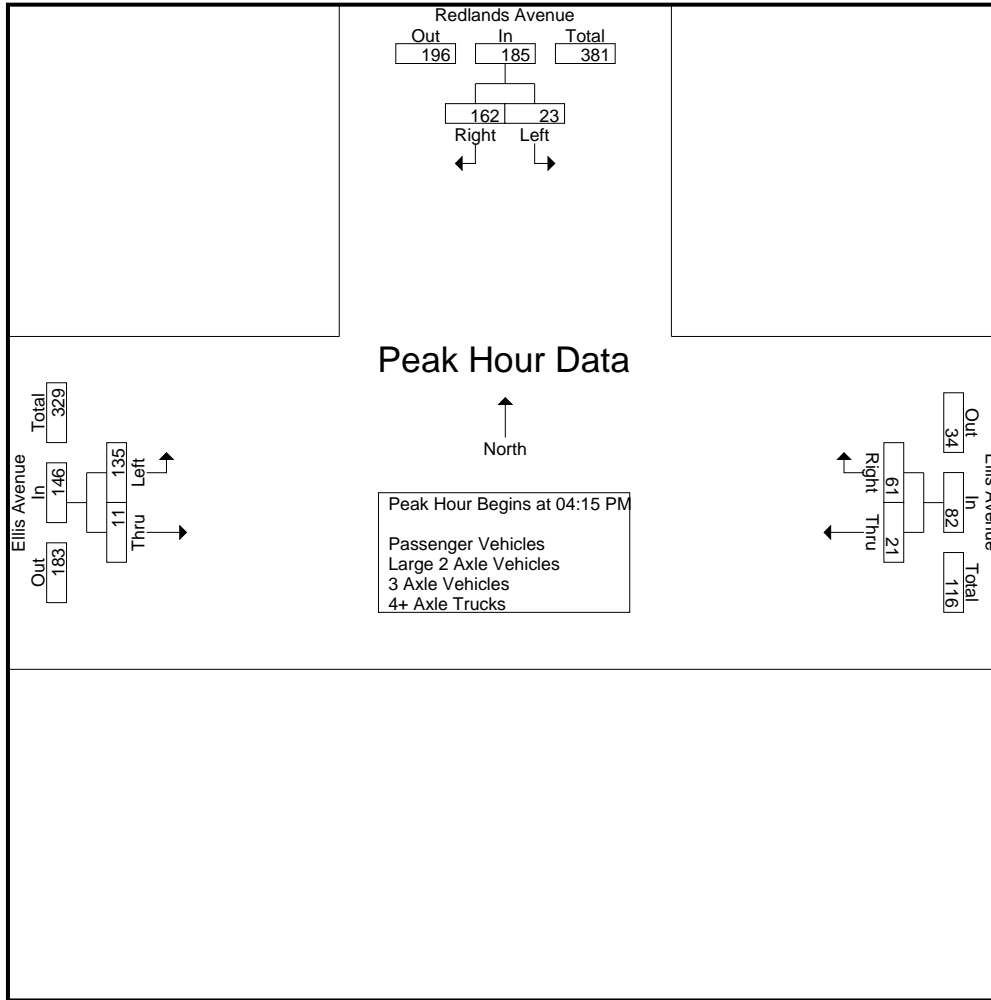
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	14	39	53	2	15	17	35	0	35	105
04:15 PM	7	35	42	3	13	16	33	5	38	96
04:30 PM	9	40	49	4	16	20	35	5	40	109
04:45 PM	4	42	46	3	11	14	32	1	33	93
Total	34	156	190	12	55	67	135	11	146	403
05:00 PM	3	45	48	11	21	32	35	0	35	115
05:15 PM	4	36	40	4	13	17	26	1	27	84
05:30 PM	2	33	35	13	11	24	25	5	30	89
05:45 PM	1	36	37	8	22	30	30	2	32	99
Total	10	150	160	36	67	103	116	8	124	387
Grand Total	44	306	350	48	122	170	251	19	270	790
Apprch %	12.6	87.4		28.2	71.8		93	7		
Total %	5.6	38.7	44.3	6.1	15.4	21.5	31.8	2.4	34.2	
Passenger Vehicles	44	281	325	44	122	166	235	15	250	741
% Passenger Vehicles	100	91.8	92.9	91.7	100	97.6	93.6	78.9	92.6	93.8
Large 2 Axle Vehicles	0	8	8	0	0	0	5	0	5	13
% Large 2 Axle Vehicles	0	2.6	2.3	0	0	0	2	0	1.9	1.6
3 Axle Vehicles	0	3	3	1	0	1	2	0	2	6
% 3 Axle Vehicles	0	1	0.9	2.1	0	0.6	0.8	0	0.7	0.8
4+ Axle Trucks	0	14	14	3	0	3	9	4	13	30
% 4+ Axle Trucks	0	4.6	4	6.2	0	1.8	3.6	21.1	4.8	3.8

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	7	35	42	3	13	16	33	5	38	96
04:30 PM	9	40	49	4	16	20	35	5	40	109
04:45 PM	4	42	46	3	11	14	32	1	33	93
05:00 PM	3	45	48	11	21	32	35	0	35	115
Total Volume	23	162	185	21	61	82	135	11	146	413
% App. Total	12.4	87.6		25.6	74.4		92.5	7.5		
PHF	.639	.900	.944	.477	.726	.641	.964	.550	.913	.898

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

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

	04:00 PM			05:00 PM			04:00 PM		
+0 mins.	14	39	53	11	21	32	35	0	35
+15 mins.	7	35	42	4	13	17	33	5	38
+30 mins.	9	40	49	13	11	24	35	5	40
+45 mins.	4	42	46	8	22	30	32	1	33
Total Volume	34	156	190	36	67	103	135	11	146
% App. Total	17.9	82.1		35	65		92.5	7.5	
PHF	.607	.929	.896	.692	.761	.805	.964	.550	.913

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis PM
 Site Code : 10823257
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Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	14	32	46	2	15	17	35	0	35	98
04:15 PM	7	31	38	3	13	16	29	4	33	87
04:30 PM	9	38	47	4	16	20	32	5	37	104
04:45 PM	4	40	44	3	11	14	30	0	30	88
Total	34	141	175	12	55	67	126	9	135	377
05:00 PM	3	43	46	10	21	31	30	0	30	107
05:15 PM	4	32	36	3	13	16	25	1	26	78
05:30 PM	2	31	33	13	11	24	25	3	28	85
05:45 PM	1	34	35	6	22	28	29	2	31	94
Total	10	140	150	32	67	99	109	6	115	364
Grand Total	44	281	325	44	122	166	235	15	250	741
Apprch %	13.5	86.5		26.5	73.5		94	6		
Total %	5.9	37.9	43.9	5.9	16.5	22.4	31.7	2	33.7	

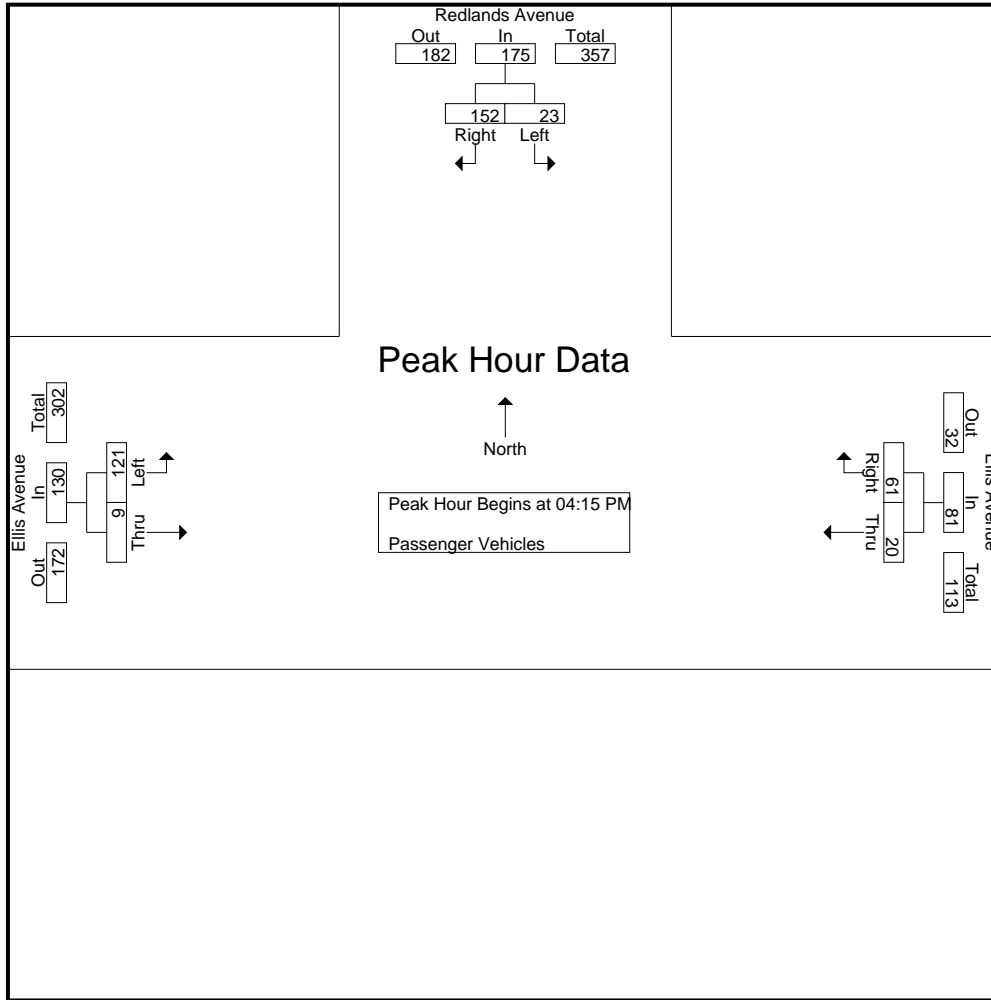
Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:15 PM	7	31	38	3	13	16	29	4	33	87
04:30 PM	9	38	47	4	16	20	32	5	37	104
04:45 PM	4	40	44	3	11	14	30	0	30	88
05:00 PM	3	43	46	10	21	31	30	0	30	107
Total Volume	23	152	175	20	61	81	121	9	130	386
% App. Total	13.1	86.9		24.7	75.3		93.1	6.9		
PHF	.639	.884	.931	.500	.726	.653	.945	.450	.878	.902

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis PM
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	7	31	38	3	13	16	29	4	33
+15 mins.	9	38	47	4	16	20	32	5	37
+30 mins.	4	40	44	3	11	14	30	0	30
+45 mins.	3	43	46	10	21	31	30	0	30
Total Volume	23	152	175	20	61	81	121	9	130
% App. Total	13.1	86.9		24.7	75.3		93.1	6.9	
PHF	.639	.884	.931	.500	.726	.653	.945	.450	.878

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis PM
 Site Code : 10823257
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Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	3	3	0	0	0	0	0	0	3
04:15 PM	0	3	3	0	0	0	2	0	2	5
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	7	7	0	0	0	3	0	3	10
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	1	1	0	0	0	2	0	2	3
Grand Total	0	8	8	0	0	0	5	0	5	13
Apprch %	0	100		0	0		100	0		
Total %	0	61.5	61.5	0	0	0	38.5	0	38.5	

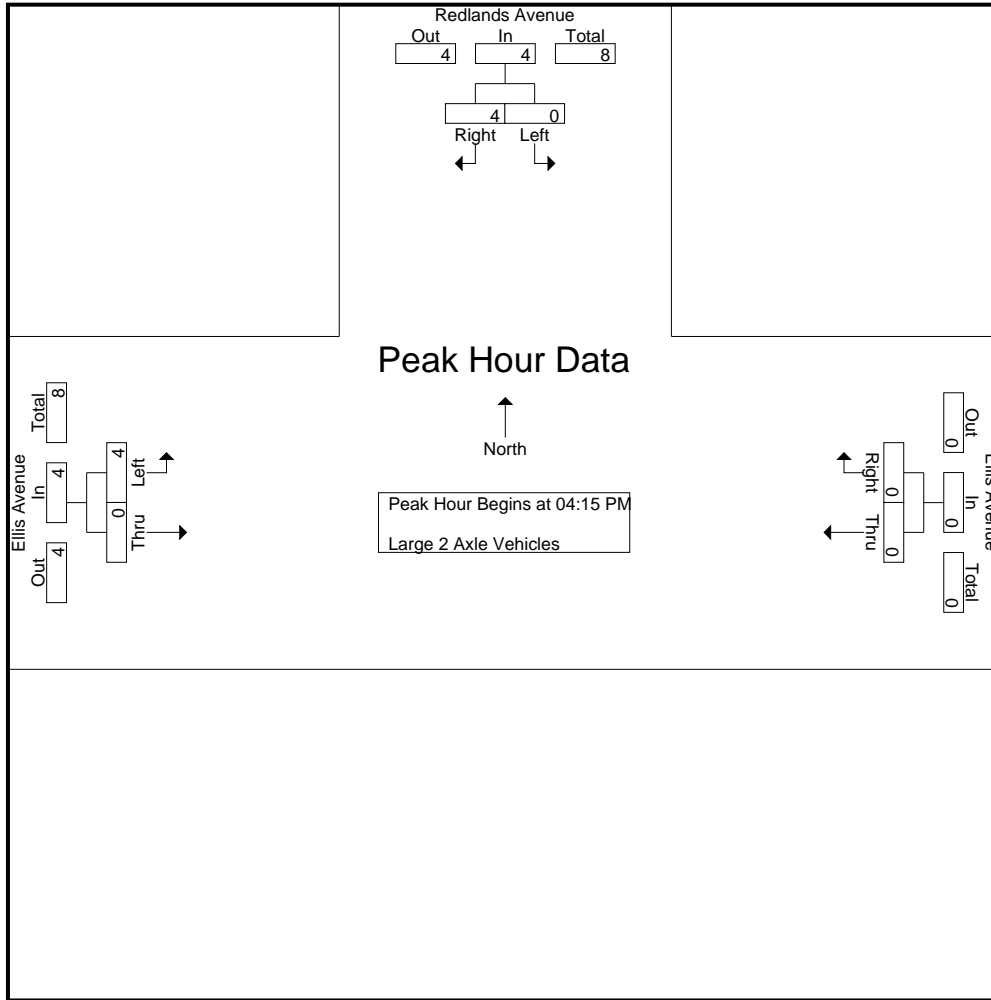
Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:15 PM	0	3	3	0	0	0	2	0	2	5
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	4	4	0	0	0	4	0	4	8
% App. Total	0	100		0	0		100	0		
PHF	.000	.333	.333	.000	.000	.000	.500	.000	.500	.400

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis PM
 Site Code : 10823257
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	3	3	0	0	0	2	0	2
+15 mins.	0	1	1	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	4	4	0	0	0	4	0	4
% App. Total	0	100		0	0		100	0	
PHF	.000	.333	.333	.000	.000	.000	.500	.000	.500

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	2	2	0	0	0	0	0	0	2
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	1	0	1	0	0	0	1
Total	0	3	3	1	0	1	1	0	1	5
Grand Total	0	3	3	1	0	1	2	0	2	6
Apprch %	0	100		100	0		100	0		
Total %	0	50	50	16.7	0	16.7	33.3	0	33.3	

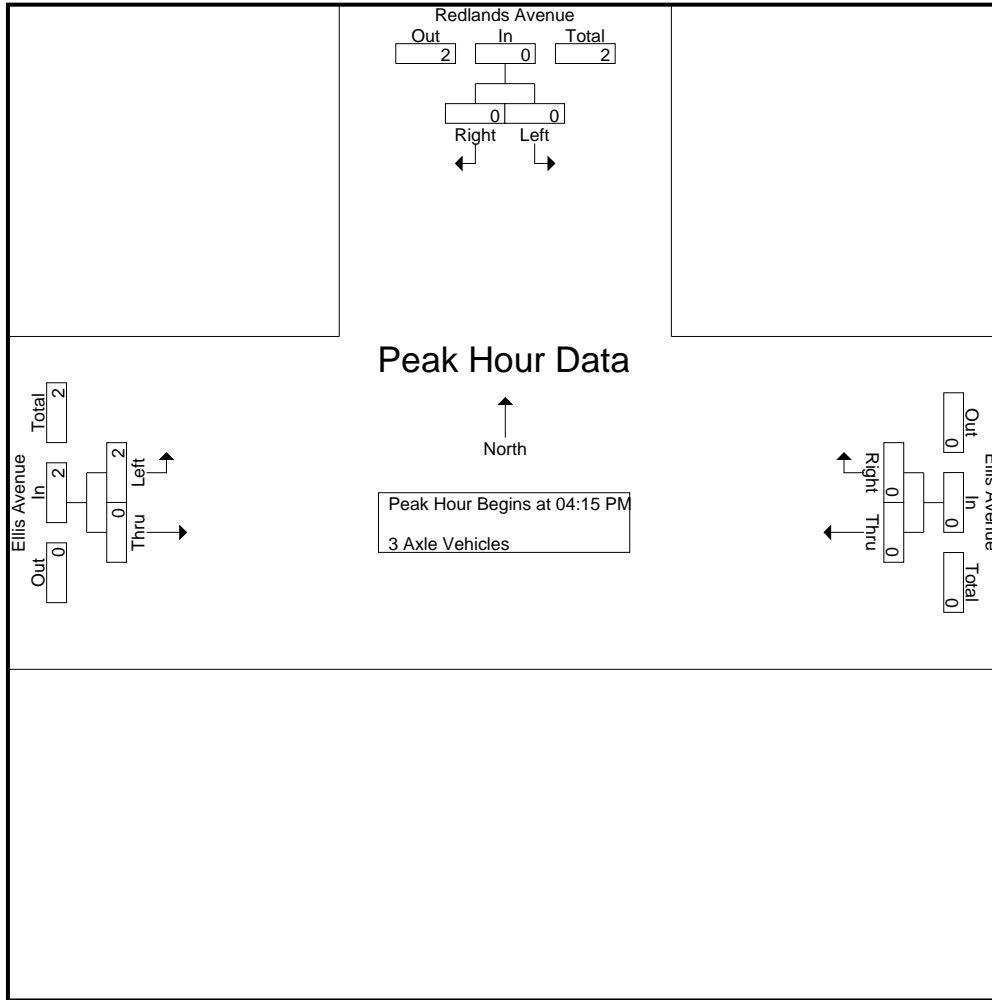
Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	2	0	2	2
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.000	.500	.500

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis PM
 Site Code : 10823257
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	2	0	2
% App. Total	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.000	.500	.000	.500

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	4	4	0	0	0	0	0	0	4
04:15 PM	0	1	1	0	0	0	1	1	2	3
04:30 PM	0	1	1	0	0	0	2	0	2	3
04:45 PM	0	2	2	0	0	0	2	1	3	5
Total	0	8	8	0	0	0	5	2	7	15
05:00 PM	0	2	2	1	0	1	3	0	3	6
05:15 PM	0	2	2	1	0	1	1	0	1	4
05:30 PM	0	0	0	0	0	0	0	2	2	2
05:45 PM	0	2	2	1	0	1	0	0	0	3
Total	0	6	6	3	0	3	4	2	6	15
Grand Total	0	14	14	3	0	3	9	4	13	30
Apprch %	0	100		100	0		69.2	30.8		
Total %	0	46.7	46.7	10	0	10	30	13.3	43.3	

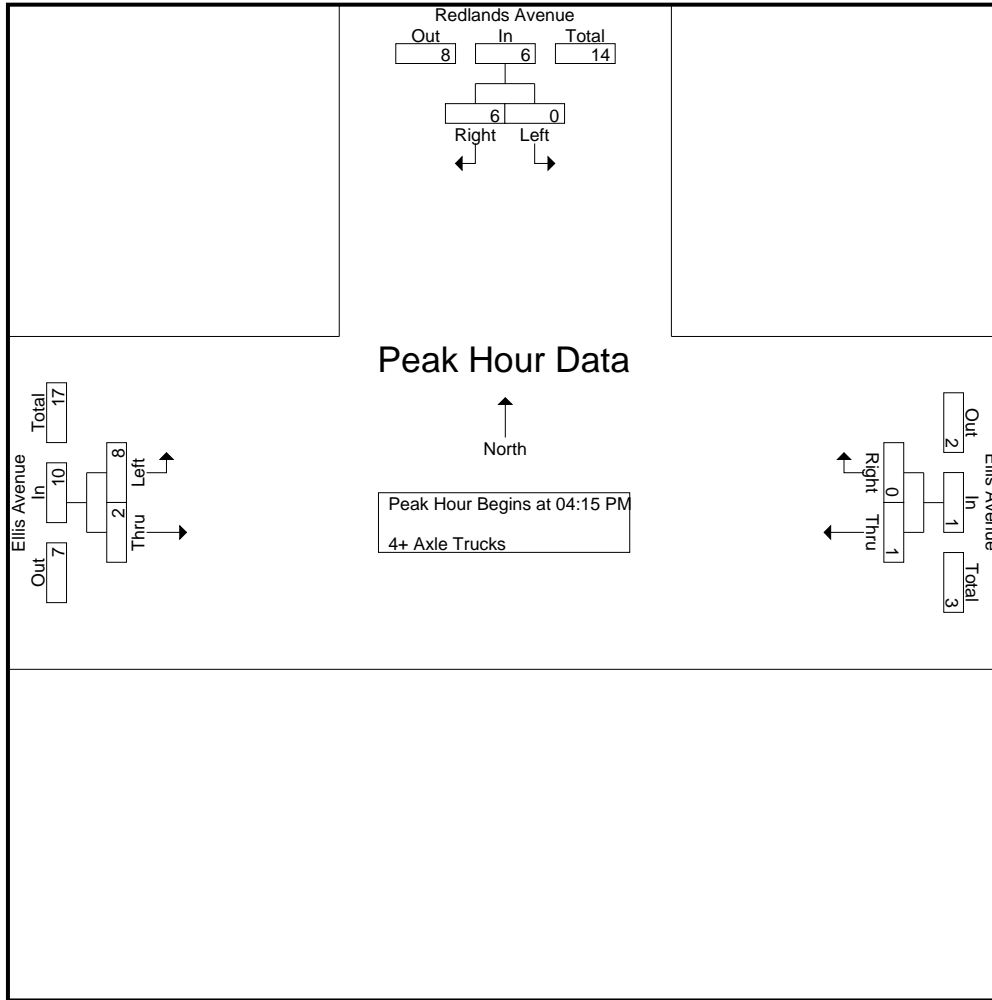
Start Time	Redlands Avenue Southbound			Ellis Avenue Westbound			Ellis Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:15 PM	0	1	1	0	0	0	1	1	2	3
04:30 PM	0	1	1	0	0	0	2	0	2	3
04:45 PM	0	2	2	0	0	0	2	1	3	5
05:00 PM	0	2	2	1	0	1	3	0	3	6
Total Volume	0	6	6	1	0	1	8	2	10	17
% App. Total	0	100		100	0		80	20		
PHF	.000	.750	.750	.250	.000	.250	.667	.500	.833	.708

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Redlands Avenue
 E/W: Ellis Avenue
 Weather: Clear

File Name : 04_PER_Red_Ellis PM
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	1	1	0	0	0	1	1	2
+15 mins.	0	1	1	0	0	0	2	0	2
+30 mins.	0	2	2	0	0	0	2	1	3
+45 mins.	0	2	2	1	0	1	3	0	3
Total Volume	0	6	6	1	0	1	8	2	10
% App. Total	0	100		100	0		80	20	
PHF	.000	.750	.750	.250	.000	.250	.667	.500	.833

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

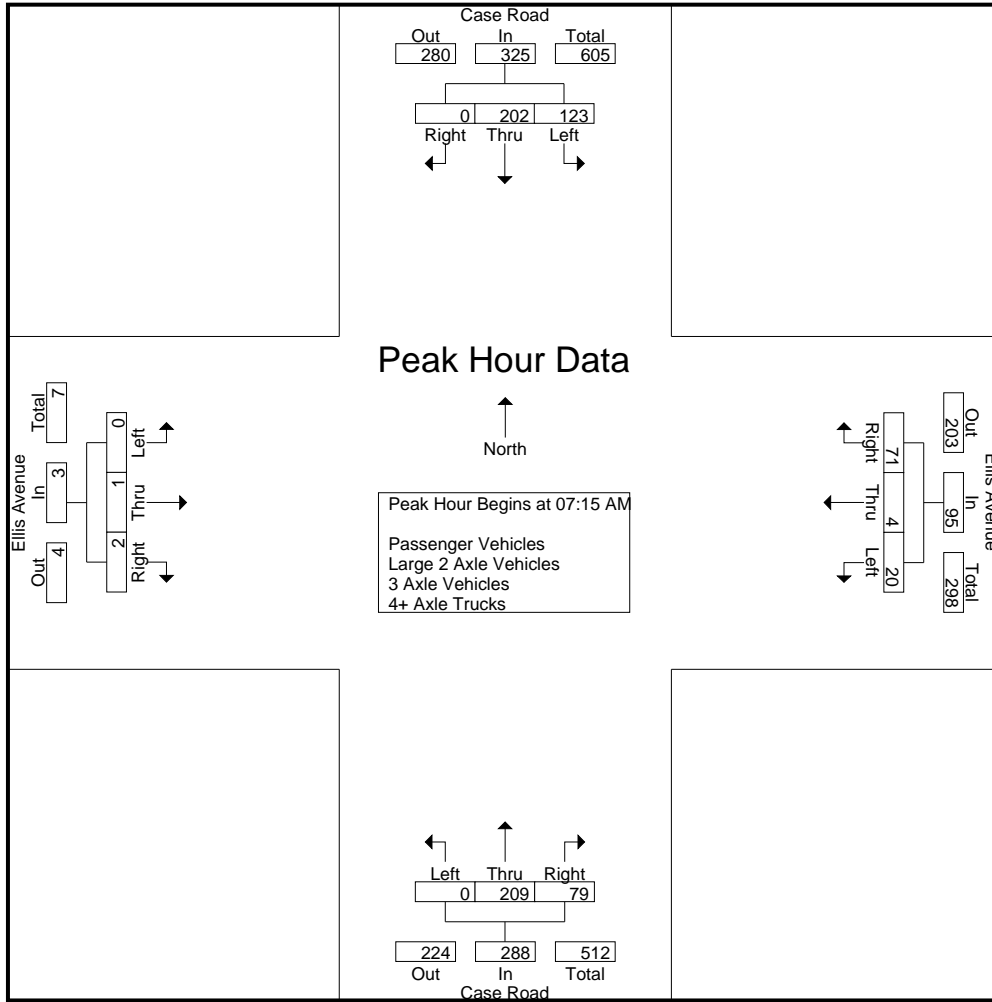
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	15	40	0	55	3	1	21	25	0	57	22	79	0	0	0	0	159
07:15 AM	20	46	0	66	2	0	7	9	0	64	21	85	0	0	1	1	161
07:30 AM	32	52	0	84	9	3	15	27	0	45	20	65	0	0	1	1	177
07:45 AM	35	55	0	90	5	1	23	29	0	50	19	69	0	1	0	1	189
Total	102	193	0	295	19	5	66	90	0	216	82	298	0	1	2	3	686
08:00 AM	36	49	0	85	4	0	26	30	0	50	19	69	0	0	0	0	184
08:15 AM	15	53	0	68	7	0	21	28	0	50	10	60	0	1	0	1	157
08:30 AM	12	60	0	72	10	0	16	26	0	61	10	71	0	0	0	0	169
08:45 AM	14	38	0	52	6	3	13	22	0	62	6	68	0	0	0	0	142
Total	77	200	0	277	27	3	76	106	0	223	45	268	0	1	0	1	652
Grand Total	179	393	0	572	46	8	142	196	0	439	127	566	0	2	2	4	1338
Apprch %	31.3	68.7	0		23.5	4.1	72.4		0	77.6	22.4		0	50	50		
Total %	13.4	29.4	0	42.8	3.4	0.6	10.6	14.6	0	32.8	9.5	42.3	0	0.1	0.1	0.3	
Passenger Vehicles	164	360	0	524	45	8	123	176	0	416	124	540	0	2	2	4	1244
% Passenger Vehicles	91.6	91.6	0	91.6	97.8	100	86.6	89.8	0	94.8	97.6	95.4	0	100	100	100	93
Large 2 Axle Vehicles	3	23	0	26	1	0	9	10	0	15	1	16	0	0	0	0	52
% Large 2 Axle Vehicles	1.7	5.9	0	4.5	2.2	0	6.3	5.1	0	3.4	0.8	2.8	0	0	0	0	3.9
3 Axle Vehicles	4	7	0	11	0	0	1	1	0	3	2	5	0	0	0	0	17
% 3 Axle Vehicles	2.2	1.8	0	1.9	0	0	0.7	0.5	0	0.7	1.6	0.9	0	0	0	0	1.3
4+ Axle Trucks	8	3	0	11	0	0	9	9	0	5	0	5	0	0	0	0	25
% 4+ Axle Trucks	4.5	0.8	0	1.9	0	0	6.3	4.6	0	1.1	0	0.9	0	0	0	0	1.9

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	20	46	0	66	2	0	7	9	0	64	21	85	0	0	1	1	161
07:30 AM	32	52	0	84	9	3	15	27	0	45	20	65	0	0	1	1	177
07:45 AM	35	55	0	90	5	1	23	29	0	50	19	69	0	1	0	1	189
08:00 AM	36	49	0	85	4	0	26	30	0	50	19	69	0	0	0	0	184
Total Volume	123	202	0	325	20	4	71	95	0	209	79	288	0	1	2	3	711
% App. Total	37.8	62.2	0		21.1	4.2	74.7		0	72.6	27.4		0	33.3	66.7		
PHF	.854	.918	.000	.903	.556	.333	.683	.792	.000	.816	.940	.847	.000	.250	.500	.750	.940

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
 Site Code : 10823257
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:00 AM				07:00 AM			
+0 mins.	32	52	0	84	9	3	15	27	0	57	22	79	0	0	0	0
+15 mins.	35	55	0	90	5	1	23	29	0	64	21	85	0	0	0	1
+30 mins.	36	49	0	85	4	0	26	30	0	45	20	65	0	0	0	1
+45 mins.	15	53	0	68	7	0	21	28	0	50	19	69	0	1	0	1
Total Volume	118	209	0	327	25	4	85	114	0	216	82	298	0	1	2	3
% App. Total	36.1	63.9	0		21.9	3.5	74.6		0	72.5	27.5		0	33.3	66.7	
PHF	.819	.950	.000	.908	.694	.333	.817	.950	.000	.844	.932	.876	.000	.250	.500	.750

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
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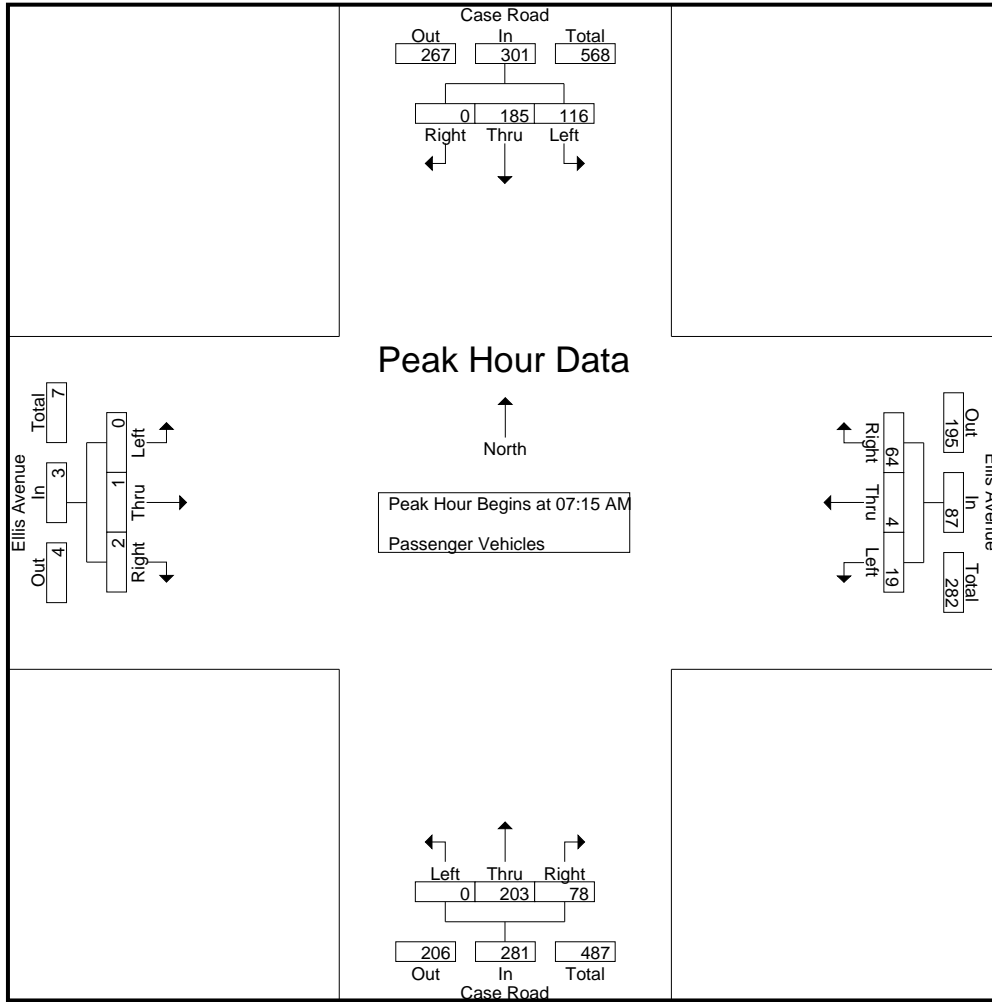
Groups Printed- Passenger Vehicles

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	12	33	0	45	3	1	17	21	0	54	20	74	0	0	0	0	140
07:15 AM	20	40	0	60	2	0	5	7	0	60	21	81	0	0	1	1	149
07:30 AM	28	47	0	75	9	3	14	26	0	45	19	64	0	0	1	1	166
07:45 AM	33	53	0	86	4	1	21	26	0	49	19	68	0	1	0	1	181
Total	93	173	0	266	18	5	57	80	0	208	79	287	0	1	2	3	636
08:00 AM	35	45	0	80	4	0	24	28	0	49	19	68	0	0	0	0	176
08:15 AM	14	48	0	62	7	0	16	23	0	46	10	56	0	1	0	1	142
08:30 AM	9	58	0	67	10	0	15	25	0	55	10	65	0	0	0	0	157
08:45 AM	13	36	0	49	6	3	11	20	0	58	6	64	0	0	0	0	133
Total	71	187	0	258	27	3	66	96	0	208	45	253	0	1	0	1	608
Grand Total	164	360	0	524	45	8	123	176	0	416	124	540	0	2	2	4	1244
Apprch %	31.3	68.7	0		25.6	4.5	69.9		0	77	23		0	50	50		
Total %	13.2	28.9	0	42.1	3.6	0.6	9.9	14.1	0	33.4	10	43.4	0	0.2	0.2	0.3	

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	20	40	0	60	2	0	5	7	0	60	21	81	0	0	1	1	149
07:30 AM	28	47	0	75	9	3	14	26	0	45	19	64	0	0	1	1	166
07:45 AM	33	53	0	86	4	1	21	26	0	49	19	68	0	1	0	1	181
08:00 AM	35	45	0	80	4	0	24	28	0	49	19	68	0	0	0	0	176
Total Volume	116	185	0	301	19	4	64	87	0	203	78	281	0	1	2	3	672
% App. Total	38.5	61.5	0		21.8	4.6	73.6		0	72.2	27.8		0	33.3	66.7		
PHF	.829	.873	.000	.875	.528	.333	.667	.777	.000	.846	.929	.867	.000	.250	.500	.750	.928

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
 Site Code : 10823257
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	20	40	0	60	2	0	5	7	0	60	21	81	0	0	1	1
+15 mins.	28	47	0	75	9	3	14	26	0	45	19	64	0	0	1	1
+30 mins.	33	53	0	86	4	1	21	26	0	49	19	68	0	1	0	1
+45 mins.	35	45	0	80	4	0	24	28	0	49	19	68	0	0	0	0
Total Volume	116	185	0	301	19	4	64	87	0	203	78	281	0	1	2	3
% App. Total	38.5	61.5	0		21.8	4.6	73.6		0	72.2	27.8		0	33.3	66.7	
PHF	.829	.873	.000	.875	.528	.333	.667	.777	.000	.846	.929	.867	.000	.250	.500	.750

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	6	0	6	0	0	1	1	0	1	0	1	0	0	0	0	8
07:15 AM	0	3	0	3	0	0	2	2	0	4	0	4	0	0	0	0	9
07:30 AM	1	2	0	3	0	0	0	0	0	0	1	1	0	0	0	0	4
07:45 AM	0	1	0	1	1	0	1	2	0	1	0	1	0	0	0	0	4
Total	1	12	0	13	1	0	4	5	0	6	1	7	0	0	0	0	25
08:00 AM	0	3	0	3	0	0	1	1	0	1	0	1	0	0	0	0	5
08:15 AM	1	5	0	6	0	0	4	4	0	2	0	2	0	0	0	0	12
08:30 AM	1	2	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
08:45 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	2	11	0	13	0	0	5	5	0	9	0	9	0	0	0	0	27
Grand Total	3	23	0	26	1	0	9	10	0	15	1	16	0	0	0	0	52
Apprch %	11.5	88.5	0		10	0	90		0	93.8	6.2		0	0	0		
Total %	5.8	44.2	0	50	1.9	0	17.3	19.2	0	28.8	1.9	30.8	0	0	0	0	

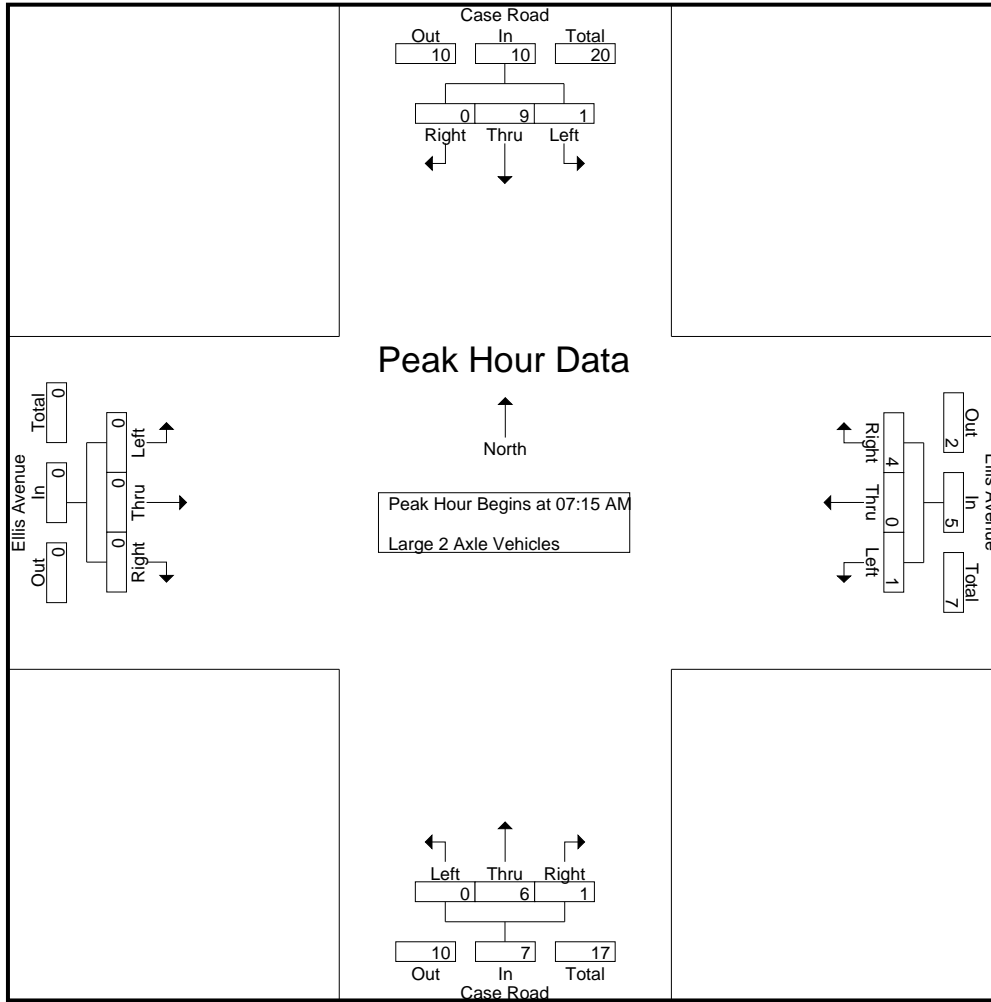
Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	3	0	3	0	0	2	2	0	4	0	4	0	0	0	0	9
07:30 AM	1	2	0	3	0	0	0	0	0	0	1	1	0	0	0	0	4
07:45 AM	0	1	0	1	1	0	1	2	0	1	0	1	0	0	0	0	4
08:00 AM	0	3	0	3	0	0	1	1	0	1	0	1	0	0	0	0	5
Total Volume	1	9	0	10	1	0	4	5	0	6	1	7	0	0	0	0	22
% App. Total	10	90	0		20	0	80		0	85.7	14.3		0	0	0		
PHF	.250	.750	.000	.833	.250	.000	.500	.625	.000	.375	.250	.438	.000	.000	.000	.000	.611

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
 Site Code : 10823257
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	3	0	3	0	0	2	2	0	4	0	4	0	0	0	0
+15 mins.	1	2	0	3	0	0	0	0	0	0	1	1	0	0	0	0
+30 mins.	0	1	0	1	1	0	1	2	0	1	0	1	0	0	0	0
+45 mins.	0	3	0	3	0	0	1	1	0	1	0	1	0	0	0	0
Total Volume	1	9	0	10	1	0	4	5	0	6	1	7	0	0	0	0
% App. Total	10	90	0		20	0	80		0	85.7	14.3		0	0	0	
PHF	.250	.750	.000	.833	.250	.000	.500	.625	.000	.375	.250	.438	.000	.000	.000	.000

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- 3 Axle Vehicles

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	2	1	0	3	0	0	0	0	0	1	2	3	0	0	0	0	6
07:15 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:30 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	3	6	0	9	0	0	0	0	0	1	2	3	0	0	0	0	12
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	1	0	1	0	0	0	0	1
08:30 AM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
08:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	1	1	0	2	0	0	1	1	0	2	0	2	0	0	0	0	5
Grand Total	4	7	0	11	0	0	1	1	0	3	2	5	0	0	0	0	17
Apprch %	36.4	63.6	0		0	0	100		0	60	40		0	0	0		
Total %	23.5	41.2	0	64.7	0	0	5.9	5.9	0	17.6	11.8	29.4	0	0	0	0	

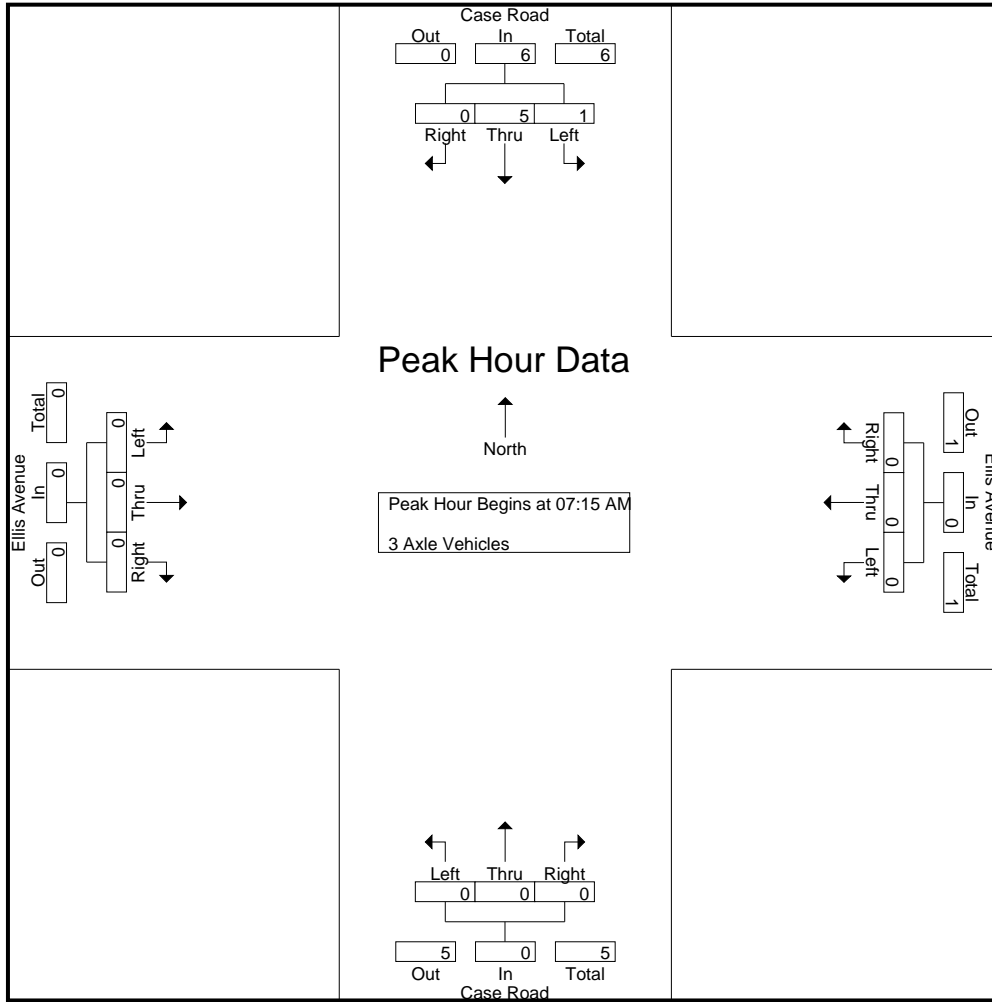
Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:30 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	5	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
% App. Total	16.7	83.3	0		0	0	0		0	0	0		0	0	0		
PHF	.250	.417	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	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	1	5	0	6	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	16.7	83.3	0		0	0	0		0	0	0		0	0	0	
PHF	.250	.417	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Groups Printed- 4+ Axle Trucks

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	0	0	1	0	0	3	3	0	1	0	1	0	0	0	0	5
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	2	2	0	4	0	0	1	1	0	0	0	0	0	0	0	0	5
07:45 AM	2	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
Total	5	2	0	7	0	0	5	5	0	1	0	1	0	0	0	0	13
08:00 AM	1	1	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
08:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:45 AM	1	0	0	1	0	0	2	2	0	1	0	1	0	0	0	0	4
Total	3	1	0	4	0	0	4	4	0	4	0	4	0	0	0	0	12
Grand Total	8	3	0	11	0	0	9	9	0	5	0	5	0	0	0	0	25
Apprch %	72.7	27.3	0		0	0	100		0	100	0		0	0	0		
Total %	32	12	0	44	0	0	36	36	0	20	0	20	0	0	0	0	

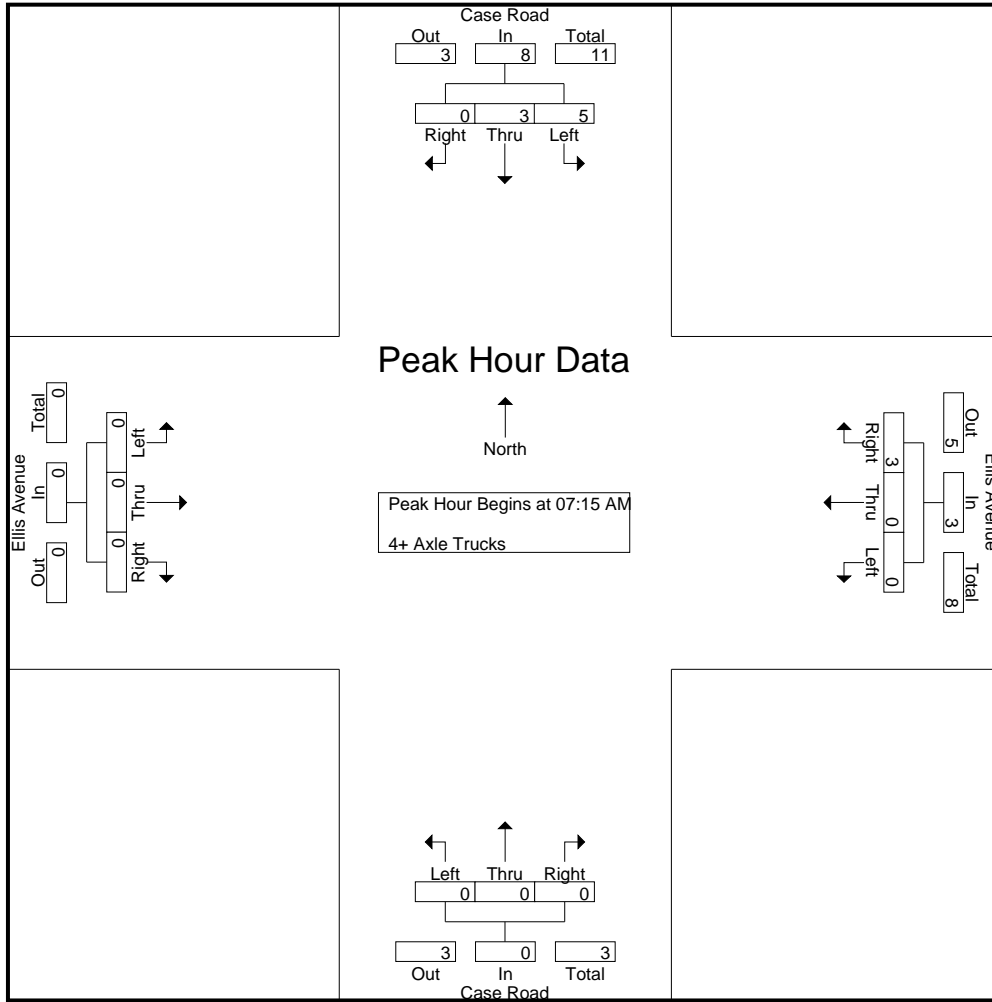
Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	2	2	0	4	0	0	1	1	0	0	0	0	0	0	0	0	5
07:45 AM	2	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
08:00 AM	1	1	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
Total Volume	5	3	0	8	0	0	3	3	0	0	0	0	0	0	0	0	11
% App. Total	62.5	37.5	0		0	0	100		0	0	0		0	0	0		
PHF	.625	.375	.000	.500	.000	.000	.750	.750	.000	.000	.000	.000	.000	.000	.000	.000	.550

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis AM
 Site Code : 10823257
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	2	2	0	4	0	0	1	1	0	0	0	0	0	0	0	0
+30 mins.	2	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0
+45 mins.	1	1	0	2	0	0	1	1	0	0	0	0	0	0	0	0
Total Volume	5	3	0	8	0	0	3	3	0	0	0	0	0	0	0	0
% App. Total	62.5	37.5	0		0	0	100		0	0	0		0	0	0	
PHF	.625	.375	.000	.500	.000	.000	.750	.750	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis PM
 Site Code : 10823257
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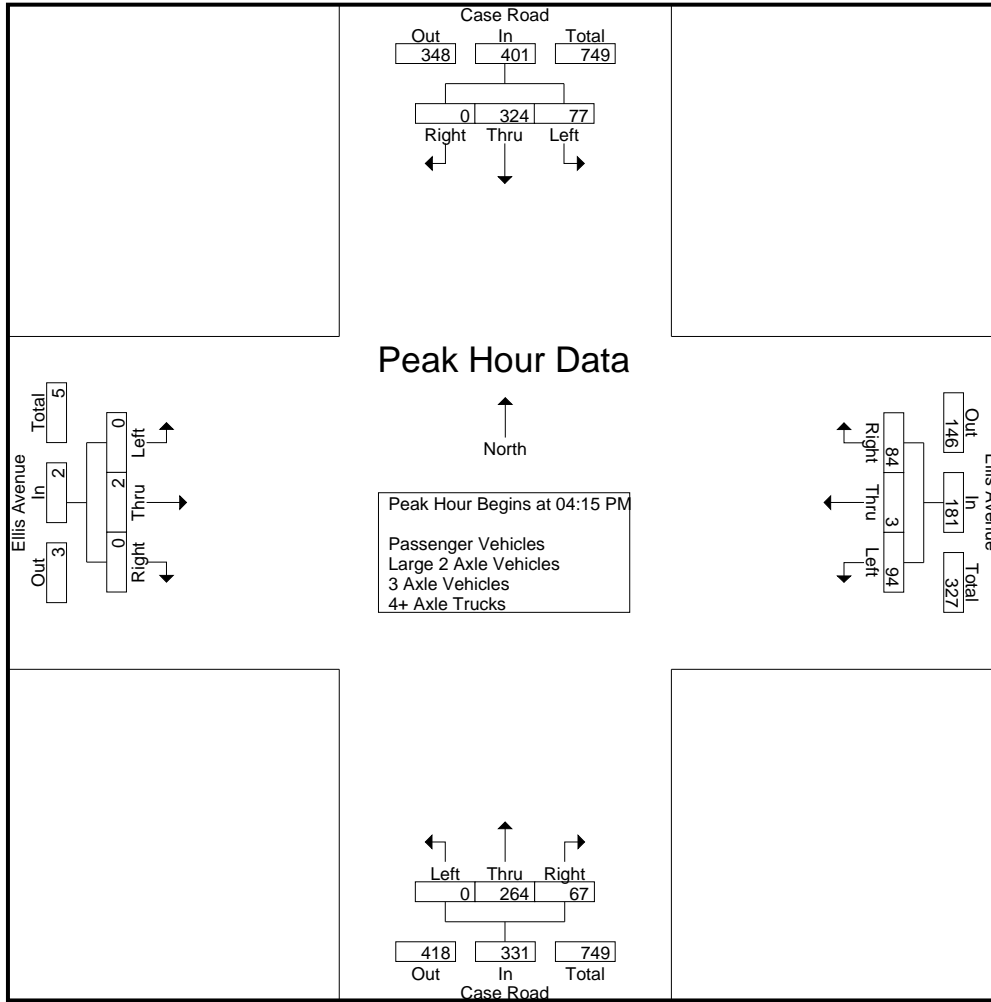
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	18	54	0	72	15	1	25	41	0	79	17	96	0	0	0	0	209
04:15 PM	17	79	0	96	17	1	13	31	0	70	21	91	0	0	0	0	218
04:30 PM	25	98	0	123	26	0	24	50	0	61	17	78	0	0	0	0	251
04:45 PM	18	60	0	78	22	1	22	45	0	64	15	79	0	1	0	1	203
Total	78	291	0	369	80	3	84	167	0	274	70	344	0	1	0	1	881
05:00 PM	17	87	0	104	29	1	25	55	0	69	14	83	0	1	0	1	243
05:15 PM	12	79	0	91	24	0	17	41	0	60	11	71	0	0	0	0	203
05:30 PM	18	73	0	91	14	0	27	41	0	67	11	78	0	0	0	0	210
05:45 PM	14	44	0	58	17	3	22	42	0	66	15	81	0	0	0	0	181
Total	61	283	0	344	84	4	91	179	0	262	51	313	0	1	0	1	837
Grand Total	139	574	0	713	164	7	175	346	0	536	121	657	0	2	0	2	1718
Apprch %	19.5	80.5	0		47.4	2	50.6		0	81.6	18.4		0	100	0		
Total %	8.1	33.4	0	41.5	9.5	0.4	10.2	20.1	0	31.2	7	38.2	0	0.1	0	0.1	
Passenger Vehicles	122	562	0	684	162	6	152	320	0	496	121	617	0	2	0	2	1623
% Passenger Vehicles	87.8	97.9	0	95.9	98.8	85.7	86.9	92.5	0	92.5	100	93.9	0	100	0	100	94.5
Large 2 Axle Vehicles	1	12	0	13	2	1	3	6	0	25	0	25	0	0	0	0	44
% Large 2 Axle Vehicles	0.7	2.1	0	1.8	1.2	14.3	1.7	1.7	0	4.7	0	3.8	0	0	0	0	2.6
3 Axle Vehicles	2	0	0	2	0	0	4	4	0	14	0	14	0	0	0	0	20
% 3 Axle Vehicles	1.4	0	0	0.3	0	0	2.3	1.2	0	2.6	0	2.1	0	0	0	0	1.2
4+ Axle Trucks	14	0	0	14	0	0	16	16	0	1	0	1	0	0	0	0	31
% 4+ Axle Trucks	10.1	0	0	2	0	0	9.1	4.6	0	0.2	0	0.2	0	0	0	0	1.8

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	17	79	0	96	17	1	13	31	0	70	21	91	0	0	0	0	218
04:30 PM	25	98	0	123	26	0	24	50	0	61	17	78	0	0	0	0	251
04:45 PM	18	60	0	78	22	1	22	45	0	64	15	79	0	1	0	1	203
05:00 PM	17	87	0	104	29	1	25	55	0	69	14	83	0	1	0	1	243
Total Volume	77	324	0	401	94	3	84	181	0	264	67	331	0	2	0	2	915
% App. Total	19.2	80.8	0		51.9	1.7	46.4		0	79.8	20.2		0	100	0		
PHF	.770	.827	.000	.815	.810	.750	.840	.823	.000	.943	.798	.909	.000	.500	.000	.500	.911

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:30 PM				04:00 PM				04:15 PM			
+0 mins.	17	79	0	96	26	0	24	50	0	79	17	96	0	0	0	0
+15 mins.	25	98	0	123	22	1	22	45	0	70	21	91	0	0	0	0
+30 mins.	18	60	0	78	29	1	25	55	0	61	17	78	0	1	0	1
+45 mins.	17	87	0	104	24	0	17	41	0	64	15	79	0	1	0	1
Total Volume	77	324	0	401	101	2	88	191	0	274	70	344	0	2	0	2
% App. Total	19.2	80.8	0		52.9	1	46.1		0	79.7	20.3		0	100	0	
PHF	.770	.827	.000	.815	.871	.500	.880	.868	.000	.867	.833	.896	.000	.500	.000	.500

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

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 Site Code : 10823257
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Groups Printed- Passenger Vehicles

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	18	53	0	71	15	0	21	36	0	75	17	92	0	0	0	0	199
04:15 PM	13	76	0	89	16	1	11	28	0	66	21	87	0	0	0	0	204
04:30 PM	23	97	0	120	25	0	23	48	0	59	17	76	0	0	0	0	244
04:45 PM	15	59	0	74	22	1	20	43	0	56	15	71	0	1	0	1	189
Total	69	285	0	354	78	2	75	155	0	256	70	326	0	1	0	1	836
05:00 PM	12	86	0	98	29	1	22	52	0	60	14	74	0	1	0	1	225
05:15 PM	11	79	0	90	24	0	12	36	0	57	11	68	0	0	0	0	194
05:30 PM	16	69	0	85	14	0	25	39	0	64	11	75	0	0	0	0	199
05:45 PM	14	43	0	57	17	3	18	38	0	59	15	74	0	0	0	0	169
Total	53	277	0	330	84	4	77	165	0	240	51	291	0	1	0	1	787
Grand Total	122	562	0	684	162	6	152	320	0	496	121	617	0	2	0	2	1623
Apprch %	17.8	82.2	0		50.6	1.9	47.5		0	80.4	19.6		0	100	0		
Total %	7.5	34.6	0	42.1	10	0.4	9.4	19.7	0	30.6	7.5	38	0	0.1	0	0.1	

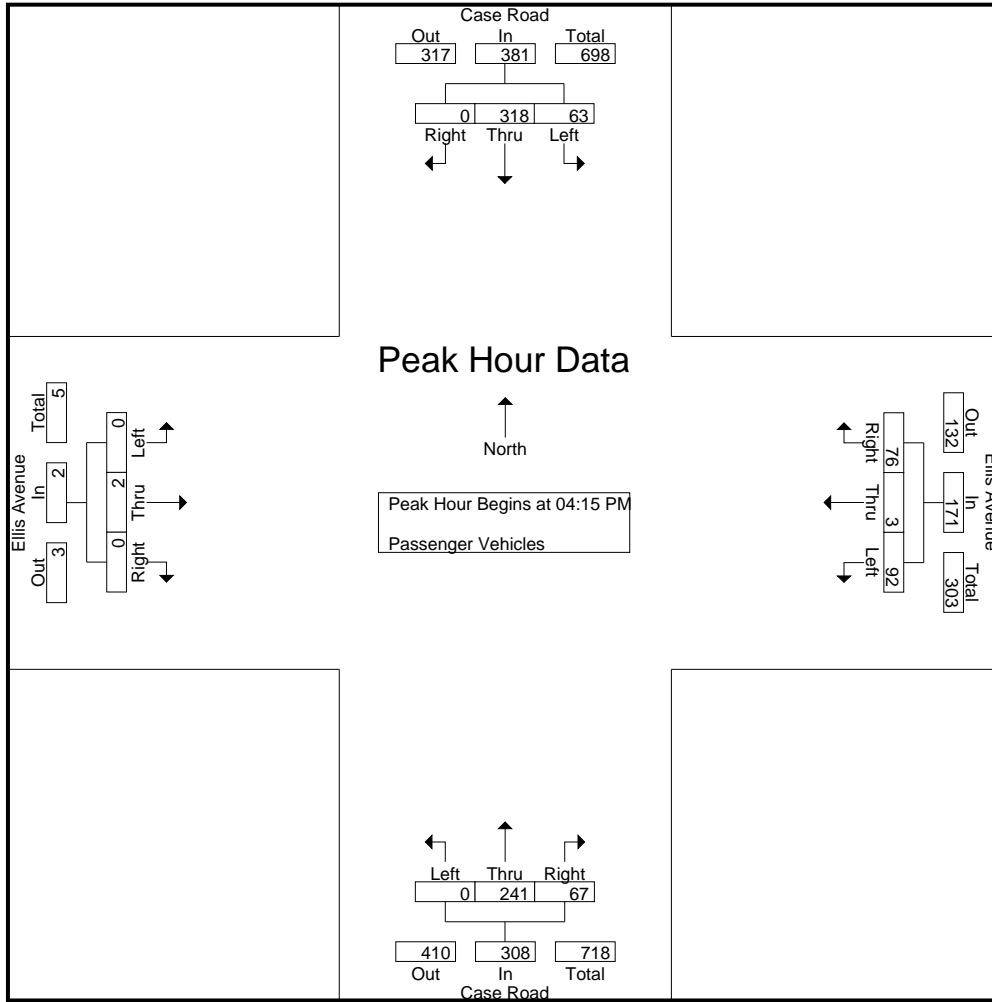
Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	13	76	0	89	16	1	11	28	0	66	21	87	0	0	0	0	204
04:30 PM	23	97	0	120	25	0	23	48	0	59	17	76	0	0	0	0	244
04:45 PM	15	59	0	74	22	1	20	43	0	56	15	71	0	1	0	1	189
05:00 PM	12	86	0	98	29	1	22	52	0	60	14	74	0	1	0	1	225
Total Volume	63	318	0	381	92	3	76	171	0	241	67	308	0	2	0	2	862
% App. Total	16.5	83.5	0		53.8	1.8	44.4		0	78.2	21.8		0	100	0		
PHF	.685	.820	.000	.794	.793	.750	.826	.822	.000	.913	.798	.885	.000	.500	.000	.500	.883

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	13	76	0	89	16	1	11	28	0	66	21	87	0	0	0	0
+15 mins.	23	97	0	120	25	0	23	48	0	59	17	76	0	0	0	0
+30 mins.	15	59	0	74	22	1	20	43	0	56	15	71	0	1	0	1
+45 mins.	12	86	0	98	29	1	22	52	0	60	14	74	0	1	0	1
Total Volume	63	318	0	381	92	3	76	171	0	241	67	308	0	2	0	2
% App. Total	16.5	83.5	0		53.8	1.8	44.4		0	78.2	21.8		0	100	0	
PHF	.685	.820	.000	.794	.793	.750	.826	.822	.000	.913	.798	.885	.000	.500	.000	.500

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
04:15 PM	0	3	0	3	1	0	2	3	0	4	0	4	0	0	0	0	10
04:30 PM	1	1	0	2	1	0	0	1	0	2	0	2	0	0	0	0	5
04:45 PM	0	1	0	1	0	0	0	0	0	7	0	7	0	0	0	0	8
Total	1	6	0	7	2	1	2	5	0	14	0	14	0	0	0	0	26
05:00 PM	0	1	0	1	0	0	0	0	0	5	0	5	0	0	0	0	6
05:15 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
05:30 PM	0	4	0	4	0	0	1	1	0	0	0	0	0	0	0	0	5
05:45 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Total	0	6	0	6	0	0	1	1	0	11	0	11	0	0	0	0	18
Grand Total	1	12	0	13	2	1	3	6	0	25	0	25	0	0	0	0	44
Apprch %	7.7	92.3	0		33.3	16.7	50		0	100	0		0	0	0		
Total %	2.3	27.3	0	29.5	4.5	2.3	6.8	13.6	0	56.8	0	56.8	0	0	0	0	

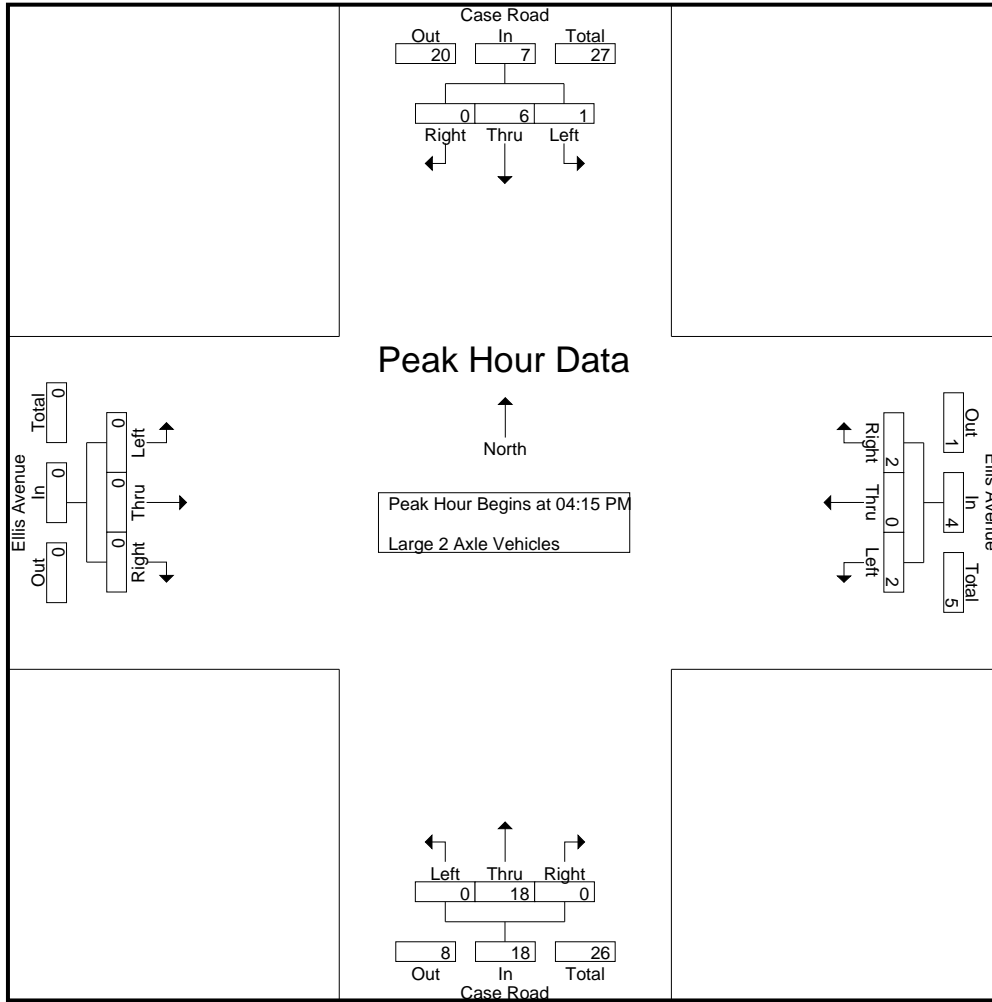
Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	3	0	3	1	0	2	3	0	4	0	4	0	0	0	0	10
04:30 PM	1	1	0	2	1	0	0	1	0	2	0	2	0	0	0	0	5
04:45 PM	0	1	0	1	0	0	0	0	0	7	0	7	0	0	0	0	8
05:00 PM	0	1	0	1	0	0	0	0	0	5	0	5	0	0	0	0	6
Total Volume	1	6	0	7	2	0	2	4	0	18	0	18	0	0	0	0	29
% App. Total	14.3	85.7	0		50	0	50		0	100	0		0	0	0		
PHF	.250	.500	.000	.583	.500	.000	.250	.333	.000	.643	.000	.643	.000	.000	.000	.000	.725

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	3	0	3	1	0	2	3	0	4	0	4	0	0	0	0
+15 mins.	1	1	0	2	1	0	0	1	0	2	0	2	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	7	0	7	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	5	0	5	0	0	0	0
Total Volume	1	6	0	7	2	0	2	4	0	18	0	18	0	0	0	0
% App. Total	14.3	85.7	0	7	50	0	50	4	0	100	0	18	0	0	0	0
PHF	.250	.500	.000	.583	.500	.000	.250	.333	.000	.643	.000	.643	.000	.000	.000	.000

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	1	0	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	1	0	1	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
05:00 PM	1	0	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
05:15 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	1	1	0	3	0	3	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	1	1	0	4	0	4	0	0	0	0	5
Total	1	0	0	1	0	0	4	4	0	11	0	11	0	0	0	0	16
Grand Total	2	0	0	2	0	0	4	4	0	14	0	14	0	0	0	0	20
Apprch %	100	0	0		0	0	100		0	100	0		0	0	0		
Total %	10	0	0	10	0	0	20	20	0	70	0	70	0	0	0	0	

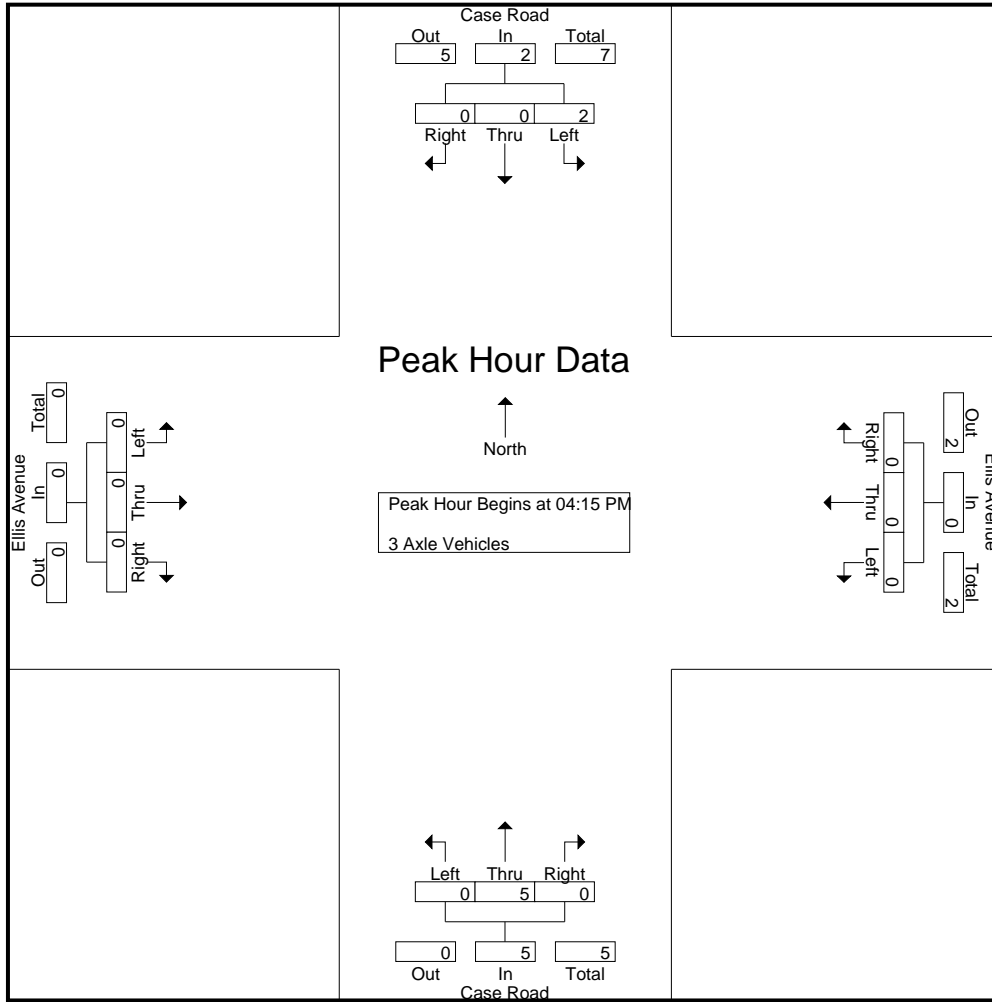
Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	1	0	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
Total Volume	2	0	0	2	0	0	0	0	0	5	0	5	0	0	0	0	7
% App. Total	100	0	0		0	0	0		0	100	0		0	0	0		
PHF	.500	.000	.000	.500	.000	.000	.000	.000	.000	.313	.000	.313	.000	.000	.000	.000	.350

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	1	0	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.	1	0	0	1	0	0	0	0	0	4	0	4	0	0	0	0
Total Volume	2	0	0	2	0	0	0	0	0	5	0	5	0	0	0	0
% App. Total	100	0	0		0	0	0		0	100	0		0	0	0	
PHF	.500	.000	.000	.500	.000	.000	.000	.000	.000	.313	.000	.313	.000	.000	.000	.000

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	4	4	0	1	0	1	0	0	0	0	5
04:15 PM	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30 PM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
04:45 PM	3	0	0	3	0	0	2	2	0	0	0	0	0	0	0	0	5
Total	7	0	0	7	0	0	7	7	0	1	0	1	0	0	0	0	15
05:00 PM	4	0	0	4	0	0	3	3	0	0	0	0	0	0	0	0	7
05:15 PM	1	0	0	1	0	0	3	3	0	0	0	0	0	0	0	0	4
05:30 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
Total	7	0	0	7	0	0	9	9	0	0	0	0	0	0	0	0	16
Grand Total	14	0	0	14	0	0	16	16	0	1	0	1	0	0	0	0	31
Apprch %	100	0	0		0	0	100		0	100	0		0	0	0		
Total %	45.2	0	0	45.2	0	0	51.6	51.6	0	3.2	0	3.2	0	0	0	0	

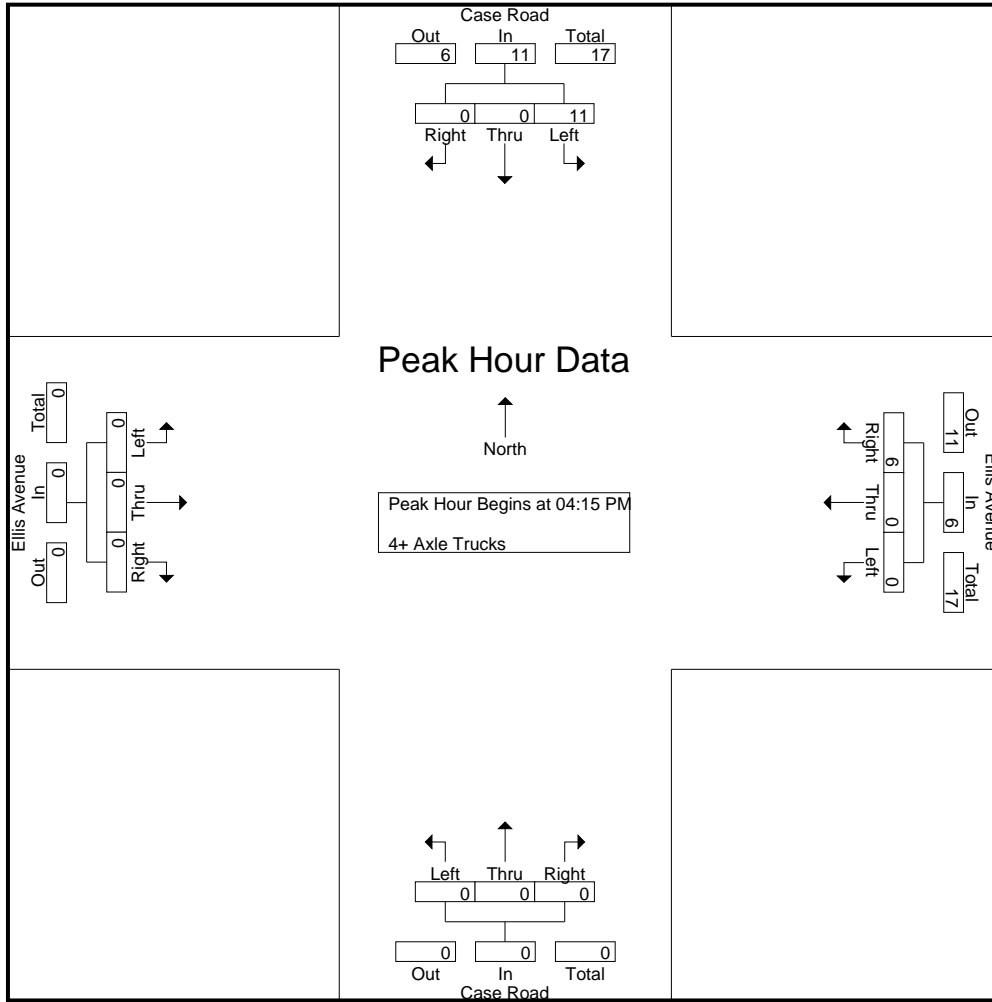
Start Time	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30 PM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
04:45 PM	3	0	0	3	0	0	2	2	0	0	0	0	0	0	0	0	5
05:00 PM	4	0	0	4	0	0	3	3	0	0	0	0	0	0	0	0	7
Total Volume	11	0	0	11	0	0	6	6	0	0	0	0	0	0	0	0	17
% App. Total	100	0	0		0	0	100		0	0	0		0	0	0		
PHF	.688	.000	.000	.688	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	.607

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Case Road
 E/W: Ellis Avenue
 Weather: Clear

File Name : 05_PER_Case_Ellis PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0
+30 mins.	3	0	0	3	0	0	2	2	0	0	0	0	0	0	0	0
+45 mins.	4	0	0	4	0	0	3	3	0	0	0	0	0	0	0	0
Total Volume	11	0	0	11	0	0	6	6	0	0	0	0	0	0	0	0
% App. Total	100	0	0	100	0	0	100	100	0	0	0	0	0	0	0	0
PHF	.688	.000	.000	.688	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

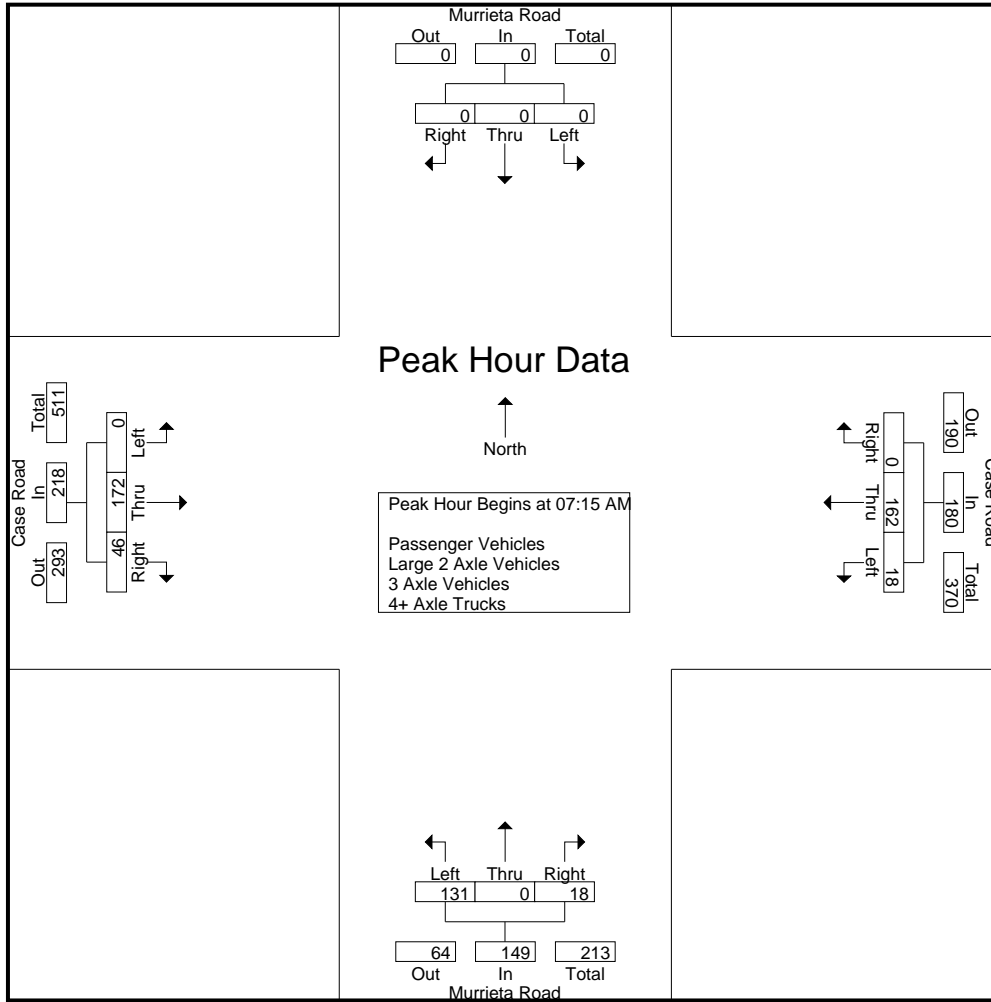
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	5	41	0	46	32	0	6	38	0	34	5	39	123
07:15 AM	0	0	0	0	3	47	0	50	41	0	5	46	0	37	10	47	143
07:30 AM	0	0	0	0	2	31	0	33	34	0	8	42	0	47	13	60	135
07:45 AM	0	0	0	0	9	32	0	41	33	0	4	37	0	51	9	60	138
Total	0	0	0	0	19	151	0	170	140	0	23	163	0	169	37	206	539
08:00 AM	0	0	0	0	4	52	0	56	23	0	1	24	0	37	14	51	131
08:15 AM	0	0	0	0	5	35	0	40	21	0	3	24	0	49	12	61	125
08:30 AM	0	0	0	0	4	58	0	62	17	0	0	17	0	52	19	71	150
08:45 AM	0	0	0	0	4	46	0	50	18	0	0	18	0	34	11	45	113
Total	0	0	0	0	17	191	0	208	79	0	4	83	0	172	56	228	519
Grand Total	0	0	0	0	36	342	0	378	219	0	27	246	0	341	93	434	1058
Apprch %	0	0	0		9.5	90.5	0		89	0	11		0	78.6	21.4		
Total %	0	0	0	0	3.4	32.3	0	35.7	20.7	0	2.6	23.3	0	32.2	8.8	41	
Passenger Vehicles	0	0	0	0	33	311	0	344	213	0	24	237	0	303	87	390	971
% Passenger Vehicles	0	0	0	0	91.7	90.9	0	91	97.3	0	88.9	96.3	0	88.9	93.5	89.9	91.8
Large 2 Axle Vehicles	0	0	0	0	3	21	0	24	6	0	3	9	0	28	6	34	67
% Large 2 Axle Vehicles	0	0	0	0	8.3	6.1	0	6.3	2.7	0	11.1	3.7	0	8.2	6.5	7.8	6.3
3 Axle Vehicles	0	0	0	0	0	5	0	5	0	0	0	0	0	7	0	7	12
% 3 Axle Vehicles	0	0	0	0	0	1.5	0	1.3	0	0	0	0	0	2.1	0	1.6	1.1
4+ Axle Trucks	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
% 4+ Axle Trucks	0	0	0	0	0	1.5	0	1.3	0	0	0	0	0	0.9	0	0.7	0.8

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	3	47	0	50	41	0	5	46	0	37	10	47	143
07:30 AM	0	0	0	0	2	31	0	33	34	0	8	42	0	47	13	60	135
07:45 AM	0	0	0	0	9	32	0	41	33	0	4	37	0	51	9	60	138
08:00 AM	0	0	0	0	4	52	0	56	23	0	1	24	0	37	14	51	131
Total Volume	0	0	0	0	18	162	0	180	131	0	18	149	0	172	46	218	547
% App. Total	0	0	0		10	90	0		87.9	0	12.1		0	78.9	21.1		
PHF	.000	.000	.000	.000	.500	.779	.000	.804	.799	.000	.563	.810	.000	.843	.821	.908	.956

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 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				08:00 AM				07:00 AM				07:45 AM			
+0 mins.	0	0	0	0	4	52	0	56	32	0	6	38	0	51	9	60
+15 mins.	0	0	0	0	5	35	0	40	41	0	5	46	0	37	14	51
+30 mins.	0	0	0	0	4	58	0	62	34	0	8	42	0	49	12	61
+45 mins.	0	0	0	0	4	46	0	50	33	0	4	37	0	52	19	71
Total Volume	0	0	0	0	17	191	0	208	140	0	23	163	0	189	54	243
% App. Total	0	0	0	0	8.2	91.8	0		85.9	0	14.1		0	77.8	22.2	
PHF	.000	.000	.000	.000	.850	.823	.000	.839	.854	.000	.719	.886	.000	.909	.711	.856

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	4	37	0	41	30	0	4	34	0	28	4	32	107
07:15 AM	0	0	0	0	2	41	0	43	40	0	5	45	0	32	9	41	129
07:30 AM	0	0	0	0	2	29	0	31	34	0	7	41	0	41	12	53	125
07:45 AM	0	0	0	0	8	29	0	37	33	0	4	37	0	48	8	56	130
Total	0	0	0	0	16	136	0	152	137	0	20	157	0	149	33	182	491
08:00 AM	0	0	0	0	4	49	0	53	22	0	1	23	0	32	14	46	122
08:15 AM	0	0	0	0	5	31	0	36	20	0	3	23	0	43	11	54	113
08:30 AM	0	0	0	0	4	52	0	56	16	0	0	16	0	47	19	66	138
08:45 AM	0	0	0	0	4	43	0	47	18	0	0	18	0	32	10	42	107
Total	0	0	0	0	17	175	0	192	76	0	4	80	0	154	54	208	480
Grand Total	0	0	0	0	33	311	0	344	213	0	24	237	0	303	87	390	971
Apprch %	0	0	0		9.6	90.4	0		89.9	0	10.1		0	77.7	22.3		
Total %	0	0	0	0	3.4	32	0	35.4	21.9	0	2.5	24.4	0	31.2	9	40.2	

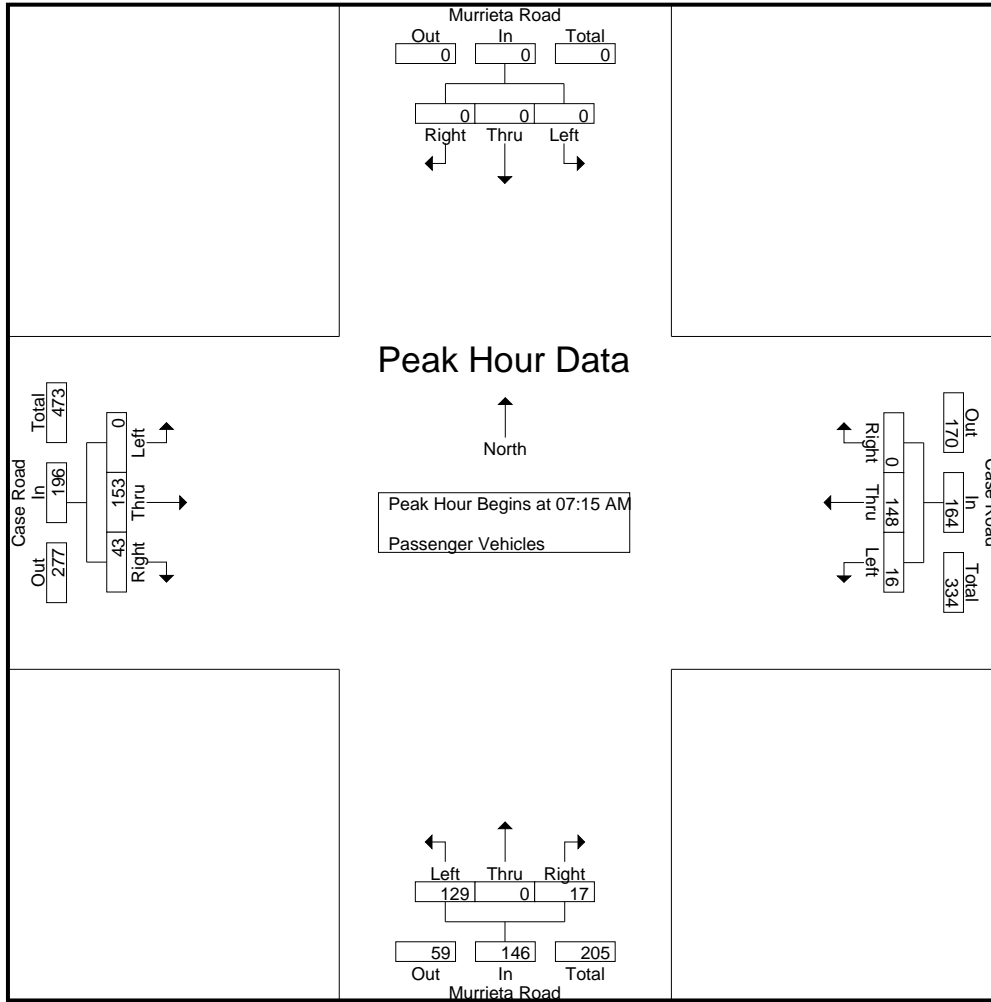
Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	2	41	0	43	40	0	5	45	0	32	9	41	129
07:30 AM	0	0	0	0	2	29	0	31	34	0	7	41	0	41	12	53	125
07:45 AM	0	0	0	0	8	29	0	37	33	0	4	37	0	48	8	56	130
08:00 AM	0	0	0	0	4	49	0	53	22	0	1	23	0	32	14	46	122
Total Volume	0	0	0	0	16	148	0	164	129	0	17	146	0	153	43	196	506
% App. Total	0	0	0		9.8	90.2	0		88.4	0	11.6		0	78.1	21.9		
PHF	.000	.000	.000	.000	.500	.755	.000	.774	.806	.000	.607	.811	.000	.797	.768	.875	.973

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	2	41	0	43	40	0	5	45	0	32	9	41
+15 mins.	0	0	0	0	2	29	0	31	34	0	7	41	0	41	12	53
+30 mins.	0	0	0	0	8	29	0	37	33	0	4	37	0	48	8	56
+45 mins.	0	0	0	0	4	49	0	53	22	0	1	23	0	32	14	46
Total Volume	0	0	0	0	16	148	0	164	129	0	17	146	0	153	43	196
% App. Total	0	0	0	0	9.8	90.2	0		88.4	0	11.6		0	78.1	21.9	
PHF	.000	.000	.000	.000	.500	.755	.000	.774	.806	.000	.607	.811	.000	.797	.768	.875

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

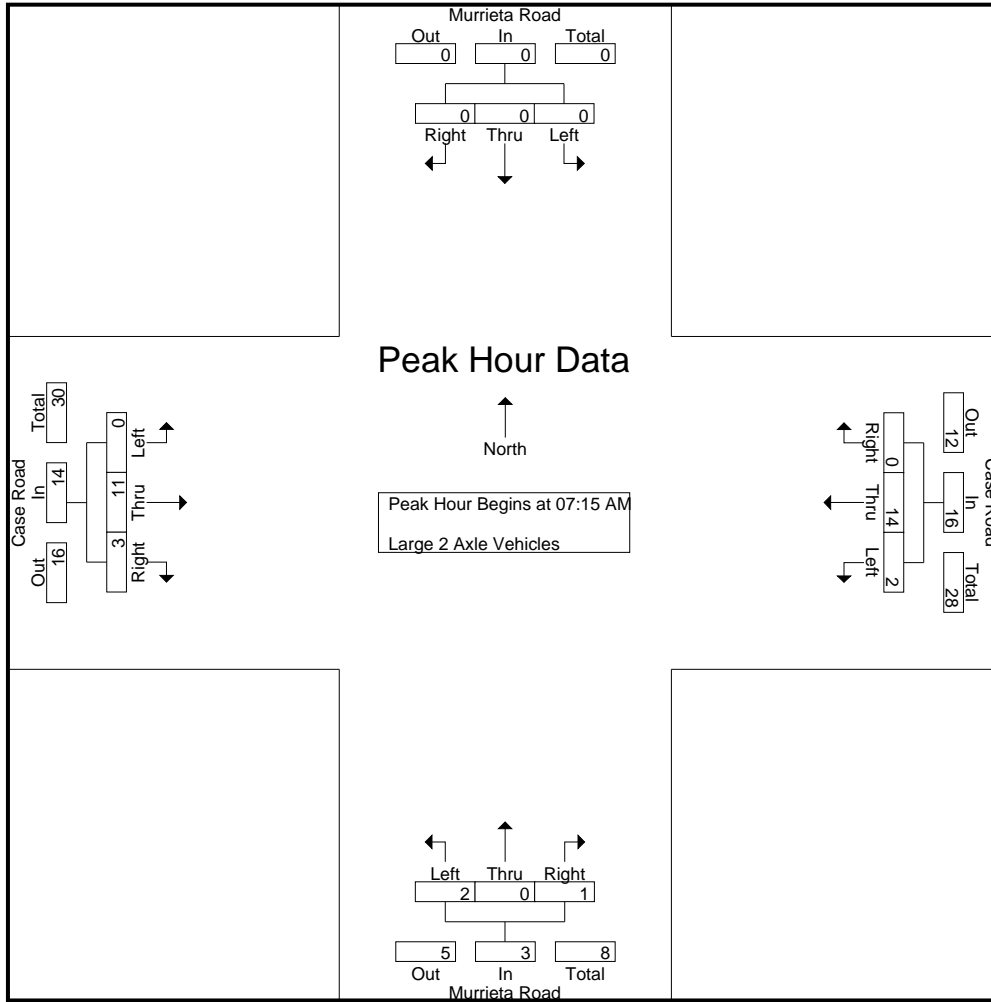
Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	1	0	0	1	2	0	2	4	0	5	1	6	11
07:15 AM	0	0	0	0	1	6	0	7	1	0	0	1	0	2	1	3	11
07:30 AM	0	0	0	0	0	2	0	2	0	0	1	1	0	3	1	4	7
07:45 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	2	1	3	7
Total	0	0	0	0	3	11	0	14	3	0	3	6	0	12	4	16	36
08:00 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	4	0	4	8
08:15 AM	0	0	0	0	0	2	0	2	1	0	0	1	0	6	1	7	10
08:30 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	5	0	5	10
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	3
Total	0	0	0	0	0	10	0	10	3	0	0	3	0	16	2	18	31
Grand Total	0	0	0	0	3	21	0	24	6	0	3	9	0	28	6	34	67
Apprch %	0	0	0		12.5	87.5	0		66.7	0	33.3		0	82.4	17.6		
Total %	0	0	0		4.5	31.3	0	35.8	9	0	4.5	13.4	0	41.8	9	50.7	

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	1	6	0	7	1	0	0	1	0	2	1	3	11
07:30 AM	0	0	0	0	0	2	0	2	0	0	1	1	0	3	1	4	7
07:45 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	2	1	3	7
08:00 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	4	0	4	8
Total Volume	0	0	0	0	2	14	0	16	2	0	1	3	0	11	3	14	33
% App. Total	0	0	0		12.5	87.5	0		66.7	0	33.3		0	78.6	21.4		
PHF	.000	.000	.000	.000	.500	.583	.000	.571	.500	.000	.250	.750	.000	.688	.750	.875	.750

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	1	6	0	7	1	0	0	1	0	2	1	3
+15 mins.	0	0	0	0	0	2	0	2	0	0	1	1	0	3	1	4
+30 mins.	0	0	0	0	1	3	0	4	0	0	0	0	0	2	1	3
+45 mins.	0	0	0	0	0	3	0	3	1	0	0	1	0	4	0	4
Total Volume	0	0	0	0	2	14	0	16	2	0	1	3	0	11	3	14
% App. Total	0	0	0	0	12.5	87.5	0		66.7	0	33.3		0	78.6	21.4	
PHF	.000	.000	.000	.000	.500	.583	.000	.571	.500	.000	.250	.750	.000	.688	.750	.875

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

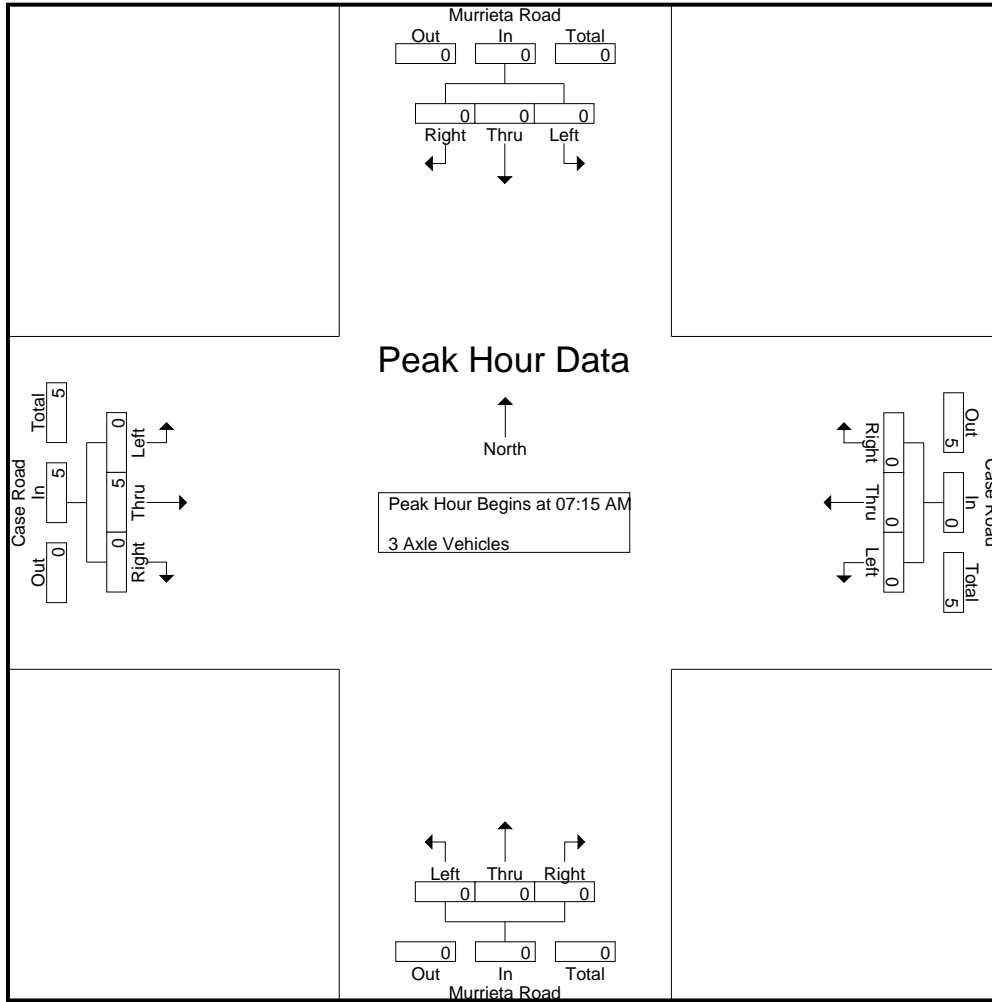
Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	6	0	6	9
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	1	0	1	0	0	0	0	0	0	0	0	1
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	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Grand Total	0	0	0	0	0	5	0	5	0	0	0	0	0	7	0	7	12
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0		0	41.7	0	41.7	0	0	0		0	58.3	0	58.3	

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 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	5	0	5	5
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.417	.000	.417	.417

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+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	5	0	5
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.417	.000	.417

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	1	0	1	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	0	0	0	0	2	0	2	2
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	1	0	1	0	0	0	0	0	2	0	2	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:45 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	0	0	0	0	0	1	0	1	5
Grand Total	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0		0	62.5	0	62.5	0	0	0		0	37.5	0	37.5	

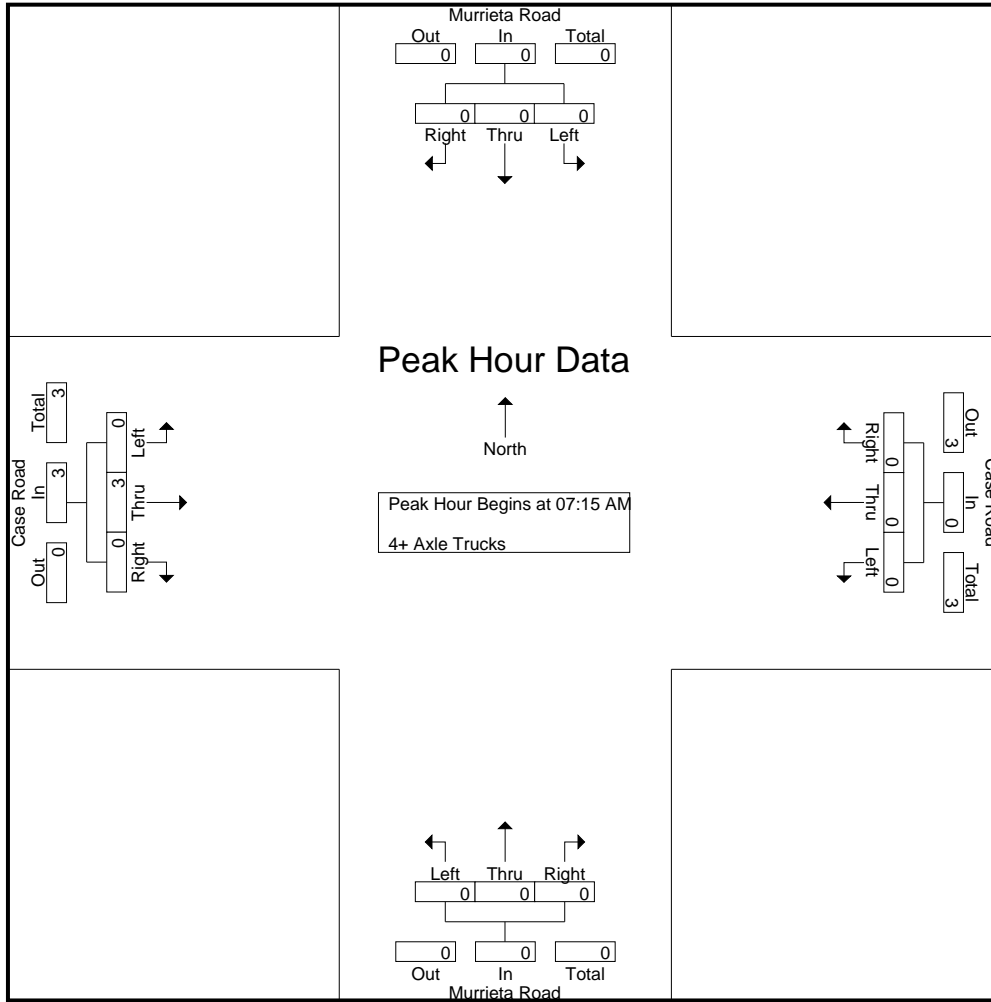
Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:45 AM	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	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375	.375

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 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	2	0	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	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

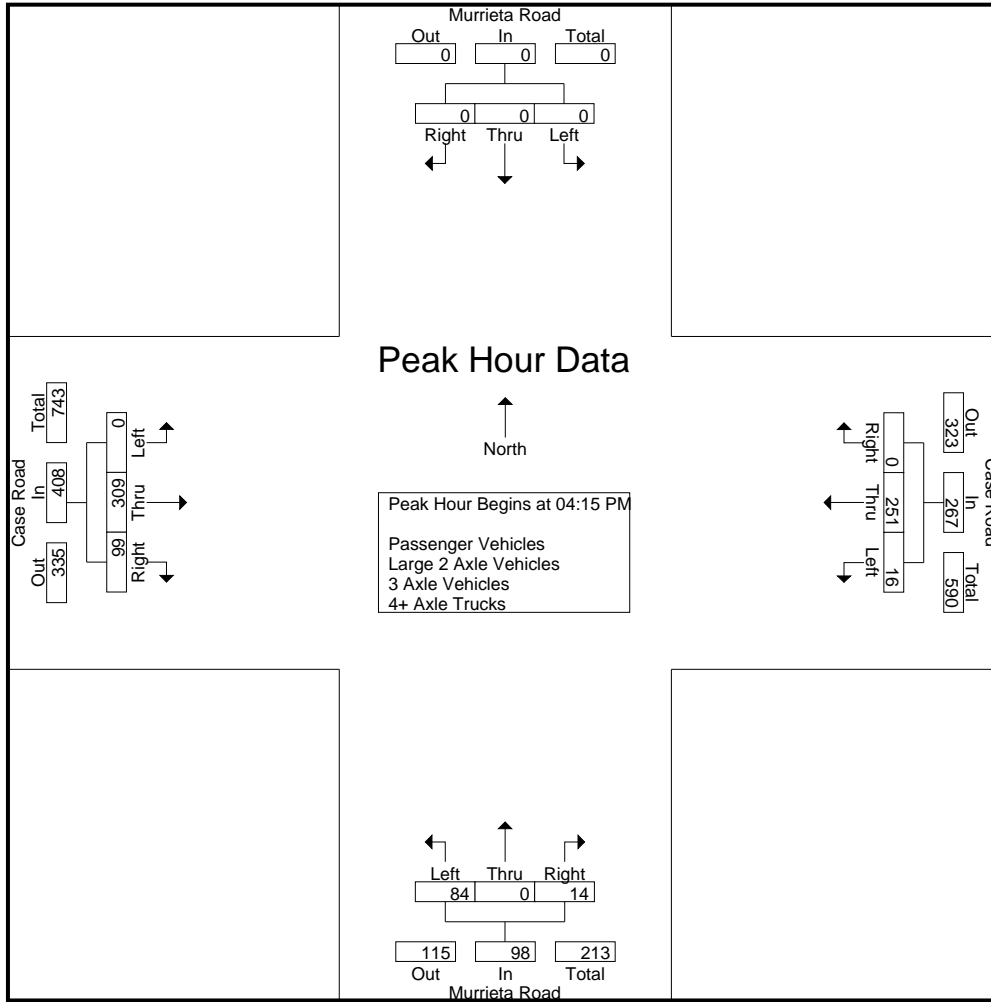
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	7	68	0	75	25	0	4	29	0	52	15	67	171
04:15 PM	0	0	0	0	5	71	0	76	18	0	7	25	0	67	18	85	186
04:30 PM	0	0	0	0	10	55	0	65	23	0	3	26	0	90	37	127	218
04:45 PM	0	0	0	0	1	63	0	64	23	0	2	25	0	63	26	89	178
Total	0	0	0	0	23	257	0	280	89	0	16	105	0	272	96	368	753
05:00 PM	0	0	0	0	0	62	0	62	20	0	2	22	0	89	18	107	191
05:15 PM	0	0	0	0	1	49	0	50	19	0	5	24	0	78	34	112	186
05:30 PM	0	0	0	0	3	61	0	64	18	0	4	22	0	59	29	88	174
05:45 PM	0	0	0	0	3	57	0	60	21	0	0	21	0	40	20	60	141
Total	0	0	0	0	7	229	0	236	78	0	11	89	0	266	101	367	692
Grand Total	0	0	0	0	30	486	0	516	167	0	27	194	0	538	197	735	1445
Apprch %	0	0	0		5.8	94.2	0		86.1	0	13.9		0	73.2	26.8		
Total %	0	0	0	0	2.1	33.6	0	35.7	11.6	0	1.9	13.4	0	37.2	13.6	50.9	
Passenger Vehicles	0	0	0	0	30	445	0	475	163	0	22	185	0	521	193	714	1374
% Passenger Vehicles	0	0	0	0	100	91.6	0	92.1	97.6	0	81.5	95.4	0	96.8	98	97.1	95.1
Large 2 Axle Vehicles	0	0	0	0	0	26	0	26	4	0	5	9	0	17	4	21	56
% Large 2 Axle Vehicles	0	0	0	0	0	5.3	0	5	2.4	0	18.5	4.6	0	3.2	2	2.9	3.9
3 Axle Vehicles	0	0	0	0	0	14	0	14	0	0	0	0	0	0	0	0	14
% 3 Axle Vehicles	0	0	0	0	0	2.9	0	2.7	0	0	0	0	0	0	0	0	1
4+ Axle Trucks	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0	0	0	0	0.1

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	5	71	0	76	18	0	7	25	0	67	18	85	186
04:30 PM	0	0	0	0	10	55	0	65	23	0	3	26	0	90	37	127	218
04:45 PM	0	0	0	0	1	63	0	64	23	0	2	25	0	63	26	89	178
05:00 PM	0	0	0	0	0	62	0	62	20	0	2	22	0	89	18	107	191
Total Volume	0	0	0	0	16	251	0	267	84	0	14	98	0	309	99	408	773
% App. Total	0	0	0		6	94	0		85.7	0	14.3		0	75.7	24.3		
PHF	.000	.000	.000	.000	.400	.884	.000	.878	.913	.000	.500	.942	.000	.858	.669	.803	.886

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:30 PM			
+0 mins.	0	0	0	0	7	68	0	75	25	0	4	29	0	90	37	127
+15 mins.	0	0	0	0	5	71	0	76	18	0	7	25	0	63	26	89
+30 mins.	0	0	0	0	10	55	0	65	23	0	3	26	0	89	18	107
+45 mins.	0	0	0	0	1	63	0	64	23	0	2	25	0	78	34	112
Total Volume	0	0	0	0	23	257	0	280	89	0	16	105	0	320	115	435
% App. Total	0	0	0	0	8.2	91.8	0		84.8	0	15.2		0	73.6	26.4	
PHF	.000	.000	.000	.000	.575	.905	.000	.921	.890	.000	.571	.905	.000	.889	.777	.856

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

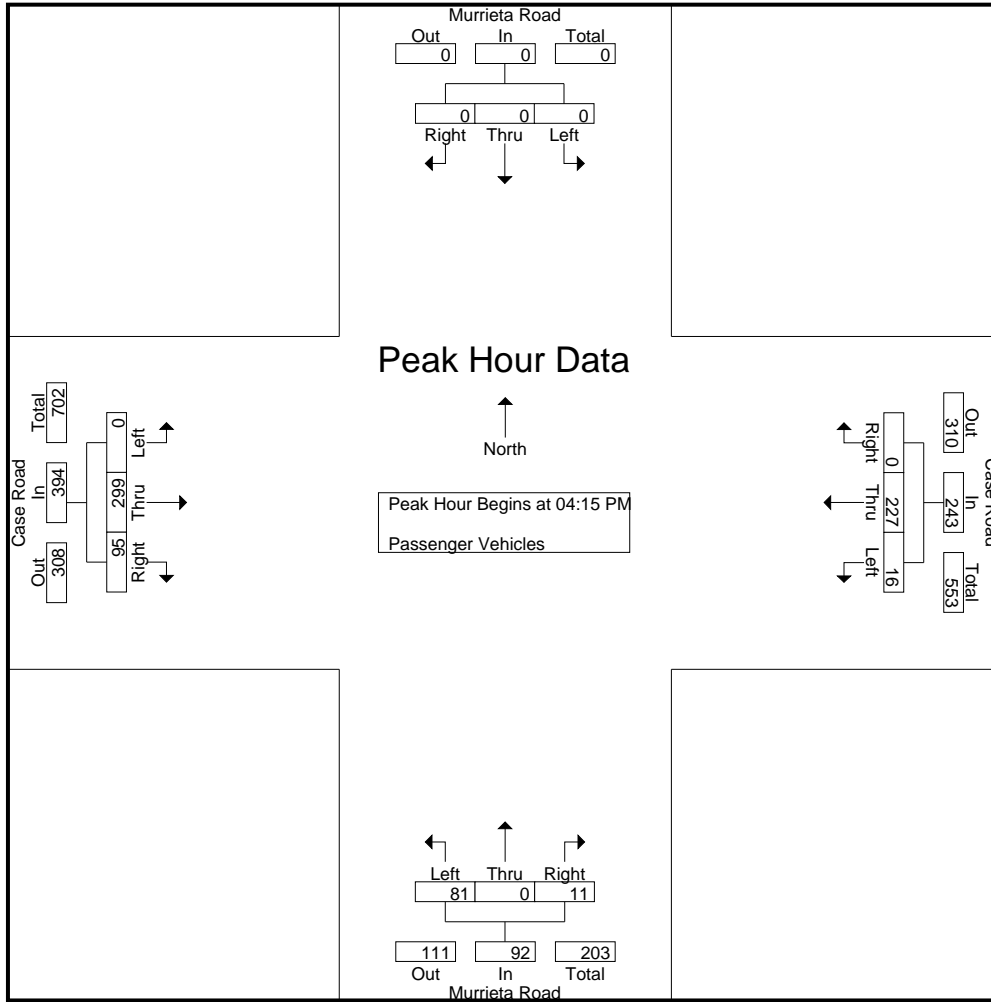
Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	7	62	0	69	25	0	4	29	0	51	15	66	164
04:15 PM	0	0	0	0	5	68	0	73	16	0	6	22	0	61	16	77	172
04:30 PM	0	0	0	0	10	51	0	61	22	0	3	25	0	89	36	125	211
04:45 PM	0	0	0	0	1	55	0	56	23	0	0	23	0	63	25	88	167
Total	0	0	0	0	23	236	0	259	86	0	13	99	0	264	92	356	714
05:00 PM	0	0	0	0	0	53	0	53	20	0	2	22	0	86	18	104	179
05:15 PM	0	0	0	0	1	49	0	50	18	0	3	21	0	76	34	110	181
05:30 PM	0	0	0	0	3	57	0	60	18	0	4	22	0	56	29	85	167
05:45 PM	0	0	0	0	3	50	0	53	21	0	0	21	0	39	20	59	133
Total	0	0	0	0	7	209	0	216	77	0	9	86	0	257	101	358	660
Grand Total	0	0	0	0	30	445	0	475	163	0	22	185	0	521	193	714	1374
Apprch %	0	0	0	0	6.3	93.7	0		88.1	0	11.9		0	73	27		
Total %	0	0	0	0	2.2	32.4	0	34.6	11.9	0	1.6	13.5	0	37.9	14	52	

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	0	0	0	5	68	0	73	16	0	6	22	0	61	16	77	172
04:30 PM	0	0	0	0	10	51	0	61	22	0	3	25	0	89	36	125	211
04:45 PM	0	0	0	0	1	55	0	56	23	0	0	23	0	63	25	88	167
05:00 PM	0	0	0	0	0	53	0	53	20	0	2	22	0	86	18	104	179
Total Volume	0	0	0	0	16	227	0	243	81	0	11	92	0	299	95	394	729
% App. Total	0	0	0	0	6.6	93.4	0		88	0	12		0	75.9	24.1		
PHF	.000	.000	.000	.000	.400	.835	.000	.832	.880	.000	.458	.920	.000	.840	.660	.788	.864

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	5	68	0	73	16	0	6	22	0	61	16	77
+15 mins.	0	0	0	0	10	51	0	61	22	0	3	25	0	89	36	125
+30 mins.	0	0	0	0	1	55	0	56	23	0	0	23	0	63	25	88
+45 mins.	0	0	0	0	0	53	0	53	20	0	2	22	0	86	18	104
Total Volume	0	0	0	0	16	227	0	243	81	0	11	92	0	299	95	394
% App. Total	0	0	0	0	6.6	93.4	0	88	88	0	12	92	0	75.9	24.1	88
PHF	.000	.000	.000	.000	.400	.835	.000	.832	.880	.000	.458	.920	.000	.840	.660	.788

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
04:15 PM	0	0	0	0	0	3	0	3	2	0	1	3	0	6	2	8	14
04:30 PM	0	0	0	0	0	4	0	4	1	0	0	1	0	1	1	2	7
04:45 PM	0	0	0	0	0	7	0	7	0	0	2	2	0	0	1	1	10
Total	0	0	0	0	0	17	0	17	3	0	3	6	0	8	4	12	35
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
05:15 PM	0	0	0	0	0	0	0	0	1	0	2	3	0	2	0	2	5
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
Total	0	0	0	0	0	9	0	9	1	0	2	3	0	9	0	9	21
Grand Total	0	0	0	0	0	26	0	26	4	0	5	9	0	17	4	21	56
Apprch %	0	0	0		0	100	0		44.4	0	55.6		0	81	19		
Total %	0	0	0	0	0	46.4	0	46.4	7.1	0	8.9	16.1	0	30.4	7.1	37.5	

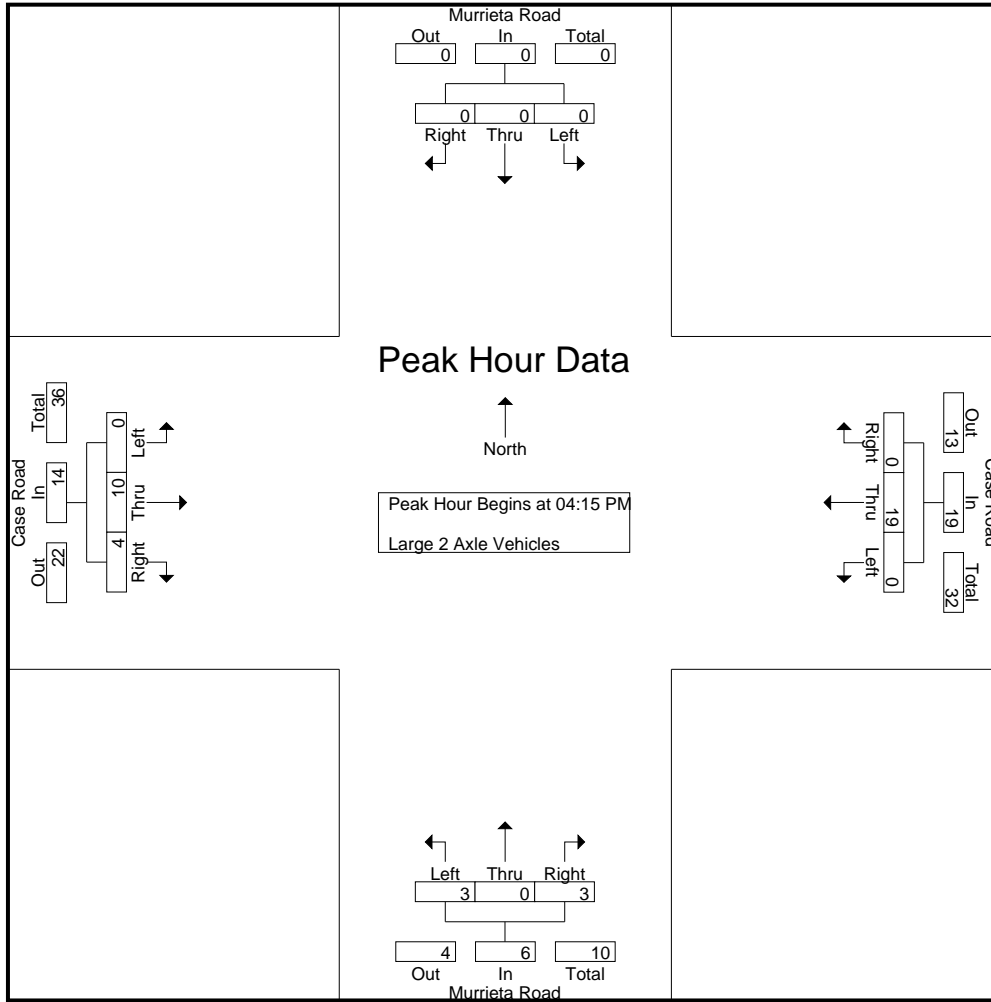
Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	0	0	0	0	3	0	3	2	0	1	3	0	6	2	8	14
04:30 PM	0	0	0	0	0	4	0	4	1	0	0	1	0	1	1	2	7
04:45 PM	0	0	0	0	0	7	0	7	0	0	2	2	0	0	1	1	10
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
Total Volume	0	0	0	0	0	19	0	19	3	0	3	6	0	10	4	14	39
% App. Total	0	0	0		0	100	0		50	0	50		0	71.4	28.6		
PHF	.000	.000	.000	.000	.000	.679	.000	.679	.375	.000	.375	.500	.000	.417	.500	.438	.696

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	3	0	3	2	0	1	3	0	6	2	8
+15 mins.	0	0	0	0	0	4	0	4	1	0	0	1	0	1	1	2
+30 mins.	0	0	0	0	0	7	0	7	0	0	2	2	0	0	1	1
+45 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3
Total Volume	0	0	0	0	0	19	0	19	3	0	3	6	0	10	4	14
% App. Total	0	0	0	0	0	100	0	100	50	0	50	50	0	71.4	28.6	71.4
PHF	.000	.000	.000	.000	.000	.679	.000	.679	.375	.000	.375	.500	.000	.417	.500	.438

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	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	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	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	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	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
05:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	11	0	11	0	0	0	0	0	0	0	0	11
Grand Total	0	0	0	0	0	14	0	14	0	0	0	0	0	0	0	0	14
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0		0	100	0	100	0	0	0		0	0	0		

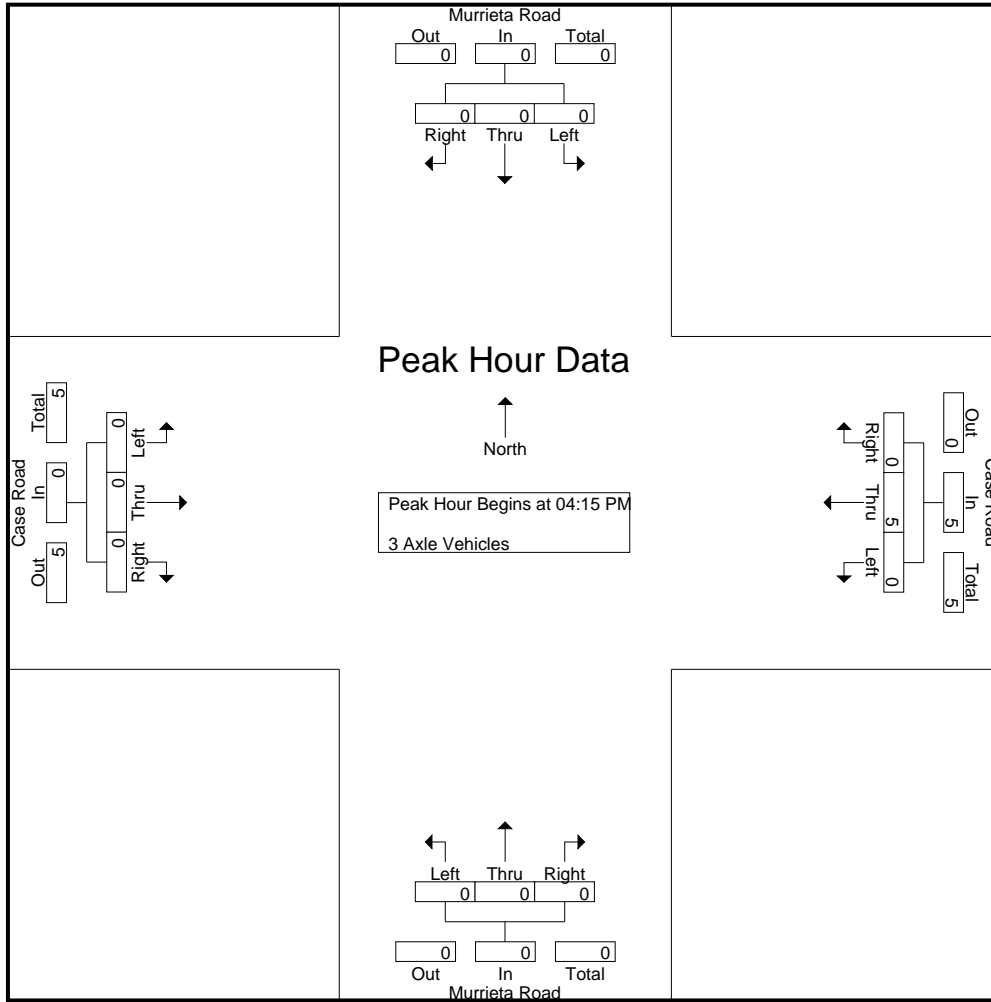
Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	5
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.313	.000	.313	.000	.000	.000	.000	.000	.000	.000	.000	.313

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 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	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.313	.000	.313	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
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	1	0	1	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	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0		0	100	0	100	0	0	0		0	0	0		

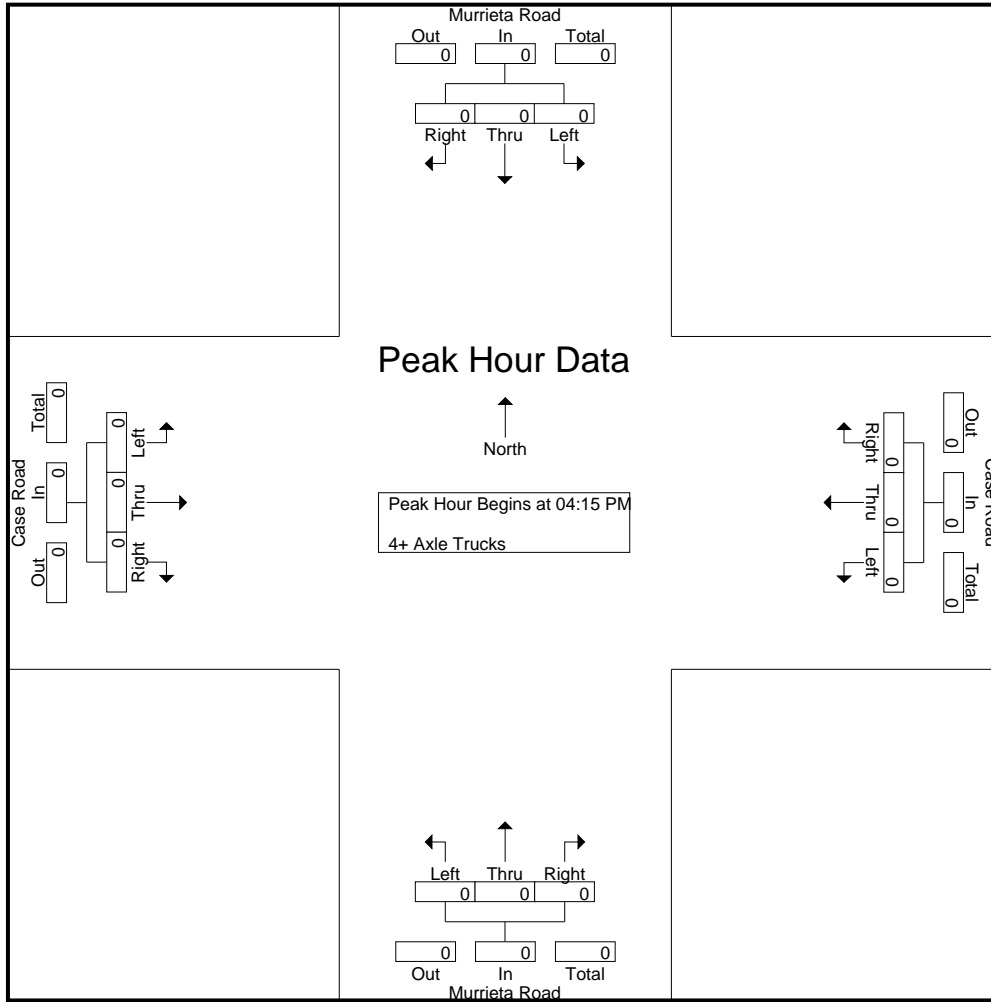
Start Time	Murrieta Road Southbound				Case Road Westbound				Murrieta Road Northbound				Case Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	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
05:00 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

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Perris
 N/S: Murrieta Road
 E/W: Case Road
 Weather: Clear

File Name : 06_PER_Mur_Case PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 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	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris
 N/S: Case Road
 E/W: Mapes Road
 Weather: Clear

File Name : 07_PER_Case_Map AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

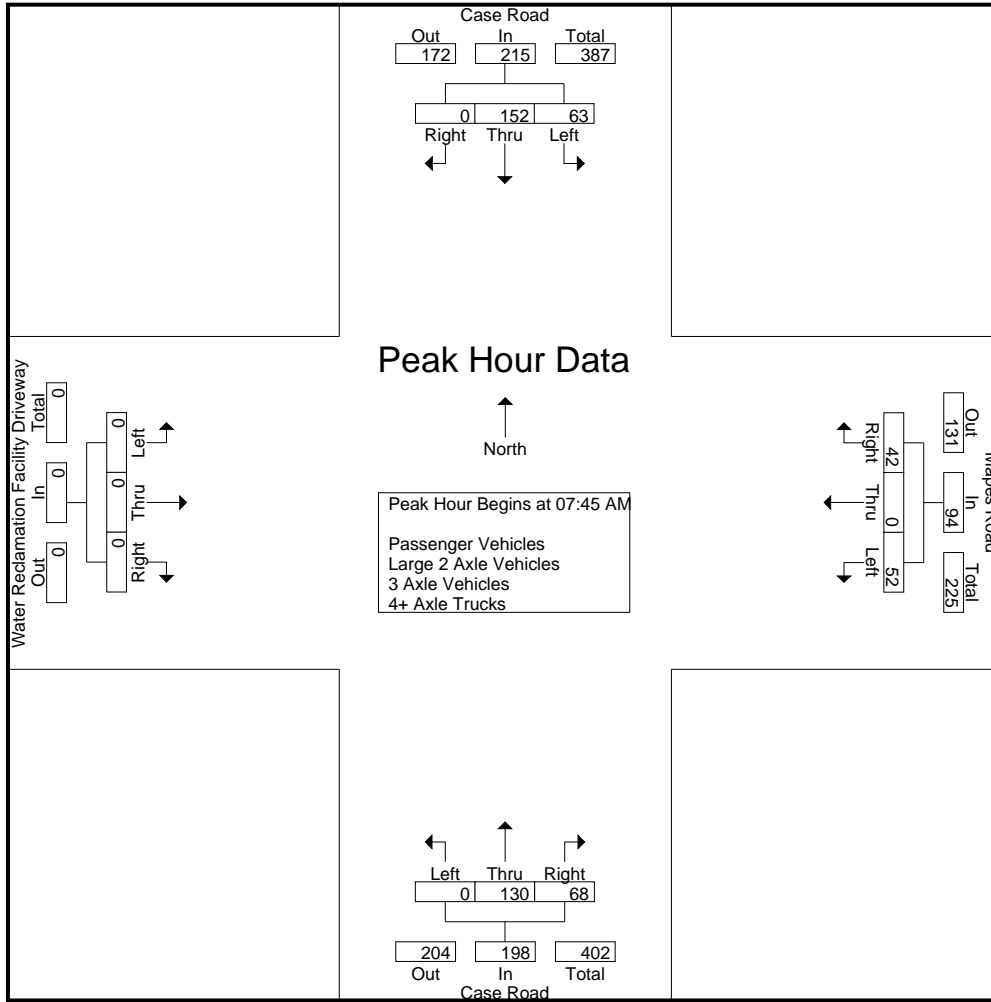
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	7	38	0	45	7	0	4	11	0	33	8	41	0	0	0	0	97
07:15 AM	10	48	0	58	8	0	6	14	0	27	17	44	0	0	0	0	116
07:30 AM	10	33	0	43	8	0	8	16	0	47	11	58	0	0	0	0	117
07:45 AM	16	26	0	42	12	0	12	24	0	40	17	57	0	0	0	0	123
Total	43	145	0	188	35	0	30	65	0	147	53	200	0	0	0	0	453
08:00 AM	12	45	0	57	13	0	8	21	0	28	11	39	0	0	0	0	117
08:15 AM	19	33	0	52	10	0	9	19	0	34	16	50	0	0	0	0	121
08:30 AM	16	48	0	64	17	0	13	30	0	28	24	52	0	0	0	0	146
08:45 AM	14	33	0	47	16	0	9	25	0	20	15	35	0	0	0	0	107
Total	61	159	0	220	56	0	39	95	0	110	66	176	0	0	0	0	491
Grand Total	104	304	0	408	91	0	69	160	0	257	119	376	0	0	0	0	944
Apprch %	25.5	74.5	0		56.9	0	43.1		0	68.4	31.6		0	0	0		
Total %	11	32.2	0	43.2	9.6	0	7.3	16.9	0	27.2	12.6	39.8	0	0	0	0	
Passenger Vehicles	95	276	0	371	80	0	63	143	0	223	109	332	0	0	0	0	846
% Passenger Vehicles	91.3	90.8	0	90.9	87.9	0	91.3	89.4	0	86.8	91.6	88.3	0	0	0	0	89.6
Large 2 Axle Vehicles	6	20	0	26	9	0	3	12	0	25	9	34	0	0	0	0	72
% Large 2 Axle Vehicles	5.8	6.6	0	6.4	9.9	0	4.3	7.5	0	9.7	7.6	9	0	0	0	0	7.6
3 Axle Vehicles	2	4	0	6	1	0	1	2	0	7	0	7	0	0	0	0	15
% 3 Axle Vehicles	1.9	1.3	0	1.5	1.1	0	1.4	1.2	0	2.7	0	1.9	0	0	0	0	1.6
4+ Axle Trucks	1	4	0	5	1	0	2	3	0	2	1	3	0	0	0	0	11
% 4+ Axle Trucks	1	1.3	0	1.2	1.1	0	2.9	1.9	0	0.8	0.8	0.8	0	0	0	0	1.2

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	16	26	0	42	12	0	12	24	0	40	17	57	0	0	0	0	123
08:00 AM	12	45	0	57	13	0	8	21	0	28	11	39	0	0	0	0	117
08:15 AM	19	33	0	52	10	0	9	19	0	34	16	50	0	0	0	0	121
08:30 AM	16	48	0	64	17	0	13	30	0	28	24	52	0	0	0	0	146
Total Volume	63	152	0	215	52	0	42	94	0	130	68	198	0	0	0	0	507
% App. Total	29.3	70.7	0		55.3	0	44.7		0	65.7	34.3		0	0	0		
PHF	.829	.792	.000	.840	.765	.000	.808	.783	.000	.813	.708	.868	.000	.000	.000	.000	.868

City of Perris
 N/S: Case Road
 E/W: Mapes Road
 Weather: Clear

File Name : 07_PER_Case_Map AM
 Site Code : 10823257
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:30 AM				07:00 AM			
+0 mins.	12	45	0	57	13	0	8	21	0	47	11	58	0	0	0	0
+15 mins.	19	33	0	52	10	0	9	19	0	40	17	57	0	0	0	0
+30 mins.	16	48	0	64	17	0	13	30	0	28	11	39	0	0	0	0
+45 mins.	14	33	0	47	16	0	9	25	0	34	16	50	0	0	0	0
Total Volume	61	159	0	220	56	0	39	95	0	149	55	204	0	0	0	0
% App. Total	27.7	72.3	0		58.9	0	41.1		0	73	27		0	0	0	
PHF	.803	.828	.000	.859	.824	.000	.750	.792	.000	.793	.809	.879	.000	.000	.000	.000

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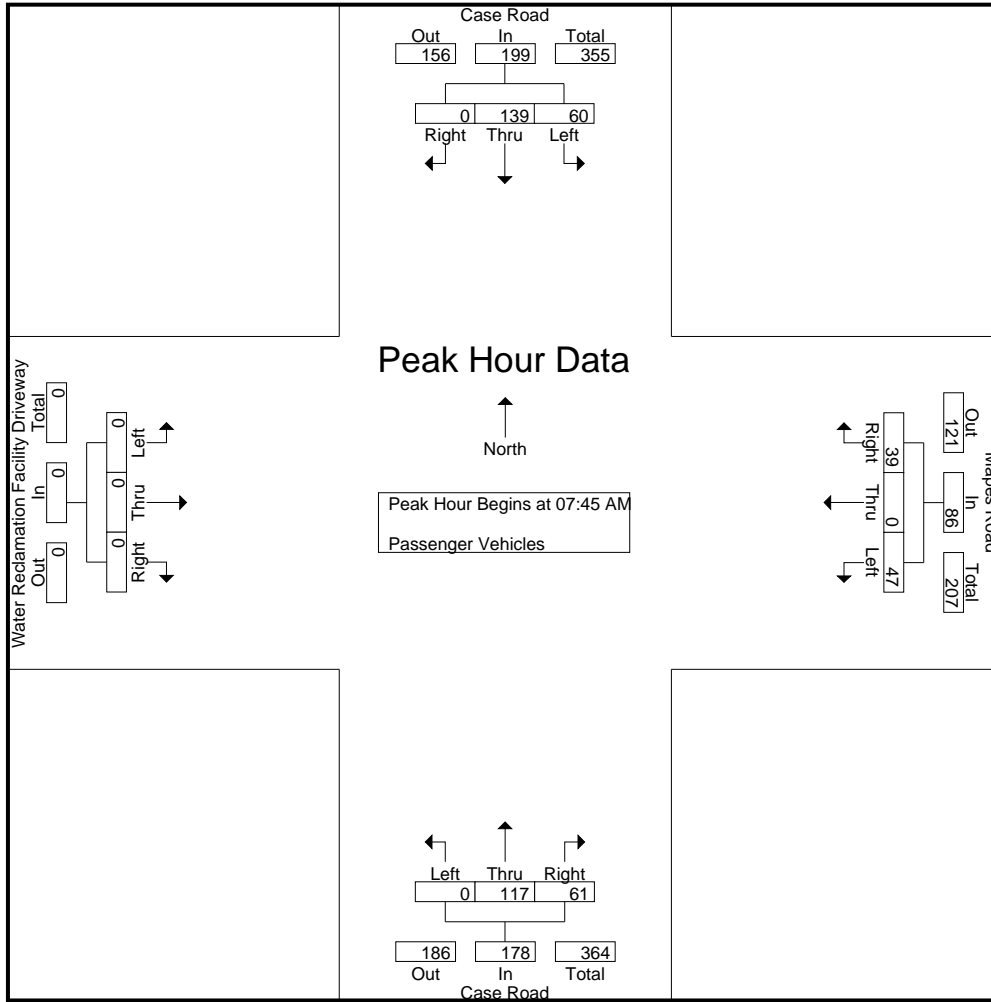
Groups Printed- Passenger Vehicles

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	5	34	0	39	7	0	4	11	0	26	8	34	0	0	0	0	84
07:15 AM	8	41	0	49	4	0	3	7	0	22	16	38	0	0	0	0	94
07:30 AM	9	30	0	39	7	0	8	15	0	40	9	49	0	0	0	0	103
07:45 AM	15	24	0	39	11	0	11	22	0	38	16	54	0	0	0	0	115
Total	37	129	0	166	29	0	26	55	0	126	49	175	0	0	0	0	396
08:00 AM	12	42	0	54	12	0	8	20	0	25	10	35	0	0	0	0	109
08:15 AM	18	29	0	47	8	0	8	16	0	29	15	44	0	0	0	0	107
08:30 AM	15	44	0	59	16	0	12	28	0	25	20	45	0	0	0	0	132
08:45 AM	13	32	0	45	15	0	9	24	0	18	15	33	0	0	0	0	102
Total	58	147	0	205	51	0	37	88	0	97	60	157	0	0	0	0	450
Grand Total	95	276	0	371	80	0	63	143	0	223	109	332	0	0	0	0	846
Apprch %	25.6	74.4	0		55.9	0	44.1		0	67.2	32.8		0	0	0		
Total %	11.2	32.6	0	43.9	9.5	0	7.4	16.9	0	26.4	12.9	39.2	0	0	0	0	

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	15	24	0	39	11	0	11	22	0	38	16	54	0	0	0	0	115
08:00 AM	12	42	0	54	12	0	8	20	0	25	10	35	0	0	0	0	109
08:15 AM	18	29	0	47	8	0	8	16	0	29	15	44	0	0	0	0	107
08:30 AM	15	44	0	59	16	0	12	28	0	25	20	45	0	0	0	0	132
Total Volume	60	139	0	199	47	0	39	86	0	117	61	178	0	0	0	0	463
% App. Total	30.2	69.8	0		54.7	0	45.3		0	65.7	34.3		0	0	0		
PHF	.833	.790	.000	.843	.734	.000	.813	.768	.000	.770	.763	.824	.000	.000	.000	.000	.877

City of Perris
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Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	15	24	0	39	11	0	11	22	0	38	16	54	0	0	0	0
+15 mins.	12	42	0	54	12	0	8	20	0	25	10	35	0	0	0	0
+30 mins.	18	29	0	47	8	0	8	16	0	29	15	44	0	0	0	0
+45 mins.	15	44	0	59	16	0	12	28	0	25	20	45	0	0	0	0
Total Volume	60	139	0	199	47	0	39	86	0	117	61	178	0	0	0	0
% App. Total	30.2	69.8	0		54.7	0	45.3		0	65.7	34.3		0	0	0	
PHF	.833	.790	.000	.843	.734	.000	.813	.768	.000	.770	.763	.824	.000	.000	.000	.000

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 N/S: Case Road
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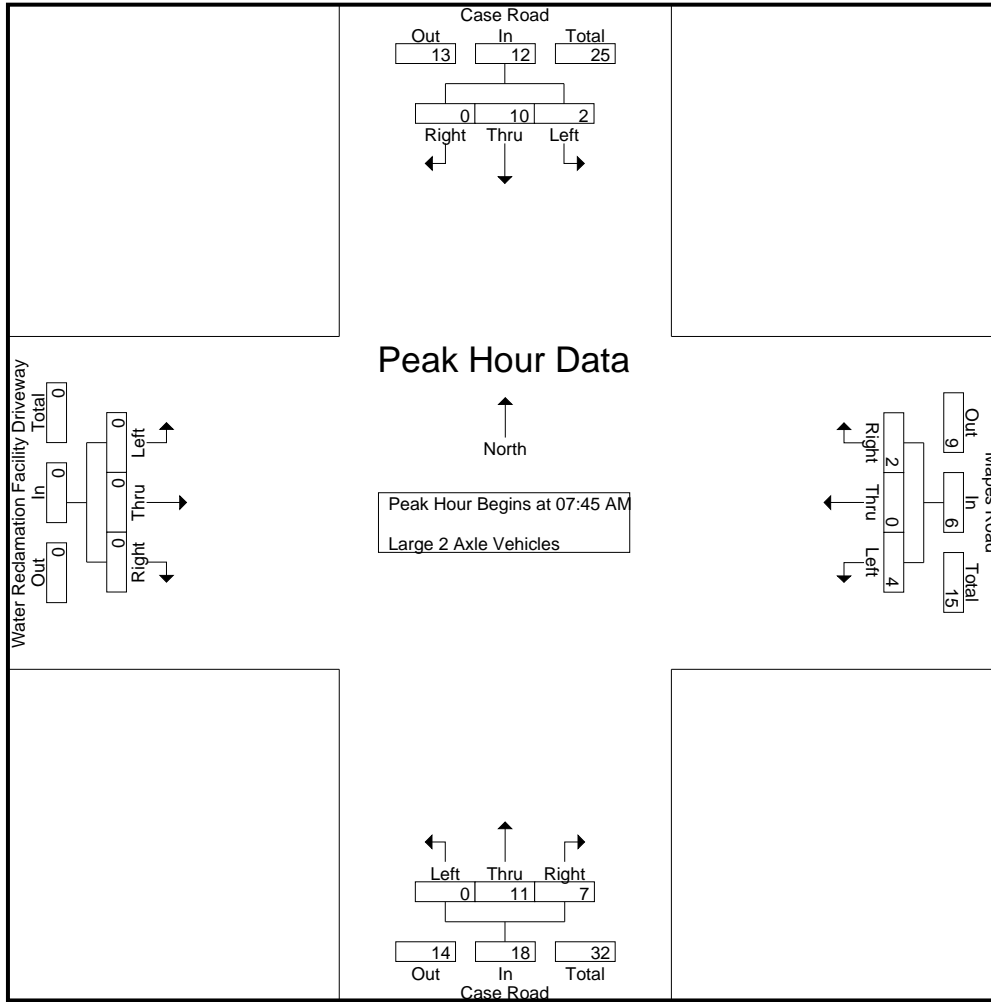
Groups Printed- Large 2 Axle Vehicles

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	0	0	1	0	0	0	0	0	6	0	6	0	0	0	0	7
07:15 AM	2	7	0	9	4	0	1	5	0	2	1	3	0	0	0	0	17
07:30 AM	0	3	0	3	0	0	0	0	0	5	1	6	0	0	0	0	9
07:45 AM	1	2	0	3	1	0	1	2	0	1	1	2	0	0	0	0	7
Total	4	12	0	16	5	0	2	7	0	14	3	17	0	0	0	0	40
08:00 AM	0	3	0	3	1	0	0	1	0	2	1	3	0	0	0	0	7
08:15 AM	0	1	0	1	1	0	1	2	0	5	1	6	0	0	0	0	9
08:30 AM	1	4	0	5	1	0	0	1	0	3	4	7	0	0	0	0	13
08:45 AM	1	0	0	1	1	0	0	1	0	1	0	1	0	0	0	0	3
Total	2	8	0	10	4	0	1	5	0	11	6	17	0	0	0	0	32
Grand Total	6	20	0	26	9	0	3	12	0	25	9	34	0	0	0	0	72
Apprch %	23.1	76.9	0		75	0	25		0	73.5	26.5		0	0	0		
Total %	8.3	27.8	0	36.1	12.5	0	4.2	16.7	0	34.7	12.5	47.2	0	0	0	0	

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	2	0	3	1	0	1	2	0	1	1	2	0	0	0	0	7
08:00 AM	0	3	0	3	1	0	0	1	0	2	1	3	0	0	0	0	7
08:15 AM	0	1	0	1	1	0	1	2	0	5	1	6	0	0	0	0	9
08:30 AM	1	4	0	5	1	0	0	1	0	3	4	7	0	0	0	0	13
Total Volume	2	10	0	12	4	0	2	6	0	11	7	18	0	0	0	0	36
% App. Total	16.7	83.3	0		66.7	0	33.3		0	61.1	38.9		0	0	0		
PHF	.500	.625	.000	.600	1.00	.000	.500	.750	.000	.550	.438	.643	.000	.000	.000	.000	.692

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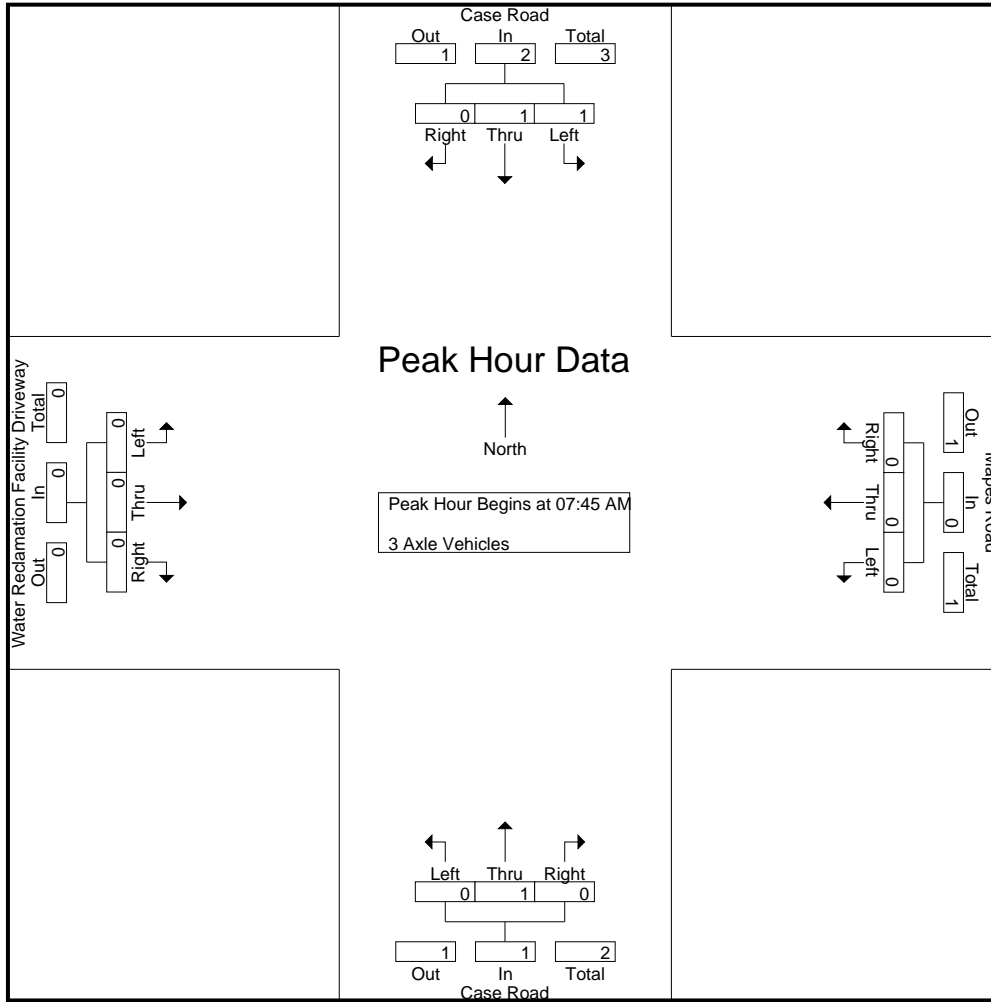


Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	1	2	0	3	1	0	1	2	0	1	1	2	0	0	0	0
+15 mins.	0	3	0	3	1	0	0	1	0	2	1	3	0	0	0	0
+30 mins.	0	1	0	1	1	0	1	2	0	5	1	6	0	0	0	0
+45 mins.	1	4	0	5	1	0	0	1	0	3	4	7	0	0	0	0
Total Volume	2	10	0	12	4	0	2	6	0	11	7	18	0	0	0	0
% App. Total	16.7	83.3	0		66.7	0	33.3		0	61.1	38.9		0	0	0	
PHF	.500	.625	.000	.600	1.000	.000	.500	.750	.000	.550	.438	.643	.000	.000	.000	.000

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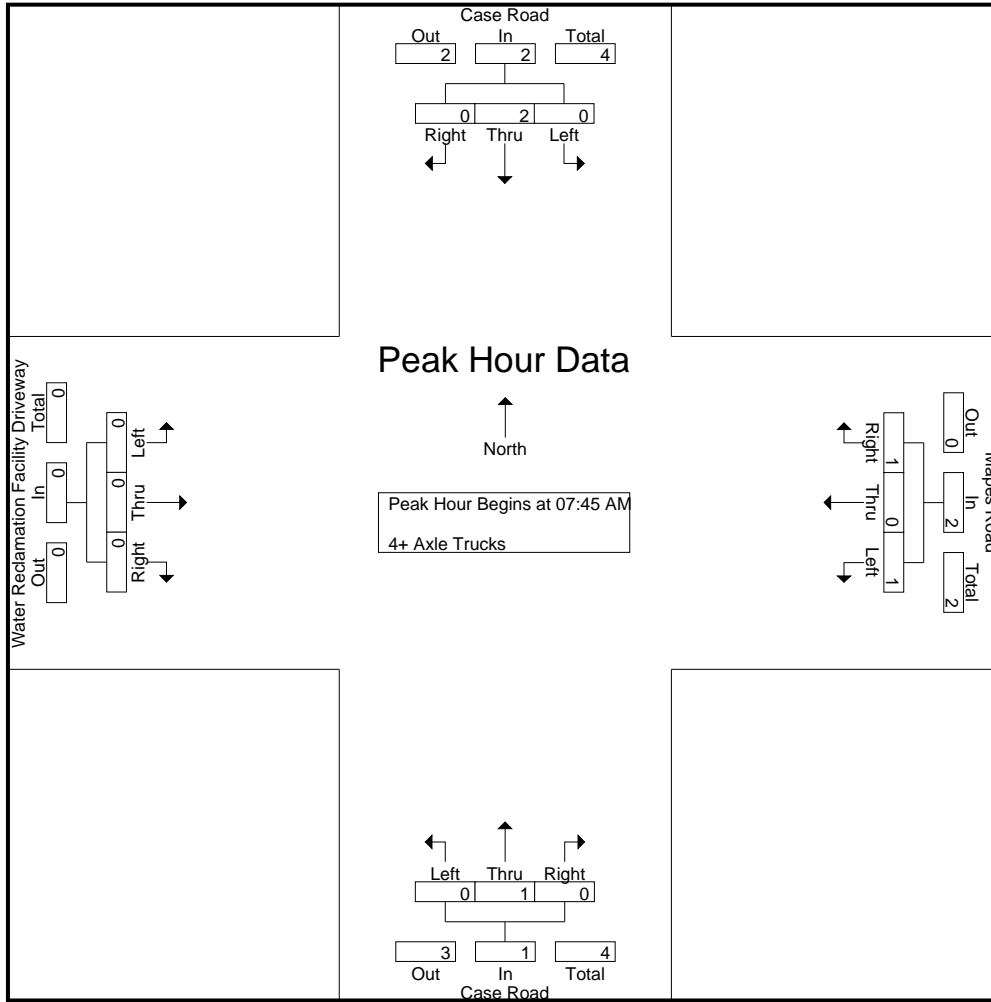


Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	1	1	0	2	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	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	50	50	0		0	0	0		0	100	0		0	0	0	
PHF	.250	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 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	1	0	1	0	0	0	0
+30 mins.	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	1	0	1	2	0	1	0	1	0	0	0	0
% App. Total	0	100	0	0	50	0	50	0	0	100	0	0	0	0	0	0
PHF	.000	.250	.000	.250	.250	.000	.250	.500	.000	.250	.000	.250	.000	.000	.000	.000

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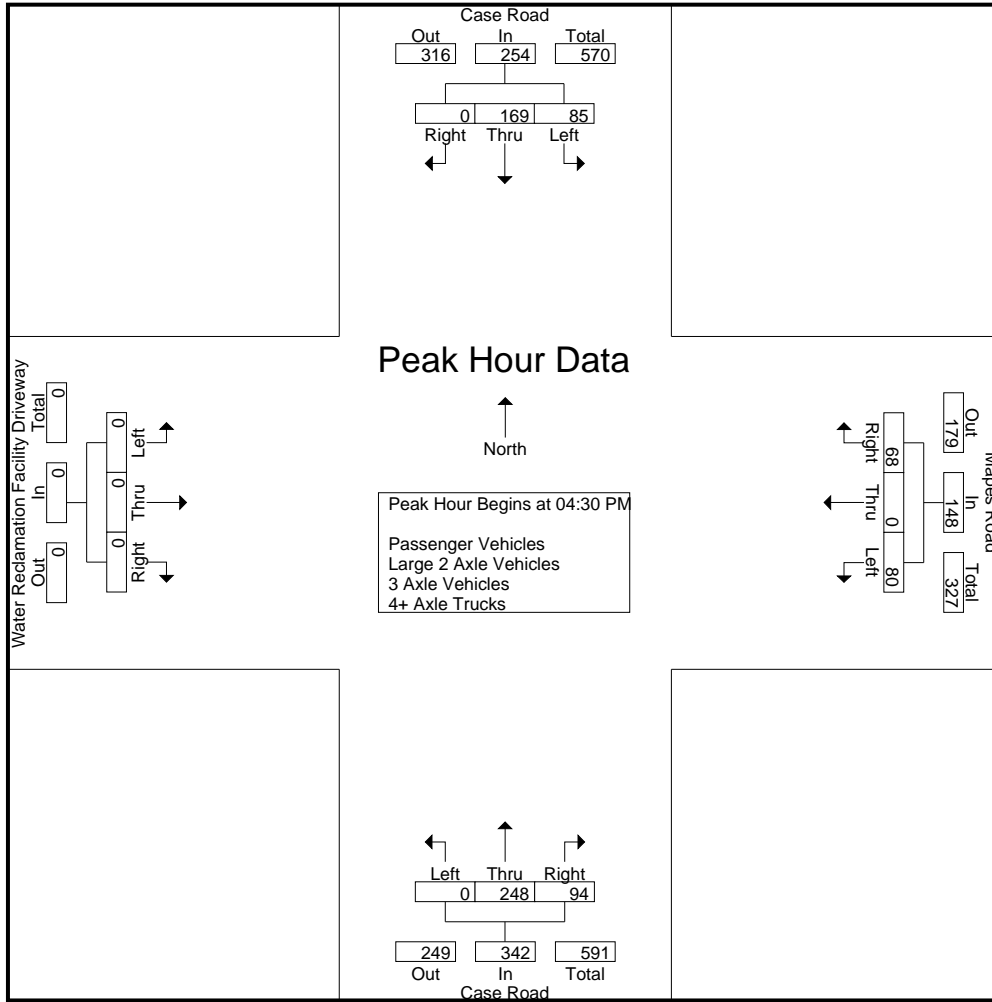
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	20	57	0	77	20	0	16	36	0	33	27	60	0	0	0	0	173
04:15 PM	12	40	0	52	32	0	18	50	1	48	27	76	0	0	0	0	178
04:30 PM	25	43	0	68	29	0	20	49	0	67	28	95	0	0	0	0	212
04:45 PM	18	42	0	60	15	0	17	32	0	43	24	67	0	0	0	0	159
Total	75	182	0	257	96	0	71	167	1	191	106	298	0	0	0	0	722
05:00 PM	19	45	0	64	17	0	16	33	0	70	24	94	0	0	0	0	191
05:15 PM	23	39	0	62	19	0	15	34	0	68	18	86	0	0	0	0	182
05:30 PM	22	47	0	69	20	0	29	49	0	49	13	62	0	0	0	0	180
05:45 PM	13	32	0	45	16	0	16	32	0	27	17	44	0	0	0	0	121
Total	77	163	0	240	72	0	76	148	0	214	72	286	0	0	0	0	674
Grand Total	152	345	0	497	168	0	147	315	1	405	178	584	0	0	0	0	1396
Apprch %	30.6	69.4	0		53.3	0	46.7		0.2	69.3	30.5		0	0	0		
Total %	10.9	24.7	0	35.6	12	0	10.5	22.6	0.1	29	12.8	41.8	0	0	0	0	
Passenger Vehicles	150	307	0	457	164	0	143	307	1	390	170	561	0	0	0	0	1325
% Passenger Vehicles	98.7	89	0	92	97.6	0	97.3	97.5	100	96.3	95.5	96.1	0	0	0	0	94.9
Large 2 Axle Vehicles	2	23	0	25	4	0	2	6	0	15	8	23	0	0	0	0	54
% Large 2 Axle Vehicles	1.3	6.7	0	5	2.4	0	1.4	1.9	0	3.7	4.5	3.9	0	0	0	0	3.9
3 Axle Vehicles	0	14	0	14	0	0	1	1	0	0	0	0	0	0	0	0	15
% 3 Axle Vehicles	0	4.1	0	2.8	0	0	0.7	0.3	0	0	0	0	0	0	0	0	1.1
4+ Axle Trucks	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
% 4+ Axle Trucks	0	0.3	0	0.2	0	0	0.7	0.3	0	0	0	0	0	0	0	0	0.1

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	25	43	0	68	29	0	20	49	0	67	28	95	0	0	0	0	212
04:45 PM	18	42	0	60	15	0	17	32	0	43	24	67	0	0	0	0	159
05:00 PM	19	45	0	64	17	0	16	33	0	70	24	94	0	0	0	0	191
05:15 PM	23	39	0	62	19	0	15	34	0	68	18	86	0	0	0	0	182
Total Volume	85	169	0	254	80	0	68	148	0	248	94	342	0	0	0	0	744
% App. Total	33.5	66.5	0		54.1	0	45.9		0	72.5	27.5		0	0	0		
PHF	.850	.939	.000	.934	.690	.000	.850	.755	.000	.886	.839	.900	.000	.000	.000	.000	.877

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

	04:00 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	20	57	0	77	20	0	16	36	0	67	28	95	0	0	0	0
+15 mins.	12	40	0	52	32	0	18	50	0	43	24	67	0	0	0	0
+30 mins.	25	43	0	68	29	0	20	49	0	70	24	94	0	0	0	0
+45 mins.	18	42	0	60	15	0	17	32	0	68	18	86	0	0	0	0
Total Volume	75	182	0	257	96	0	71	167	0	248	94	342	0	0	0	0
% App. Total	29.2	70.8	0		57.5	0	42.5		0	72.5	27.5		0	0	0	
PHF	.750	.798	.000	.834	.750	.000	.888	.835	.000	.886	.839	.900	.000	.000	.000	.000

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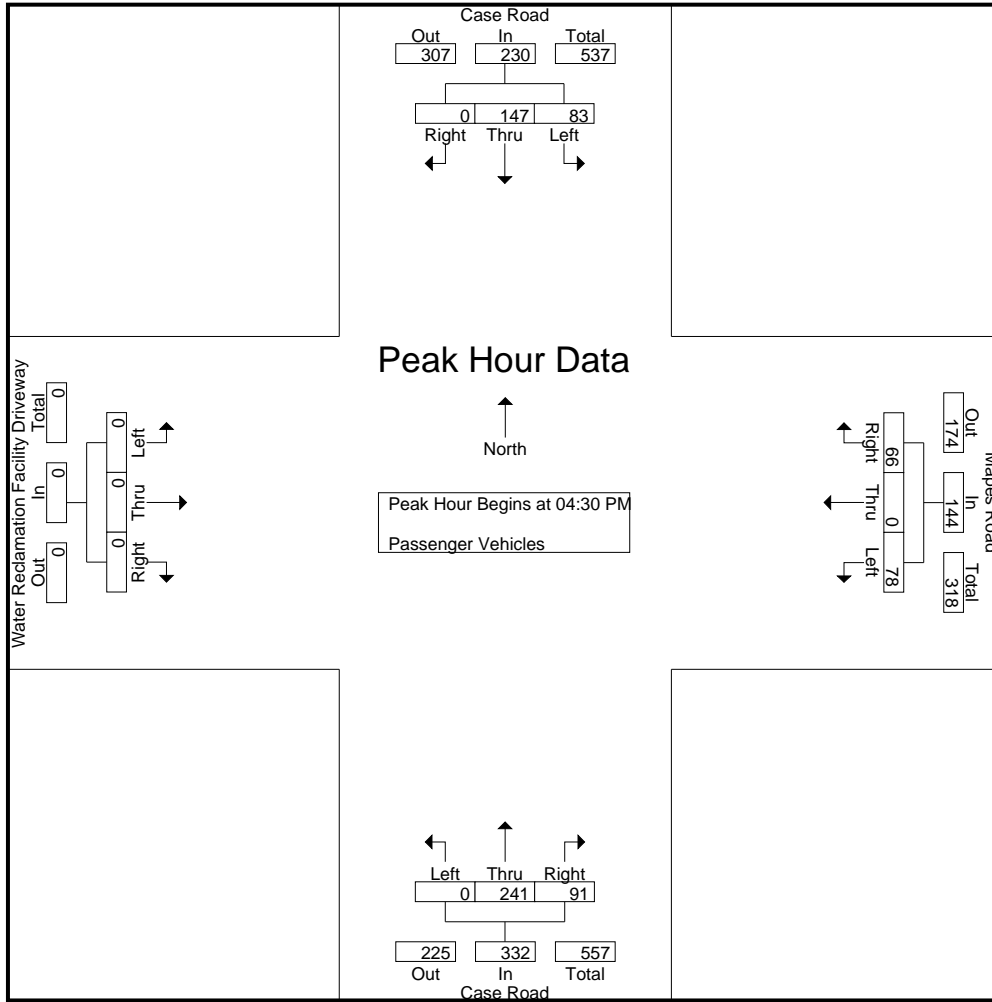
Groups Printed- Passenger Vehicles

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	20	51	0	71	20	0	15	35	0	32	26	58	0	0	0	0	164
04:15 PM	12	38	0	50	31	0	17	48	1	43	25	69	0	0	0	0	167
04:30 PM	23	39	0	62	29	0	20	49	0	66	28	94	0	0	0	0	205
04:45 PM	18	34	0	52	15	0	17	32	0	41	24	65	0	0	0	0	149
Total	73	162	0	235	95	0	69	164	1	182	103	286	0	0	0	0	685
05:00 PM	19	37	0	56	16	0	15	31	0	69	23	92	0	0	0	0	179
05:15 PM	23	37	0	60	18	0	14	32	0	65	16	81	0	0	0	0	173
05:30 PM	22	44	0	66	20	0	29	49	0	48	11	59	0	0	0	0	174
05:45 PM	13	27	0	40	15	0	16	31	0	26	17	43	0	0	0	0	114
Total	77	145	0	222	69	0	74	143	0	208	67	275	0	0	0	0	640
Grand Total	150	307	0	457	164	0	143	307	1	390	170	561	0	0	0	0	1325
Apprch %	32.8	67.2	0		53.4	0	46.6		0.2	69.5	30.3		0	0	0		
Total %	11.3	23.2	0	34.5	12.4	0	10.8	23.2	0.1	29.4	12.8	42.3	0	0	0	0	

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	23	39	0	62	29	0	20	49	0	66	28	94	0	0	0	0	205
04:45 PM	18	34	0	52	15	0	17	32	0	41	24	65	0	0	0	0	149
05:00 PM	19	37	0	56	16	0	15	31	0	69	23	92	0	0	0	0	179
05:15 PM	23	37	0	60	18	0	14	32	0	65	16	81	0	0	0	0	173
Total Volume	83	147	0	230	78	0	66	144	0	241	91	332	0	0	0	0	706
% App. Total	36.1	63.9	0		54.2	0	45.8		0	72.6	27.4		0	0	0		
PHF	.902	.942	.000	.927	.672	.000	.825	.735	.000	.873	.813	.883	.000	.000	.000	.000	.861

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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	23	39	0	62	29	0	20	49	0	66	28	94	0	0	0	0
+15 mins.	18	34	0	52	15	0	17	32	0	41	24	65	0	0	0	0
+30 mins.	19	37	0	56	16	0	15	31	0	69	23	92	0	0	0	0
+45 mins.	23	37	0	60	18	0	14	32	0	65	16	81	0	0	0	0
Total Volume	83	147	0	230	78	0	66	144	0	241	91	332	0	0	0	0
% App. Total	36.1	63.9	0		54.2	0	45.8		0	72.6	27.4		0	0	0	
PHF	.902	.942	.000	.927	.672	.000	.825	.735	.000	.873	.813	.883	.000	.000	.000	.000

City of Perris
 N/S: Case Road
 E/W: Mapes Road
 Weather: Clear

File Name : 07_PER_Case_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

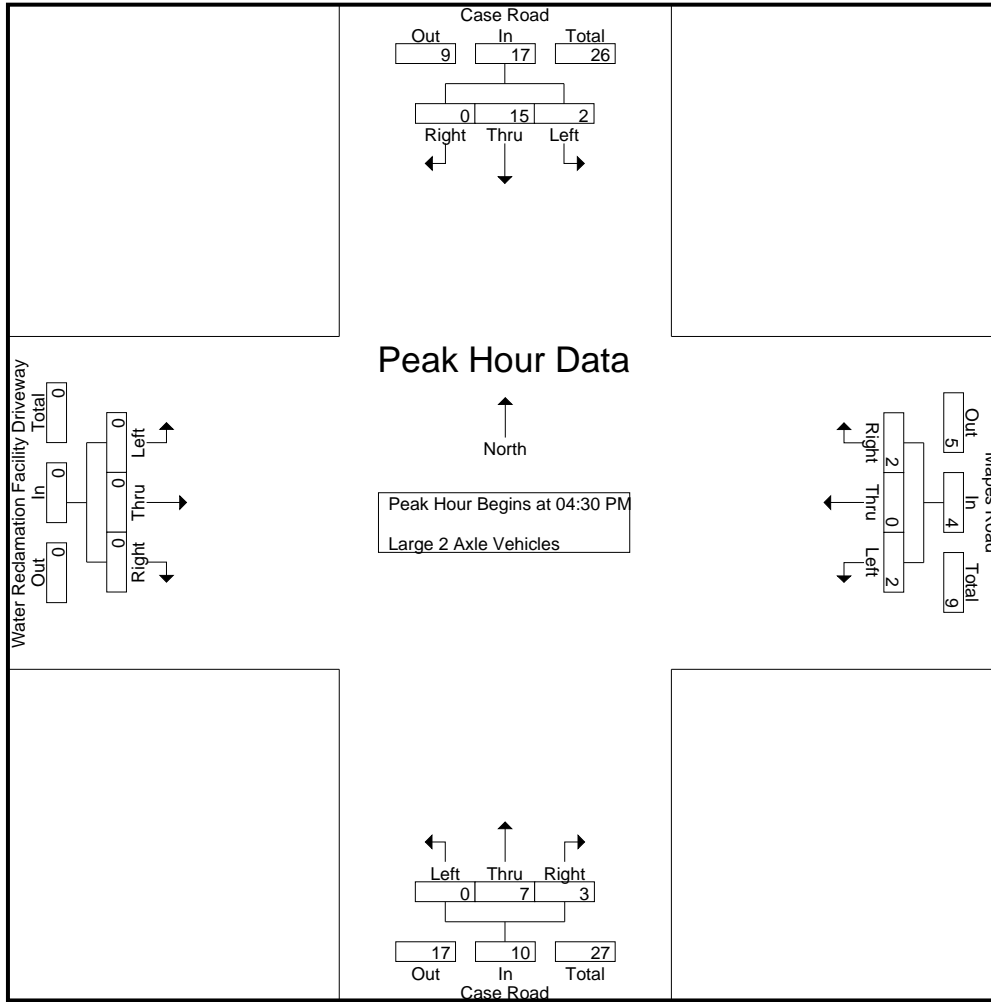
Groups Printed- Large 2 Axle Vehicles

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	3	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
04:15 PM	0	2	0	2	1	0	0	1	0	5	2	7	0	0	0	0	10
04:30 PM	2	4	0	6	0	0	0	0	0	1	0	1	0	0	0	0	7
04:45 PM	0	7	0	7	0	0	0	0	0	2	0	2	0	0	0	0	9
Total	2	16	0	18	1	0	0	1	0	9	3	12	0	0	0	0	31
05:00 PM	0	4	0	4	1	0	1	2	0	1	1	2	0	0	0	0	8
05:15 PM	0	0	0	0	1	0	1	2	0	3	2	5	0	0	0	0	7
05:30 PM	0	1	0	1	0	0	0	0	0	1	2	3	0	0	0	0	4
05:45 PM	0	2	0	2	1	0	0	1	0	1	0	1	0	0	0	0	4
Total	0	7	0	7	3	0	2	5	0	6	5	11	0	0	0	0	23
Grand Total	2	23	0	25	4	0	2	6	0	15	8	23	0	0	0	0	54
Apprch %	8	92	0		66.7	0	33.3		0	65.2	34.8		0	0	0		
Total %	3.7	42.6	0	46.3	7.4	0	3.7	11.1	0	27.8	14.8	42.6	0	0	0	0	

Start Time	Case Road Southbound				Mapes Road Westbound				Case Road Northbound				Water Reclamation Facility Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	4	0	6	0	0	0	0	0	1	0	1	0	0	0	0	7
04:45 PM	0	7	0	7	0	0	0	0	0	2	0	2	0	0	0	0	9
05:00 PM	0	4	0	4	1	0	1	2	0	1	1	2	0	0	0	0	8
05:15 PM	0	0	0	0	1	0	1	2	0	3	2	5	0	0	0	0	7
Total Volume	2	15	0	17	2	0	2	4	0	7	3	10	0	0	0	0	31
% App. Total	11.8	88.2	0		50	0	50		0	70	30		0	0	0		
PHF	.250	.536	.000	.607	.500	.000	.500	.500	.000	.583	.375	.500	.000	.000	.000	.000	.861

City of Perris
 N/S: Case Road
 E/W: Mapes Road
 Weather: Clear

File Name : 07_PER_Case_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2

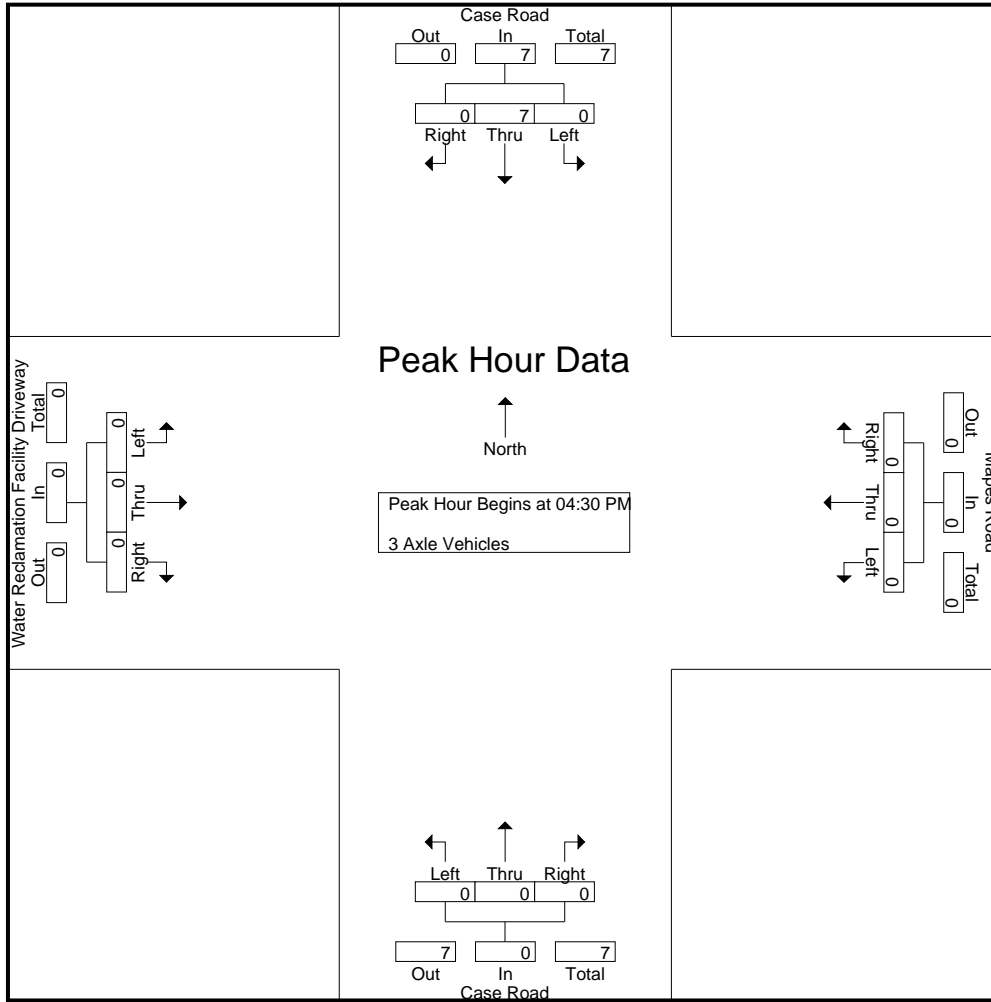


Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	2	4	0	6	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	7	0	7	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	4	0	4	1	0	1	2	0	1	1	2	0	0	0	0
+45 mins.	0	0	0	0	1	0	1	2	0	3	2	5	0	0	0	0
Total Volume	2	15	0	17	2	0	2	4	0	7	3	10	0	0	0	0
% App. Total	11.8	88.2	0		50	0	50		0	70	30		0	0	0	
PHF	.250	.536	.000	.607	.500	.000	.500	.500	.000	.583	.375	.500	.000	.000	.000	.000

City of Perris
 N/S: Case Road
 E/W: Mapes Road
 Weather: Clear

File Name : 07_PER_Case_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
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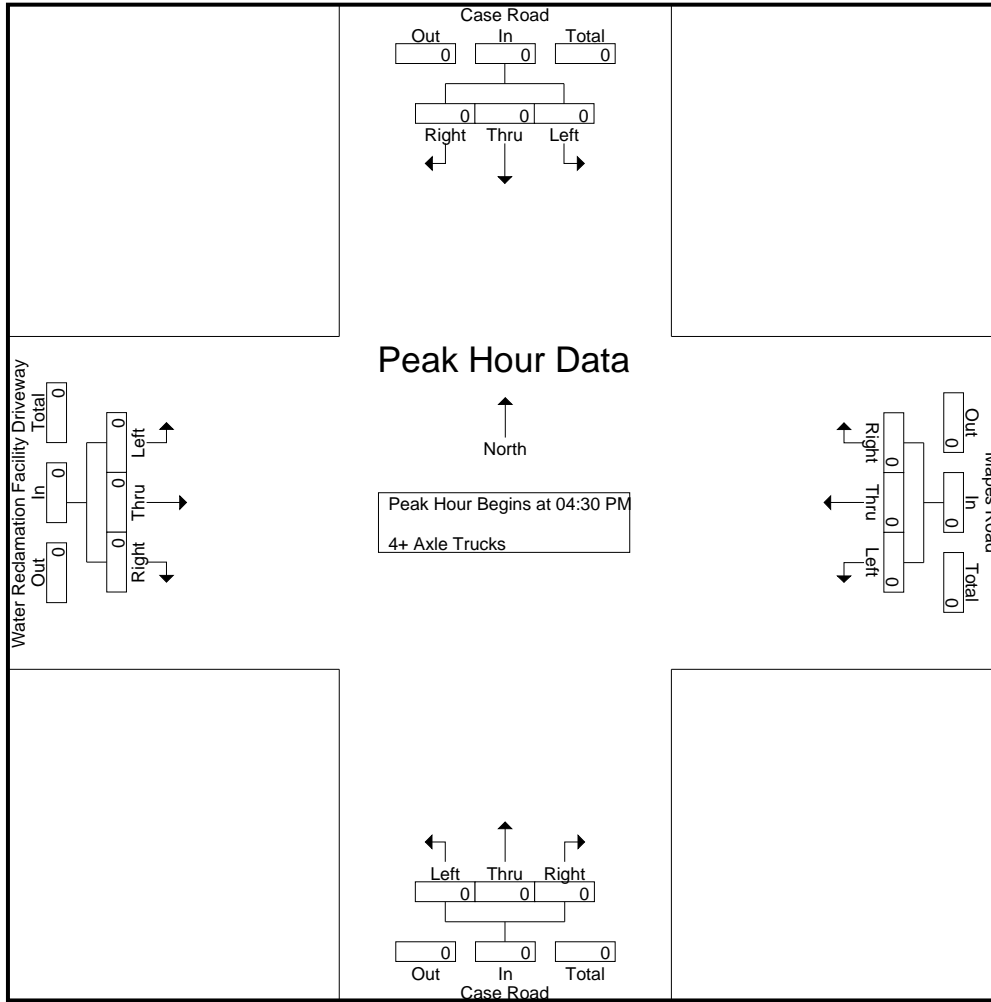


Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	4	0	4	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	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.438	.000	.438	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris
 N/S: Case Road
 E/W: Mapes Road
 Weather: Clear

File Name : 07_PER_Case_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 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	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

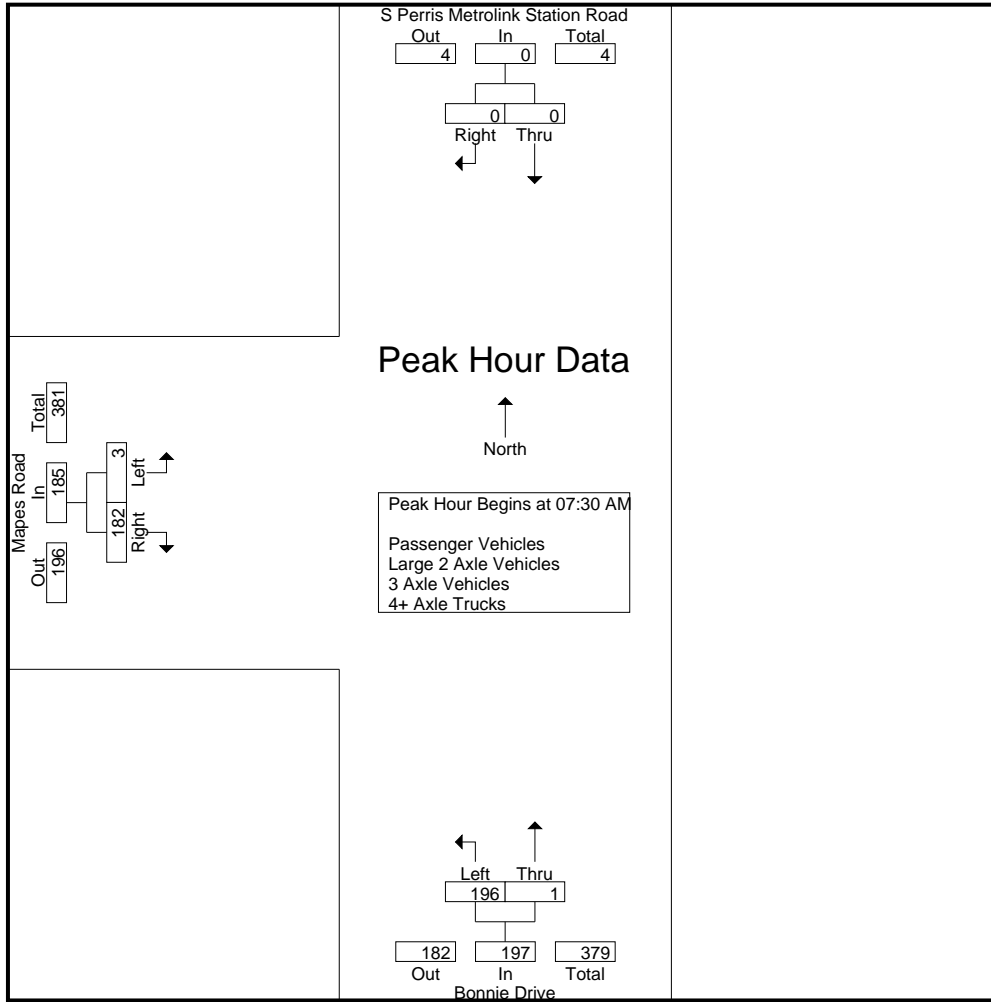
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	1	0	1	46	0	46	0	36	36	83
07:15 AM	0	1	1	55	1	56	0	32	32	89
07:30 AM	0	0	0	45	0	45	1	55	56	101
07:45 AM	0	0	0	40	0	40	0	50	50	90
Total	1	1	2	186	1	187	1	173	174	363
08:00 AM	0	0	0	56	0	56	1	32	33	89
08:15 AM	0	0	0	55	1	56	1	45	46	102
08:30 AM	1	0	1	62	0	62	1	35	36	99
08:45 AM	1	0	1	47	1	48	0	30	30	79
Total	2	0	2	220	2	222	3	142	145	369
Grand Total	3	1	4	406	3	409	4	315	319	732
Apprch %	75	25		99.3	0.7		1.3	98.7		
Total %	0.4	0.1	0.5	55.5	0.4	55.9	0.5	43	43.6	
Passenger Vehicles	3	1	4	381	3	384	3	283	286	674
% Passenger Vehicles	100	100	100	93.8	100	93.9	75	89.8	89.7	92.1
Large 2 Axle Vehicles	0	0	0	14	0	14	1	20	21	35
% Large 2 Axle Vehicles	0	0	0	3.4	0	3.4	25	6.3	6.6	4.8
3 Axle Vehicles	0	0	0	6	0	6	0	8	8	14
% 3 Axle Vehicles	0	0	0	1.5	0	1.5	0	2.5	2.5	1.9
4+ Axle Trucks	0	0	0	5	0	5	0	4	4	9
% 4+ Axle Trucks	0	0	0	1.2	0	1.2	0	1.3	1.3	1.2

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	45	0	45	1	55	56	101
07:45 AM	0	0	0	40	0	40	0	50	50	90
08:00 AM	0	0	0	56	0	56	1	32	33	89
08:15 AM	0	0	0	55	1	56	1	45	46	102
Total Volume	0	0	0	196	1	197	3	182	185	382
% App. Total	0	0		99.5	0.5		1.6	98.4		
PHF	.000	.000	.000	.875	.250	.879	.750	.827	.826	.936

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM			08:00 AM			07:30 AM		
+0 mins.	1	0	1	56	0	56	1	55	56
+15 mins.	0	1	1	55	1	56	0	50	50
+30 mins.	0	0	0	62	0	62	1	32	33
+45 mins.	0	0	0	47	1	48	1	45	46
Total Volume	1	1	2	220	2	222	3	182	185
% App. Total	50	50		99.1	0.9		1.6	98.4	
PHF	.250	.250	.500	.887	.500	.895	.750	.827	.826

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

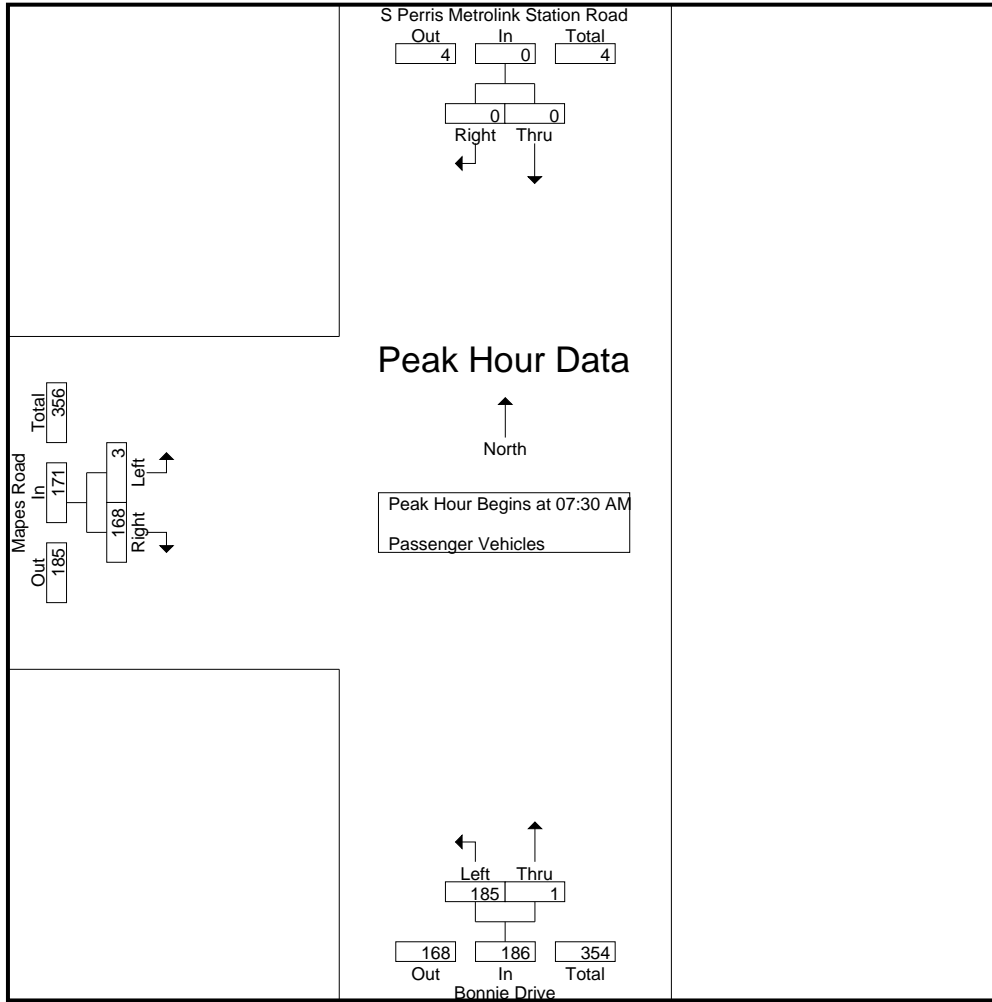
Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	1	0	1	40	0	40	0	30	30	71
07:15 AM	0	1	1	52	1	53	0	25	25	79
07:30 AM	0	0	0	42	0	42	1	50	51	93
07:45 AM	0	0	0	39	0	39	0	48	48	87
Total	1	1	2	173	1	174	1	153	154	330
08:00 AM	0	0	0	54	0	54	1	29	30	84
08:15 AM	0	0	0	50	1	51	1	41	42	93
08:30 AM	1	0	1	58	0	58	0	32	32	91
08:45 AM	1	0	1	46	1	47	0	28	28	76
Total	2	0	2	208	2	210	2	130	132	344
Grand Total	3	1	4	381	3	384	3	283	286	674
Apprch %	75	25		99.2	0.8		1	99		
Total %	0.4	0.1	0.6	56.5	0.4	57	0.4	42	42.4	

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:30 AM	0	0	0	42	0	42	1	50	51	93
07:45 AM	0	0	0	39	0	39	0	48	48	87
08:00 AM	0	0	0	54	0	54	1	29	30	84
08:15 AM	0	0	0	50	1	51	1	41	42	93
Total Volume	0	0	0	185	1	186	3	168	171	357
% App. Total	0	0		99.5	0.5		1.8	98.2		
PHF	.000	.000	.000	.856	.250	.861	.750	.840	.838	.960

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	42	0	42	1	50	51
+15 mins.	0	0	0	39	0	39	0	48	48
+30 mins.	0	0	0	54	0	54	1	29	30
+45 mins.	0	0	0	50	1	51	1	41	42
Total Volume	0	0	0	185	1	186	3	168	171
% App. Total	0	0	0	99.5	0.5		1.8	98.2	
PHF	.000	.000	.000	.856	.250	.861	.750	.840	.838

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	0	0	1	0	1	0	5	5	6
07:15 AM	0	0	0	3	0	3	0	3	3	6
07:30 AM	0	0	0	2	0	2	0	2	2	4
07:45 AM	0	0	0	1	0	1	0	1	1	2
Total	0	0	0	7	0	7	0	11	11	18
08:00 AM	0	0	0	2	0	2	0	2	2	4
08:15 AM	0	0	0	1	0	1	0	4	4	5
08:30 AM	0	0	0	4	0	4	1	2	3	7
08:45 AM	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	7	0	7	1	9	10	17
Grand Total	0	0	0	14	0	14	1	20	21	35
Apprch %	0	0		100	0		4.8	95.2		
Total %	0	0		40	0	40	2.9	57.1	60	

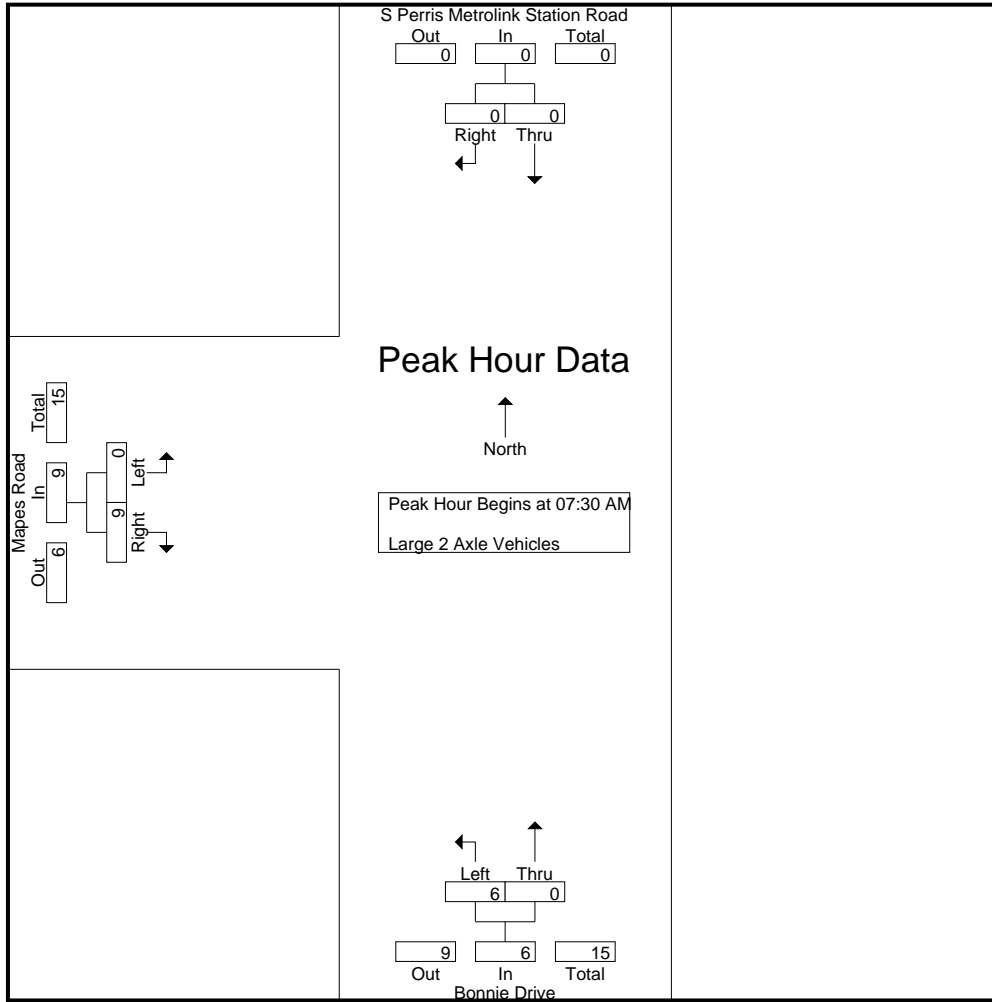
Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:30 AM	0	0	0	2	0	2	0	2	2	4
07:45 AM	0	0	0	1	0	1	0	1	1	2
08:00 AM	0	0	0	2	0	2	0	2	2	4
08:15 AM	0	0	0	1	0	1	0	4	4	5
Total Volume	0	0	0	6	0	6	0	9	9	15
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.750	.000	.750	.000	.563	.563	.750

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	2	0	2	0	2	2
+15 mins.	0	0	0	1	0	1	0	1	1
+30 mins.	0	0	0	2	0	2	0	2	2
+45 mins.	0	0	0	1	0	1	0	4	4
Total Volume	0	0	0	6	0	6	0	9	9
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.750	.000	.750	.000	.563	.563

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
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Groups Printed- 3 Axle Vehicles

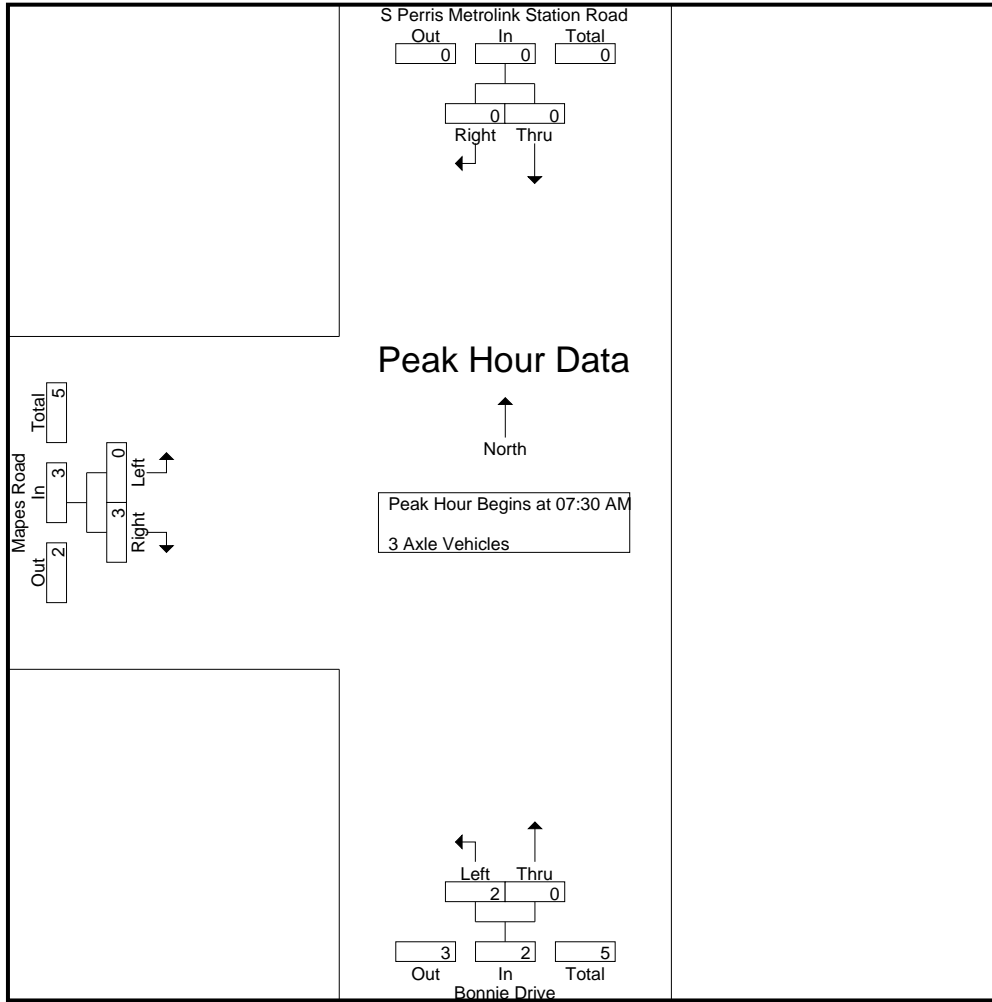
Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	0	0	4	0	4	0	1	1	5
07:15 AM	0	0	0	0	0	0	0	3	3	3
07:30 AM	0	0	0	0	0	0	0	2	2	2
07:45 AM	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	4	0	4	0	7	7	11
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	2	0	2	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	2	0	2	0	1	1	3
Grand Total	0	0	0	6	0	6	0	8	8	14
Apprch %	0	0		100	0		0	100		
Total %	0	0		42.9	0	42.9	0	57.1	57.1	

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:30 AM	0	0	0	0	0	0	0	2	2	2
07:45 AM	0	0	0	0	0	0	0	1	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	2	0	2	0	0	0	2
Total Volume	0	0	0	2	0	2	0	3	3	5
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.250	.000	.250	.000	.375	.375	.625

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	2	2
+15 mins.	0	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	2	0	2	0	0	0
Total Volume	0	0	0	2	0	2	0	3	3
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.250	.000	.250	.000	.375	.375

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	0	0	1	0	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	1	0	1	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	2	0	2	2	4
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	2	0	2	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	1	1	1
08:45 AM	0	0	0	1	0	1	0	0	0	1
Total	0	0	0	3	0	3	0	2	2	5
Grand Total	0	0	0	5	0	5	0	4	4	9
Apprch %	0	0		100	0		0	100		
Total %	0	0		55.6	0	55.6	0	44.4	44.4	

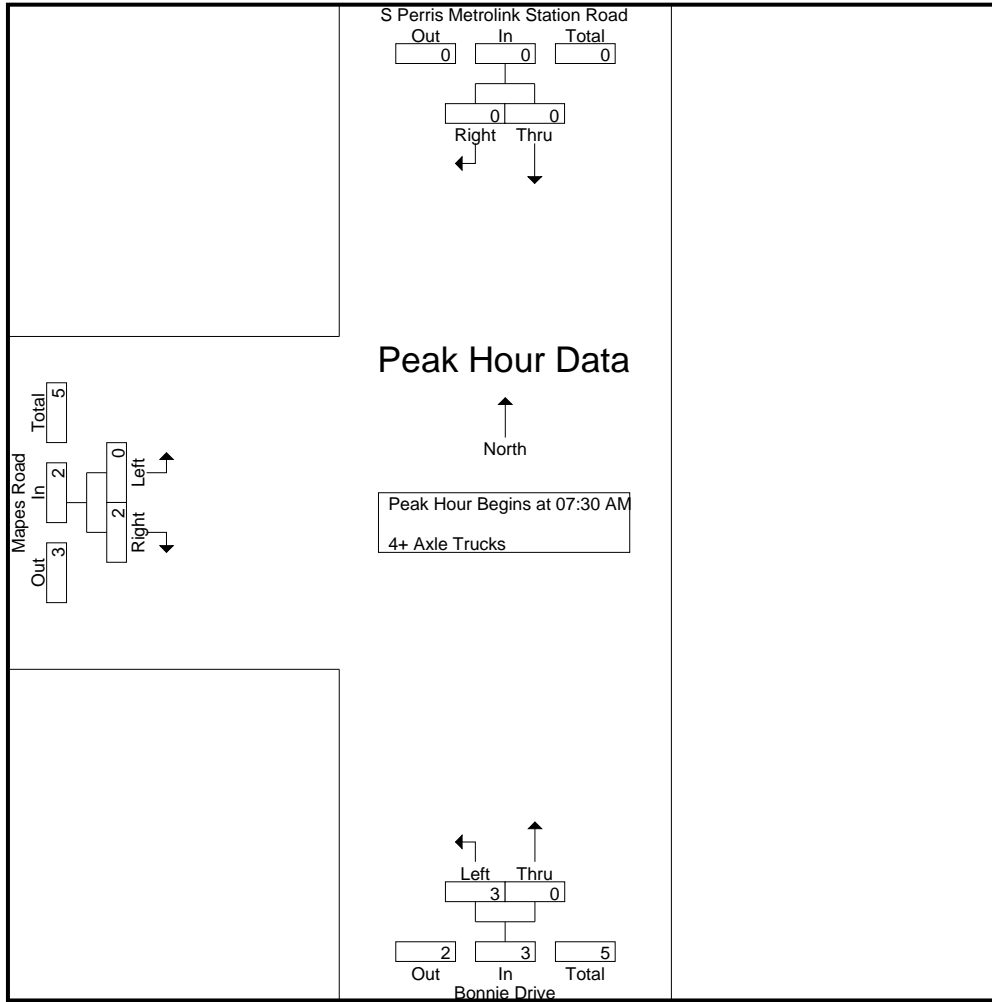
Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:30 AM	0	0	0	1	0	1	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	2	0	2	0	0	0	2
Total Volume	0	0	0	3	0	3	0	2	2	5
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.375	.000	.375	.000	.500	.500	.625

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	1	0	1	0	1	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	2	0	2	0	0	0
Total Volume	0	0	0	3	0	3	0	2	2
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.375	.000	.375	.000	.500	.500

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

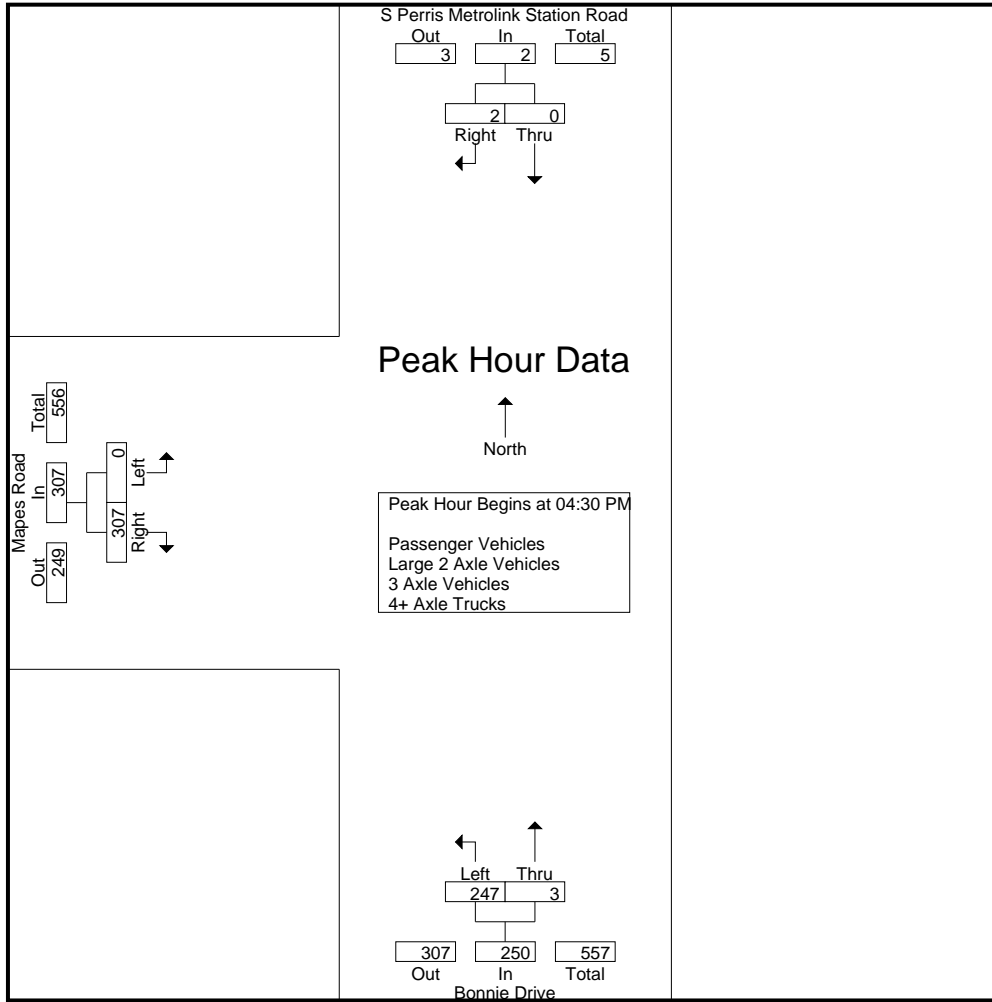
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	1	1	75	1	76	0	41	41	118
04:15 PM	0	1	1	53	0	53	0	70	70	124
04:30 PM	0	0	0	66	2	68	0	86	86	154
04:45 PM	0	1	1	64	1	65	0	59	59	125
Total	0	3	3	258	4	262	0	256	256	521
05:00 PM	0	1	1	57	0	57	0	84	84	142
05:15 PM	0	0	0	60	0	60	0	78	78	138
05:30 PM	0	1	1	69	3	72	2	77	79	152
05:45 PM	0	1	1	43	8	51	1	40	41	93
Total	0	3	3	229	11	240	3	279	282	525
Grand Total	0	6	6	487	15	502	3	535	538	1046
Apprch %	0	100		97	3		0.6	99.4		
Total %	0	0.6	0.6	46.6	1.4	48	0.3	51.1	51.4	
Passenger Vehicles	0	6	6	452	15	467	3	520	523	996
% Passenger Vehicles	0	100	100	92.8	100	93	100	97.2	97.2	95.2
Large 2 Axle Vehicles	0	0	0	20	0	20	0	13	13	33
% Large 2 Axle Vehicles	0	0	0	4.1	0	4	0	2.4	2.4	3.2
3 Axle Vehicles	0	0	0	14	0	14	0	1	1	15
% 3 Axle Vehicles	0	0	0	2.9	0	2.8	0	0.2	0.2	1.4
4+ Axle Trucks	0	0	0	1	0	1	0	1	1	2
% 4+ Axle Trucks	0	0	0	0.2	0	0.2	0	0.2	0.2	0.2

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	66	2	68	0	86	86	154
04:45 PM	0	1	1	64	1	65	0	59	59	125
05:00 PM	0	1	1	57	0	57	0	84	84	142
05:15 PM	0	0	0	60	0	60	0	78	78	138
Total Volume	0	2	2	247	3	250	0	307	307	559
% App. Total	0	100		98.8	1.2		0	100		
PHF	.000	.500	.500	.936	.375	.919	.000	.892	.892	.907

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



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

	04:00 PM			04:00 PM			04:30 PM		
+0 mins.	0	1	1	75	1	76	0	86	86
+15 mins.	0	1	1	53	0	53	0	59	59
+30 mins.	0	0	0	66	2	68	0	84	84
+45 mins.	0	1	1	64	1	65	0	78	78
Total Volume	0	3	3	258	4	262	0	307	307
% App. Total	0	100		98.5	1.5		0	100	
PHF	.000	.750	.750	.860	.500	.862	.000	.892	.892

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	1	1	71	1	72	0	41	41	114
04:15 PM	0	1	1	51	0	51	0	66	66	118
04:30 PM	0	0	0	61	2	63	0	85	85	148
04:45 PM	0	1	1	57	1	58	0	57	57	116
Total	0	3	3	240	4	244	0	249	249	496
05:00 PM	0	1	1	49	0	49	0	82	82	132
05:15 PM	0	0	0	58	0	58	0	76	76	134
05:30 PM	0	1	1	66	3	69	2	75	77	147
05:45 PM	0	1	1	39	8	47	1	38	39	87
Total	0	3	3	212	11	223	3	271	274	500
Grand Total	0	6	6	452	15	467	3	520	523	996
Apprch %	0	100		96.8	3.2		0.6	99.4		
Total %	0	0.6	0.6	45.4	1.5	46.9	0.3	52.2	52.5	

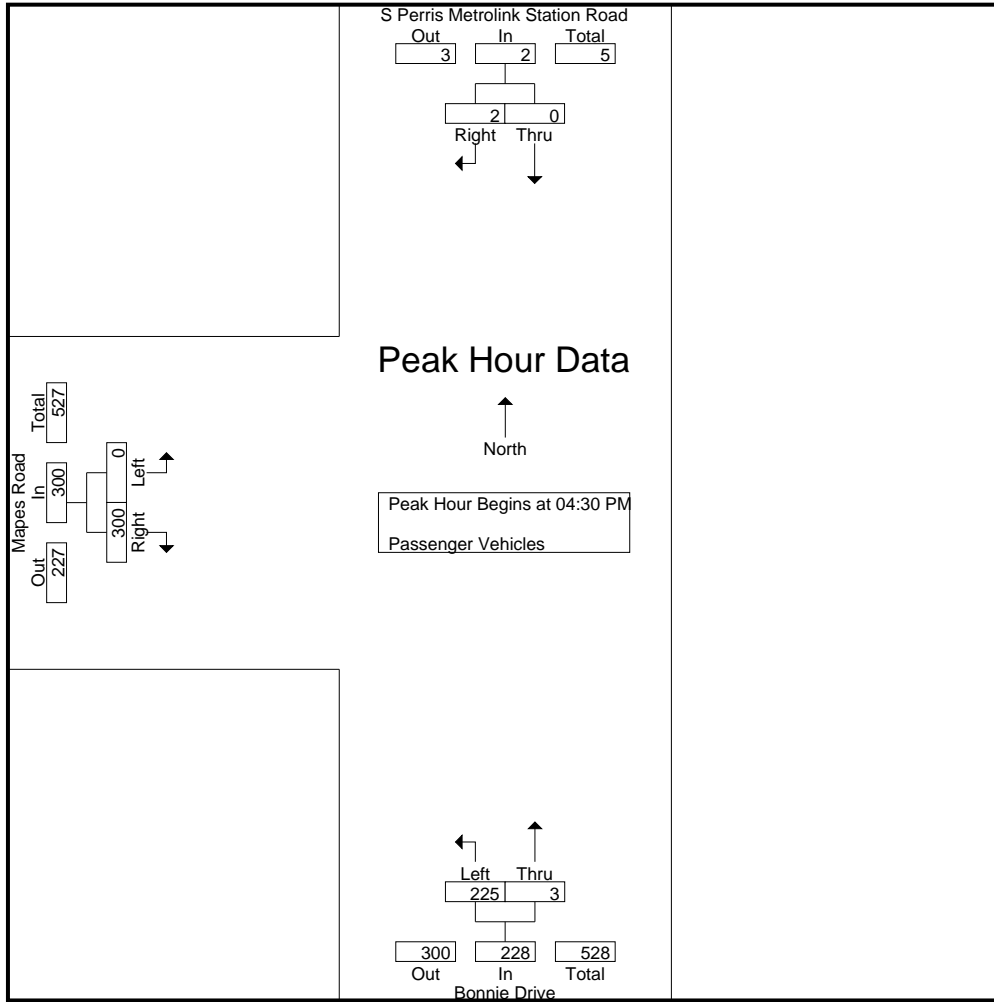
Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	0	0	0	61	2	63	0	85	85	148
04:45 PM	0	1	1	57	1	58	0	57	57	116
05:00 PM	0	1	1	49	0	49	0	82	82	132
05:15 PM	0	0	0	58	0	58	0	76	76	134
Total Volume	0	2	2	225	3	228	0	300	300	530
% App. Total	0	100		98.7	1.3		0	100		
PHF	.000	.500	.500	.922	.375	.905	.000	.882	.882	.895

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	61	2	63	0	85	85
+15 mins.	0	1	1	57	1	58	0	57	57
+30 mins.	0	1	1	49	0	49	0	82	82
+45 mins.	0	0	0	58	0	58	0	76	76
Total Volume	0	2	2	225	3	228	0	300	300
% App. Total	0	100		98.7	1.3		0	100	
PHF	.000	.500	.500	.922	.375	.905	.000	.882	.882

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	1	0	1	0	0	0	1
04:15 PM	0	0	0	2	0	2	0	2	2	4
04:30 PM	0	0	0	5	0	5	0	1	1	6
04:45 PM	0	0	0	6	0	6	0	2	2	8
Total	0	0	0	14	0	14	0	5	5	19
05:00 PM	0	0	0	4	0	4	0	2	2	6
05:15 PM	0	0	0	0	0	0	0	2	2	2
05:30 PM	0	0	0	1	0	1	0	2	2	3
05:45 PM	0	0	0	1	0	1	0	2	2	3
Total	0	0	0	6	0	6	0	8	8	14
Grand Total	0	0	0	20	0	20	0	13	13	33
Apprch %	0	0		100	0		0	100		
Total %	0	0		60.6	0	60.6	0	39.4	39.4	

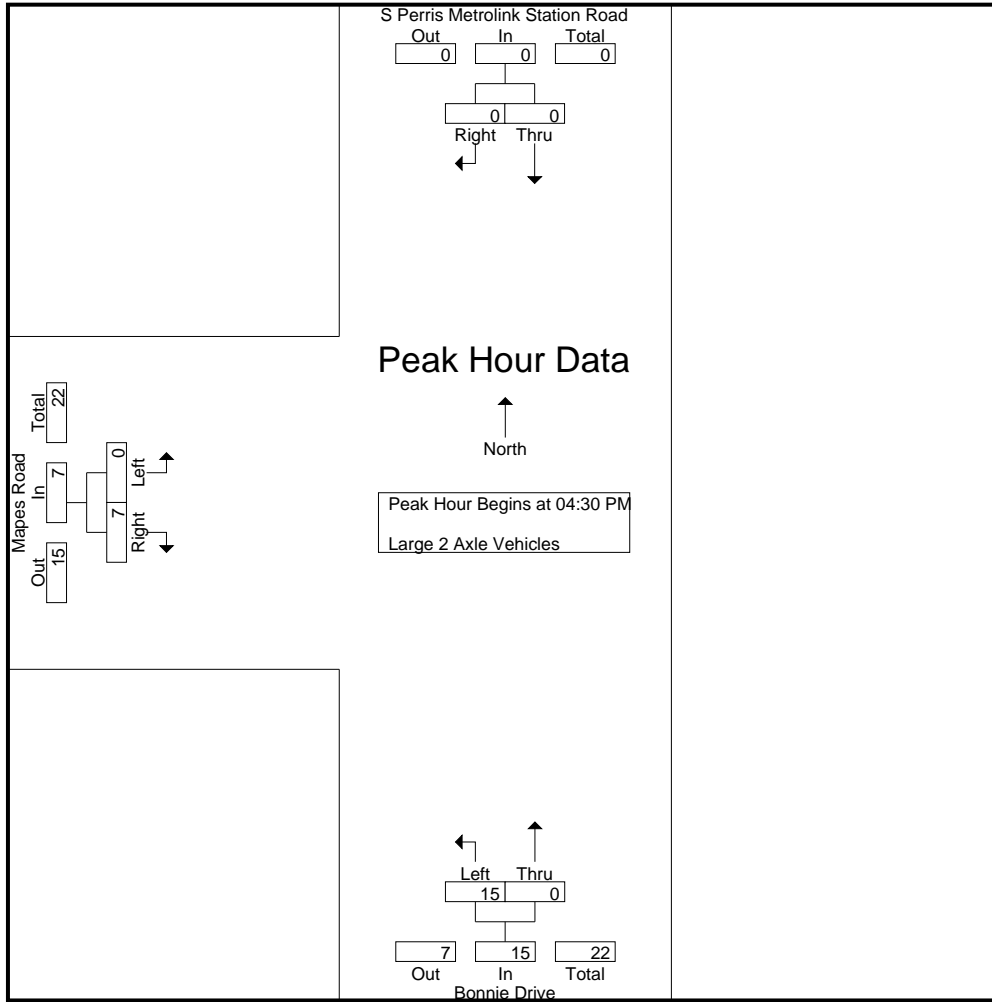
Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	0	0	0	5	0	5	0	1	1	6
04:45 PM	0	0	0	6	0	6	0	2	2	8
05:00 PM	0	0	0	4	0	4	0	2	2	6
05:15 PM	0	0	0	0	0	0	0	2	2	2
Total Volume	0	0	0	15	0	15	0	7	7	22
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.625	.000	.625	.000	.875	.875	.688

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	5	0	5	0	1	1
+15 mins.	0	0	0	6	0	6	0	2	2
+30 mins.	0	0	0	4	0	4	0	2	2
+45 mins.	0	0	0	0	0	0	0	2	2
Total Volume	0	0	0	15	0	15	0	7	7
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.625	.000	.625	.000	.875	.875

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

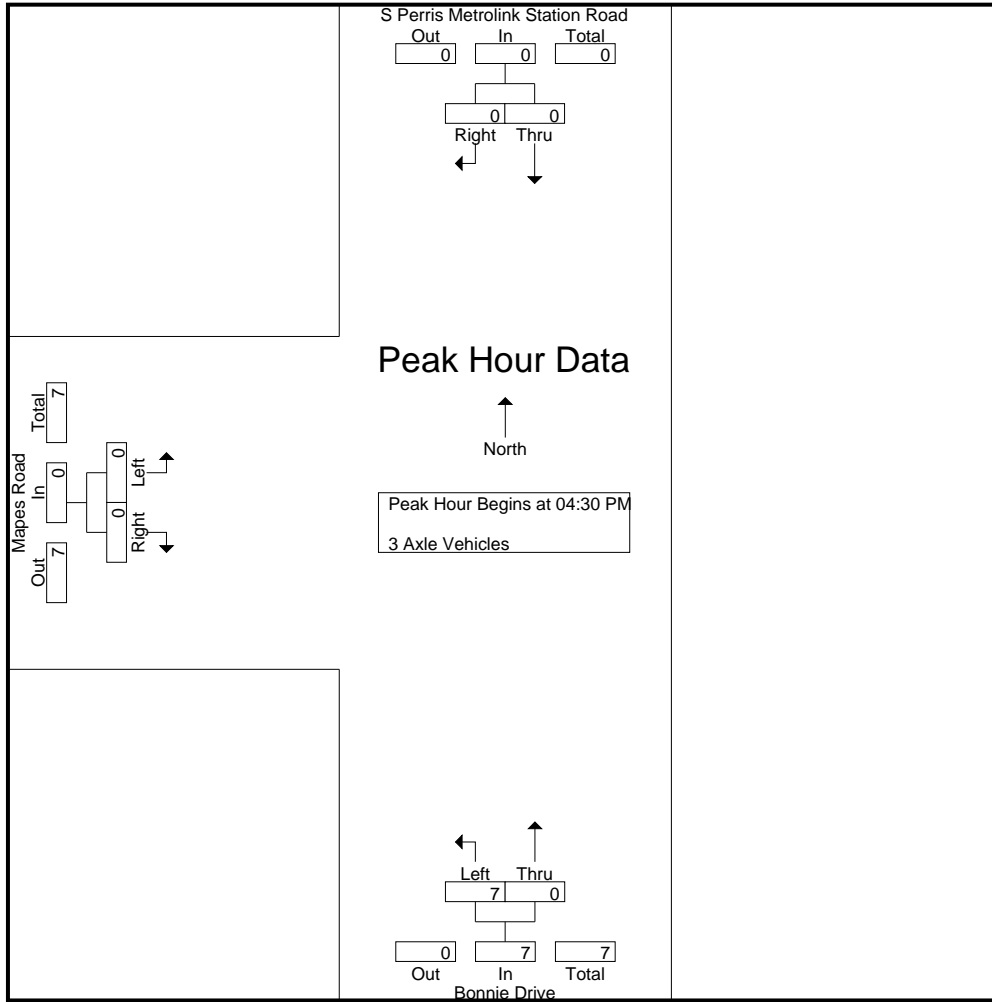
Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	2	0	2	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	0	1	0	0	0	1
Total	0	0	0	3	0	3	0	1	1	4
05:00 PM	0	0	0	4	0	4	0	0	0	4
05:15 PM	0	0	0	2	0	2	0	0	0	2
05:30 PM	0	0	0	2	0	2	0	0	0	2
05:45 PM	0	0	0	3	0	3	0	0	0	3
Total	0	0	0	11	0	11	0	0	0	11
Grand Total	0	0	0	14	0	14	0	1	1	15
Apprch %	0	0		100	0		0	100		
Total %	0	0		93.3	0	93.3	0	6.7	6.7	

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	0	1	0	0	0	1
05:00 PM	0	0	0	4	0	4	0	0	0	4
05:15 PM	0	0	0	2	0	2	0	0	0	2
Total Volume	0	0	0	7	0	7	0	0	0	7
% App. Total	0	0		100	0		0	0		
PHF	.000	.000	.000	.438	.000	.438	.000	.000	.000	.438

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	1	0	1	0	0	0
+30 mins.	0	0	0	4	0	4	0	0	0
+45 mins.	0	0	0	2	0	2	0	0	0
Total Volume	0	0	0	7	0	7	0	0	0
% App. Total	0	0	0	100	0	0	0	0	0
PHF	.000	.000	.000	.438	.000	.438	.000	.000	.000

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

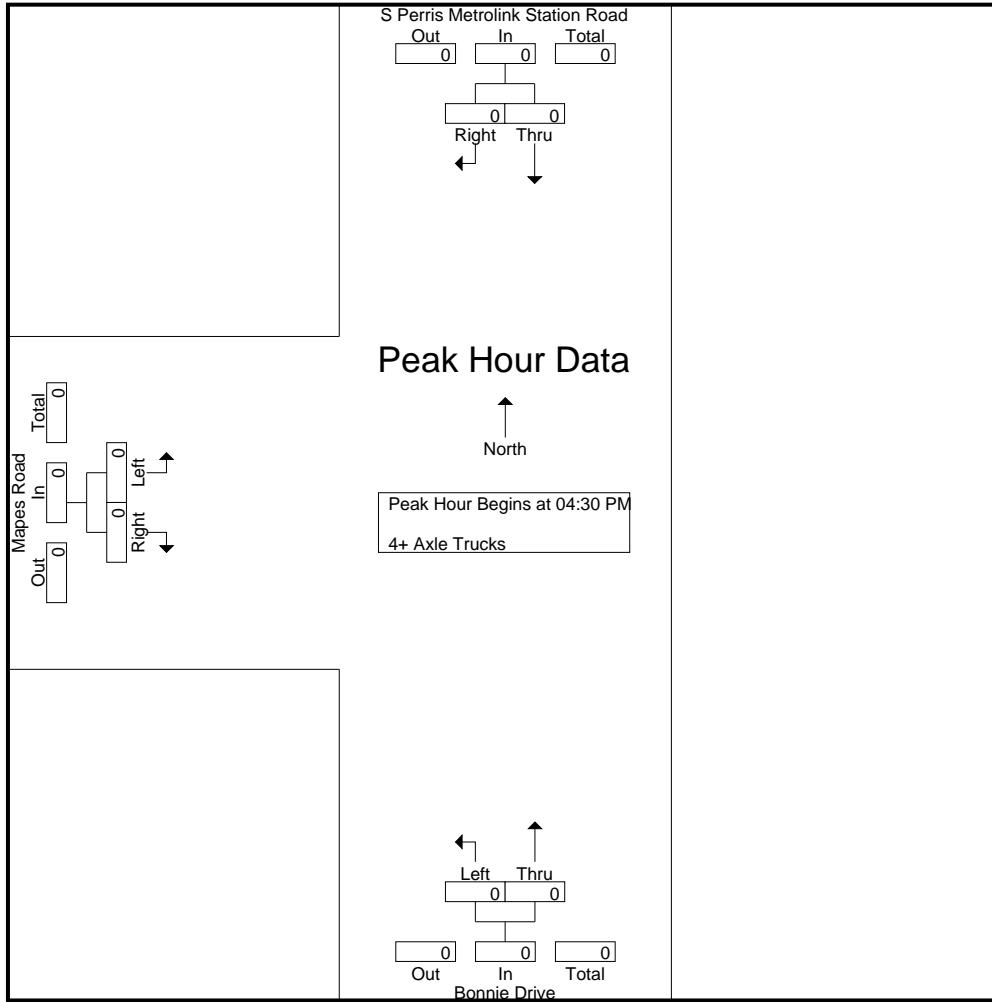
Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	1	0	1	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	1	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	1	0	1	0	1	1	2
Apprch %	0	0		100	0		0	100		
Total %	0	0		50	0	50	0	50	50	

Start Time	S Perris Metrolink Station Road Southbound			Bonnie Drive Northbound			Mapes Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris
 N/S: S Perris Metrolink Stn Rd/Bonnie Dr
 E/W: Mapes Road
 Weather: Clear

File Name : 08_PER_Metro_Map PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

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

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

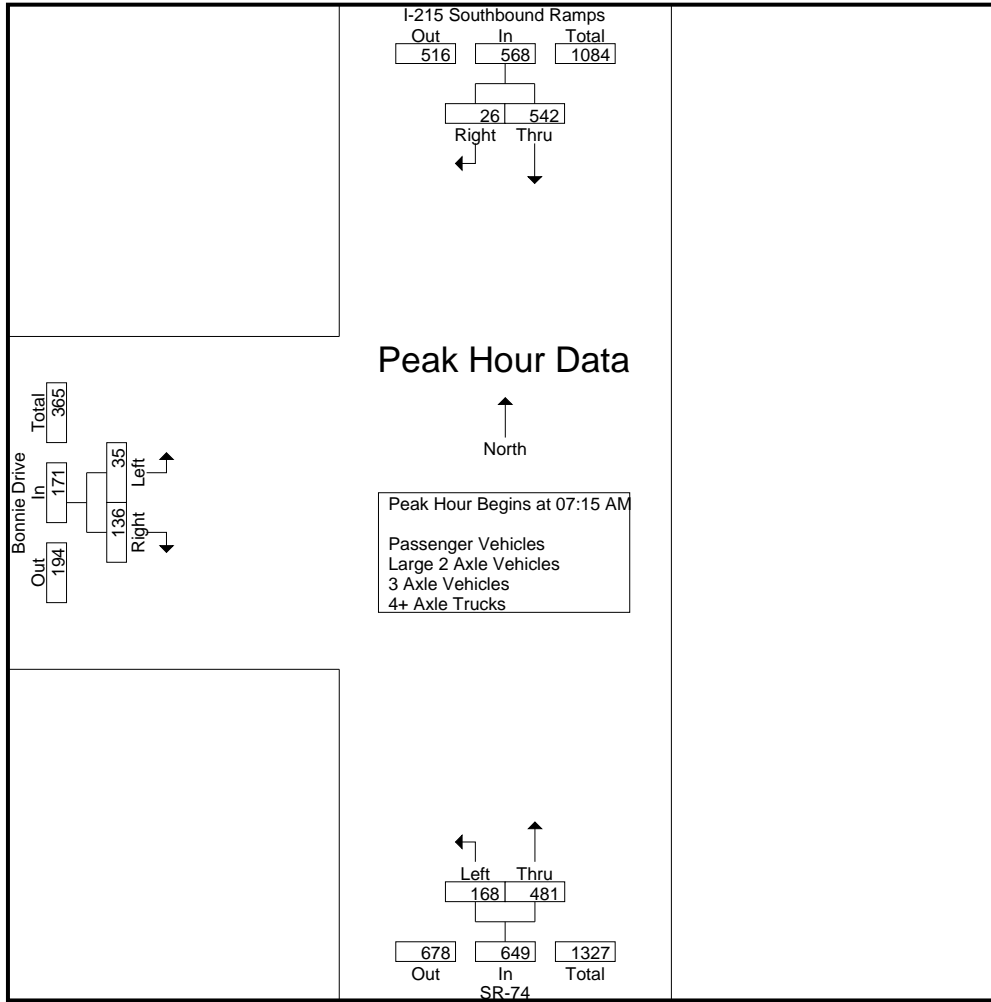
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	135	6	141	45	83	128	9	28	37	306
07:15 AM	117	6	123	45	120	165	8	26	34	322
07:30 AM	152	7	159	38	140	178	7	43	50	387
07:45 AM	139	8	147	39	123	162	11	41	52	361
Total	543	27	570	167	466	633	35	138	173	1376
08:00 AM	134	5	139	46	98	144	9	26	35	318
08:15 AM	125	12	137	48	86	134	10	35	45	316
08:30 AM	122	7	129	49	90	139	5	31	36	304
08:45 AM	118	7	125	43	72	115	7	27	34	274
Total	499	31	530	186	346	532	31	119	150	1212
Grand Total	1042	58	1100	353	812	1165	66	257	323	2588
Apprch %	94.7	5.3		30.3	69.7		20.4	79.6		
Total %	40.3	2.2	42.5	13.6	31.4	45	2.6	9.9	12.5	
Passenger Vehicles	931	52	983	334	719	1053	62	224	286	2322
% Passenger Vehicles	89.3	89.7	89.4	94.6	88.5	90.4	93.9	87.2	88.5	89.7
Large 2 Axle Vehicles	74	1	75	14	61	75	1	21	22	172
% Large 2 Axle Vehicles	7.1	1.7	6.8	4	7.5	6.4	1.5	8.2	6.8	6.6
3 Axle Vehicles	13	1	14	4	2	6	2	6	8	28
% 3 Axle Vehicles	1.2	1.7	1.3	1.1	0.2	0.5	3	2.3	2.5	1.1
4+ Axle Trucks	24	4	28	1	30	31	1	6	7	66
% 4+ Axle Trucks	2.3	6.9	2.5	0.3	3.7	2.7	1.5	2.3	2.2	2.6

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	117	6	123	45	120	165	8	26	34	322
07:30 AM	152	7	159	38	140	178	7	43	50	387
07:45 AM	139	8	147	39	123	162	11	41	52	361
08:00 AM	134	5	139	46	98	144	9	26	35	318
Total Volume	542	26	568	168	481	649	35	136	171	1388
% App. Total	95.4	4.6		25.9	74.1		20.5	79.5		
PHF	.891	.813	.893	.913	.859	.912	.795	.791	.822	.897

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



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

	07:30 AM			07:15 AM			07:30 AM		
+0 mins.	152	7	159	45	120	165	7	43	50
+15 mins.	139	8	147	38	140	178	11	41	52
+30 mins.	134	5	139	39	123	162	9	26	35
+45 mins.	125	12	137	46	98	144	10	35	45
Total Volume	550	32	582	168	481	649	37	145	182
% App. Total	94.5	5.5		25.9	74.1		20.3	79.7	
PHF	.905	.667	.915	.913	.859	.912	.841	.843	.875

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

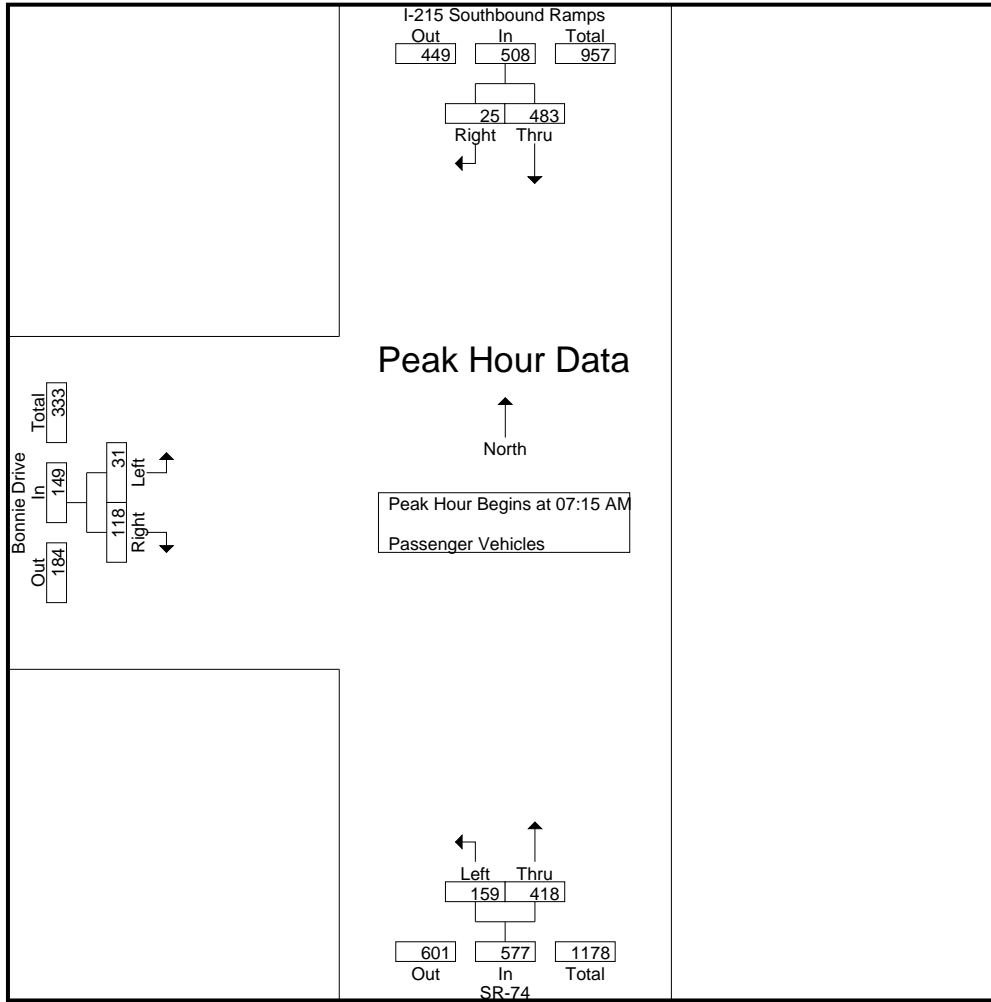
Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	117	4	121	42	68	110	9	23	32	263
07:15 AM	104	6	110	41	101	142	6	19	25	277
07:30 AM	137	6	143	36	119	155	7	37	44	342
07:45 AM	123	8	131	38	110	148	10	38	48	327
Total	481	24	505	157	398	555	32	117	149	1209
08:00 AM	119	5	124	44	88	132	8	24	32	288
08:15 AM	114	11	125	44	79	123	10	30	40	288
08:30 AM	114	6	120	46	88	134	5	28	33	287
08:45 AM	103	6	109	43	66	109	7	25	32	250
Total	450	28	478	177	321	498	30	107	137	1113
Grand Total	931	52	983	334	719	1053	62	224	286	2322
Apprch %	94.7	5.3		31.7	68.3		21.7	78.3		
Total %	40.1	2.2	42.3	14.4	31	45.3	2.7	9.6	12.3	

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:15 AM	104	6	110	41	101	142	6	19	25	277
07:30 AM	137	6	143	36	119	155	7	37	44	342
07:45 AM	123	8	131	38	110	148	10	38	48	327
08:00 AM	119	5	124	44	88	132	8	24	32	288
Total Volume	483	25	508	159	418	577	31	118	149	1234
% App. Total	95.1	4.9		27.6	72.4		20.8	79.2		
PHF	.881	.781	.888	.903	.878	.931	.775	.776	.776	.902

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	104	6	110	41	101	142	6	19	25
+15 mins.	137	6	143	36	119	155	7	37	44
+30 mins.	123	8	131	38	110	148	10	38	48
+45 mins.	119	5	124	44	88	132	8	24	32
Total Volume	483	25	508	159	418	577	31	118	149
% App. Total	95.1	4.9		27.6	72.4		20.8	79.2	
PHF	.881	.781	.888	.903	.878	.931	.775	.776	.776

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	12	0	12	1	14	15	0	4	4	31
07:15 AM	5	0	5	4	14	18	1	3	4	27
07:30 AM	9	0	9	2	12	14	0	2	2	25
07:45 AM	10	0	10	1	6	7	0	2	2	19
Total	36	0	36	8	46	54	1	11	12	102
08:00 AM	13	0	13	2	5	7	0	2	2	22
08:15 AM	7	0	7	1	5	6	0	5	5	18
08:30 AM	6	1	7	3	2	5	0	2	2	14
08:45 AM	12	0	12	0	3	3	0	1	1	16
Total	38	1	39	6	15	21	0	10	10	70
Grand Total	74	1	75	14	61	75	1	21	22	172
Apprch %	98.7	1.3		18.7	81.3		4.5	95.5		
Total %	43	0.6	43.6	8.1	35.5	43.6	0.6	12.2	12.8	

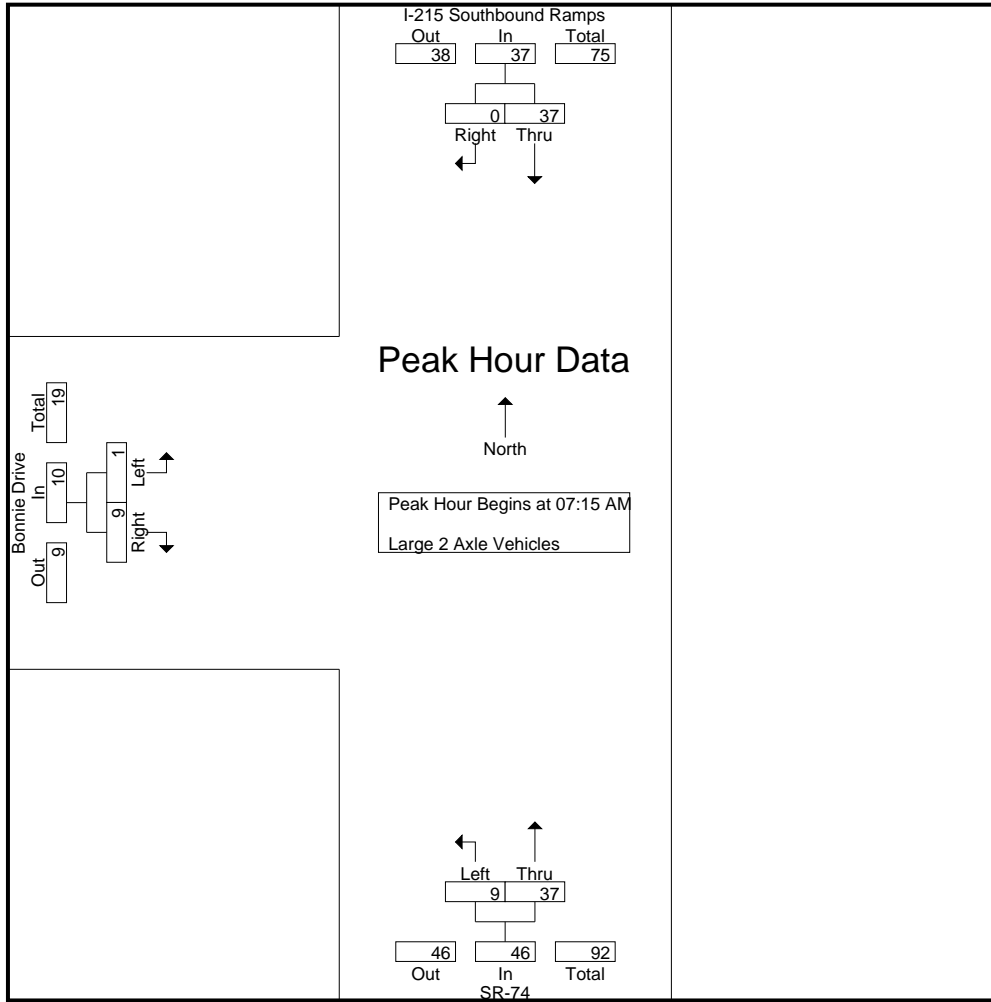
Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:15 AM	5	0	5	4	14	18	1	3	4	27
07:30 AM	9	0	9	2	12	14	0	2	2	25
07:45 AM	10	0	10	1	6	7	0	2	2	19
08:00 AM	13	0	13	2	5	7	0	2	2	22
Total Volume	37	0	37	9	37	46	1	9	10	93
% App. Total	100	0		19.6	80.4		10	90		
PHF	.712	.000	.712	.563	.661	.639	.250	.750	.625	.861

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	5	0	5	4	14	18	1	3	4
+15 mins.	9	0	9	2	12	14	0	2	2
+30 mins.	10	0	10	1	6	7	0	2	2
+45 mins.	13	0	13	2	5	7	0	2	2
Total Volume	37	0	37	9	37	46	1	9	10
% App. Total	100	0		19.6	80.4		10	90	
PHF	.712	.000	.712	.563	.661	.639	.250	.750	.625

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	2	1	3	2	0	2	0	1	1	6
07:15 AM	3	0	3	0	0	0	1	2	3	6
07:30 AM	1	0	1	0	0	0	0	1	1	2
07:45 AM	1	0	1	0	0	0	1	1	2	3
Total	7	1	8	2	0	2	2	5	7	17
08:00 AM	2	0	2	0	1	1	0	0	0	3
08:15 AM	2	0	2	2	0	2	0	0	0	4
08:30 AM	1	0	1	0	0	0	0	0	0	1
08:45 AM	1	0	1	0	1	1	0	1	1	3
Total	6	0	6	2	2	4	0	1	1	11
Grand Total	13	1	14	4	2	6	2	6	8	28
Apprch %	92.9	7.1		66.7	33.3		25	75		
Total %	46.4	3.6	50	14.3	7.1	21.4	7.1	21.4	28.6	

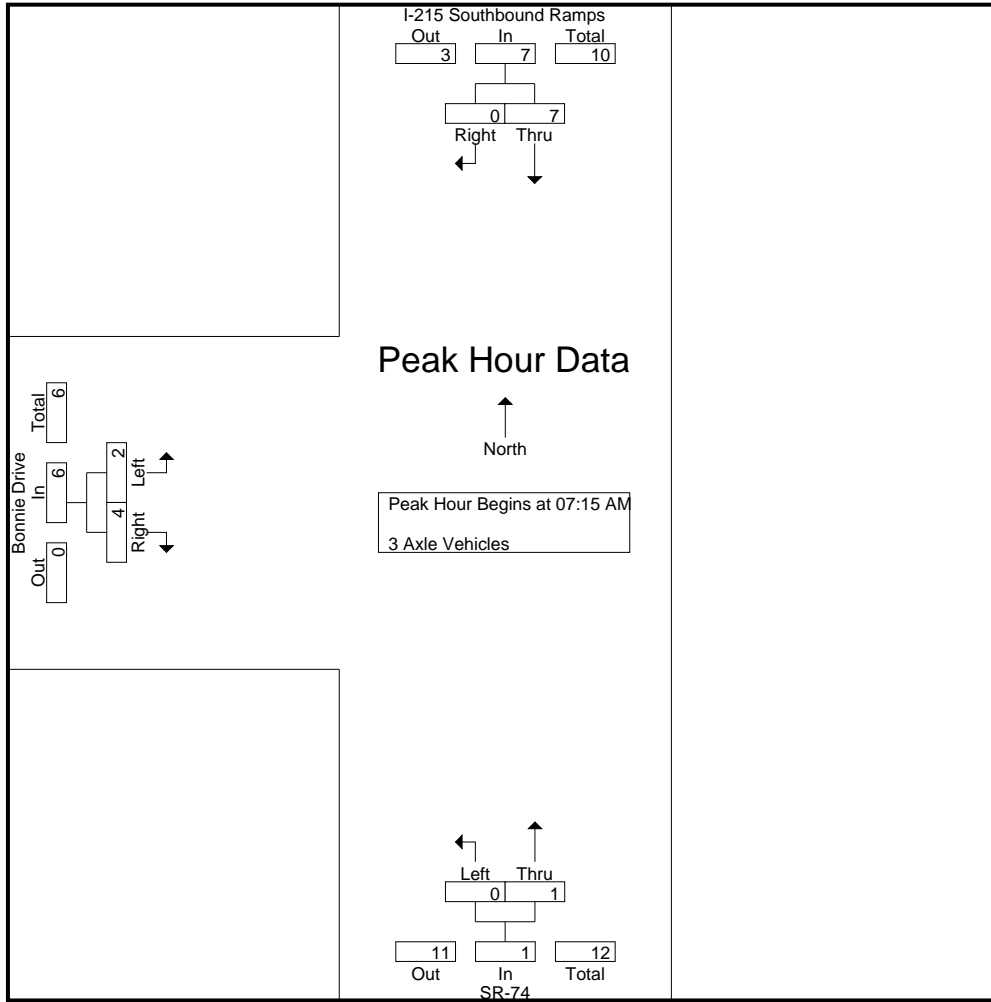
Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:15 AM	3	0	3	0	0	0	1	2	3	6
07:30 AM	1	0	1	0	0	0	0	1	1	2
07:45 AM	1	0	1	0	0	0	1	1	2	3
08:00 AM	2	0	2	0	1	1	0	0	0	3
Total Volume	7	0	7	0	1	1	2	4	6	14
% App. Total	100	0		0	100		33.3	66.7		
PHF	.583	.000	.583	.000	.250	.250	.500	.500	.500	.583

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	3	0	3	0	0	0	1	2	3
+15 mins.	1	0	1	0	0	0	0	1	1
+30 mins.	1	0	1	0	0	0	1	1	2
+45 mins.	2	0	2	0	1	1	0	0	0
Total Volume	7	0	7	0	1	1	2	4	6
% App. Total	100	0		0	100		33.3	66.7	
PHF	.583	.000	.583	.000	.250	.250	.500	.500	.500

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

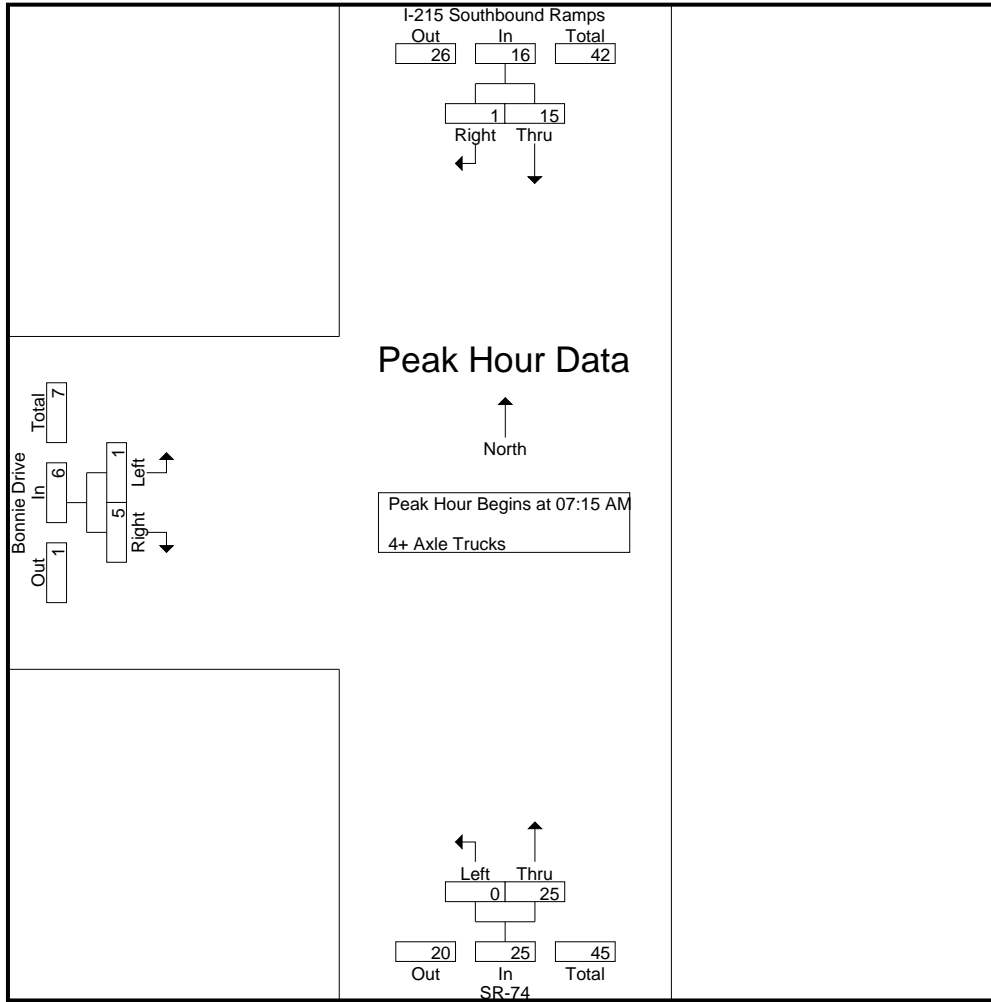
Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	4	1	5	0	1	1	0	0	0	6
07:15 AM	5	0	5	0	5	5	0	2	2	12
07:30 AM	5	1	6	0	9	9	0	3	3	18
07:45 AM	5	0	5	0	7	7	0	0	0	12
Total	19	2	21	0	22	22	0	5	5	48
08:00 AM	0	0	0	0	4	4	1	0	1	5
08:15 AM	2	1	3	1	2	3	0	0	0	6
08:30 AM	1	0	1	0	0	0	0	1	1	2
08:45 AM	2	1	3	0	2	2	0	0	0	5
Total	5	2	7	1	8	9	1	1	2	18
Grand Total	24	4	28	1	30	31	1	6	7	66
Apprch %	85.7	14.3		3.2	96.8		14.3	85.7		
Total %	36.4	6.1	42.4	1.5	45.5	47	1.5	9.1	10.6	

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:15 AM	5	0	5	0	5	5	0	2	2	12
07:30 AM	5	1	6	0	9	9	0	3	3	18
07:45 AM	5	0	5	0	7	7	0	0	0	12
08:00 AM	0	0	0	0	4	4	1	0	1	5
Total Volume	15	1	16	0	25	25	1	5	6	47
% App. Total	93.8	6.2		0	100		16.7	83.3		
PHF	.750	.250	.667	.000	.694	.694	.250	.417	.500	.653

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	5	0	5	0	5	5	0	2	2
+15 mins.	5	1	6	0	9	9	0	3	3
+30 mins.	5	0	5	0	7	7	0	0	0
+45 mins.	0	0	0	0	4	4	1	0	1
Total Volume	15	1	16	0	25	25	1	5	6
% App. Total	93.8	6.2		0	100		16.7	83.3	
PHF	.750	.250	.667	.000	.694	.694	.250	.417	.500

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

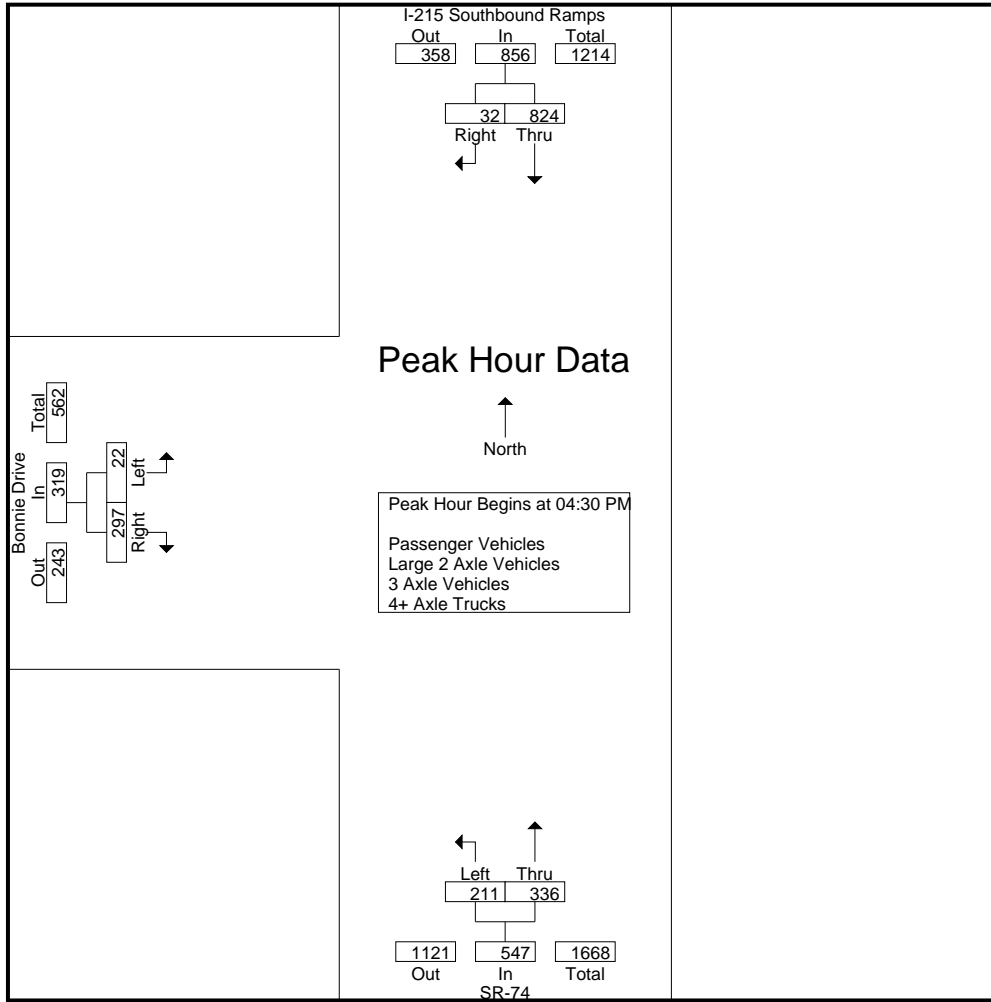
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	224	5	229	69	110	179	2	41	43	451
04:15 PM	184	5	189	51	79	130	6	63	69	388
04:30 PM	195	11	206	50	90	140	3	87	90	436
04:45 PM	222	9	231	58	92	150	6	52	58	439
Total	825	30	855	228	371	599	17	243	260	1714
05:00 PM	186	7	193	51	76	127	7	80	87	407
05:15 PM	221	5	226	52	78	130	6	78	84	440
05:30 PM	192	8	200	66	79	145	4	70	74	419
05:45 PM	217	5	222	50	65	115	6	41	47	384
Total	816	25	841	219	298	517	23	269	292	1650
Grand Total	1641	55	1696	447	669	1116	40	512	552	3364
Apprch %	96.8	3.2		40.1	59.9		7.2	92.8		
Total %	48.8	1.6	50.4	13.3	19.9	33.2	1.2	15.2	16.4	
Passenger Vehicles	1578	53	1631	416	650	1066	38	495	533	3230
% Passenger Vehicles	96.2	96.4	96.2	93.1	97.2	95.5	95	96.7	96.6	96
Large 2 Axle Vehicles	52	2	54	16	13	29	2	13	15	98
% Large 2 Axle Vehicles	3.2	3.6	3.2	3.6	1.9	2.6	5	2.5	2.7	2.9
3 Axle Vehicles	3	0	3	14	0	14	0	1	1	18
% 3 Axle Vehicles	0.2	0	0.2	3.1	0	1.3	0	0.2	0.2	0.5
4+ Axle Trucks	8	0	8	1	6	7	0	3	3	18
% 4+ Axle Trucks	0.5	0	0.5	0.2	0.9	0.6	0	0.6	0.5	0.5

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	195	11	206	50	90	140	3	87	90	436
04:45 PM	222	9	231	58	92	150	6	52	58	439
05:00 PM	186	7	193	51	76	127	7	80	87	407
05:15 PM	221	5	226	52	78	130	6	78	84	440
Total Volume	824	32	856	211	336	547	22	297	319	1722
% App. Total	96.3	3.7		38.6	61.4		6.9	93.1		
PHF	.928	.727	.926	.909	.913	.912	.786	.853	.886	.978

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



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

	04:30 PM			04:00 PM			04:30 PM		
+0 mins.	195	11	206	69	110	179	3	87	90
+15 mins.	222	9	231	51	79	130	6	52	58
+30 mins.	186	7	193	50	90	140	7	80	87
+45 mins.	221	5	226	58	92	150	6	78	84
Total Volume	824	32	856	228	371	599	22	297	319
% App. Total	96.3	3.7		38.1	61.9		6.9	93.1	
PHF	.928	.727	.926	.826	.843	.837	.786	.853	.886

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

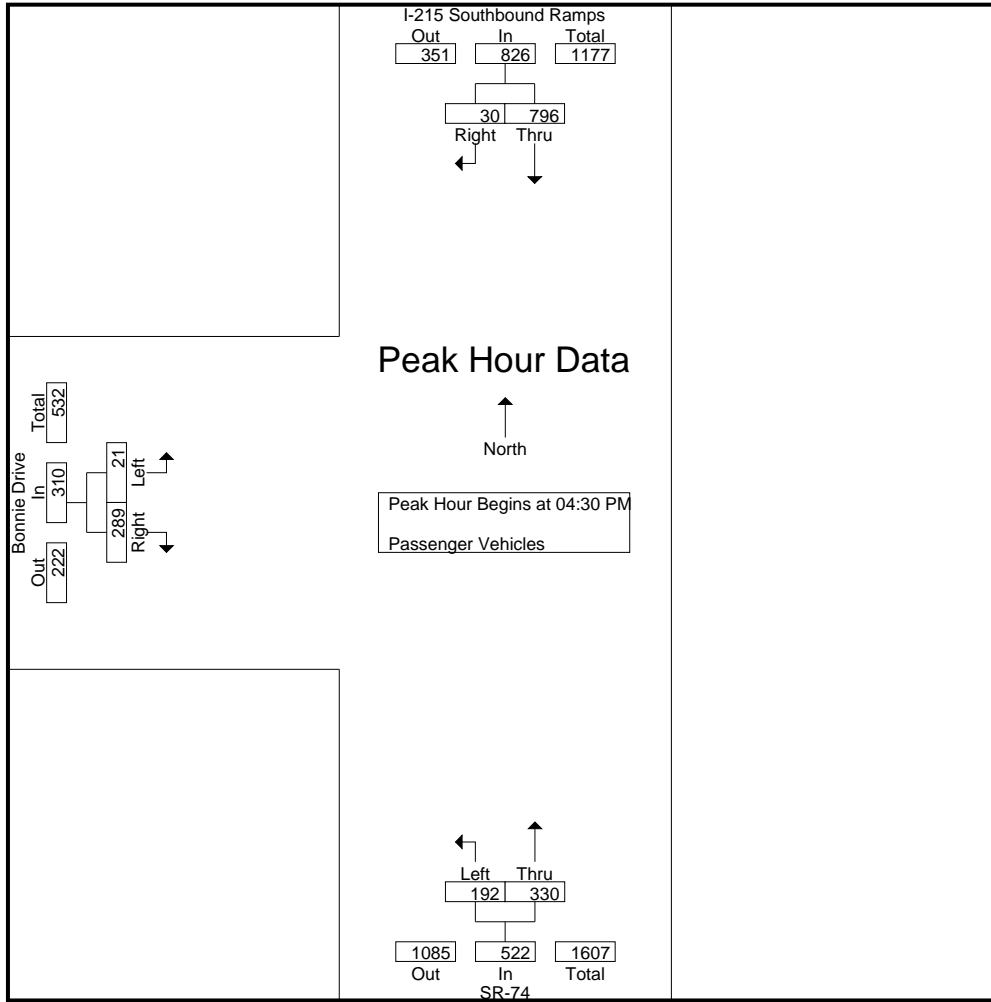
Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	215	5	220	67	109	176	2	40	42	438
04:15 PM	175	5	180	48	73	121	5	58	63	364
04:30 PM	188	9	197	48	89	137	3	86	89	423
04:45 PM	214	9	223	51	89	140	5	51	56	419
Total	792	28	820	214	360	574	15	235	250	1644
05:00 PM	181	7	188	43	75	118	7	78	85	391
05:15 PM	213	5	218	50	77	127	6	74	80	425
05:30 PM	185	8	193	61	75	136	4	68	72	401
05:45 PM	207	5	212	48	63	111	6	40	46	369
Total	786	25	811	202	290	492	23	260	283	1586
Grand Total	1578	53	1631	416	650	1066	38	495	533	3230
Apprch %	96.8	3.2		39	61		7.1	92.9		
Total %	48.9	1.6	50.5	12.9	20.1	33	1.2	15.3	16.5	

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	188	9	197	48	89	137	3	86	89	423
04:45 PM	214	9	223	51	89	140	5	51	56	419
05:00 PM	181	7	188	43	75	118	7	78	85	391
05:15 PM	213	5	218	50	77	127	6	74	80	425
Total Volume	796	30	826	192	330	522	21	289	310	1658
% App. Total	96.4	3.6		36.8	63.2		6.8	93.2		
PHF	.930	.833	.926	.941	.927	.932	.750	.840	.871	.975

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	188	9	197	48	89	137	3	86	89
+15 mins.	214	9	223	51	89	140	5	51	56
+30 mins.	181	7	188	43	75	118	7	78	85
+45 mins.	213	5	218	50	77	127	6	74	80
Total Volume	796	30	826	192	330	522	21	289	310
% App. Total	96.4	3.6		36.8	63.2		6.8	93.2	
PHF	.930	.833	.926	.941	.927	.932	.750	.840	.871

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

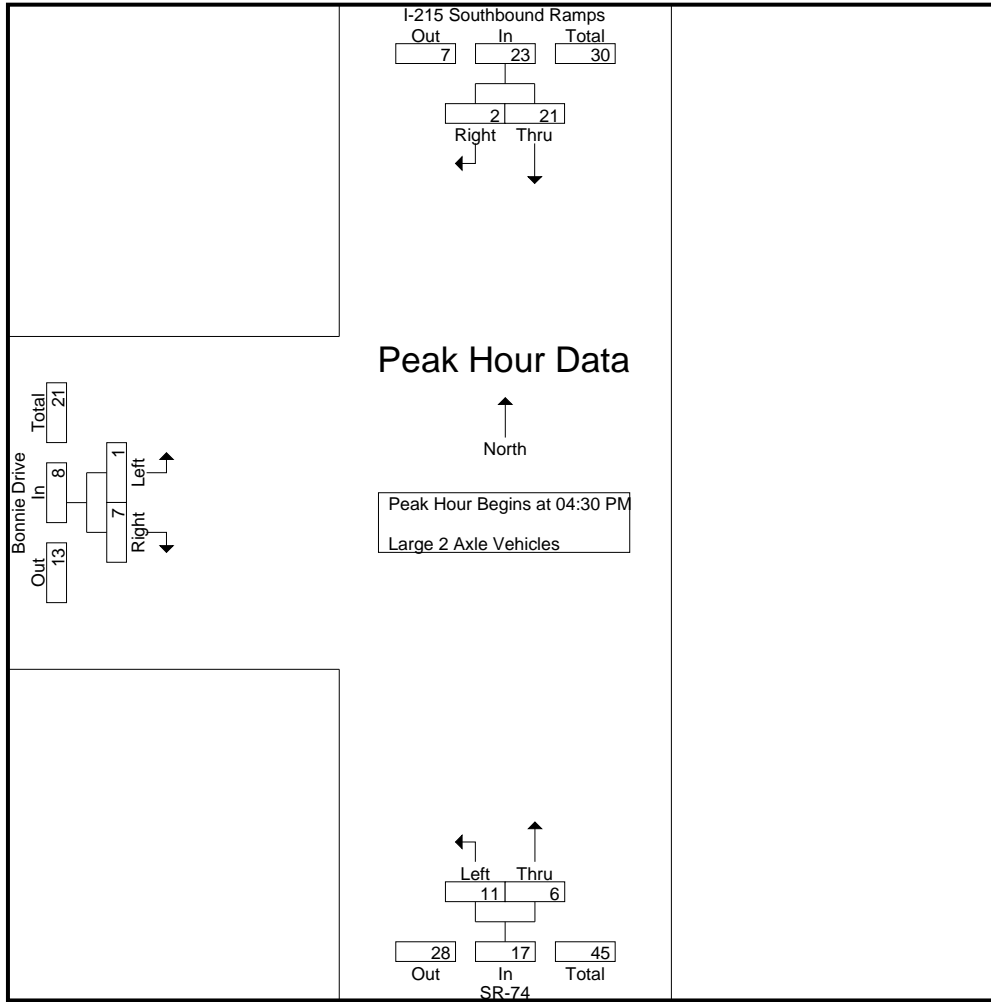
Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	9	0	9	0	1	1	0	1	1	11
04:15 PM	7	0	7	3	4	7	1	3	4	18
04:30 PM	5	2	7	2	1	3	0	1	1	11
04:45 PM	7	0	7	5	3	8	1	1	2	17
Total	28	2	30	10	9	19	2	6	8	57
05:00 PM	4	0	4	4	1	5	0	2	2	11
05:15 PM	5	0	5	0	1	1	0	3	3	9
05:30 PM	6	0	6	1	0	1	0	1	1	8
05:45 PM	9	0	9	1	2	3	0	1	1	13
Total	24	0	24	6	4	10	0	7	7	41
Grand Total	52	2	54	16	13	29	2	13	15	98
Apprch %	96.3	3.7		55.2	44.8		13.3	86.7		
Total %	53.1	2	55.1	16.3	13.3	29.6	2	13.3	15.3	

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	5	2	7	2	1	3	0	1	1	11
04:45 PM	7	0	7	5	3	8	1	1	2	17
05:00 PM	4	0	4	4	1	5	0	2	2	11
05:15 PM	5	0	5	0	1	1	0	3	3	9
Total Volume	21	2	23	11	6	17	1	7	8	48
% App. Total	91.3	8.7		64.7	35.3		12.5	87.5		
PHF	.750	.250	.821	.550	.500	.531	.250	.583	.667	.706

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	5	2	7	2	1	3	0	1	1
+15 mins.	7	0	7	5	3	8	1	1	2
+30 mins.	4	0	4	4	1	5	0	2	2
+45 mins.	5	0	5	0	1	1	0	3	3
Total Volume	21	2	23	11	6	17	1	7	8
% App. Total	91.3	8.7		64.7	35.3		12.5	87.5	
PHF	.750	.250	.821	.550	.500	.531	.250	.583	.667

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

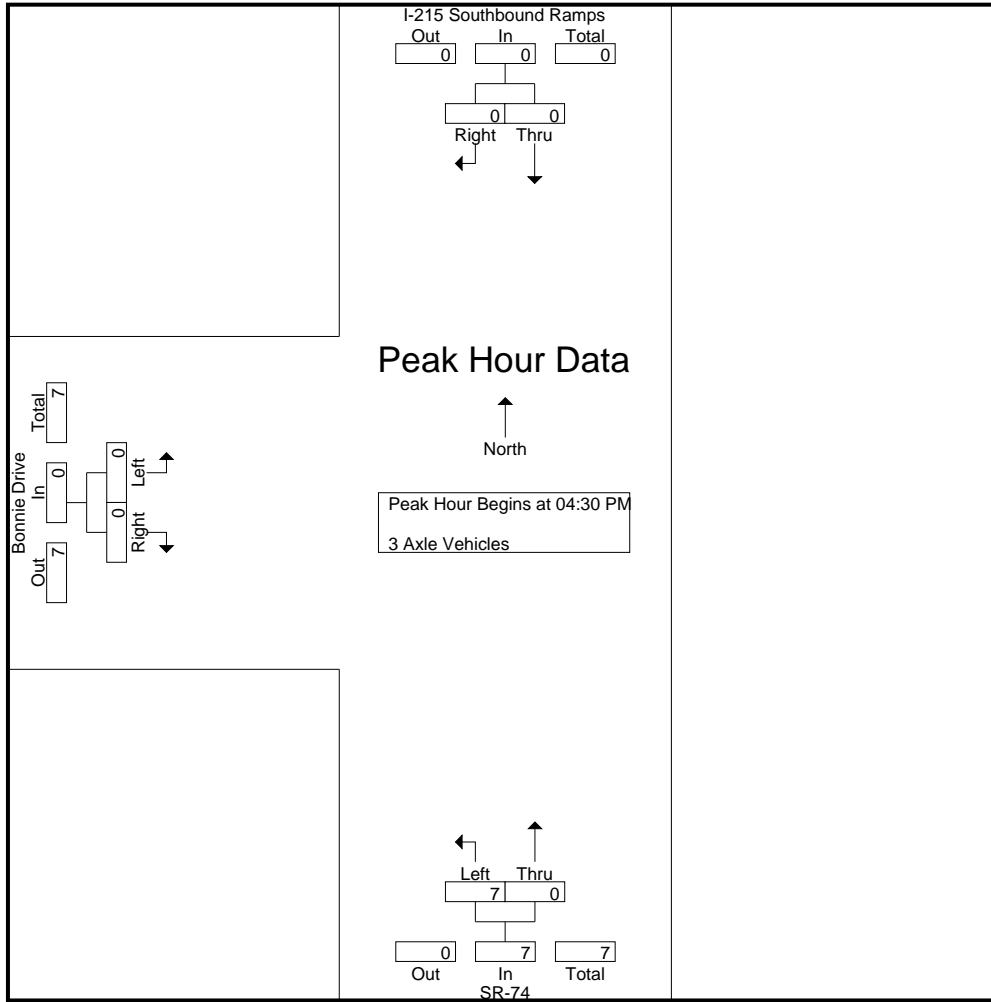
Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	2	0	2	0	0	0	2
04:15 PM	1	0	1	0	0	0	0	1	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	0	1	0	0	0	1
Total	1	0	1	3	0	3	0	1	1	5
05:00 PM	0	0	0	4	0	4	0	0	0	4
05:15 PM	0	0	0	2	0	2	0	0	0	2
05:30 PM	1	0	1	4	0	4	0	0	0	5
05:45 PM	1	0	1	1	0	1	0	0	0	2
Total	2	0	2	11	0	11	0	0	0	13
Grand Total	3	0	3	14	0	14	0	1	1	18
Apprch %	100	0		100	0		0	100		
Total %	16.7	0	16.7	77.8	0	77.8	0	5.6	5.6	

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	0	1	0	0	0	1
05:00 PM	0	0	0	4	0	4	0	0	0	4
05:15 PM	0	0	0	2	0	2	0	0	0	2
Total Volume	0	0	0	7	0	7	0	0	0	7
% App. Total	0	0		100	0		0	0		
PHF	.000	.000	.000	.438	.000	.438	.000	.000	.000	.438

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	1	0	1	0	0	0
+30 mins.	0	0	0	4	0	4	0	0	0
+45 mins.	0	0	0	2	0	2	0	0	0
Total Volume	0	0	0	7	0	7	0	0	0
% App. Total	0	0	0	100	0	0	0	0	0
PHF	.000	.000	.000	.438	.000	.438	.000	.000	.000

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	1	0	2	2	0	1	1	4
04:30 PM	2	0	2	0	0	0	0	0	0	2
04:45 PM	1	0	1	1	0	1	0	0	0	2
Total	4	0	4	1	2	3	0	1	1	8
05:00 PM	1	0	1	0	0	0	0	0	0	1
05:15 PM	3	0	3	0	0	0	0	1	1	4
05:30 PM	0	0	0	0	4	4	0	1	1	5
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	4	0	4	0	4	4	0	2	2	10
Grand Total	8	0	8	1	6	7	0	3	3	18
Apprch %	100	0		14.3	85.7		0	100		
Total %	44.4	0	44.4	5.6	33.3	38.9	0	16.7	16.7	

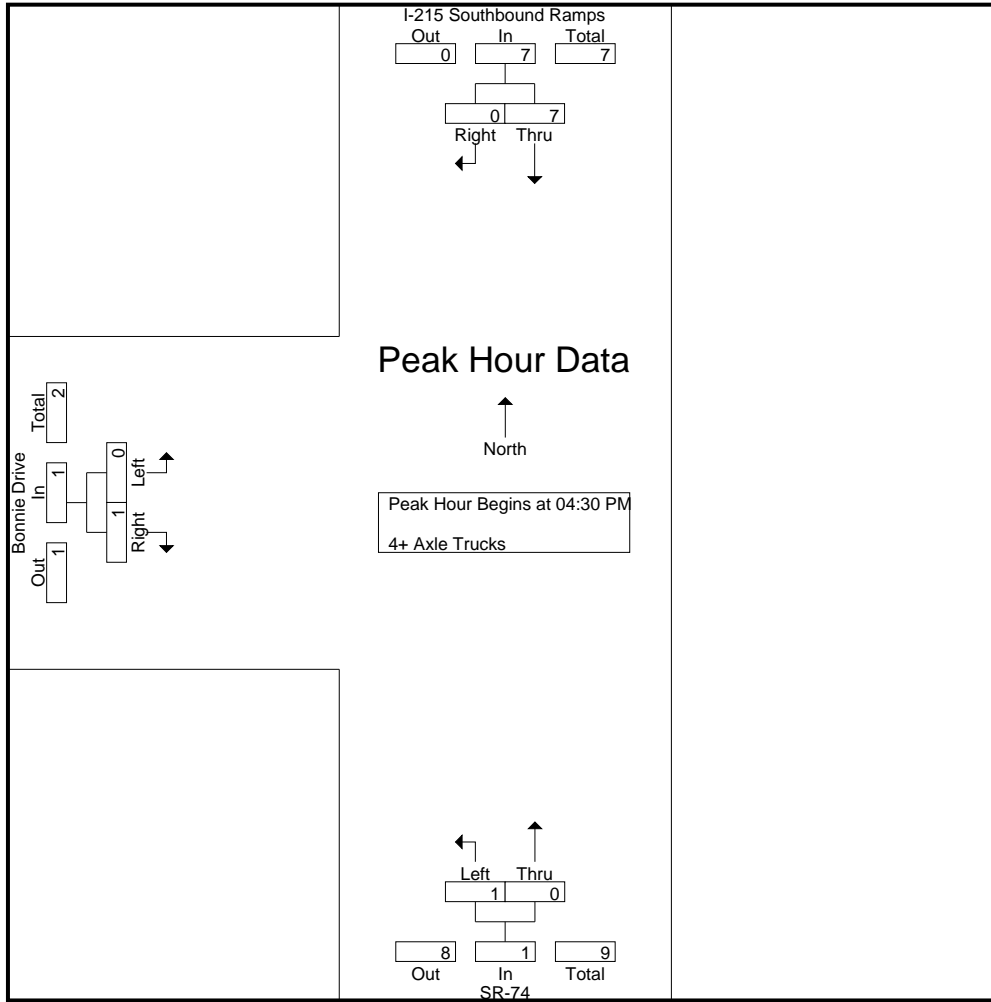
Start Time	I-215 Southbound Ramps Southbound			SR-74 Northbound			Bonnie Drive Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	2	0	2	0	0	0	0	0	0	2
04:45 PM	1	0	1	1	0	1	0	0	0	2
05:00 PM	1	0	1	0	0	0	0	0	0	1
05:15 PM	3	0	3	0	0	0	0	1	1	4
Total Volume	7	0	7	1	0	1	0	1	1	9
% App. Total	100	0		100	0		0	100		
PHF	.583	.000	.583	.250	.000	.250	.000	.250	.250	.563

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris
 N/S: I-215 Southbound Ramps/SR-74
 E/W: Bonnie Drive
 Weather: Clear

File Name : 09_PER_215S_Bon PM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	2	0	2	0	0	0	0	0	0
+15 mins.	1	0	1	1	0	1	0	0	0
+30 mins.	1	0	1	0	0	0	0	0	0
+45 mins.	3	0	3	0	0	0	0	1	1
Total Volume	7	0	7	1	0	1	0	1	1
% App. Total	100	0		100	0		0	100	
PHF	.583	.000	.583	.250	.000	.250	.000	.250	.250

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
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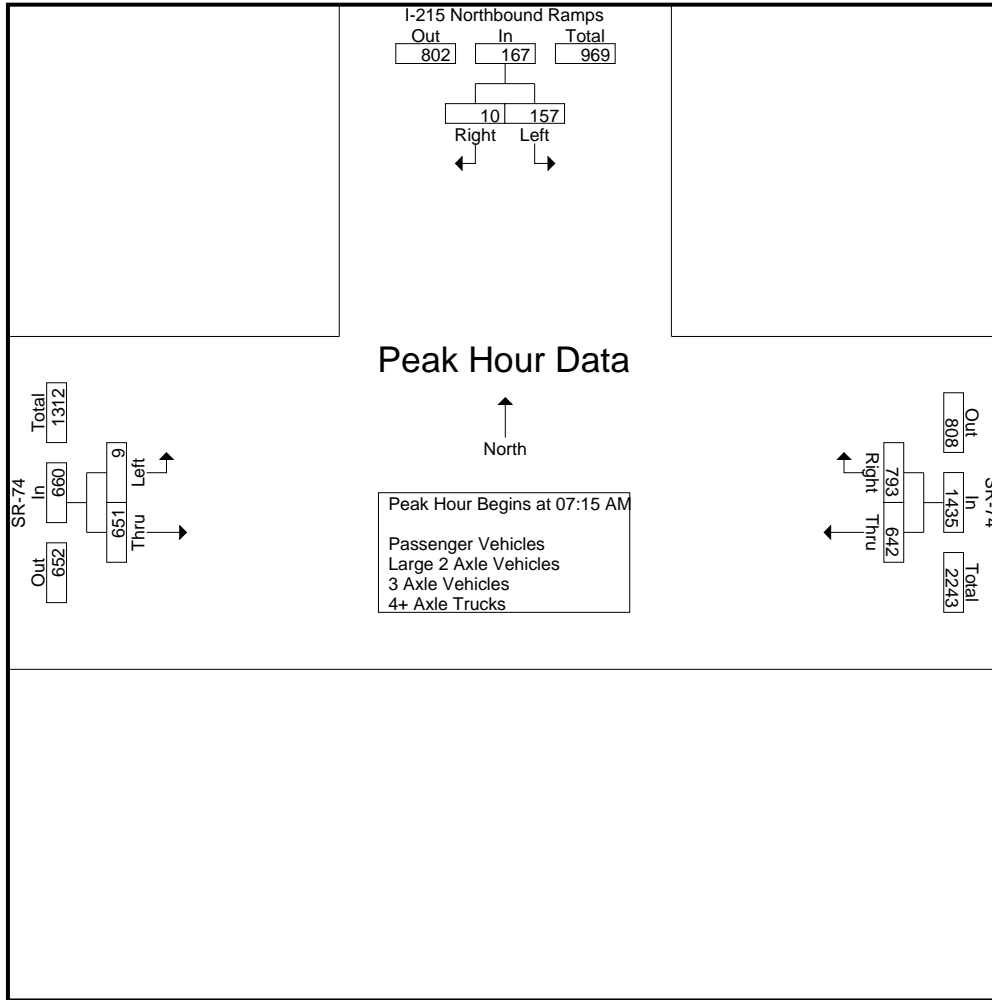
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	40	6	46	116	185	301	5	160	165	512
07:15 AM	42	2	44	163	209	372	1	137	138	554
07:30 AM	39	2	41	172	206	378	4	184	188	607
07:45 AM	43	3	46	165	181	346	4	175	179	571
Total	164	13	177	616	781	1397	14	656	670	2244
08:00 AM	33	3	36	142	197	339	0	155	155	530
08:15 AM	30	5	35	137	198	335	3	152	155	525
08:30 AM	34	0	34	134	192	326	3	134	137	497
08:45 AM	35	2	37	119	197	316	1	146	147	500
Total	132	10	142	532	784	1316	7	587	594	2052
Grand Total	296	23	319	1148	1565	2713	21	1243	1264	4296
Apprch %	92.8	7.2		42.3	57.7		1.7	98.3		
Total %	6.9	0.5	7.4	26.7	36.4	63.2	0.5	28.9	29.4	
Passenger Vehicles	276	23	299	1018	1444	2462	19	1083	1102	3863
% Passenger Vehicles	93.2	100	93.7	88.7	92.3	90.7	90.5	87.1	87.2	89.9
Large 2 Axle Vehicles	13	0	13	120	83	203	1	113	114	330
% Large 2 Axle Vehicles	4.4	0	4.1	10.5	5.3	7.5	4.8	9.1	9	7.7
3 Axle Vehicles	2	0	2	4	13	17	0	21	21	40
% 3 Axle Vehicles	0.7	0	0.6	0.3	0.8	0.6	0	1.7	1.7	0.9
4+ Axle Trucks	5	0	5	6	25	31	1	26	27	63
% 4+ Axle Trucks	1.7	0	1.6	0.5	1.6	1.1	4.8	2.1	2.1	1.5

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	42	2	44	163	209	372	1	137	138	554
07:30 AM	39	2	41	172	206	378	4	184	188	607
07:45 AM	43	3	46	165	181	346	4	175	179	571
08:00 AM	33	3	36	142	197	339	0	155	155	530
Total Volume	157	10	167	642	793	1435	9	651	660	2262
% App. Total	94	6		44.7	55.3		1.4	98.6		
PHF	.913	.833	.908	.933	.949	.949	.563	.885	.878	.932

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



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

	07:00 AM			07:15 AM			07:30 AM		
+0 mins.	40	6	46	163	209	372	4	184	188
+15 mins.	42	2	44	172	206	378	4	175	179
+30 mins.	39	2	41	165	181	346	0	155	155
+45 mins.	43	3	46	142	197	339	3	152	155
Total Volume	164	13	177	642	793	1435	11	666	677
% App. Total	92.7	7.3		44.7	55.3		1.6	98.4	
PHF	.953	.542	.962	.933	.949	.949	.688	.905	.900

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	38	6	44	98	174	272	4	131	135	451
07:15 AM	41	2	43	133	190	323	1	117	118	484
07:30 AM	37	2	39	149	194	343	4	162	166	548
07:45 AM	40	3	43	149	169	318	4	157	161	522
Total	156	13	169	529	727	1256	13	567	580	2005
08:00 AM	28	3	31	129	181	310	0	130	130	471
08:15 AM	28	5	33	124	184	308	2	134	136	477
08:30 AM	33	0	33	127	171	298	3	123	126	457
08:45 AM	31	2	33	109	181	290	1	129	130	453
Total	120	10	130	489	717	1206	6	516	522	1858
Grand Total	276	23	299	1018	1444	2462	19	1083	1102	3863
Apprch %	92.3	7.7		41.3	58.7		1.7	98.3		
Total %	7.1	0.6	7.7	26.4	37.4	63.7	0.5	28	28.5	

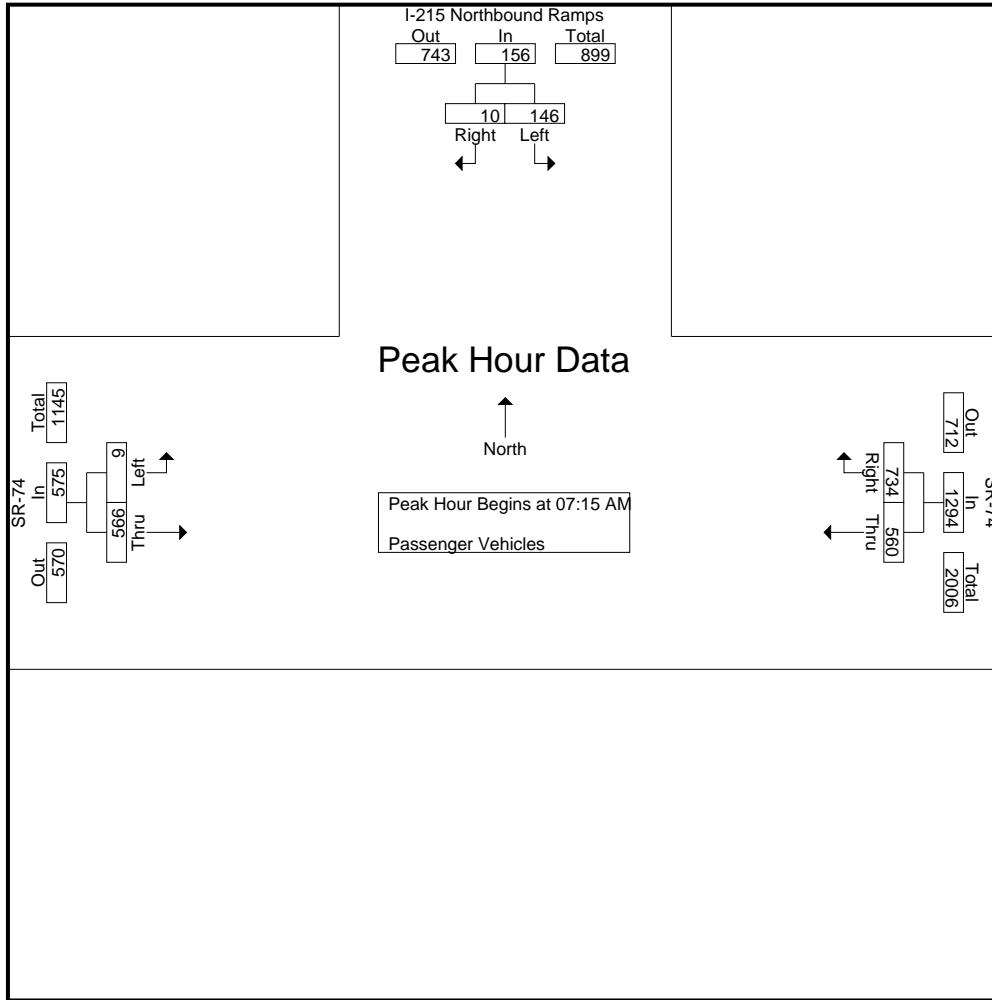
Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:15 AM	41	2	43	133	190	323	1	117	118	484
07:30 AM	37	2	39	149	194	343	4	162	166	548
07:45 AM	40	3	43	149	169	318	4	157	161	522
08:00 AM	28	3	31	129	181	310	0	130	130	471
Total Volume	146	10	156	560	734	1294	9	566	575	2025
% App. Total	93.6	6.4		43.3	56.7		1.6	98.4		
PHF	.890	.833	.907	.940	.946	.943	.563	.873	.866	.924

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	41	2	43	133	190	323	1	117	118
+15 mins.	37	2	39	149	194	343	4	162	166
+30 mins.	40	3	43	149	169	318	4	157	161
+45 mins.	28	3	31	129	181	310	0	130	130
Total Volume	146	10	156	560	734	1294	9	566	575
% App. Total	93.6	6.4		43.3	56.7		1.6	98.4	
PHF	.890	.833	.907	.940	.946	.943	.563	.873	.866

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	2	0	2	18	7	25	0	25	25	52
07:15 AM	1	0	1	28	11	39	0	10	10	50
07:30 AM	1	0	1	23	12	35	0	15	15	51
07:45 AM	2	0	2	16	7	23	0	13	13	38
Total	6	0	6	85	37	122	0	63	63	191
08:00 AM	3	0	3	12	12	24	0	16	16	43
08:15 AM	2	0	2	9	6	15	1	13	14	31
08:30 AM	0	0	0	7	13	20	0	8	8	28
08:45 AM	2	0	2	7	15	22	0	13	13	37
Total	7	0	7	35	46	81	1	50	51	139
Grand Total	13	0	13	120	83	203	1	113	114	330
Apprch %	100	0		59.1	40.9		0.9	99.1		
Total %	3.9	0	3.9	36.4	25.2	61.5	0.3	34.2	34.5	

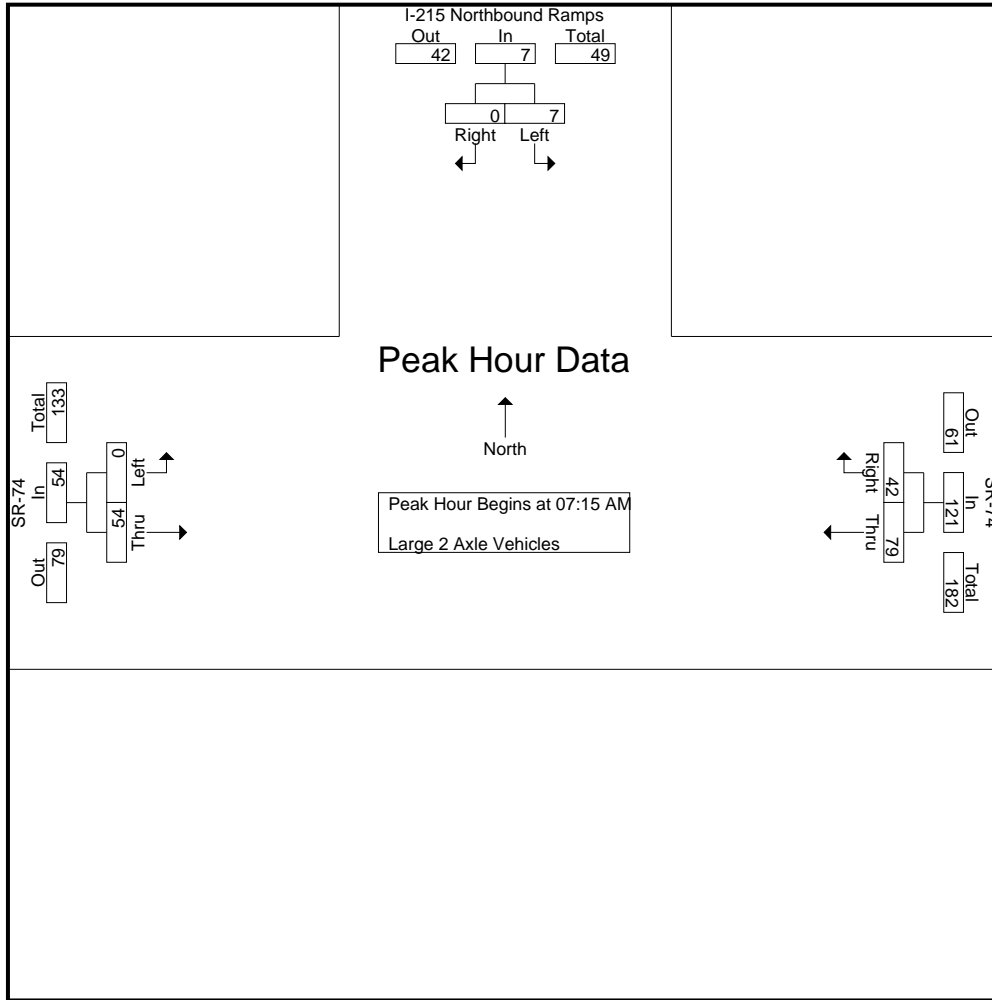
Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:15 AM	1	0	1	28	11	39	0	10	10	50
07:30 AM	1	0	1	23	12	35	0	15	15	51
07:45 AM	2	0	2	16	7	23	0	13	13	38
08:00 AM	3	0	3	12	12	24	0	16	16	43
Total Volume	7	0	7	79	42	121	0	54	54	182
% App. Total	100	0		65.3	34.7		0	100		
PHF	.583	.000	.583	.705	.875	.776	.000	.844	.844	.892

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	1	0	1	28	11	39	0	10	10
+15 mins.	1	0	1	23	12	35	0	15	15
+30 mins.	2	0	2	16	7	23	0	13	13
+45 mins.	3	0	3	12	12	24	0	16	16
Total Volume	7	0	7	79	42	121	0	54	54
% App. Total	100	0		65.3	34.7		0	100	
PHF	.583	.000	.583	.705	.875	.776	.000	.844	.844

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	0	2	2	0	3	3	5
07:15 AM	0	0	0	0	2	2	0	5	5	7
07:30 AM	0	0	0	0	0	0	0	2	2	2
07:45 AM	0	0	0	0	2	2	0	2	2	4
Total	0	0	0	0	6	6	0	12	12	18
08:00 AM	1	0	1	1	1	2	0	4	4	7
08:15 AM	0	0	0	2	3	5	0	2	2	7
08:30 AM	0	0	0	0	3	3	0	1	1	4
08:45 AM	1	0	1	1	0	1	0	2	2	4
Total	2	0	2	4	7	11	0	9	9	22
Grand Total	2	0	2	4	13	17	0	21	21	40
Apprch %	100	0		23.5	76.5		0	100		
Total %	5	0	5	10	32.5	42.5	0	52.5	52.5	

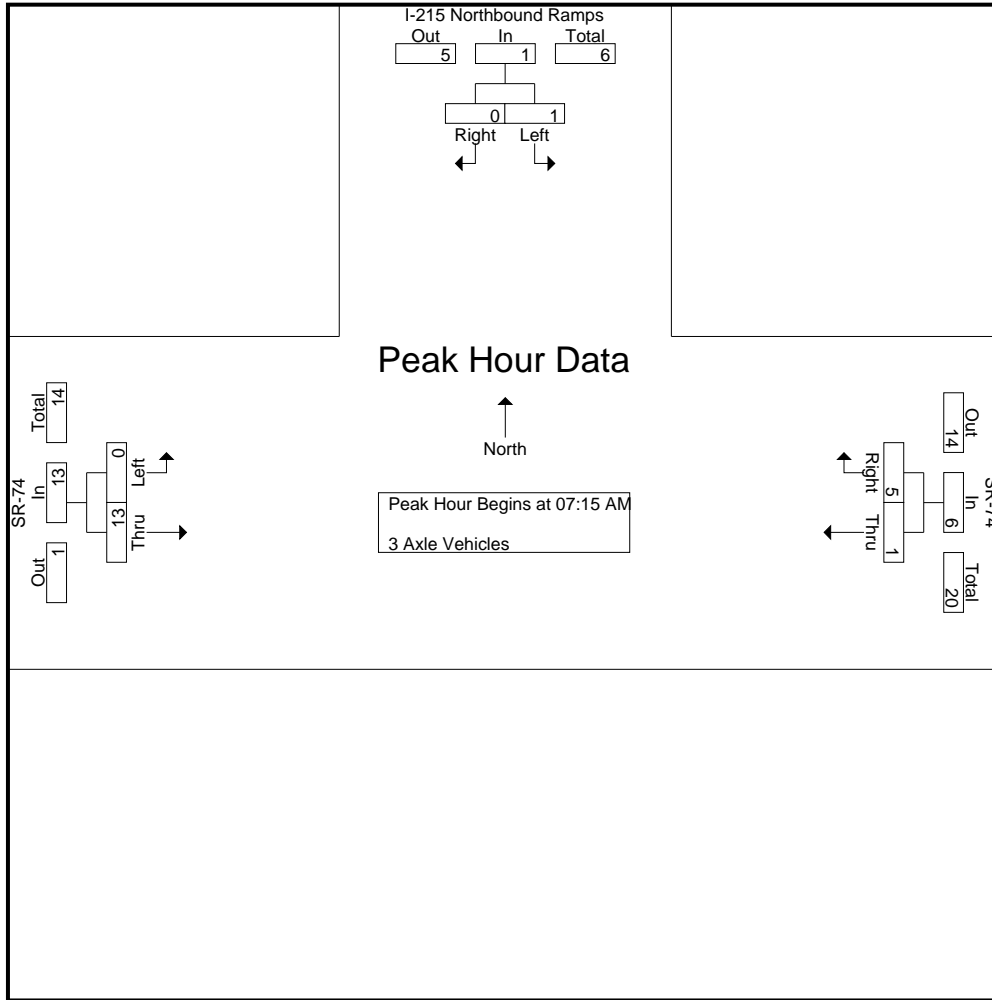
Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:15 AM	0	0	0	0	2	2	0	5	5	7
07:30 AM	0	0	0	0	0	0	0	2	2	2
07:45 AM	0	0	0	0	2	2	0	2	2	4
08:00 AM	1	0	1	1	1	2	0	4	4	7
Total Volume	1	0	1	1	5	6	0	13	13	20
% App. Total	100	0		16.7	83.3		0	100		
PHF	.250	.000	.250	.250	.625	.750	.000	.650	.650	.714

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	2	2	0	5	5
+15 mins.	0	0	0	0	0	0	0	2	2
+30 mins.	0	0	0	0	2	2	0	2	2
+45 mins.	1	0	1	1	1	2	0	4	4
Total Volume	1	0	1	1	5	6	0	13	13
% App. Total	100	0		16.7	83.3		0	100	
PHF	.250	.000	.250	.250	.625	.750	.000	.650	.650

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	0	2	2	1	1	2	4
07:15 AM	0	0	0	2	6	8	0	5	5	13
07:30 AM	1	0	1	0	0	0	0	5	5	6
07:45 AM	1	0	1	0	3	3	0	3	3	7
Total	2	0	2	2	11	13	1	14	15	30
08:00 AM	1	0	1	0	3	3	0	5	5	9
08:15 AM	0	0	0	2	5	7	0	3	3	10
08:30 AM	1	0	1	0	5	5	0	2	2	8
08:45 AM	1	0	1	2	1	3	0	2	2	6
Total	3	0	3	4	14	18	0	12	12	33
Grand Total	5	0	5	6	25	31	1	26	27	63
Apprch %	100	0		19.4	80.6		3.7	96.3		
Total %	7.9	0	7.9	9.5	39.7	49.2	1.6	41.3	42.9	

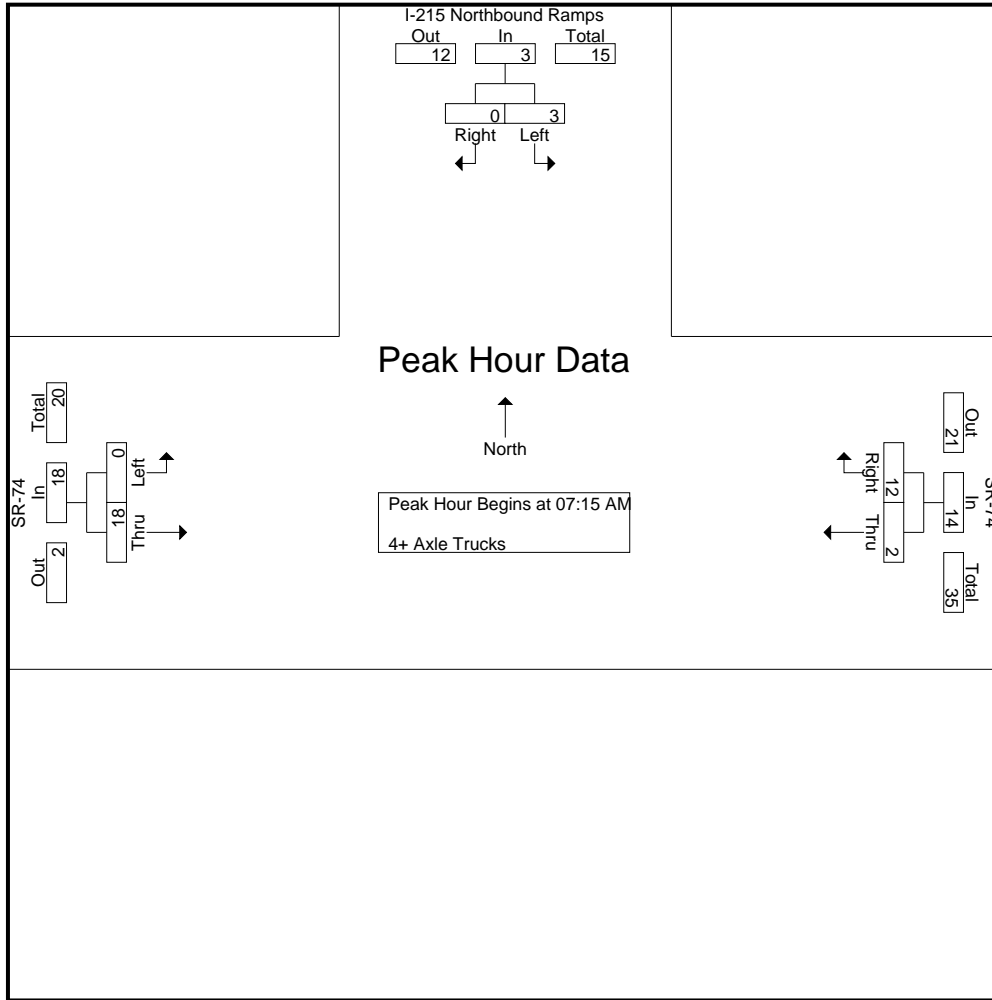
Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:15 AM	0	0	0	2	6	8	0	5	5	13
07:30 AM	1	0	1	0	0	0	0	5	5	6
07:45 AM	1	0	1	0	3	3	0	3	3	7
08:00 AM	1	0	1	0	3	3	0	5	5	9
Total Volume	3	0	3	2	12	14	0	18	18	35
% App. Total	100	0		14.3	85.7		0	100		
PHF	.750	.000	.750	.250	.500	.438	.000	.900	.900	.673

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 AM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	2	6	8	0	5	5
+15 mins.	1	0	1	0	0	0	0	5	5
+30 mins.	1	0	1	0	3	3	0	3	3
+45 mins.	1	0	1	0	3	3	0	5	5
Total Volume	3	0	3	2	12	14	0	18	18
% App. Total	100	0		14.3	85.7		0	100	
PHF	.750	.000	.750	.250	.500	.438	.000	.900	.900

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

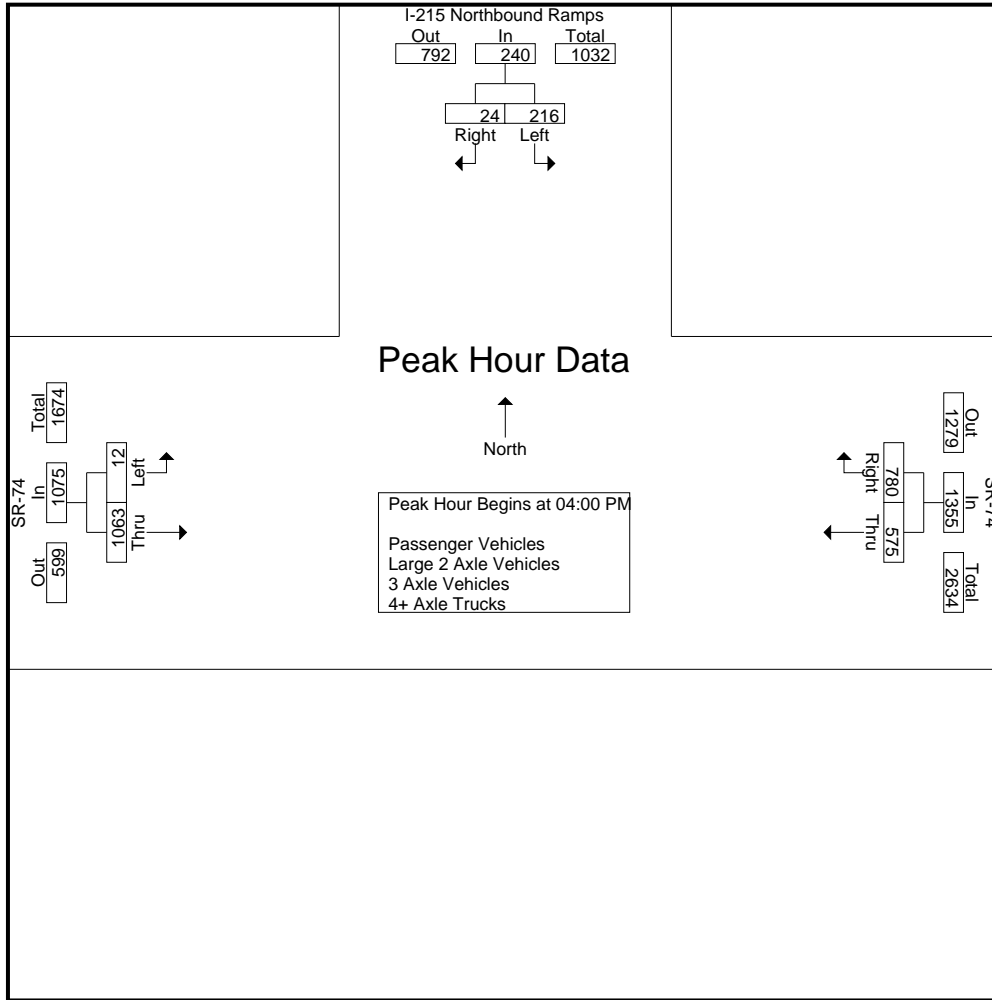
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	58	8	66	161	201	362	2	283	285	713
04:15 PM	52	8	60	124	201	325	3	236	239	624
04:30 PM	47	3	50	149	216	365	4	272	276	691
04:45 PM	59	5	64	141	162	303	3	272	275	642
Total	216	24	240	575	780	1355	12	1063	1075	2670
05:00 PM	49	11	60	113	184	297	2	261	263	620
05:15 PM	55	13	68	130	160	290	5	281	286	644
05:30 PM	64	11	75	128	191	319	6	251	257	651
05:45 PM	57	11	68	107	144	251	3	263	266	585
Total	225	46	271	478	679	1157	16	1056	1072	2500
Grand Total	441	70	511	1053	1459	2512	28	2119	2147	5170
Apprch %	86.3	13.7		41.9	58.1		1.3	98.7		
Total %	8.5	1.4	9.9	20.4	28.2	48.6	0.5	41	41.5	
Passenger Vehicles	391	65	456	996	1359	2355	26	2019	2045	4856
% Passenger Vehicles	88.7	92.9	89.2	94.6	93.1	93.8	92.9	95.3	95.2	93.9
Large 2 Axle Vehicles	45	3	48	38	58	96	1	83	84	228
% Large 2 Axle Vehicles	10.2	4.3	9.4	3.6	4	3.8	3.6	3.9	3.9	4.4
3 Axle Vehicles	4	2	6	13	21	34	1	7	8	48
% 3 Axle Vehicles	0.9	2.9	1.2	1.2	1.4	1.4	3.6	0.3	0.4	0.9
4+ Axle Trucks	1	0	1	6	21	27	0	10	10	38
% 4+ Axle Trucks	0.2	0	0.2	0.6	1.4	1.1	0	0.5	0.5	0.7

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	58	8	66	161	201	362	2	283	285	713
04:15 PM	52	8	60	124	201	325	3	236	239	624
04:30 PM	47	3	50	149	216	365	4	272	276	691
04:45 PM	59	5	64	141	162	303	3	272	275	642
Total Volume	216	24	240	575	780	1355	12	1063	1075	2670
% App. Total	90	10		42.4	57.6		1.1	98.9		
PHF	.915	.750	.909	.893	.903	.928	.750	.939	.943	.936

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 2



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

	05:00 PM			04:00 PM			04:30 PM		
+0 mins.	49	11	60	161	201	362	4	272	276
+15 mins.	55	13	68	124	201	325	3	272	275
+30 mins.	64	11	75	149	216	365	2	261	263
+45 mins.	57	11	68	141	162	303	5	281	286
Total Volume	225	46	271	575	780	1355	14	1086	1100
% App. Total	83	17		42.4	57.6		1.3	98.7	
PHF	.879	.885	.903	.893	.903	.928	.700	.966	.962

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Passenger Vehicles

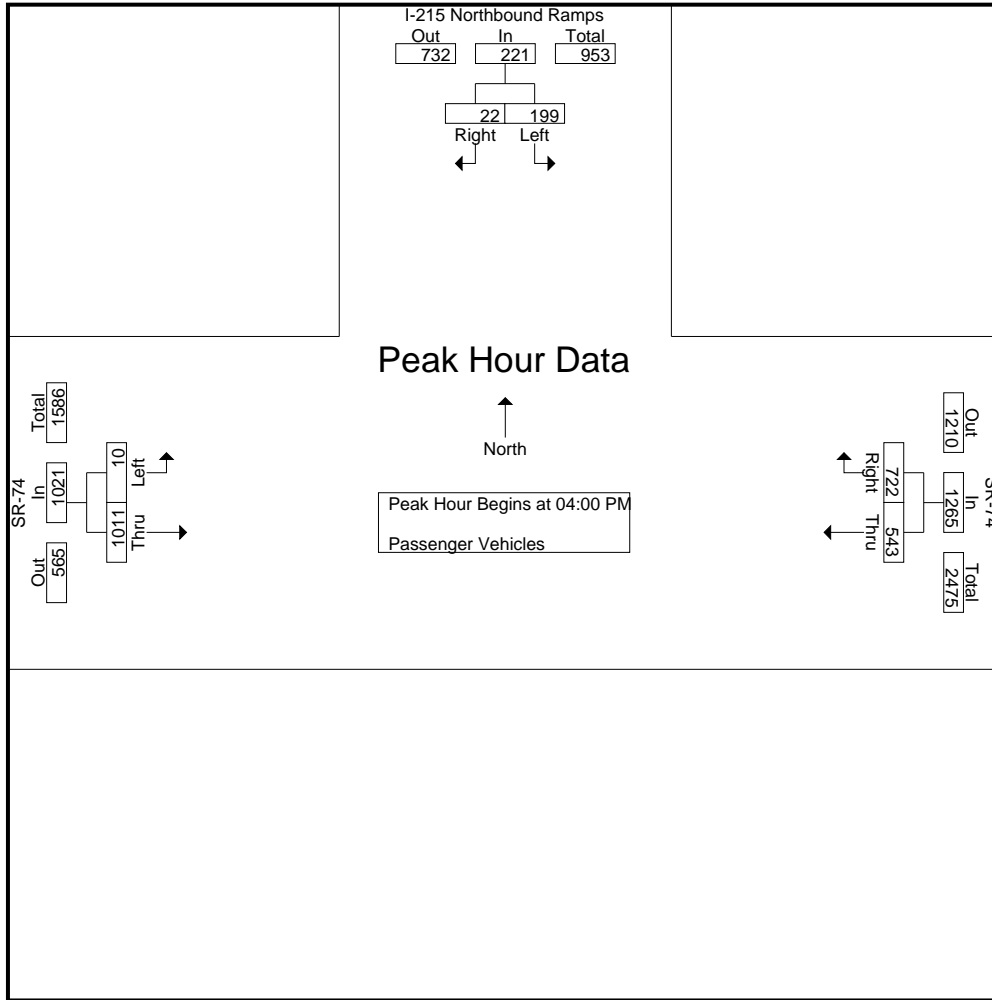
Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	56	7	63	157	185	342	2	268	270	675
04:15 PM	44	8	52	114	185	299	2	219	221	572
04:30 PM	45	3	48	143	196	339	4	262	266	653
04:45 PM	54	4	58	129	156	285	2	262	264	607
Total	199	22	221	543	722	1265	10	1011	1021	2507
05:00 PM	45	10	55	106	175	281	2	251	253	589
05:15 PM	45	13	58	126	152	278	5	269	274	610
05:30 PM	56	10	66	119	175	294	6	240	246	606
05:45 PM	46	10	56	102	135	237	3	248	251	544
Total	192	43	235	453	637	1090	16	1008	1024	2349
Grand Total	391	65	456	996	1359	2355	26	2019	2045	4856
Apprch %	85.7	14.3		42.3	57.7		1.3	98.7		
Total %	8.1	1.3	9.4	20.5	28	48.5	0.5	41.6	42.1	

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	56	7	63	157	185	342	2	268	270	675
04:15 PM	44	8	52	114	185	299	2	219	221	572
04:30 PM	45	3	48	143	196	339	4	262	266	653
04:45 PM	54	4	58	129	156	285	2	262	264	607
Total Volume	199	22	221	543	722	1265	10	1011	1021	2507
% App. Total	90	10		42.9	57.1		1	99		
PHF	.888	.688	.877	.865	.921	.925	.625	.943	.945	.929

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

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 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		
+0 mins.	56	7	63	157	185	342	2	268	270
+15 mins.	44	8	52	114	185	299	2	219	221
+30 mins.	45	3	48	143	196	339	4	262	266
+45 mins.	54	4	58	129	156	285	2	262	264
Total Volume	199	22	221	543	722	1265	10	1011	1021
% App. Total	90	10		42.9	57.1		1	99	
PHF	.888	.688	.877	.865	.921	.925	.625	.943	.945

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

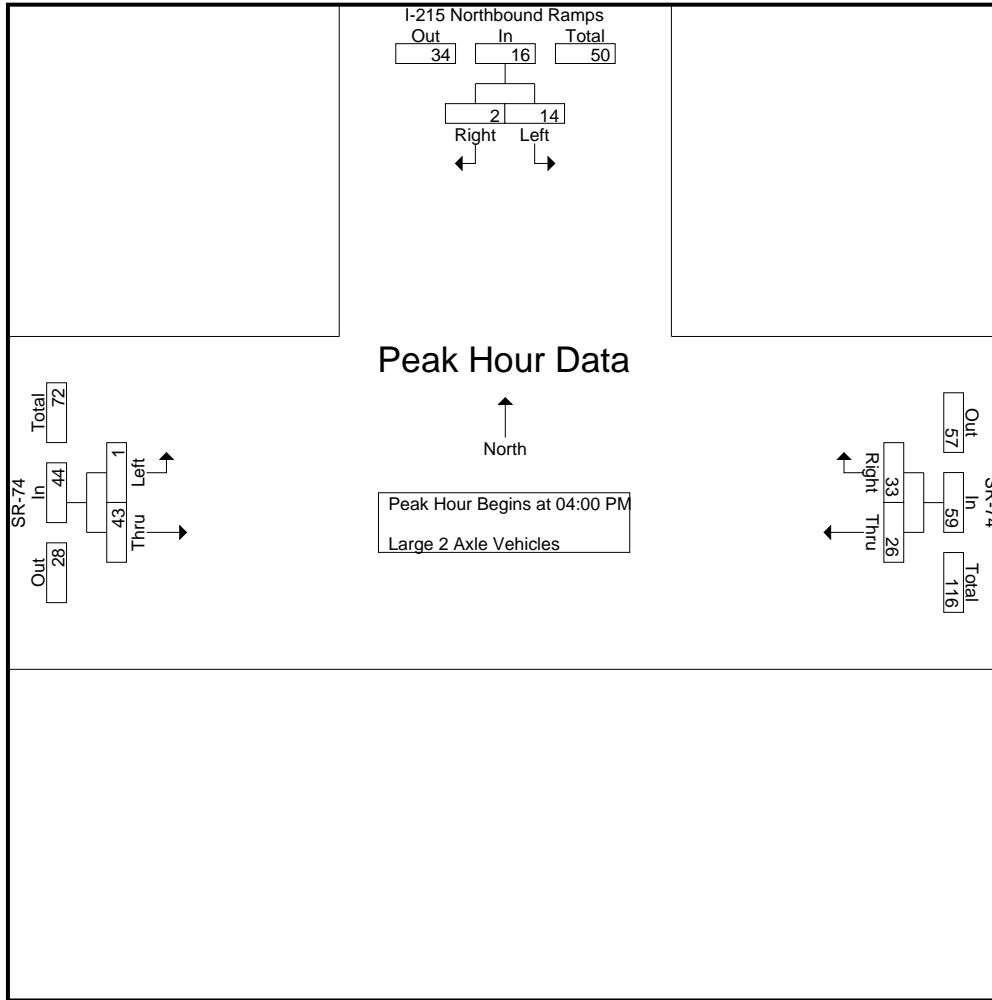
Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	2	1	3	2	13	15	0	15	15	33
04:15 PM	6	0	6	8	7	15	0	11	11	32
04:30 PM	2	0	2	6	8	14	0	8	8	24
04:45 PM	4	1	5	10	5	15	1	9	10	30
Total	14	2	16	26	33	59	1	43	44	119
05:00 PM	4	0	4	5	7	12	0	9	9	25
05:15 PM	10	0	10	2	5	7	0	9	9	26
05:30 PM	7	0	7	2	11	13	0	10	10	30
05:45 PM	10	1	11	3	2	5	0	12	12	28
Total	31	1	32	12	25	37	0	40	40	109
Grand Total	45	3	48	38	58	96	1	83	84	228
Apprch %	93.8	6.2		39.6	60.4		1.2	98.8		
Total %	19.7	1.3	21.1	16.7	25.4	42.1	0.4	36.4	36.8	

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	2	1	3	2	13	15	0	15	15	33
04:15 PM	6	0	6	8	7	15	0	11	11	32
04:30 PM	2	0	2	6	8	14	0	8	8	24
04:45 PM	4	1	5	10	5	15	1	9	10	30
Total Volume	14	2	16	26	33	59	1	43	44	119
% App. Total	87.5	12.5		44.1	55.9		2.3	97.7		
PHF	.583	.500	.667	.650	.635	.983	.250	.717	.733	.902

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

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 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		
+0 mins.	2	1	3	2	13	15	0	15	15
+15 mins.	6	0	6	8	7	15	0	11	11
+30 mins.	2	0	2	6	8	14	0	8	8
+45 mins.	4	1	5	10	5	15	1	9	10
Total Volume	14	2	16	26	33	59	1	43	44
% App. Total	87.5	12.5		44.1	55.9		2.3	97.7	
PHF	.583	.500	.667	.650	.635	.983	.250	.717	.733

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 3 Axle Vehicles

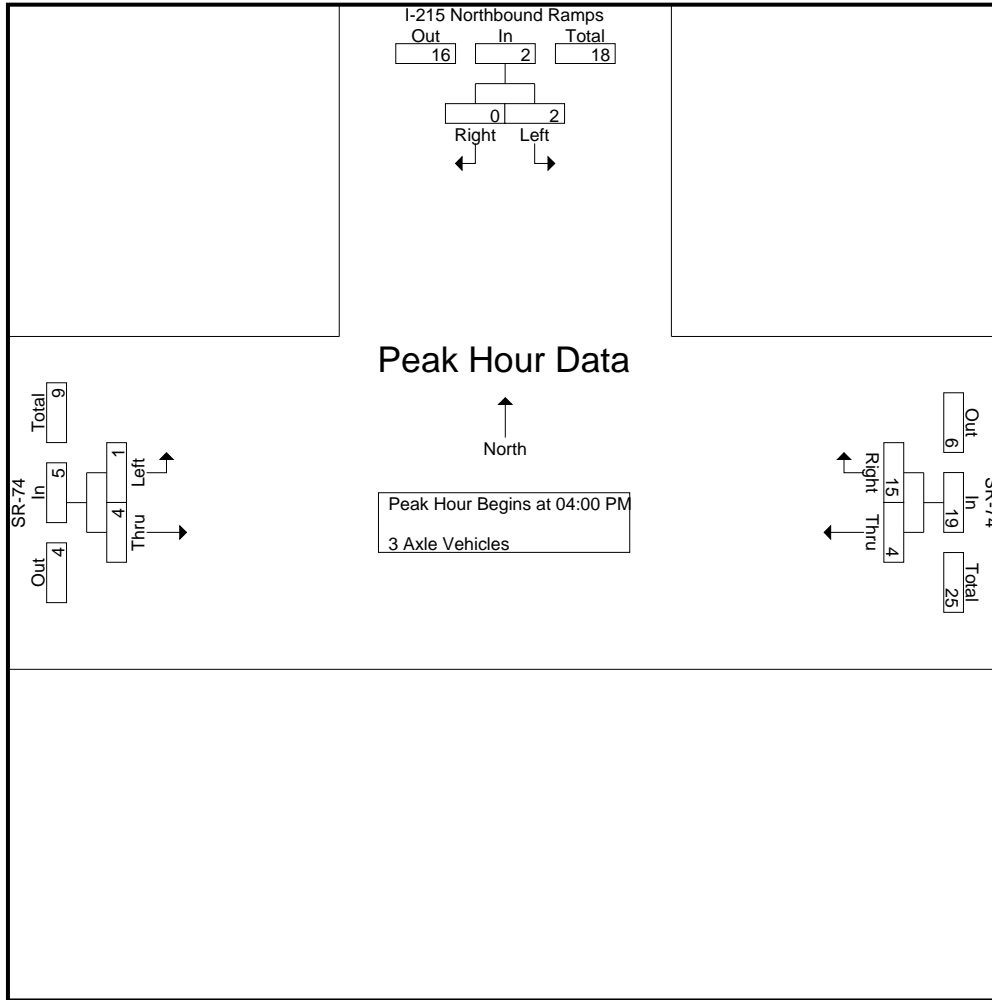
Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	2	2	4	0	0	0	4
04:15 PM	1	0	1	0	6	6	1	4	5	12
04:30 PM	0	0	0	0	7	7	0	0	0	7
04:45 PM	1	0	1	2	0	2	0	0	0	3
Total	2	0	2	4	15	19	1	4	5	26
05:00 PM	0	1	1	2	1	3	0	0	0	4
05:15 PM	0	0	0	2	0	2	0	0	0	2
05:30 PM	1	1	2	3	3	6	0	1	1	9
05:45 PM	1	0	1	2	2	4	0	2	2	7
Total	2	2	4	9	6	15	0	3	3	22
Grand Total	4	2	6	13	21	34	1	7	8	48
Apprch %	66.7	33.3		38.2	61.8		12.5	87.5		
Total %	8.3	4.2	12.5	27.1	43.8	70.8	2.1	14.6	16.7	

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	2	2	4	0	0	0	4
04:15 PM	1	0	1	0	6	6	1	4	5	12
04:30 PM	0	0	0	0	7	7	0	0	0	7
04:45 PM	1	0	1	2	0	2	0	0	0	3
Total Volume	2	0	2	4	15	19	1	4	5	26
% App. Total	100	0		21.1	78.9		20	80		
PHF	.500	.000	.500	.500	.536	.679	.250	.250	.250	.542

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

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 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		
+0 mins.	0	0	0	2	2	4	0	0	0
+15 mins.	1	0	1	0	6	6	1	4	5
+30 mins.	0	0	0	0	7	7	0	0	0
+45 mins.	1	0	1	2	0	2	0	0	0
Total Volume	2	0	2	4	15	19	1	4	5
% App. Total	100	0		21.1	78.9		20	80	
PHF	.500	.000	.500	.500	.536	.679	.250	.250	.250

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	1	1	0	0	0	1
04:15 PM	1	0	1	2	3	5	0	2	2	8
04:30 PM	0	0	0	0	5	5	0	2	2	7
04:45 PM	0	0	0	0	1	1	0	1	1	2
Total	1	0	1	2	10	12	0	5	5	18
05:00 PM	0	0	0	0	1	1	0	1	1	2
05:15 PM	0	0	0	0	3	3	0	3	3	6
05:30 PM	0	0	0	4	2	6	0	0	0	6
05:45 PM	0	0	0	0	5	5	0	1	1	6
Total	0	0	0	4	11	15	0	5	5	20
Grand Total	1	0	1	6	21	27	0	10	10	38
Apprch %	100	0		22.2	77.8		0	100		
Total %	2.6	0	2.6	15.8	55.3	71.1	0	26.3	26.3	

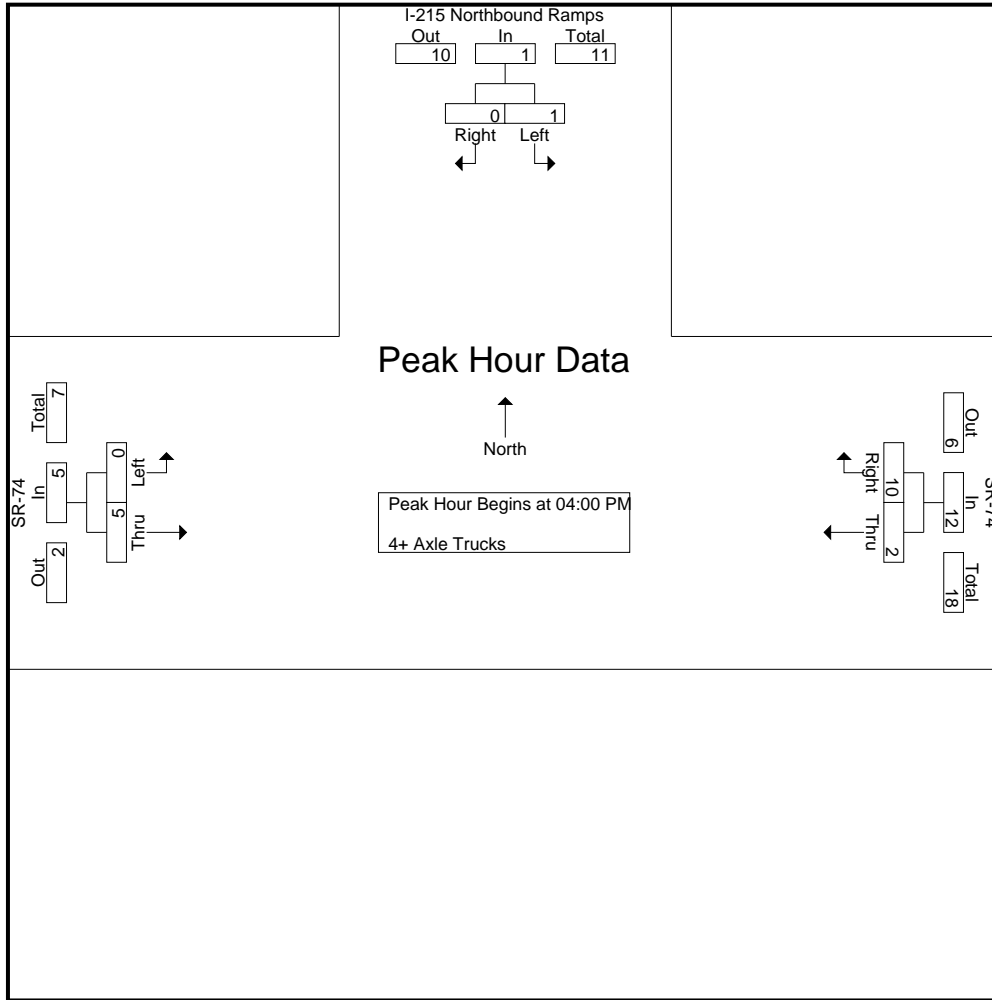
Start Time	I-215 Northbound Ramps Southbound			SR-74 Westbound			SR-74 Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	1	1	0	0	0	1
04:15 PM	1	0	1	2	3	5	0	2	2	8
04:30 PM	0	0	0	0	5	5	0	2	2	7
04:45 PM	0	0	0	0	1	1	0	1	1	2
Total Volume	1	0	1	2	10	12	0	5	5	18
% App. Total	100	0		16.7	83.3		0	100		
PHF	.250	.000	.250	.250	.500	.600	.000	.625	.625	.563

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

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: SR-74
 Weather: Clear

File Name : 10_PER_215N_SR74 PM
 Site Code : 10823257
 Start Date : 3/23/2023
 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		
+0 mins.	0	0	0	0	1	1	0	0	0
+15 mins.	1	0	1	2	3	5	0	2	2
+30 mins.	0	0	0	0	5	5	0	2	2
+45 mins.	0	0	0	0	1	1	0	1	1
Total Volume	1	0	1	2	10	12	0	5	5
% App. Total	100	0		16.7	83.3		0	100	
PHF	.250	.000	.250	.250	.500	.600	.000	.625	.625

APPENDIX D

INTERSECTION ANALYSIS WORKSHEETS

APPENDIX D-1

**INTERSECTION ANALYSIS
WORKSHEETS -
EXISTING CONDITIONS**

Newcastle Ellis Avenue Warehouse

Vistro File: K:\...\Ellis Newcastle BASE - AM.vistro

Scenario 1 EX AM

Report File: K:\...\1 EX AM.pdf

6/28/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-215 NB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	NB Left	0.365	23.7	C
2	I-215 SB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	EB Right	0.342	20.0	B
3	Redlands Avenue at 4th Street	Signalized	HCM 7th Edition	WB Left	0.511	27.8	C
4	Redlands Avenue at Ellis Avenue	All-way stop	HCM 7th Edition	EB Left	0.291	8.8	A
5	Case Road at Ellis Avenue	Signalized	HCM 7th Edition	SB Left	0.271	22.0	C
6	Case Road at Murrieta Road	All-way stop	HCM 7th Edition	NB Left	0.288	9.8	A
7	Case Rd at Mapes Rd	All-way stop	HCM 7th Edition	EB Thru	0.332	9.4	A
8	Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd	Signalized	HCM 7th Edition	WB Left	0.126	21.4	C
9	I-215 SB Ramps at SR-74/Bonnie Dr	Signalized	HCM 7th Edition	EB Left	0.477	13.5	B
10	I-215 NB Ramps at SR-74	Signalized	HCM 7th Edition	EB Left	0.323	10.4	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: I-215 NB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.365

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐⇐⇐						⇐⇐⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	1	0	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	1	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	1000.00	0.00	300.00	0.00	0.00	0.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	133	611	0	0	949	132	0	0	0	409	2	393
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	133	611	0	0	949	132	0	0	0	409	2	393
Peak Hour Factor	0.9390	0.9390	1.0000	1.0000	0.9390	0.9390	1.0000	1.0000	1.0000	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	163	0	0	253	35	0	0	0	109	1	105
Total Analysis Volume [veh/h]	142	651	0	0	1011	141	0	0	0	436	2	419
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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	16	62	0	0	46	0	0	0	0	0	58	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	7	87	76	76		25	25	25
g / C, Green / Cycle	0.06	0.73	0.64	0.64		0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.04	0.18	0.15	0.09		0.16	0.17	0.18
s, saturation flow rate [veh/h]	3459	3560	6792	1589		1781	1682	1589
c, Capacity [veh/h]	201	2590	4320	1011		366	346	327
d1, Uniform Delay [s]	55.50	5.45	9.34	8.72		45.30	45.59	45.89
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	4.48	0.23	0.13	0.29		4.05	5.00	6.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.25	0.23	0.14		0.80	0.83	0.85
d, Delay for Lane Group [s/veh]	59.97	5.68	9.47	9.01		49.35	50.59	52.12
Lane Group LOS	E	A	A	A		D	D	D
Critical Lane Group	Yes	No	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.24	2.54	2.78	1.51		8.69	8.60	8.54
50th-Percentile Queue Length [ft/ln]	55.91	63.62	69.41	37.69		217.22	215.09	213.39
95th-Percentile Queue Length [veh/ln]	4.03	4.58	5.00	2.71		13.52	13.41	13.33
95th-Percentile Queue Length [ft/ln]	100.65	114.52	124.93	67.84		338.07	335.36	333.17

Movement, Approach, & Intersection Results

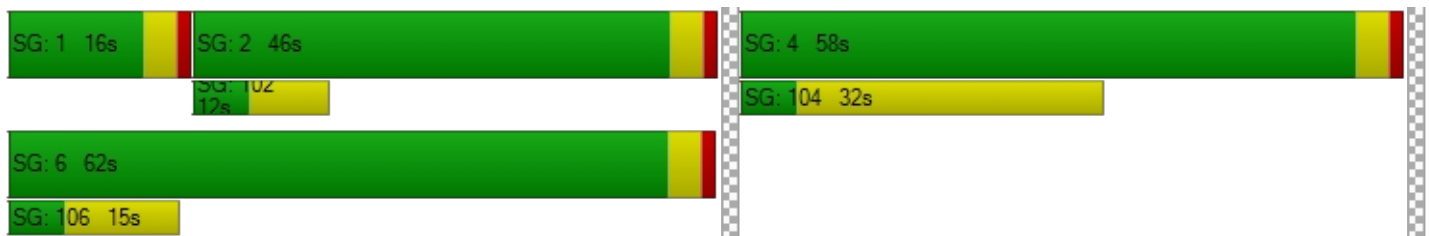
d_M, Delay for Movement [s/veh]	59.97	5.68	0.00	0.00	9.47	9.01	0.00	0.00	0.00	49.77	50.59	51.62
Movement LOS	E	A			A	A				D	D	D
d_A, Approach Delay [s/veh]	15.40				9.41		0.00		50.66			
Approach LOS	B				A		A		D			
d_I, Intersection Delay [s/veh]	23.72											
Intersection LOS	C											
Intersection V/C	0.365											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.014	2.919	2.048	2.234
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	700	0	900
d_b, Bicycle Delay [s]	16.02	25.35	60.00	18.15
I_b,int, Bicycle LOS Score for Intersection	2.214	2.035	4.132	2.974
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 SB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	20.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration							+					
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	3	0	0	0	0	0	1
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	100.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	616	290	507	914	0	118	3	141	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	616	290	507	914	0	118	3	141	0	0	0
Peak Hour Factor	1.0000	0.9050	0.9050	0.9050	0.9050	1.0000	0.9050	0.9050	0.9050	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	170	80	140	252	0	33	1	39	0	0	0
Total Analysis Volume [veh/h]	0	681	320	560	1010	0	130	3	156	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing m	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing mi	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	16	0	61	77	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	34	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	75	75	23	102	10	10	10	
g / C, Green / Cycle	0.63	0.63	0.19	0.85	0.08	0.08	0.08	
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.16	0.28	0.06	0.06	0.06	
s, saturation flow rate [veh/h]	6792	2813	3459	3560	1781	1650	1589	
c, Capacity [veh/h]	4263	1766	651	3023	150	139	134	
d1, Uniform Delay [s]	9.25	9.39	47.19	1.91	53.36	53.39	53.41	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.08	0.23	3.50	0.30	5.24	5.83	6.15	
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	0.18	0.86	0.33	0.68	0.68	0.69	
d, Delay for Lane Group [s/veh]	9.33	9.61	50.69	2.21	58.59	59.23	59.56	
Lane Group LOS	A	A	D	A	E	E	E	
Critical Lane Group	No	No	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	1.82	1.77	8.40	1.63	3.20	3.02	2.94	
50th-Percentile Queue Length [ft/ln]	45.58	44.30	209.88	40.70	79.93	75.50	73.40	
95th-Percentile Queue Length [veh/ln]	3.28	3.19	13.15	2.93	5.75	5.44	5.28	
95th-Percentile Queue Length [ft/ln]	82.04	79.74	328.68	73.25	143.87	135.90	132.12	

Movement, Approach, & Intersection Results

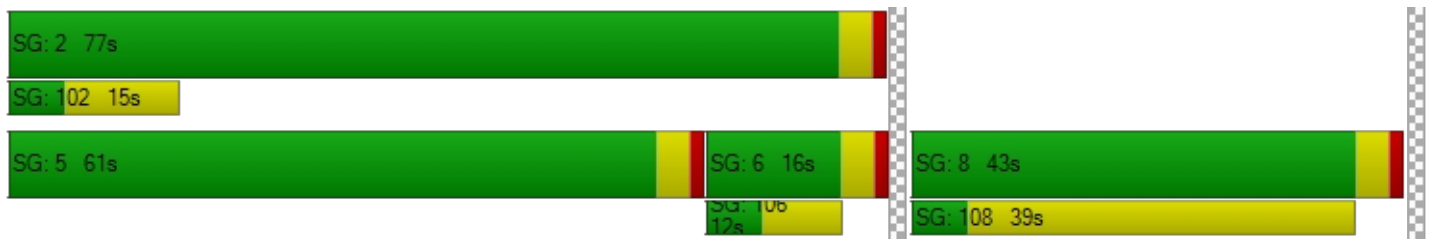
d_M, Delay for Movement [s/veh]	0.00	9.33	9.61	50.69	2.21	0.00	58.75	59.23	59.43	0.00	0.00	0.00
Movement LOS		A	A	D	A		E	E	E			
d_A, Approach Delay [s/veh]		9.42		19.50			59.11			0.00		
Approach LOS		A		B			E			A		
d_I, Intersection Delay [s/veh]	19.97											
Intersection LOS	B											
Intersection V/C	0.342											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.099	3.214	2.049	2.161
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	200	1217	650	0
d_b, Bicycle Delay [s]	48.60	9.20	27.34	60.00
I_b,int, Bicycle LOS Score for Intersection	1.973	2.855	2.036	4.132
Bicycle LOS	A	C	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 3: Redlands Avenue at 4th Street

Control Type:	Signalized	Delay (sec / veh):	27.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	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												
Base Volume Input [veh/h]	23	297	10	34	274	739	611	21	23	5	10	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	297	10	34	274	739	611	21	23	5	10	20
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	82	3	9	75	203	168	6	6	1	3	5
Total Analysis Volume [veh/h]	25	326	11	37	301	812	671	23	25	5	11	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	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]	10	26	0	13	29	0	38	30	0	51	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	21	0	0	21	0	0	34	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	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	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	68	68	4	68	68	26	32	32	1	7	7
g / C, Green / Cycle	0.02	0.56	0.56	0.03	0.57	0.57	0.22	0.27	0.27	0.01	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.01	0.09	0.01	0.02	0.08	0.29	0.19	0.01	0.02	0.00	0.01	0.01
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	2813	3459	1870	1589	1781	1870	1589
c, Capacity [veh/h]	42	2002	894	53	2023	1599	754	499	424	14	106	90
d1, Uniform Delay [s]	58.01	12.66	11.58	57.69	12.22	15.72	45.51	32.65	32.77	59.22	53.71	54.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.59	0.17	0.03	15.36	0.16	1.16	3.85	0.04	0.06	14.51	0.42	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	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.16	0.01	0.70	0.15	0.51	0.89	0.05	0.06	0.36	0.10	0.24
d, Delay for Lane Group [s/veh]	70.60	12.83	11.60	73.04	12.37	16.88	49.36	32.69	32.82	73.73	54.14	55.54
Lane Group LOS	E	B	B	E	B	B	D	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.90	2.15	0.14	1.34	1.93	6.81	10.05	0.51	0.55	0.21	0.33	0.67
50th-Percentile Queue Length [ft/ln]	22.49	53.64	3.39	33.47	48.30	170.32	251.31	12.67	13.85	5.20	8.22	16.81
95th-Percentile Queue Length [veh/ln]	1.62	3.86	0.24	2.41	3.48	11.09	15.25	0.91	1.00	0.37	0.59	1.21
95th-Percentile Queue Length [ft/ln]	40.48	96.56	6.11	60.25	86.95	277.34	381.30	22.81	24.93	9.37	14.79	30.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	70.60	12.83	11.60	73.04	12.37	16.88	49.36	32.69	32.82	73.73	54.14	55.54
Movement LOS	E	B	B	E	B	B	D	C	C	E	D	E
d_A, Approach Delay [s/veh]	16.79			17.51			48.25			57.52		
Approach LOS	B			B			D			E		
d_I, Intersection Delay [s/veh]	27.81											
Intersection LOS	C											
Intersection V/C	0.511											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.581	3.193	2.723	2.336
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	417	433	650
d_b, Bicycle Delay [s]	40.02	37.60	36.82	27.34
I_b,int, Bicycle LOS Score for Intersection	1.858	2.508	2.746	1.591
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 4: Redlands Avenue at Ellis Avenue

Control Type:	All-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.291

Intersection Setup

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

Volumes

Name	Southbound		Eastbound		Westbound	
Base Volume Input [veh/h]	21	112	192	7	6	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	112	192	7	6	9
Peak Hour Factor	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	32	55	2	2	3
Total Analysis Volume [veh/h]	24	129	220	8	7	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	890	784	711	826
Degree of Utilization, x	0.17	0.29	0.01	0.01

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.62	1.21	0.03	0.04
95th-Percentile Queue Length [ft]	15.46	30.21	0.75	0.92
Approach Delay [s/veh]	7.88	9.46	7.40	
Approach LOS	A	A	A	
Intersection Delay [s/veh]	8.76			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: Case Road at Ellis Avenue

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.271

Intersection Setup

Name	Case Rd			Case Rd								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			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	Case Rd			Case Rd								
Base Volume Input [veh/h]	0	212	80	135	218	0	0	1	2	21	4	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	212	80	135	218	0	0	1	2	21	4	79
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	56	21	36	58	0	0	0	1	6	1	21
Total Analysis Volume [veh/h]	0	226	85	144	232	0	0	1	2	22	4	84
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	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	46	0	51	97	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	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	7	0	0	7	0	0	14	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]	0.0	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]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	86	86	12	102	10	10
g / C, Green / Cycle	0.72	0.72	0.10	0.85	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.12	0.05	0.08	0.12	0.00	0.07
s, saturation flow rate [veh/h]	1870	1589	1781	1870	1379	1585
c, Capacity [veh/h]	1371	1140	176	1588	146	169
d1, Uniform Delay [s]	5.46	5.07	52.99	1.55	50.44	54.04
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	0.13	8.88	0.19	0.06	4.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.16	0.07	0.82	0.15	0.02	0.65
d, Delay for Lane Group [s/veh]	5.72	5.20	61.87	1.75	50.50	58.21
Lane Group LOS	A	A	E	A	D	E
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.48	0.52	4.51	0.35	0.09	3.46
50th-Percentile Queue Length [ft/ln]	37.06	13.09	112.84	8.72	2.13	86.59
95th-Percentile Queue Length [veh/ln]	2.67	0.94	8.00	0.63	0.15	6.23
95th-Percentile Queue Length [ft/ln]	66.71	23.56	199.94	15.69	3.84	155.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.72	5.72	5.20	61.87	1.75	1.75	50.50	50.50	50.50	58.21	58.21	58.21
Movement LOS	A	A	A	E	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	5.58			24.77			50.50			58.21		
Approach LOS	A			C			D			E		
d_I, Intersection Delay [s/veh]	22.01											
Intersection LOS	C											
Intersection V/C	0.271											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.325			2.364			1.734			1.896		
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]	700			1550			317			317		
d_b, Bicycle Delay [s]	25.35			3.04			42.50			42.50		
I_b,int, Bicycle LOS Score for Intersection	2.073			2.180			1.565			1.741		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Case Road at Murrieta Road

Control Type:	All-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.288

Intersection Setup

Name	Case Rd		Case Rd		Case Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Case Rd		Case Rd		Case Rd	
Base Volume Input [veh/h]	132	19	189	48	19	169
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	19	189	48	19	169
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	5	49	13	5	44
Total Analysis Volume [veh/h]	138	20	198	50	20	177
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	590	734	688	795	624	683
Degree of Utilization, x	0.23	0.03	0.29	0.06	0.03	0.26

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.90	0.08	1.19	0.20	0.10	1.03
95th-Percentile Queue Length [ft]	22.54	2.10	29.72	5.02	2.48	25.83
Approach Delay [s/veh]	10.29		9.53		9.69	
Approach LOS	B		A		A	
Intersection Delay [s/veh]	9.78					
Intersection LOS	A					

**Intersection Level Of Service Report
Intersection 7: Case Rd at Mapes Rd**

Control Type:	All-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.332

Intersection Setup

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	13.00	13.00	13.00	14.00	14.00	14.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Base Volume Input [veh/h]	0	0	0	56	0	45	65	162	0	0	139	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	56	0	45	65	162	0	0	139	72
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	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	16	0	13	19	47	0	0	40	21
Total Analysis Volume [veh/h]	0	0	0	65	0	52	75	187	0	0	160	83
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	684	733	789	831
Degree of Utilization, x	0.00	0.16	0.33	0.29

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	0.57	1.46	1.22
95th-Percentile Queue Length [ft]	0.00	14.14	36.48	30.51
Approach Delay [s/veh]	0.00	8.84	9.81	9.12
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.36			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 8: Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.126

Intersection Setup

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↻		↵		↵↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	14.00	16.00	13.00	13.00	12.00	14.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Base Volume Input [veh/h]	3	194	0	0	207	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	194	0	0	207	1
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	52	0	0	55	0
Total Analysis Volume [veh/h]	3	207	0	0	221	1
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Permissive	Unsignalized	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	10	0	14	0	96	110
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	0	54	58
g / C, Green / Cycle	0.45	0.00	0.45	0.48
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.12	0.00
s, saturation flow rate [veh/h]	1852	1945	1781	1945
c, Capacity [veh/h]	830	0	804	943
d1, Uniform Delay [s]	18.30	0.00	20.60	15.92
k, delay calibration	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	0.85	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.00	0.27	0.00
d, Delay for Lane Group [s/veh]	18.30	0.00	21.44	15.92
Lane Group LOS	B	A	C	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.05	0.00	3.90	0.01
50th-Percentile Queue Length [ft/ln]	1.21	0.00	97.56	0.34
95th-Percentile Queue Length [veh/ln]	0.09	0.00	7.02	0.02
95th-Percentile Queue Length [ft/ln]	2.18	0.00	175.60	0.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.30	0.00	0.00	0.00	21.44	15.92
Movement LOS	B		A	A	C	B
d_A, Approach Delay [s/veh]	18.30		0.00		21.42	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	21.37					
Intersection LOS	C					
Intersection V/C	0.126					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	100	167	1767
d_b, Bicycle Delay [s]	54.15	50.42	0.82
I_b,int, Bicycle LOS Score for Intersection	1.560	1.560	1.926
Bicycle LOS	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 9: I-215 SB Ramps at SR-74/Bonnie Dr

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

Intersection Setup

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵↑		↑↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	13.00	13.00	20.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Base Volume Input [veh/h]	173	551	598	28	40	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	173	551	598	28	40	155
Peak Hour Factor	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	154	167	8	11	43
Total Analysis Volume [veh/h]	193	614	667	31	45	173
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Unsignalized
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	96	110	14	0	10	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	108	89	89	4
g / C, Green / Cycle	0.13	0.90	0.74	0.74	0.03
(v / s)_i Volume / Saturation Flow Rate	0.11	0.32	0.34	0.02	0.03
s, saturation flow rate [veh/h]	1781	1945	1945	1653	1781
c, Capacity [veh/h]	226	1752	1440	1224	58
d1, Uniform Delay [s]	51.27	0.86	6.16	4.12	57.62
k, delay calibration	0.11	0.50	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.76	0.55	1.07	0.04	19.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.35	0.46	0.03	0.78
d, Delay for Lane Group [s/veh]	60.03	1.42	7.23	4.16	77.20
Lane Group LOS	E	A	A	A	E
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	6.03	0.27	5.35	0.17	1.64
50th-Percentile Queue Length [ft/ln]	150.79	6.73	133.69	4.15	40.98
95th-Percentile Queue Length [veh/ln]	10.06	0.48	9.14	0.30	2.95
95th-Percentile Queue Length [ft/ln]	251.49	12.12	228.51	7.47	73.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.03	1.42	7.23	4.16	77.20	0.00
Movement LOS	E	A	A	A	E	
d_A, Approach Delay [s/veh]	15.43		7.09		77.20	
Approach LOS	B		A		E	
d_I, Intersection Delay [s/veh]	13.47					
Intersection LOS	B					
Intersection V/C	0.477					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1767	167	100
d_b, Bicycle Delay [s]	0.82	50.42	54.15
I_b,int, Bicycle LOS Score for Intersection	2.891	2.711	1.560
Bicycle LOS	C	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: I-215 NB Ramps at SR-74

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.323

Intersection Setup

Name	I-215 NB Ramps		SR-74		SR-74	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	20.00	20.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	240.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	I-215 NB Ramps		SR-74		SR-74	
Base Volume Input [veh/h]	168	10	9	727	687	843
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	168	10	9	727	687	843
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	3	2	195	184	226
Total Analysis Volume [veh/h]	180	11	10	780	737	905
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protected	Permissive	Permissive	Unsignalized
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	10	10	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	65	0	10	55	45	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	L	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	1	97	92
g / C, Green / Cycle	0.12	0.01	0.81	0.77
(v / s)_i Volume / Saturation Flow Rate	0.10	0.01	0.22	0.21
s, saturation flow rate [veh/h]	1839	1781	3560	3560
c, Capacity [veh/h]	225	21	2887	2726
d1, Uniform Delay [s]	51.56	58.90	2.75	4.16
k, delay calibration	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.55	15.19	0.23	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.47	0.27	0.27
d, Delay for Lane Group [s/veh]	60.10	74.09	2.98	4.40
Lane Group LOS	E	E	A	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.16	0.38	1.34	1.96
50th-Percentile Queue Length [ft/ln]	153.91	9.57	33.55	48.89
95th-Percentile Queue Length [veh/ln]	10.23	0.69	2.42	3.52
95th-Percentile Queue Length [ft/ln]	255.65	17.23	60.38	88.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.10	60.10	74.09	2.98	4.40	0.00
Movement LOS	E	E	E	A	A	
d_A, Approach Delay [s/veh]	60.10		3.88		4.40	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	10.35					
Intersection LOS	B					
Intersection V/C	0.323					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1017	850	683
d_b, Bicycle Delay [s]	14.50	19.84	26.00
I_b,int, Bicycle LOS Score for Intersection	1.875	2.211	2.168
Bicycle LOS	A	B	B

Sequence

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



Newcastle Ellis Avenue Warehouse

Vistro File: K:\...\Ellis Newcastle BASE - PM.vistro

Scenario 1 EX PM

Report File: K:\...\1 EX PM.pdf

6/28/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-215 NB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	NB Left	0.351	24.8	C
2	I-215 SB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	EB Right	0.369	21.4	C
3	Redlands Avenue at 4th Street	Signalized	HCM 7th Edition	NB Left	0.563	33.9	C
4	Redlands Avenue at Ellis Avenue	All-way stop	HCM 7th Edition	EB Left	0.253	8.7	A
5	Case Road at Ellis Avenue	Signalized	HCM 7th Edition	SB Left	0.365	21.8	C
6	Case Road at Murrieta Road	All-way stop	HCM 7th Edition	EB Thru	0.516	11.9	B
7	Case Rd at Mapes Rd	All-way stop	HCM 7th Edition	WB Thru	0.514	11.8	B
8	Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd	Signalized	HCM 7th Edition	EB Right	0.163	23.3	C
9	I-215 SB Ramps at SR-74/Bonnie Dr	Signalized	HCM 7th Edition	EB Left	0.590	16.3	B
10	I-215 NB Ramps at SR-74	Signalized	HCM 7th Edition	EB Left	0.458	12.9	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: I-215 NB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.351

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	← ↑ →			↑ ↑ ↑ ↑ →						← ↑ →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	1	0	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	1	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	1000.00	0.00	300.00	0.00	0.00	0.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	169	650	0	0	785	122	0	0	0	298	2	481
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	169	650	0	0	785	122	0	0	0	298	2	481
Peak Hour Factor	0.9750	0.9750	1.0000	1.0000	0.9750	0.9750	1.0000	1.0000	1.0000	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	167	0	0	201	31	0	0	0	76	1	123
Total Analysis Volume [veh/h]	173	667	0	0	805	125	0	0	0	306	2	493
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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	14	33	0	0	19	0	0	0	0	0	87	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	8	89	77	77		23	23	23
g / C, Green / Cycle	0.07	0.74	0.64	0.64		0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.05	0.19	0.12	0.08		0.16	0.16	0.16
s, saturation flow rate [veh/h]	3459	3560	6792	1589		1781	1609	1589
c, Capacity [veh/h]	230	2633	4345	1017		345	312	308
d1, Uniform Delay [s]	55.04	5.01	8.83	8.45		46.23	46.59	46.63
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	4.93	0.23	0.09	0.25		4.50	6.06	6.29
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	0.75	0.25	0.19	0.12		0.81	0.84	0.84
d, Delay for Lane Group [s/veh]	59.98	5.24	8.93	8.70		50.73	52.64	52.92
Lane Group LOS	E	A	A	A		D	D	D
Critical Lane Group	No	Yes	No	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.73	2.46	2.11	1.31		8.36	8.04	8.00
50th-Percentile Queue Length [ft/ln]	68.21	61.43	52.68	32.64		209.10	201.05	200.12
95th-Percentile Queue Length [veh/ln]	4.91	4.42	3.79	2.35		13.11	12.69	12.64
95th-Percentile Queue Length [ft/ln]	122.78	110.58	94.83	58.74		327.67	317.32	316.12

Movement, Approach, & Intersection Results

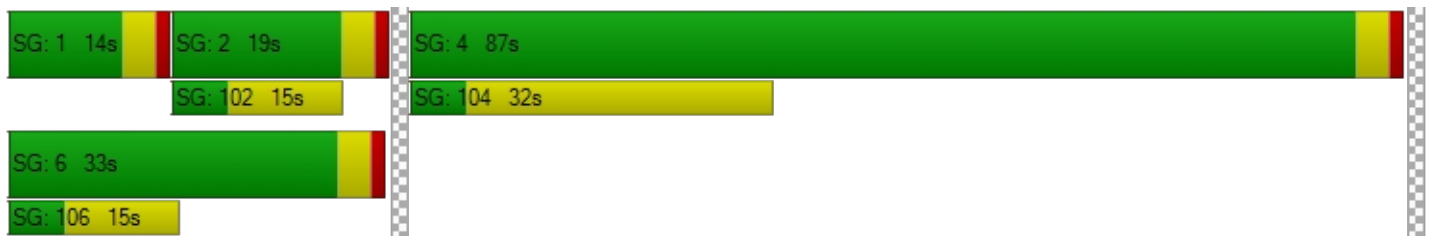
d_M, Delay for Movement [s/veh]	59.98	5.24	0.00	0.00	8.93	8.70	0.00	0.00	0.00	50.96	52.64	52.79
Movement LOS	E	A			A	A				D	D	D
d_A, Approach Delay [s/veh]	16.51				8.90		0.00		52.07			
Approach LOS	B				A		A		D			
d_I, Intersection Delay [s/veh]	24.84											
Intersection LOS	C											
Intersection V/C	0.351											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.978	2.900	2.053	2.216
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	483	250	0	1383
d_b, Bicycle Delay [s]	34.50	45.94	60.00	5.70
I_b,int, Bicycle LOS Score for Intersection	2.253	1.943	4.132	2.881
Bicycle LOS	B	A	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 SB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.369

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration							+					
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	3	0	0	0	0	0	1
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	100.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	620	435	415	702	0	157	0	198	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	620	435	415	702	0	157	0	198	0	0	0
Peak Hour Factor	1.0000	0.9370	0.9370	0.9370	0.9370	1.0000	0.9370	0.9370	0.9370	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	165	116	111	187	0	42	0	53	0	0	0
Total Analysis Volume [veh/h]	0	662	464	443	749	0	168	0	211	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	31	0	46	77	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	34	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	78	78	18	100	12	12	12	
g / C, Green / Cycle	0.65	0.65	0.15	0.83	0.10	0.10	0.10	
(v / s)_i Volume / Saturation Flow Rate	0.10	0.16	0.13	0.21	0.08	0.08	0.08	
s, saturation flow rate [veh/h]	6792	2813	3459	3560	1781	1637	1589	
c, Capacity [veh/h]	4401	1823	527	2969	177	163	158	
d1, Uniform Delay [s]	8.24	8.90	49.42	2.10	52.63	52.64	52.65	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.07	0.34	3.68	0.20	6.51	7.14	7.38	
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	0.15	0.25	0.84	0.25	0.76	0.76	0.76	
d, Delay for Lane Group [s/veh]	8.31	9.24	53.10	2.30	59.13	59.79	60.03	
Lane Group LOS	A	A	D	A	E	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	1.64	2.54	6.72	1.33	4.27	3.97	3.87	
50th-Percentile Queue Length [ft/ln]	41.00	63.40	167.89	33.37	106.69	99.17	96.66	
95th-Percentile Queue Length [veh/ln]	2.95	4.57	10.97	2.40	7.66	7.14	6.96	
95th-Percentile Queue Length [ft/ln]	73.79	114.13	274.14	60.07	191.38	178.50	173.98	

Movement, Approach, & Intersection Results

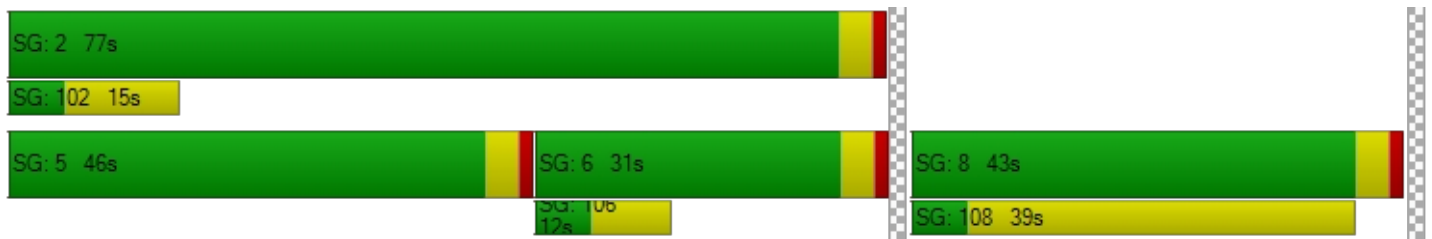
d_M, Delay for Movement [s/veh]	0.00	8.31	9.24	53.10	2.30	0.00	59.29	59.79	59.93	0.00	0.00	0.00
Movement LOS		A	A	D	A		E	E	E			
d_A, Approach Delay [s/veh]	8.69		21.18			59.63			0.00			
Approach LOS	A		C			E			A			
d_I, Intersection Delay [s/veh]	21.37											
Intersection LOS	C											
Intersection V/C	0.369											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.090	3.179	2.079	2.172
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	1217	650	0
d_b, Bicycle Delay [s]	36.04	9.20	27.34	60.00
I_b,int, Bicycle LOS Score for Intersection	2.024	2.543	2.185	4.132
Bicycle LOS	B	B	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 3: Redlands Avenue at 4th Street

Control Type:	Signalized	Delay (sec / veh):	33.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.563

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	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												
Base Volume Input [veh/h]	69	272	9	18	215	652	781	21	78	10	16	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	69	272	9	18	215	652	781	21	78	10	16	46
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	73	2	5	58	175	209	6	21	3	4	12
Total Analysis Volume [veh/h]	74	292	10	19	230	699	837	23	84	11	17	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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	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]	10	26	0	14	30	0	37	66	0	14	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	21	0	0	21	0	0	34	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	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	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	61	61	2	58	58	31	39	39	2	9	9
g / C, Green / Cycle	0.05	0.51	0.51	0.02	0.48	0.48	0.26	0.32	0.32	0.01	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.01	0.01	0.06	0.25	0.24	0.01	0.05	0.01	0.01	0.03
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	2813	3459	1870	1589	1781	1870	1589
c, Capacity [veh/h]	89	1822	813	35	1714	1354	900	602	512	23	140	119
d1, Uniform Delay [s]	56.50	15.59	14.40	58.27	17.25	21.47	43.33	27.91	29.10	58.81	51.80	52.96
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.47	0.19	0.03	12.17	0.16	1.41	4.97	0.03	0.15	14.14	0.38	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.16	0.01	0.54	0.13	0.52	0.93	0.04	0.16	0.47	0.12	0.41
d, Delay for Lane Group [s/veh]	73.96	15.78	14.43	70.44	17.41	22.88	48.30	27.94	29.25	72.95	52.18	55.21
Lane Group LOS	E	B	B	E	B	C	D	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.65	2.17	0.14	0.69	1.81	6.95	12.65	0.46	1.77	0.42	0.49	1.49
50th-Percentile Queue Length [ft/ln]	66.36	54.37	3.52	17.29	45.18	173.87	316.13	11.59	44.26	10.59	12.36	37.21
95th-Percentile Queue Length [veh/ln]	4.78	3.91	0.25	1.24	3.25	11.28	18.48	0.83	3.19	0.76	0.89	2.68
95th-Percentile Queue Length [ft/ln]	119.44	97.87	6.34	31.11	81.33	281.99	461.92	20.86	79.66	19.06	22.26	66.98

Movement, Approach, & Intersection Results

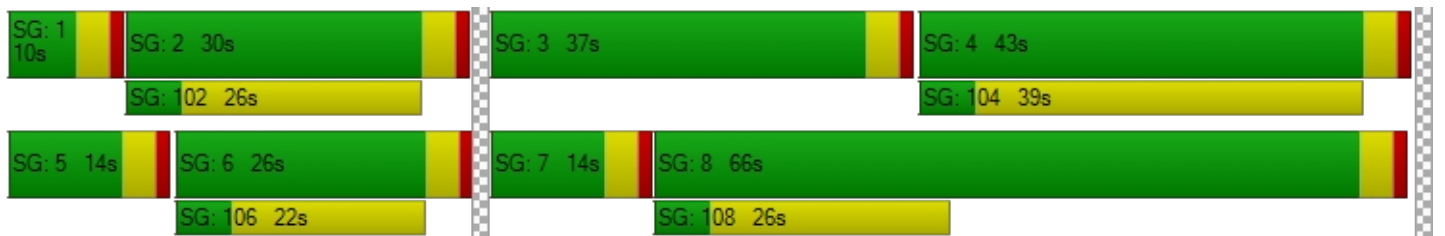
d_M, Delay for Movement [s/veh]	73.96	15.78	14.43	70.44	17.41	22.88	48.30	27.94	29.25	72.95	52.18	55.21
Movement LOS	E	B	B	E	B	C	D	C	C	E	D	E
d_A, Approach Delay [s/veh]	27.19			22.51			46.11			57.08		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	33.89											
Intersection LOS	C											
Intersection V/C	0.563											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.582	3.189	2.750	2.340
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	433	1033	650
d_b, Bicycle Delay [s]	40.02	36.82	14.02	27.34
I_b,int, Bicycle LOS Score for Intersection	1.870	2.342	3.117	1.623
Bicycle LOS	A	B	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Redlands Avenue at Ellis Avenue

Control Type:	All-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.253

Intersection Setup

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

Volumes

Name	Southbound		Eastbound		Westbound	
Base Volume Input [veh/h]	23	176	155	15	3	61
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	176	155	15	3	61
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	49	43	4	1	17
Total Analysis Volume [veh/h]	26	196	173	17	3	68
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	888	751	692	800
Degree of Utilization, x	0.25	0.25	0.00	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.99	1.00	0.01	0.28
95th-Percentile Queue Length [ft]	24.72	25.06	0.33	6.95
Approach Delay [s/veh]	8.40	9.41	7.63	
Approach LOS	A	A	A	
Intersection Delay [s/veh]	8.69			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: Case Road at Ellis Avenue

Control Type:	Signalized	Delay (sec / veh):	21.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.365

Intersection Setup

Name	Case Rd			Case Rd								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			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	Case Rd			Case Rd								
Base Volume Input [veh/h]	0	278	67	102	327	0	0	2	0	95	3	97
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	278	67	102	327	0	0	2	0	95	3	97
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	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	76	18	28	90	0	0	1	0	26	1	27
Total Analysis Volume [veh/h]	0	305	74	112	359	0	0	2	0	104	3	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	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	55	0	24	79	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	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	7	0	0	7	0	0	14	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]	0.0	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]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	80	80	9	93	19	19
g / C, Green / Cycle	0.66	0.66	0.08	0.78	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.16	0.05	0.06	0.19	0.00	0.14
s, saturation flow rate [veh/h]	1870	1589	1781	1870	1772	1528
c, Capacity [veh/h]	1271	1055	140	1451	309	285
d1, Uniform Delay [s]	8.10	7.11	54.33	3.73	42.64	49.34
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	0.13	9.87	0.41	0.01	3.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.07	0.80	0.25	0.01	0.75
d, Delay for Lane Group [s/veh]	8.55	7.24	64.20	4.14	42.65	53.23
Lane Group LOS	A	A	E	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.77	0.59	3.58	1.69	0.05	6.55
50th-Percentile Queue Length [ft/ln]	69.17	14.83	89.38	42.19	1.28	163.64
95th-Percentile Queue Length [veh/ln]	4.98	1.07	6.44	3.04	0.09	10.74
95th-Percentile Queue Length [ft/ln]	124.51	26.70	160.88	75.95	2.30	268.54

Movement, Approach, & Intersection Results

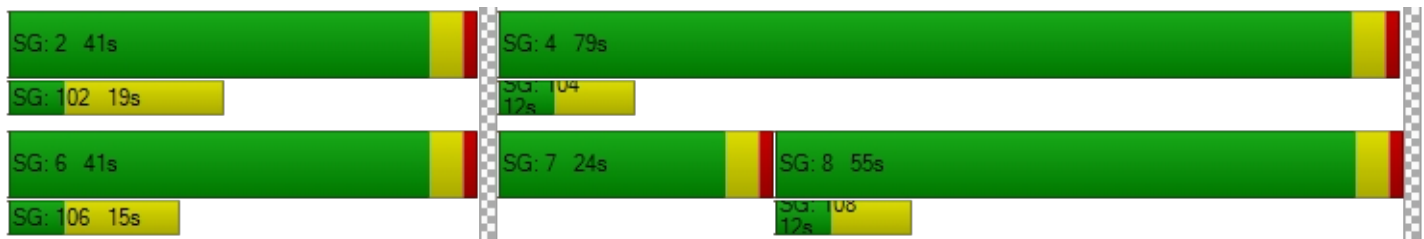
d_M, Delay for Movement [s/veh]	8.55	8.55	7.24	64.20	4.14	4.14	42.65	42.65	42.65	53.23	53.23	53.23
Movement LOS	A	A	A	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.30			18.42			42.65			53.23		
Approach LOS	A			B			D			D		
d_I, Intersection Delay [s/veh]	21.82											
Intersection LOS	C											
Intersection V/C	0.365											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.605			2.481			1.733			1.926		
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]	850			1250			617			617		
d_b, Bicycle Delay [s]	19.84			8.44			28.70			28.70		
I_b,int, Bicycle LOS Score for Intersection	2.185			2.337			1.563			1.911		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Case Road at Murrieta Road

Control Type:	All-way stop	Delay (sec / veh):	11.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

Intersection Setup

Name	Case Rd		Case Rd		Case Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Case Rd		Case Rd		Case Rd	
Base Volume Input [veh/h]	86	16	314	101	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	16	314	101	16	266
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	5	89	28	5	75
Total Analysis Volume [veh/h]	97	18	354	114	18	300
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	528	640	686	792	612	669
Degree of Utilization, x	0.18	0.03	0.52	0.14	0.03	0.45

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.67	0.09	2.98	0.50	0.09	2.32
95th-Percentile Queue Length [ft]	16.69	2.17	74.60	12.53	2.27	58.09
Approach Delay [s/veh]	10.65		12.09		12.18	
Approach LOS	B		B		B	
Intersection Delay [s/veh]	11.94					
Intersection LOS	B					

**Intersection Level Of Service Report
Intersection 7: Case Rd at Mapes Rd**

Control Type:	All-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.514

Intersection Setup

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	13.00	13.00	13.00	14.00	14.00	14.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Base Volume Input [veh/h]	0	0	0	81	0	69	86	184	0	0	252	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	81	0	69	86	184	0	0	252	96
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
Other Adjustment Factor	1.0000	1.0000	1.0000	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	23	0	20	25	52	0	0	72	27
Total Analysis Volume [veh/h]	0	0	0	92	0	79	98	210	0	0	287	109
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	602	663	723	771
Degree of Utilization, x	0.00	0.26	0.43	0.51

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	1.03	2.14	2.98
95th-Percentile Queue Length [ft]	0.00	25.63	53.55	74.54
Approach Delay [s/veh]	0.00	10.30	11.64	12.50
Approach LOS	A	B	B	B
Intersection Delay [s/veh]	11.77			
Intersection LOS	B			

Intersection Level Of Service Report

Intersection 8: Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.163

Intersection Setup

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↶		↷		↵↶	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	14.00	16.00	13.00	13.00	12.00	14.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Base Volume Input [veh/h]	0	311	0	2	262	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	311	0	2	262	3
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	86	0	1	72	1
Total Analysis Volume [veh/h]	0	343	0	2	289	3
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Permissive	Unsignalized	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	10	0	14	0	96	110
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	1	54	58
g / C, Green / Cycle	0.45	0.01	0.45	0.49
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.16	0.00
s, saturation flow rate [veh/h]	1852	1653	1781	1945
c, Capacity [veh/h]	825	9	799	948
d1, Uniform Delay [s]	0.00	59.42	21.75	15.77
k, delay calibration	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	11.91	1.27	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.22	0.36	0.00
d, Delay for Lane Group [s/veh]	0.00	71.33	23.02	15.77
Lane Group LOS	A	E	C	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	0.09	5.39	0.04
50th-Percentile Queue Length [ft/ln]	0.00	2.25	134.78	1.02
95th-Percentile Queue Length [veh/ln]	0.00	0.16	9.20	0.07
95th-Percentile Queue Length [ft/ln]	0.00	4.05	229.97	1.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	71.33	71.33	23.02	15.77
Movement LOS	A		E	E	C	B
d_A, Approach Delay [s/veh]	0.00		71.33		22.95	
Approach LOS	A		E		C	
d_I, Intersection Delay [s/veh]	23.28					
Intersection LOS	C					
Intersection V/C	0.163					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	100	167	1767
d_b, Bicycle Delay [s]	54.15	50.42	0.82
I_b,int, Bicycle LOS Score for Intersection	1.560	1.563	2.041
Bicycle LOS	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 9: I-215 SB Ramps at SR-74/Bonnie Dr

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

Intersection Setup

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵↑		↑↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	13.00	13.00	20.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Base Volume Input [veh/h]	226	339	849	33	23	303
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	226	339	849	33	23	303
Peak Hour Factor	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	87	217	8	6	77
Total Analysis Volume [veh/h]	231	347	868	34	24	310
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Unsignalized
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	29	110	81	0	10	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	109	88	88	3
g / C, Green / Cycle	0.15	0.91	0.73	0.73	0.02
(v / s)_i Volume / Saturation Flow Rate	0.13	0.18	0.45	0.02	0.01
s, saturation flow rate [veh/h]	1781	1945	1945	1653	1781
c, Capacity [veh/h]	261	1770	1419	1207	42
d1, Uniform Delay [s]	50.19	0.59	7.91	4.47	58.01
k, delay calibration	0.11	0.50	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.57	0.25	1.97	0.04	11.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.20	0.61	0.03	0.58
d, Delay for Lane Group [s/veh]	59.76	0.84	9.88	4.51	69.99
Lane Group LOS	E	A	A	A	E
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	7.24	0.12	8.93	0.19	0.84
50th-Percentile Queue Length [ft/ln]	180.98	3.05	223.14	4.87	21.10
95th-Percentile Queue Length [veh/ln]	11.65	0.22	13.83	0.35	1.52
95th-Percentile Queue Length [ft/ln]	291.29	5.48	345.63	8.77	37.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.76	0.84	9.88	4.51	69.99	0.00
Movement LOS	E	A	A	A	E	
d_A, Approach Delay [s/veh]	24.39		9.68		69.99	
Approach LOS	C		A		E	
d_I, Intersection Delay [s/veh]	16.29					
Intersection LOS	B					
Intersection V/C	0.590					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1767	1283	100
d_b, Bicycle Delay [s]	0.82	7.70	54.15
I_b,int, Bicycle LOS Score for Intersection	2.513	3.048	1.560
Bicycle LOS	B	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: I-215 NB Ramps at SR-74

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.458

Intersection Setup

Name	I-215 NB Ramps		SR-74		SR-74	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	20.00	20.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	240.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	I-215 NB Ramps		SR-74		SR-74	
Base Volume Input [veh/h]	227	25	14	1034	596	832
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	227	25	14	1034	596	832
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	7	4	276	159	222
Total Analysis Volume [veh/h]	243	27	15	1105	637	889
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protected	Permissive	Permissive	Unsignalized
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	10	10	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	83	0	13	37	24	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	L	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	2	92	86
g / C, Green / Cycle	0.17	0.02	0.77	0.72
(v / s)_i Volume / Saturation Flow Rate	0.15	0.01	0.31	0.18
s, saturation flow rate [veh/h]	1830	1781	3560	3560
c, Capacity [veh/h]	306	30	2727	2548
d1, Uniform Delay [s]	48.79	58.49	4.77	5.90
k, delay calibration	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.17	12.28	0.45	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.50	0.41	0.25
d, Delay for Lane Group [s/veh]	56.96	70.76	5.22	6.14
Lane Group LOS	E	E	A	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.58	0.54	3.37	2.28
50th-Percentile Queue Length [ft/ln]	214.46	13.52	84.16	56.92
95th-Percentile Queue Length [veh/ln]	13.38	0.97	6.06	4.10
95th-Percentile Queue Length [ft/ln]	334.55	24.34	151.48	102.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.96	56.96	70.76	5.22	6.14	0.00
Movement LOS	E	E	E	A	A	
d_A, Approach Delay [s/veh]	56.96		6.09		6.14	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	12.88					
Intersection LOS	B					
Intersection V/C	0.458					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1317	550	333
d_b, Bicycle Delay [s]	7.00	31.54	41.67
I_b,int, Bicycle LOS Score for Intersection	2.005	2.484	2.085
Bicycle LOS	B	B	B

Sequence

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



APPENDIX D-2

**INTERSECTION ANALYSIS
WORKSHEETS -
EXISTING PLUS PROJECT**

Newcastle Ellis Avenue Warehouse

Vistro File: K:\...\Ellis Newcastle BASE - AM.vistro

Scenario 2 EX WP AM

Report File: K:\...\2 EX WP AM.pdf

6/28/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-215 NB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	NB Left	0.369	23.7	C
2	I-215 SB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	EB Right	0.350	20.2	C
3	Redlands Avenue at 4th Street	Signalized	HCM 7th Edition	WB Left	0.513	27.8	C
4	Redlands Avenue at Ellis Avenue	All-way stop	HCM 7th Edition	EB Left	0.384	9.8	A
5	Case Road at Ellis Avenue	Signalized	HCM 7th Edition	SB Left	0.282	22.2	C
6	Case Road at Murrieta Road	All-way stop	HCM 7th Edition	NB Left	0.334	10.3	B
7	Case Rd at Mapes Rd	All-way stop	HCM 7th Edition	EB Thru	0.365	9.8	A
8	Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd	Signalized	HCM 7th Edition	WB Left	0.154	22.4	C
9	I-215 SB Ramps at SR-74/Bonnie Dr	Signalized	HCM 7th Edition	EB Left	0.504	15.3	B
10	I-215 NB Ramps at SR-74	Signalized	HCM 7th Edition	EB Left	0.342	11.8	B
11	Ellis Avenue at West Project Driveway	Two-way stop	HCM 7th Edition	NB Left	0.027	9.3	A
12	Ellis Avenue at East Project Driveway	Two-way stop	HCM 7th Edition	NB Left	0.009	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: I-215 NB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.369

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	← ↑ →			↑ ↑ ↑ ↑ →						← ↑ →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	1	0	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	1	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	1000.00	0.00	300.00	0.00	0.00	0.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	133	611	0	0	949	132	0	0	0	409	2	393
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	6	0	0	15	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	617	0	0	964	132	0	0	0	409	2	393
Peak Hour Factor	0.9390	0.9390	1.0000	1.0000	0.9390	0.9390	1.0000	1.0000	1.0000	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	164	0	0	257	35	0	0	0	109	1	105
Total Analysis Volume [veh/h]	146	657	0	0	1027	141	0	0	0	436	2	419
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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	16	62	0	0	46	0	0	0	0	0	58	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	7	87	76	76		25	25	25
g / C, Green / Cycle	0.06	0.73	0.64	0.64		0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.04	0.18	0.15	0.09		0.16	0.17	0.18
s, saturation flow rate [veh/h]	3459	3560	6792	1589		1781	1682	1589
c, Capacity [veh/h]	205	2590	4312	1009		366	346	327
d1, Uniform Delay [s]	55.42	5.46	9.43	8.78		45.30	45.59	45.89
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	4.50	0.24	0.13	0.29		4.05	5.00	6.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.25	0.24	0.14		0.80	0.83	0.85
d, Delay for Lane Group [s/veh]	59.92	5.70	9.56	9.07		49.35	50.59	52.12
Lane Group LOS	E	A	A	A		D	D	D
Critical Lane Group	Yes	No	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.30	2.57	2.84	1.51		8.69	8.60	8.54
50th-Percentile Queue Length [ft/ln]	57.47	64.34	71.01	37.85		217.22	215.09	213.39
95th-Percentile Queue Length [veh/ln]	4.14	4.63	5.11	2.73		13.52	13.41	13.33
95th-Percentile Queue Length [ft/ln]	103.45	115.82	127.82	68.13		338.07	335.36	333.17

Movement, Approach, & Intersection Results

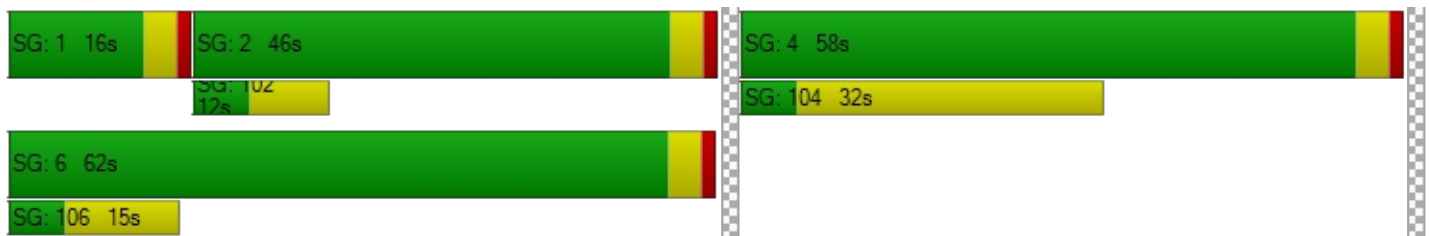
d_M, Delay for Movement [s/veh]	59.92	5.70	0.00	0.00	9.56	9.07	0.00	0.00	0.00	49.77	50.59	51.62
Movement LOS	E	A			A	A				D	D	D
d_A, Approach Delay [s/veh]	15.56				9.50		0.00		50.66			
Approach LOS	B				A		A		D			
d_I, Intersection Delay [s/veh]	23.69											
Intersection LOS	C											
Intersection V/C	0.369											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.017	2.922	2.049	2.234
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	700	0	900
d_b, Bicycle Delay [s]	16.02	25.35	60.00	18.15
I_b,int, Bicycle LOS Score for Intersection	2.222	2.041	4.132	2.974
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 SB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.350

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration							+					
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	3	0	0	0	0	0	1
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	100.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	616	290	507	914	0	118	3	141	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	0	15	0	0	0	15	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	626	290	507	929	0	118	3	156	0	0	0
Peak Hour Factor	1.0000	0.9050	0.9050	0.9050	0.9050	1.0000	0.9050	0.9050	0.9050	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	173	80	140	257	0	33	1	43	0	0	0
Total Analysis Volume [veh/h]	0	692	320	560	1027	0	130	3	172	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing m	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing mi	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	16	0	61	77	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	34	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	75	75	23	102	10	10	10	
g / C, Green / Cycle	0.63	0.63	0.19	0.85	0.08	0.08	0.08	
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.16	0.29	0.06	0.06	0.06	
s, saturation flow rate [veh/h]	6792	2813	3459	3560	1781	1636	1589	
c, Capacity [veh/h]	4263	1766	651	3023	150	138	134	
d1, Uniform Delay [s]	9.26	9.39	47.19	1.92	53.55	53.59	53.60	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.08	0.23	3.50	0.31	6.26	7.03	7.31	
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	0.16	0.18	0.86	0.34	0.72	0.72	0.73	
d, Delay for Lane Group [s/veh]	9.35	9.61	50.69	2.23	59.81	60.62	60.91	
Lane Group LOS	A	A	D	A	E	E	E	
Critical Lane Group	No	No	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	1.86	1.77	8.40	1.67	3.43	3.21	3.14	
50th-Percentile Queue Length [ft/ln]	46.40	44.30	209.88	41.67	85.71	80.33	78.57	
95th-Percentile Queue Length [veh/ln]	3.34	3.19	13.15	3.00	6.17	5.78	5.66	
95th-Percentile Queue Length [ft/ln]	83.52	79.74	328.68	75.00	154.27	144.60	141.43	

Movement, Approach, & Intersection Results

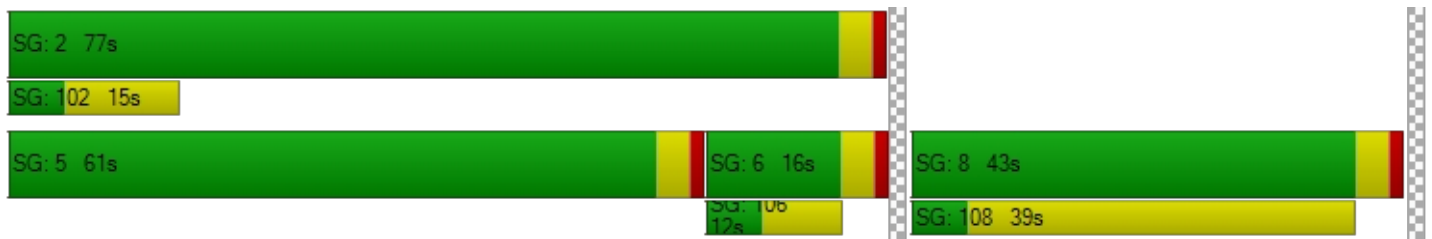
d_M, Delay for Movement [s/veh]	0.00	9.35	9.61	50.69	2.23	0.00	59.97	60.62	60.79	0.00	0.00	0.00
Movement LOS		A	A	D	A		E	E	E			
d_A, Approach Delay [s/veh]	9.43			19.33			60.42			0.00		
Approach LOS	A			B			E			A		
d_I, Intersection Delay [s/veh]	20.19											
Intersection LOS	C											
Intersection V/C	0.350											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	3.104			3.217			2.055			2.161		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	200			1217			650			0		
d_b, Bicycle Delay [s]	48.60			9.20			27.34			60.00		
I_b,int, Bicycle LOS Score for Intersection	1.977			2.869			2.063			4.132		
Bicycle LOS	A			C			B			D		

Sequence

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



Intersection Level Of Service Report
Intersection 3: Redlands Avenue at 4th Street

Control Type:	Signalized	Delay (sec / veh):	27.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	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												
Base Volume Input [veh/h]	23	297	10	34	274	739	611	21	23	5	10	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	10	0	0	30	0	0	0	15	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	307	10	34	304	739	611	21	38	5	10	20
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	84	3	9	84	203	168	6	10	1	3	5
Total Analysis Volume [veh/h]	30	337	11	37	334	812	671	23	42	5	11	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	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]	10	26	0	13	29	0	38	30	0	51	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	21	0	0	21	0	0	34	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	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	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	68	68	4	68	68	26	32	32	1	7	7
g / C, Green / Cycle	0.03	0.56	0.56	0.03	0.57	0.57	0.22	0.27	0.27	0.01	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.02	0.09	0.01	0.02	0.09	0.29	0.19	0.01	0.03	0.00	0.01	0.01
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	2813	3459	1870	1589	1781	1870	1589
c, Capacity [veh/h]	47	2002	894	53	2013	1591	754	499	424	14	106	90
d1, Uniform Delay [s]	57.84	12.70	11.58	57.69	12.50	15.92	45.51	32.65	33.13	59.22	53.71	54.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.42	0.18	0.03	15.36	0.18	1.17	3.85	0.04	0.10	14.51	0.42	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	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.17	0.01	0.70	0.17	0.51	0.89	0.05	0.10	0.36	0.10	0.24
d, Delay for Lane Group [s/veh]	71.26	12.88	11.60	73.04	12.68	17.10	49.36	32.69	33.23	73.73	54.14	55.54
Lane Group LOS	E	B	B	E	B	B	D	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.08	2.23	0.14	1.34	2.18	6.87	10.05	0.51	0.94	0.21	0.33	0.67
50th-Percentile Queue Length [ft/ln]	26.94	55.65	3.39	33.47	54.59	171.70	251.31	12.67	23.54	5.20	8.22	16.81
95th-Percentile Queue Length [veh/ln]	1.94	4.01	0.24	2.41	3.93	11.17	15.25	0.91	1.69	0.37	0.59	1.21
95th-Percentile Queue Length [ft/ln]	48.50	100.16	6.11	60.25	98.27	279.15	381.30	22.81	42.36	9.37	14.79	30.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.26	12.88	11.60	73.04	12.68	17.10	49.36	32.69	33.23	73.73	54.14	55.54
Movement LOS	E	B	B	E	B	B	D	C	C	E	D	E
d_A, Approach Delay [s/veh]	17.48			17.60			47.92			57.52		
Approach LOS	B			B			D			E		
d_I, Intersection Delay [s/veh]	27.79											
Intersection LOS	C											
Intersection V/C	0.513											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersection	2.591	3.197	2.726	2.336
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	417	433	650
d_b, Bicycle Delay [s]	40.02	37.60	36.82	27.34
l_b,int, Bicycle LOS Score for Intersection	1.871	2.536	2.774	1.591
Bicycle LOS	A	B	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Redlands Avenue at Ellis Avenue

Control Type:	All-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.384

Intersection Setup

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

Volumes

Name	Southbound		Eastbound		Westbound	
Base Volume Input [veh/h]	21	112	192	7	6	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	45	0	0	55	16	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	112	192	62	22	23
Peak Hour Factor	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	32	55	18	6	7
Total Analysis Volume [veh/h]	76	129	220	71	25	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	807	757	679	782
Degree of Utilization, x	0.25	0.38	0.04	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.01	1.82	0.11	0.10
95th-Percentile Queue Length [ft]	25.21	45.39	2.87	2.58
Approach Delay [s/veh]	8.97	10.69	7.83	
Approach LOS	A	B	A	
Intersection Delay [s/veh]	9.78			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: Case Road at Ellis Avenue

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.282

Intersection Setup

Name	Case Rd			Case Rd								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			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	Case Rd			Case Rd								
Base Volume Input [veh/h]	0	212	80	135	218	0	0	1	2	21	4	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	48	0	0	0	0	7	0	14	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	212	128	135	218	0	0	8	2	35	6	79
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	56	34	36	58	0	0	2	1	9	2	21
Total Analysis Volume [veh/h]	0	226	136	144	232	0	0	9	2	37	6	84
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	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	46	0	51	97	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	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	7	0	0	7	0	0	14	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]	0.0	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]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	85	85	12	101	11	11
g / C, Green / Cycle	0.71	0.71	0.10	0.84	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.12	0.09	0.08	0.12	0.01	0.08
s, saturation flow rate [veh/h]	1870	1589	1781	1870	1514	1575
c, Capacity [veh/h]	1350	1122	175	1566	175	189
d1, Uniform Delay [s]	5.90	5.67	53.07	1.81	49.37	53.27
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	0.22	9.21	0.20	0.15	4.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.12	0.82	0.15	0.06	0.67
d, Delay for Lane Group [s/veh]	6.17	5.89	62.28	2.00	49.52	57.33
Lane Group LOS	A	A	E	A	D	E
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.58	0.93	4.53	0.45	0.31	3.98
50th-Percentile Queue Length [ft/ln]	39.55	23.15	113.21	11.34	7.73	99.45
95th-Percentile Queue Length [veh/ln]	2.85	1.67	8.02	0.82	0.56	7.16
95th-Percentile Queue Length [ft/ln]	71.20	41.68	200.46	20.42	13.91	179.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.17	6.17	5.89	62.28	2.00	2.00	49.52	49.52	49.52	57.33	57.33	57.33
Movement LOS	A	A	A	E	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	6.06			25.09			49.52			57.33		
Approach LOS	A			C			D			E		
d_I, Intersection Delay [s/veh]	22.21											
Intersection LOS	C											
Intersection V/C	0.282											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.385			2.364			1.738			1.933		
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]	700			1550			317			317		
d_b, Bicycle Delay [s]	25.35			3.04			42.50			42.50		
I_b,int, Bicycle LOS Score for Intersection	2.157			2.180			1.578			1.769		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Case Road at Murrieta Road

Control Type:	All-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.334

Intersection Setup

Name	Case Rd		Case Rd		Case Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Case Rd		Case Rd		Case Rd	
Base Volume Input [veh/h]	132	19	189	48	19	169
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	14	0	0	48
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	19	203	48	19	217
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	5	53	13	5	57
Total Analysis Volume [veh/h]	138	20	212	50	20	227
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	575	711	680	784	620	679
Degree of Utilization, x	0.24	0.03	0.31	0.06	0.03	0.33

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.93	0.09	1.33	0.20	0.10	1.47
95th-Percentile Queue Length [ft]	23.28	2.17	33.25	5.10	2.50	36.74
Approach Delay [s/veh]	10.54		9.85		10.49	
Approach LOS	B		A		B	
Intersection Delay [s/veh]	10.25					
Intersection LOS	B					

**Intersection Level Of Service Report
Intersection 7: Case Rd at Mapes Rd**

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

Delay (sec / veh): 9.8
 Level Of Service: A
 Volume to Capacity (v/c): 0.365

Intersection Setup

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	13.00	13.00	13.00	14.00	14.00	14.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Base Volume Input [veh/h]	0	0	0	56	0	45	65	162	0	0	139	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	48	14	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	56	0	93	79	162	0	0	139	72
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	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	16	0	27	23	47	0	0	40	21
Total Analysis Volume [veh/h]	0	0	0	65	0	107	91	187	0	0	160	83
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	663	744	761	798
Degree of Utilization, x	0.00	0.23	0.37	0.30

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	0.89	1.68	1.29
95th-Percentile Queue Length [ft]	0.00	22.29	41.98	32.25
Approach Delay [s/veh]	0.00	9.29	10.43	9.48
Approach LOS	A	A	B	A
Intersection Delay [s/veh]	9.81			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 8: Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.154

Intersection Setup

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔↔		↑		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	14.00	16.00	13.00	13.00	12.00	14.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Base Volume Input [veh/h]	3	194	0	0	207	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	14	0	0	48	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	208	0	0	255	1
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	56	0	0	68	0
Total Analysis Volume [veh/h]	3	222	0	0	272	1
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Permissive	Unsignalized	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	10	0	14	0	96	110
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	0	54	58
g / C, Green / Cycle	0.45	0.00	0.45	0.48
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.15	0.00
s, saturation flow rate [veh/h]	1852	1945	1781	1945
c, Capacity [veh/h]	830	0	804	943
d1, Uniform Delay [s]	18.30	0.00	21.29	15.92
k, delay calibration	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	1.14	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.00	0.34	0.00
d, Delay for Lane Group [s/veh]	18.30	0.00	22.43	15.92
Lane Group LOS	B	A	C	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.05	0.00	4.98	0.01
50th-Percentile Queue Length [ft/ln]	1.21	0.00	124.48	0.34
95th-Percentile Queue Length [veh/ln]	0.09	0.00	8.64	0.02
95th-Percentile Queue Length [ft/ln]	2.18	0.00	215.97	0.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.30	0.00	0.00	0.00	22.43	15.92
Movement LOS	B		A	A	C	B
d_A, Approach Delay [s/veh]	18.30		0.00		22.41	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	22.36					
Intersection LOS	C					
Intersection V/C	0.154					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	100	167	1767
d_b, Bicycle Delay [s]	54.15	50.42	0.82
I_b,int, Bicycle LOS Score for Intersection	1.560	1.560	2.010
Bicycle LOS	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 9: I-215 SB Ramps at SR-74/Bonnie Dr

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵↑		↑↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	13.00	13.00	20.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Base Volume Input [veh/h]	173	551	598	28	40	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	35	0	0	13	8	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	208	551	598	41	48	161
Peak Hour Factor	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	154	167	11	13	45
Total Analysis Volume [veh/h]	232	614	667	46	54	179
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Unsignalized
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	96	110	14	0	10	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	107	85	85	5
g / C, Green / Cycle	0.15	0.89	0.71	0.71	0.04
(v / s)_i Volume / Saturation Flow Rate	0.13	0.32	0.34	0.03	0.03
s, saturation flow rate [veh/h]	1781	1945	1945	1653	1781
c, Capacity [veh/h]	266	1739	1384	1177	70
d1, Uniform Delay [s]	49.94	0.98	7.59	5.13	57.14
k, delay calibration	0.11	0.50	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.75	0.56	1.20	0.06	16.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.35	0.48	0.04	0.78
d, Delay for Lane Group [s/veh]	58.69	1.54	8.79	5.19	73.81
Lane Group LOS	E	A	A	A	E
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	7.20	0.27	6.35	0.29	1.91
50th-Percentile Queue Length [ft/ln]	180.07	6.81	158.78	7.37	47.68
95th-Percentile Queue Length [veh/ln]	11.60	0.49	10.48	0.53	3.43
95th-Percentile Queue Length [ft/ln]	290.11	12.25	262.11	13.27	85.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.69	1.54	8.79	5.19	73.81	0.00
Movement LOS	E	A	A	A	E	
d_A, Approach Delay [s/veh]	17.22		8.56		73.81	
Approach LOS	B		A		E	
d_I, Intersection Delay [s/veh]	15.28					
Intersection LOS	B					
Intersection V/C	0.504					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1767	167	100
d_b, Bicycle Delay [s]	0.82	50.42	54.15
I_b,int, Bicycle LOS Score for Intersection	2.956	2.736	1.560
Bicycle LOS	C	B	A

Sequence




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



Intersection Level Of Service Report
Intersection 10: I-215 NB Ramps at SR-74

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

Intersection Setup

Name	I-215 NB Ramps		SR-74		SR-74	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	20.00	20.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	240.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	I-215 NB Ramps		SR-74		SR-74	
Base Volume Input [veh/h]	168	10	9	727	687	843
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	4	2	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	168	38	13	729	694	843
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	10	3	196	186	226
Total Analysis Volume [veh/h]	180	41	14	782	745	905
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protected	Permissive	Permissive	Unsignalized
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	10	10	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	65	0	10	55	45	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	L	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	2	95	89
g / C, Green / Cycle	0.14	0.02	0.79	0.74
(v / s)_i Volume / Saturation Flow Rate	0.12	0.01	0.22	0.21
s, saturation flow rate [veh/h]	1812	1781	3560	3560
c, Capacity [veh/h]	256	28	2819	2644
d1, Uniform Delay [s]	50.37	58.58	3.33	5.02
k, delay calibration	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.38	12.93	0.24	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.50	0.28	0.28
d, Delay for Lane Group [s/veh]	58.75	71.51	3.58	5.29
Lane Group LOS	E	E	A	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.08	0.51	1.66	2.34
50th-Percentile Queue Length [ft/ln]	176.96	12.76	41.55	58.49
95th-Percentile Queue Length [veh/ln]	11.44	0.92	2.99	4.21
95th-Percentile Queue Length [ft/ln]	286.04	22.98	74.78	105.29

Movement, Approach, & Intersection Results

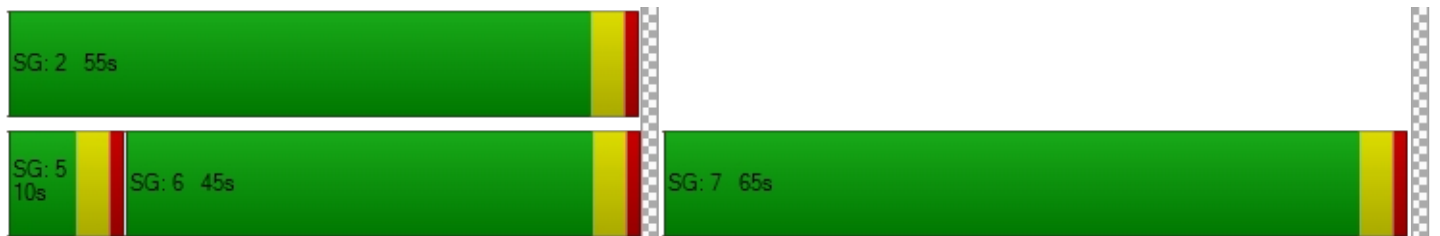
d_M, Delay for Movement [s/veh]	58.75	58.75	71.51	3.58	5.29	0.00
Movement LOS	E	E	E	A	A	
d_A, Approach Delay [s/veh]	58.75		4.77		5.29	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	11.76					
Intersection LOS	B					
Intersection V/C	0.342					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1017	850	683
d_b, Bicycle Delay [s]	14.50	19.84	26.00
I_b,int, Bicycle LOS Score for Intersection	1.924	2.216	2.174
Bicycle LOS	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	0	0	0	0	0	26	74	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	0	0	0	0	0	0	54	74	0	23	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	0	0	0	0	0	14	19	0	6	0
Total Analysis Volume [veh/h]	23	0	0	0	0	0	0	57	78	0	24	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.33	9.79	8.86	9.21	9.91	8.42	7.26	0.00	0.00	7.48	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.07	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.33			9.18			0.00			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.18											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	0	0	0	0	0	0	0	26	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	0	0	0	0	0	28	26	0	15	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	0	0	7	7	0	4	0
Total Analysis Volume [veh/h]	8	0	0	0	0	0	0	29	27	0	16	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.87	9.36	8.53	8.84	9.40	8.39	7.25	0.00	0.00	7.32	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.65	0.65	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.87			8.87			0.00			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	0.89											
Intersection LOS	A											

Newcastle Ellis Avenue Warehouse

Vistro File: K:\...\Ellis Newcastle BASE - PM.vistro

Scenario 2 EX WP PM

Report File: K:\...\2 EX WP PM.pdf

6/28/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-215 NB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	NB Left	0.355	25.0	C
2	I-215 SB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	EB Right	0.370	21.3	C
3	Redlands Avenue at 4th Street	Signalized	HCM 7th Edition	NB Left	0.571	34.9	C
4	Redlands Avenue at Ellis Avenue	All-way stop	HCM 7th Edition	EB Left	0.303	9.3	A
5	Case Road at Ellis Avenue	Signalized	HCM 7th Edition	SB Left	0.414	24.7	C
6	Case Road at Murrieta Road	All-way stop	HCM 7th Edition	EB Thru	0.617	13.6	B
7	Case Rd at Mapes Rd	All-way stop	HCM 7th Edition	EB Thru	0.535	13.0	B
8	Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd	Signalized	HCM 7th Edition	EB Right	0.177	23.8	C
9	I-215 SB Ramps at SR-74/Bonnie Dr	Signalized	HCM 7th Edition	EB Left	0.616	19.1	B
10	I-215 NB Ramps at SR-74	Signalized	HCM 7th Edition	EB Left	0.468	14.1	B
11	Ellis Avenue at West Project Driveway	Two-way stop	HCM 7th Edition	NB Left	0.094	10.0	B
12	Ellis Avenue at East Project Driveway	Two-way stop	HCM 7th Edition	NB Left	0.044	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: I-215 NB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	25.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.355

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	← ↑ →			↑ ↑ ↑						← ↑ →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	1	0	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	1	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	1000.00	0.00	300.00	0.00	0.00	0.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	169	650	0	0	785	122	0	0	0	298	2	481
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	14	0	0	5	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	664	0	0	790	122	0	0	0	298	2	481
Peak Hour Factor	0.9750	0.9750	1.0000	1.0000	0.9750	0.9750	1.0000	1.0000	1.0000	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	170	0	0	203	31	0	0	0	76	1	123
Total Analysis Volume [veh/h]	188	681	0	0	810	125	0	0	0	306	2	493
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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	14	33	0	0	19	0	0	0	0	0	87	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	8	89	76	76		23	23	23
g / C, Green / Cycle	0.07	0.74	0.64	0.64		0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.05	0.19	0.12	0.08		0.16	0.16	0.16
s, saturation flow rate [veh/h]	3459	3560	6792	1589		1781	1609	1589
c, Capacity [veh/h]	244	2633	4316	1010		345	312	308
d1, Uniform Delay [s]	54.80	5.03	9.05	8.65		46.23	46.59	46.63
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	5.06	0.24	0.10	0.25		4.50	6.06	6.29
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	0.77	0.26	0.19	0.12		0.81	0.84	0.84
d, Delay for Lane Group [s/veh]	59.85	5.27	9.15	8.90		50.73	52.64	52.92
Lane Group LOS	E	A	A	A		D	D	D
Critical Lane Group	No	Yes	No	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.96	2.52	2.15	1.33		8.36	8.04	8.00
50th-Percentile Queue Length [ft/ln]	74.11	63.03	53.87	33.13		209.10	201.05	200.12
95th-Percentile Queue Length [veh/ln]	5.34	4.54	3.88	2.39		13.11	12.69	12.64
95th-Percentile Queue Length [ft/ln]	133.40	113.46	96.97	59.63		327.67	317.32	316.12

Movement, Approach, & Intersection Results

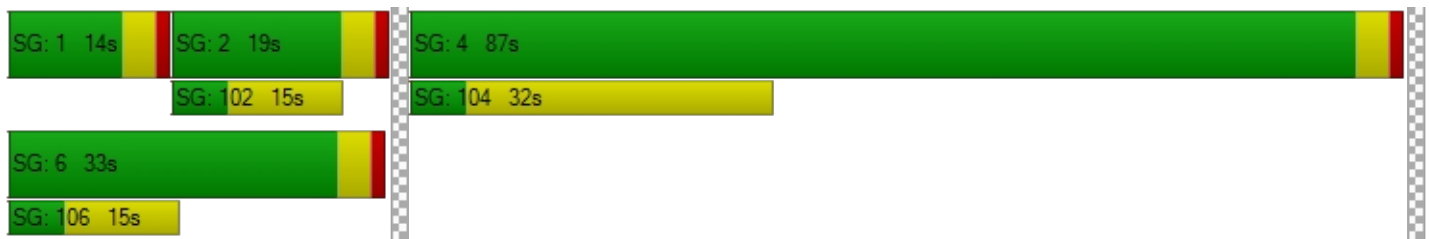
d_M, Delay for Movement [s/veh]	59.85	5.27	0.00	0.00	9.15	8.90	0.00	0.00	0.00	50.96	52.64	52.79
Movement LOS	E	A			A	A				D	D	D
d_A, Approach Delay [s/veh]	17.08				9.11		0.00		52.07			
Approach LOS	B				A		A		D			
d_I, Intersection Delay [s/veh]	24.98											
Intersection LOS	C											
Intersection V/C	0.355											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.983	2.903	2.058	2.216
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	483	250	0	1383
d_b, Bicycle Delay [s]	34.50	45.94	60.00	5.70
I_b,int, Bicycle LOS Score for Intersection	2.277	1.945	4.132	2.881
Bicycle LOS	B	A	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 SB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.370

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration							+					
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	3	0	0	0	0	0	1
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	100.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	620	435	415	702	0	157	0	198	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	0	5	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	648	435	415	707	0	157	0	203	0	0	0
Peak Hour Factor	1.0000	0.9370	0.9370	0.9370	0.9370	1.0000	0.9370	0.9370	0.9370	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	173	116	111	189	0	42	0	54	0	0	0
Total Analysis Volume [veh/h]	0	692	464	443	755	0	168	0	217	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing m	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing mi	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	31	0	46	77	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	34	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	78	78	18	100	12	12	12	
g / C, Green / Cycle	0.65	0.65	0.15	0.83	0.10	0.10	0.10	
(v / s)_i Volume / Saturation Flow Rate	0.10	0.16	0.13	0.21	0.08	0.08	0.08	
s, saturation flow rate [veh/h]	6792	2813	3459	3560	1781	1633	1589	
c, Capacity [veh/h]	4392	1819	527	2964	180	165	160	
d1, Uniform Delay [s]	8.34	8.97	49.42	2.14	52.55	52.56	52.56	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.08	0.34	3.68	0.21	6.51	7.16	7.37	
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	0.16	0.26	0.84	0.25	0.76	0.76	0.76	
d, Delay for Lane Group [s/veh]	8.42	9.31	53.10	2.34	59.06	59.72	59.94	
Lane Group LOS	A	A	D	A	E	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	1.73	2.55	6.72	1.37	4.34	4.02	3.93	
50th-Percentile Queue Length [ft/ln]	43.28	63.72	167.89	34.25	108.45	100.53	98.18	
95th-Percentile Queue Length [veh/ln]	3.12	4.59	10.97	2.47	7.75	7.24	7.07	
95th-Percentile Queue Length [ft/ln]	77.91	114.69	274.14	61.64	193.84	180.96	176.73	

Movement, Approach, & Intersection Results

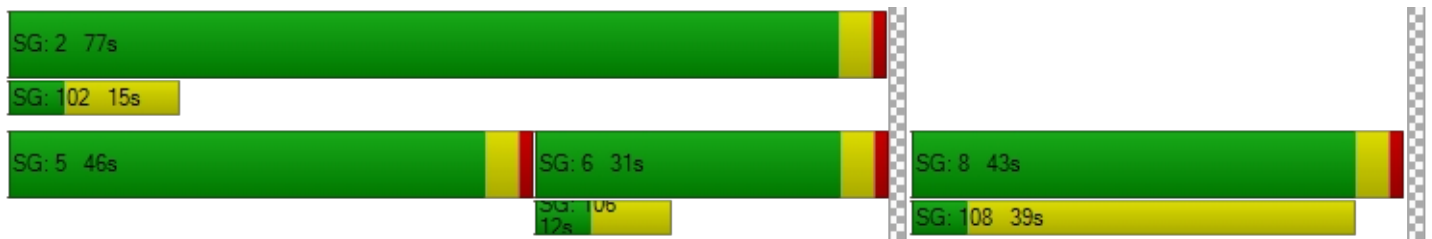
d_M, Delay for Movement [s/veh]	0.00	8.42	9.31	53.10	2.34	0.00	59.21	59.72	59.85	0.00	0.00	0.00
Movement LOS		A	A	D	A		E	E	E			
d_A, Approach Delay [s/veh]	8.77			21.11			59.56			0.00		
Approach LOS	A			C			E			A		
d_I, Intersection Delay [s/veh]	21.31											
Intersection LOS	C											
Intersection V/C	0.370											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	3.095			3.182			2.081			2.172		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	450			1217			650			0		
d_b, Bicycle Delay [s]	36.04			9.20			27.34			60.00		
I_b,int, Bicycle LOS Score for Intersection	2.036			2.548			2.195			4.132		
Bicycle LOS	B			B			B			D		

Sequence

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



Intersection Level Of Service Report
Intersection 3: Redlands Avenue at 4th Street

Control Type:	Signalized	Delay (sec / veh):	34.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	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												
Base Volume Input [veh/h]	69	272	9	18	215	652	781	21	78	10	16	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	28	0	0	10	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	300	9	18	225	652	781	21	83	10	16	46
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	80	2	5	60	175	209	6	22	3	4	12
Total Analysis Volume [veh/h]	89	322	10	19	241	699	837	23	89	11	17	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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	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]	10	26	0	14	30	0	37	66	0	14	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	21	0	0	21	0	0	34	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	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	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	61	61	2	58	58	31	39	39	2	9	9
g / C, Green / Cycle	0.05	0.51	0.51	0.02	0.48	0.48	0.26	0.32	0.32	0.01	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.05	0.09	0.01	0.01	0.07	0.25	0.24	0.01	0.06	0.01	0.01	0.03
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	2813	3459	1870	1589	1781	1870	1589
c, Capacity [veh/h]	89	1822	813	35	1714	1354	900	602	512	23	140	119
d1, Uniform Delay [s]	57.00	15.73	14.40	58.27	17.31	21.47	43.33	27.91	29.20	58.81	51.80	52.96
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	44.20	0.21	0.03	12.17	0.17	1.41	4.97	0.03	0.16	14.14	0.38	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	0.18	0.01	0.54	0.14	0.52	0.93	0.04	0.17	0.47	0.12	0.41
d, Delay for Lane Group [s/veh]	101.20	15.95	14.43	70.44	17.48	22.88	48.30	27.94	29.36	72.95	52.18	55.21
Lane Group LOS	F	B	B	E	B	C	D	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.79	2.42	0.14	0.69	1.90	6.95	12.65	0.46	1.88	0.42	0.49	1.49
50th-Percentile Queue Length [ft/ln]	94.74	60.53	3.52	17.29	47.50	173.87	316.13	11.59	47.05	10.59	12.36	37.21
95th-Percentile Queue Length [veh/ln]	6.82	4.36	0.25	1.24	3.42	11.28	18.48	0.83	3.39	0.76	0.89	2.68
95th-Percentile Queue Length [ft/ln]	170.54	108.95	6.34	31.11	85.51	281.99	461.92	20.86	84.69	19.06	22.26	66.98

Movement, Approach, & Intersection Results

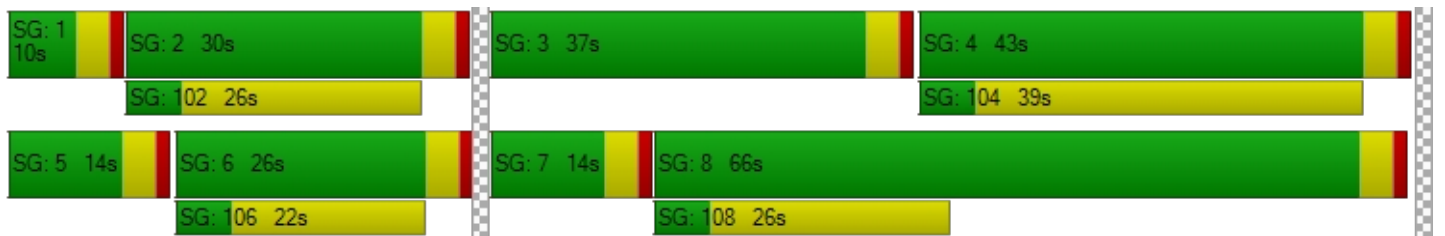
d_M, Delay for Movement [s/veh]	101.20	15.95	14.43	70.44	17.48	22.88	48.30	27.94	29.36	72.95	52.18	55.21
Movement LOS	F	B	B	E	B	C	D	C	C	E	D	E
d_A, Approach Delay [s/veh]	33.93			22.46			46.03			57.08		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	34.87											
Intersection LOS	C											
Intersection V/C	0.571											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.592	3.193	2.753	2.340
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	433	1033	650
d_b, Bicycle Delay [s]	40.02	36.82	14.02	27.34
I_b,int, Bicycle LOS Score for Intersection	1.907	2.351	3.125	1.623
Bicycle LOS	A	B	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Redlands Avenue at Ellis Avenue

Control Type:	All-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.303

Intersection Setup

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

Volumes

Name	Southbound		Eastbound		Westbound	
Base Volume Input [veh/h]	23	176	155	15	3	61
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	25	64	42
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	176	155	40	67	103
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	49	43	11	19	29
Total Analysis Volume [veh/h]	42	196	173	45	75	115
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	810	720	675	778
Degree of Utilization, x	0.29	0.30	0.11	0.15

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.23	1.28	0.37	0.52
95th-Percentile Queue Length [ft]	30.67	31.93	9.33	12.93
Approach Delay [s/veh]	9.28	10.16	8.36	
Approach LOS	A	B	A	
Intersection Delay [s/veh]	9.30			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: Case Road at Ellis Avenue

Control Type:	Signalized	Delay (sec / veh):	24.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.414

Intersection Setup

Name	Case Rd			Case Rd								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			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	Case Rd			Case Rd								
Base Volume Input [veh/h]	0	278	67	102	327	0	0	2	0	95	3	97
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	22	0	0	0	0	3	0	57	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	278	89	102	327	0	0	5	0	152	10	97
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	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	76	24	28	90	0	0	1	0	42	3	27
Total Analysis Volume [veh/h]	0	305	98	112	359	0	0	5	0	167	11	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	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	55	0	24	79	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	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	7	0	0	7	0	0	14	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]	0.0	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]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	74	74	9	87	25	25
g / C, Green / Cycle	0.62	0.62	0.08	0.73	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.16	0.06	0.06	0.19	0.00	0.19
s, saturation flow rate [veh/h]	1870	1589	1781	1870	1792	1514
c, Capacity [veh/h]	1182	979	140	1362	398	358
d1, Uniform Delay [s]	10.56	9.42	54.35	5.48	38.02	46.45
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	0.20	9.94	0.47	0.01	6.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.10	0.80	0.26	0.01	0.79
d, Delay for Lane Group [s/veh]	11.09	9.62	64.29	5.96	38.03	52.54
Lane Group LOS	B	A	E	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.36	0.97	3.58	2.41	0.12	8.86
50th-Percentile Queue Length [ft/ln]	84.05	24.23	89.45	60.24	3.00	221.41
95th-Percentile Queue Length [veh/ln]	6.05	1.74	6.44	4.34	0.22	13.74
95th-Percentile Queue Length [ft/ln]	151.28	43.62	161.00	108.44	5.39	343.43

Movement, Approach, & Intersection Results

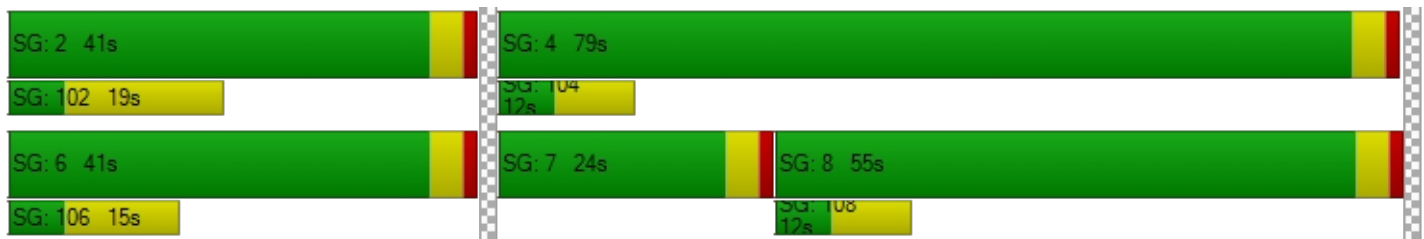
d_M, Delay for Movement [s/veh]	11.09	11.09	9.62	64.29	5.96	5.96	38.03	38.03	38.03	52.54	52.54	52.54
Movement LOS	B	B	A	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	10.73			19.83			38.03			52.54		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	24.74											
Intersection LOS	C											
Intersection V/C	0.414											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.747			2.481			1.738			1.973		
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]	850			1250			617			617		
d_b, Bicycle Delay [s]	19.84			8.44			28.70			28.70		
I_b,int, Bicycle LOS Score for Intersection	2.225			2.337			1.568			2.028		
Bicycle LOS	B			B			A			B		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Case Road at Murrieta Road

Control Type:	All-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

Intersection Setup

Name	Case Rd		Case Rd		Case Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Case Rd		Case Rd		Case Rd	
Base Volume Input [veh/h]	86	16	314	101	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	57	0	0	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	16	371	101	16	288
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	5	105	28	5	81
Total Analysis Volume [veh/h]	97	18	419	114	18	325
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	511	616	679	783	602	657
Degree of Utilization, x	0.19	0.03	0.62	0.15	0.03	0.49

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.69	0.09	4.27	0.51	0.09	2.76
95th-Percentile Queue Length [ft]	17.36	2.26	106.86	12.71	2.31	68.89
Approach Delay [s/veh]	10.98		14.44		13.19	
Approach LOS	B		B		B	
Intersection Delay [s/veh]	13.60					
Intersection LOS	B					

**Intersection Level Of Service Report
Intersection 7: Case Rd at Mapes Rd**

Control Type:	All-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

Intersection Setup

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	13.00	13.00	13.00	14.00	14.00	14.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Base Volume Input [veh/h]	0	0	0	81	0	69	86	184	0	0	252	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	22	57	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	81	0	91	143	184	0	0	252	96
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
Other Adjustment Factor	1.0000	1.0000	1.0000	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	23	0	26	41	52	0	0	72	27
Total Analysis Volume [veh/h]	0	0	0	92	0	104	163	210	0	0	287	109
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	573	647	702	740
Degree of Utilization, x	0.00	0.30	0.53	0.54

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	1.28	3.16	3.22
95th-Percentile Queue Length [ft]	0.00	31.93	78.93	80.43
Approach Delay [s/veh]	0.00	10.98	13.79	13.34
Approach LOS	A	B	B	B
Intersection Delay [s/veh]	13.03			
Intersection LOS	B			

Intersection Level Of Service Report

Intersection 8: Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd

Control Type:	Signalized	Delay (sec / veh):	23.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.177

Intersection Setup

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔↔		↑		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	14.00	16.00	13.00	13.00	12.00	14.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Base Volume Input [veh/h]	0	311	0	2	262	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	57	0	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	368	0	2	284	3
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	101	0	1	78	1
Total Analysis Volume [veh/h]	0	406	0	2	313	3
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Permissive	Unsignalized	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	10	0	14	0	96	110
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	1	54	58
g / C, Green / Cycle	0.45	0.01	0.45	0.49
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.18	0.00
s, saturation flow rate [veh/h]	1852	1653	1781	1945
c, Capacity [veh/h]	825	9	799	948
d1, Uniform Delay [s]	0.00	59.42	22.11	15.77
k, delay calibration	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	11.91	1.44	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.22	0.39	0.00
d, Delay for Lane Group [s/veh]	0.00	71.33	23.55	15.77
Lane Group LOS	A	E	C	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	0.09	5.94	0.04
50th-Percentile Queue Length [ft/ln]	0.00	2.25	148.60	1.02
95th-Percentile Queue Length [veh/ln]	0.00	0.16	9.94	0.07
95th-Percentile Queue Length [ft/ln]	0.00	4.05	248.56	1.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	71.33	71.33	23.55	15.77
Movement LOS	A		E	E	C	B
d_A, Approach Delay [s/veh]	0.00		71.33		23.48	
Approach LOS	A		E		C	
d_I, Intersection Delay [s/veh]	23.78					
Intersection LOS	C					
Intersection V/C	0.177					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	100	167	1767
d_b, Bicycle Delay [s]	54.15	50.42	0.82
I_b,int, Bicycle LOS Score for Intersection	1.560	1.563	2.081
Bicycle LOS	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 9: I-215 SB Ramps at SR-74/Bonnie Dr

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.616

Intersection Setup

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵↑		↑↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	13.00	13.00	20.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Base Volume Input [veh/h]	226	339	849	33	23	303
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	7	32	25
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	241	339	849	40	55	328
Peak Hour Factor	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	87	217	10	14	84
Total Analysis Volume [veh/h]	246	347	868	41	56	335
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Unsignalized
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	29	110	81	0	10	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	107	85	85	5
g / C, Green / Cycle	0.15	0.89	0.70	0.70	0.04
(v / s)_i Volume / Saturation Flow Rate	0.14	0.18	0.45	0.02	0.03
s, saturation flow rate [veh/h]	1781	1945	1945	1653	1781
c, Capacity [veh/h]	277	1736	1369	1164	72
d1, Uniform Delay [s]	49.66	0.84	9.50	5.39	57.01
k, delay calibration	0.12	0.50	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.51	0.26	2.25	0.06	15.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.20	0.63	0.04	0.77
d, Delay for Lane Group [s/veh]	60.18	1.10	11.75	5.45	72.81
Lane Group LOS	E	A	B	A	E
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	7.77	0.12	10.35	0.27	1.96
50th-Percentile Queue Length [ft/ln]	194.13	3.12	258.79	6.82	49.03
95th-Percentile Queue Length [veh/ln]	12.34	0.22	15.63	0.49	3.53
95th-Percentile Queue Length [ft/ln]	308.38	5.62	390.71	12.28	88.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.18	1.10	11.75	5.45	72.81	0.00
Movement LOS	E	A	B	A	E	
d_A, Approach Delay [s/veh]	25.61		11.46		72.81	
Approach LOS	C		B		E	
d_I, Intersection Delay [s/veh]	19.05					
Intersection LOS	B					
Intersection V/C	0.616					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1767	1283	100
d_b, Bicycle Delay [s]	0.82	7.70	54.15
I_b,int, Bicycle LOS Score for Intersection	2.538	3.059	1.560
Bicycle LOS	B	C	A

Sequence




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



Intersection Level Of Service Report
Intersection 10: I-215 NB Ramps at SR-74

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

Intersection Setup

Name	I-215 NB Ramps		SR-74		SR-74	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	20.00	20.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	240.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	I-215 NB Ramps		SR-74		SR-74	
Base Volume Input [veh/h]	227	25	14	1034	596	832
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	18	7	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	227	37	32	1041	599	832
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	10	9	278	160	222
Total Analysis Volume [veh/h]	243	40	34	1112	640	889
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protected	Permissive	Permissive	Unsignalized
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	10	10	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	83	0	13	37	24	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	L	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	3	91	84
g / C, Green / Cycle	0.17	0.03	0.76	0.70
(v / s)_i Volume / Saturation Flow Rate	0.16	0.02	0.31	0.18
s, saturation flow rate [veh/h]	1821	1781	3560	3560
c, Capacity [veh/h]	319	51	2699	2478
d1, Uniform Delay [s]	48.32	57.72	5.11	6.76
k, delay calibration	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.20	13.99	0.47	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.67	0.41	0.26
d, Delay for Lane Group [s/veh]	56.52	71.70	5.57	7.01
Lane Group LOS	E	E	A	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.98	1.19	3.61	2.55
50th-Percentile Queue Length [ft/ln]	224.46	29.73	90.36	63.74
95th-Percentile Queue Length [veh/ln]	13.89	2.14	6.51	4.59
95th-Percentile Queue Length [ft/ln]	347.31	53.51	162.64	114.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.52	56.52	71.70	5.57	7.01	0.00
Movement LOS	E	E	E	A	A	
d_A, Approach Delay [s/veh]	56.52		7.54		7.01	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	14.07					
Intersection LOS	B					
Intersection V/C	0.468					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1317	550	333
d_b, Bicycle Delay [s]	7.00	31.54	41.67
I_b,int, Bicycle LOS Score for Intersection	2.027	2.505	2.088
Bicycle LOS	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.094

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	70	0	0	0	0	0	0	14	26	0	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	0	0	0	0	0	0	52	26	0	100	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	0	0	0	0	0	14	7	0	26	0
Total Analysis Volume [veh/h]	74	0	0	0	0	0	0	55	27	0	105	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.03	10.47	9.09	9.56	10.09	8.79	7.42	0.00	0.00	7.38	0.00	0.00
Movement LOS	B	B	A	A	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.31	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	7.73	7.73	7.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.03			9.48			0.00			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	2.84											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.044

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	36	0	0	0	0	0	0	0	14	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	0	0	0	0	0	0	38	14	0	64	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	0	0	0	0	10	4	0	17	0
Total Analysis Volume [veh/h]	38	0	0	0	0	0	0	40	15	0	67	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.37	9.83	8.72	9.17	9.69	8.61	7.35	0.00	0.00	7.32	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.14	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.45	3.45	3.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.37			9.16			0.00			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.22											
Intersection LOS	A											

APPENDIX D-3

**INTERSECTION ANALYSIS
WORKSHEETS -
OPENING YEAR 2025 CUMULATIVE
CONDITIONS**

Newcastle Ellis Avenue Warehouse

Vistro File: K:\...\Ellis Newcastle BASE - AM.vistro

Scenario 3 OY CP AM

Report File: K:\...\3 OY CP AM.pdf

6/28/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-215 NB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	NB Left	0.471	25.4	C
2	I-215 SB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	EB Right	0.473	26.0	C
3	Redlands Avenue at 4th Street	Signalized	HCM 7th Edition	SB Left	0.581	28.9	C
4	Redlands Avenue at Ellis Avenue	All-way stop	HCM 7th Edition	EB Left	0.776	19.6	C
5	Case Road at Ellis Avenue	Signalized	HCM 7th Edition	SB Left	0.529	28.2	C
6	Case Road at Murrieta Road	All-way stop	HCM 7th Edition	WB Thru	0.802	19.4	C
7	Case Rd at Mapes Rd	All-way stop	HCM 7th Edition	EB Left	0.806	24.1	C
8	Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd	Signalized	HCM 7th Edition	WB Left	0.324	31.9	C
9	I-215 SB Ramps at SR-74/Bonnie Dr	Signalized	HCM 7th Edition	EB Left	0.738	29.7	C
10	I-215 NB Ramps at SR-74	Signalized	HCM 7th Edition	EB Left	0.527	22.3	C
11	Ellis Avenue at West Project Driveway	Two-way stop	HCM 7th Edition	SB Right	0.039	8.7	A
12	Ellis Avenue at East Project Driveway	Two-way stop	HCM 7th Edition	SB Right	0.022	8.6	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: I-215 NB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	← ↑ →			↑ ↑ ↑						← ↑ →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	1	0	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	1	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	1000.00	0.00	300.00	0.00	0.00	0.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	133	611	0	0	949	132	0	0	0	409	2	393
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0000	1.0000	1.0600	1.0600	1.0000	1.0000	1.0000	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	81	134	0	0	142	117	0	0	0	20	0	127
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	222	782	0	0	1148	257	0	0	0	454	2	544
Peak Hour Factor	0.9390	0.9390	1.0000	1.0000	0.9390	0.9390	1.0000	1.0000	1.0000	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	208	0	0	306	68	0	0	0	121	1	145
Total Analysis Volume [veh/h]	236	833	0	0	1223	274	0	0	0	483	2	579
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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	17	33	0	0	16	0	0	0	0	0	87	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	10	81	67	67		31	31	31
g / C, Green / Cycle	0.09	0.68	0.56	0.56		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.07	0.23	0.18	0.17		0.20	0.21	0.22
s, saturation flow rate [veh/h]	3459	3560	6792	1589		1781	1655	1589
c, Capacity [veh/h]	295	2409	3788	886		457	425	408
d1, Uniform Delay [s]	53.86	8.20	14.31	14.18		41.38	42.17	42.65
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	4.95	0.39	0.23	0.91		2.85	4.35	5.75
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	0.80	0.35	0.32	0.31		0.78	0.83	0.87
d, Delay for Lane Group [s/veh]	58.81	8.59	14.54	15.09		44.23	46.52	48.40
Lane Group LOS	E	A	B	B		D	D	D
Critical Lane Group	Yes	No	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.70	4.42	4.47	4.14		10.06	10.40	10.65
50th-Percentile Queue Length [ft/ln]	92.48	110.41	111.82	103.53		251.61	260.05	266.32
95th-Percentile Queue Length [veh/ln]	6.66	7.86	7.94	7.45		15.27	15.69	16.01
95th-Percentile Queue Length [ft/ln]	166.47	196.58	198.53	186.36		381.68	392.29	400.14

Movement, Approach, & Intersection Results

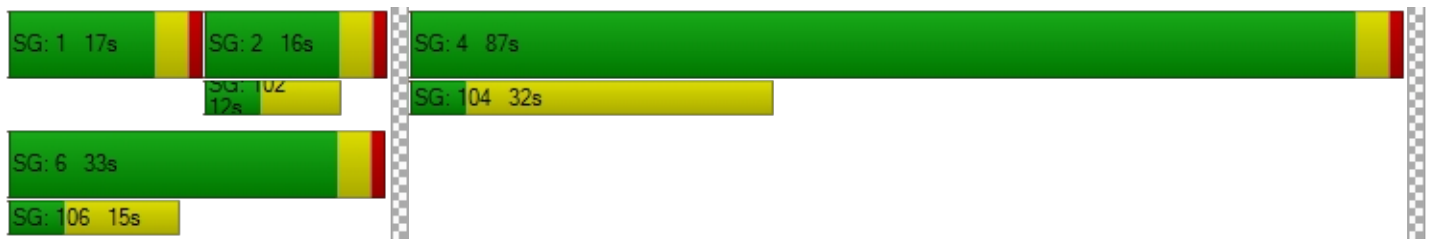
d_M, Delay for Movement [s/veh]	58.81	8.59	0.00	0.00	14.54	15.09	0.00	0.00	0.00	44.84	46.52	47.67
Movement LOS	E	A			B	B				D	D	D
d_A, Approach Delay [s/veh]	19.68				14.64		0.00		46.39			
Approach LOS	B				B		A		D			
d_I, Intersection Delay [s/veh]	25.43											
Intersection LOS	C											
Intersection V/C	0.471											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.079	3.014	2.122	2.301
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	483	200	0	1383
d_b, Bicycle Delay [s]	34.50	48.60	60.00	5.70
I_b,int, Bicycle LOS Score for Intersection	2.442	2.177	4.132	3.315
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 SB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.473

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration							+					
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	3	0	0	0	0	0	1
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	100.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	616	290	507	914	0	118	3	141	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0600	1.0600	1.0600	1.0600	1.0000	1.0600	1.0600	1.0600	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	89	32	117	45	0	127	0	186	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	742	339	654	1014	0	252	3	335	0	0	0
Peak Hour Factor	1.0000	0.9050	0.9050	0.9050	0.9050	1.0000	0.9050	0.9050	0.9050	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	205	94	181	280	0	70	1	93	0	0	0
Total Analysis Volume [veh/h]	0	820	375	723	1120	0	278	3	370	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0		0		0			
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0			
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0			
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0			
Bicycle Volume [bicycles/h]	0		0		0		0		0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	25	0	52	77	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	34	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	61	61	28	93	19	19	19	
g / C, Green / Cycle	0.51	0.51	0.24	0.78	0.16	0.16	0.16	
(v / s)_i Volume / Saturation Flow Rate	0.12	0.13	0.21	0.31	0.13	0.13	0.13	
s, saturation flow rate [veh/h]	6792	2813	3459	3560	1781	1632	1589	
c, Capacity [veh/h]	3425	1419	821	2759	282	258	252	
d1, Uniform Delay [s]	16.77	17.01	44.12	4.43	48.81	48.88	48.90	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.17	0.46	3.30	0.44	5.73	6.50	6.75	
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	0.24	0.26	0.88	0.41	0.82	0.82	0.83	
d, Delay for Lane Group [s/veh]	16.93	17.46	47.42	4.88	54.54	55.38	55.65	
Lane Group LOS	B	B	D	A	D	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.21	3.03	10.68	3.93	7.11	6.63	6.50	
50th-Percentile Queue Length [ft/ln]	80.32	75.86	267.02	98.16	177.69	165.87	162.42	
95th-Percentile Queue Length [veh/ln]	5.78	5.46	16.04	7.07	11.48	10.86	10.68	
95th-Percentile Queue Length [ft/ln]	144.57	136.54	401.02	176.69	287.00	271.48	266.92	

Movement, Approach, & Intersection Results

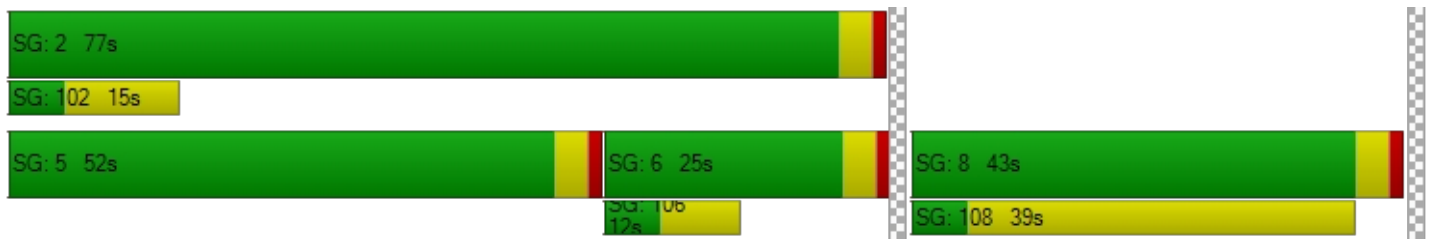
d_M, Delay for Movement [s/veh]	0.00	16.93	17.46	47.42	4.88	0.00	54.71	55.38	55.54	0.00	0.00	0.00
Movement LOS		B	B	D	A		D	E	E			
d_A, Approach Delay [s/veh]		17.10		21.57			55.17			0.00		
Approach LOS		B		C			E			A		
d_I, Intersection Delay [s/veh]		26.05										
Intersection LOS		C										
Intersection V/C		0.473										

Other Modes

g_Walk,mi, Effective Walk Time [s]		9.0		9.0		9.0		9.0
M_corner, Corner Circulation Area [ft ² /ped]		0.00		0.00		0.00		0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]		0.00		0.00		0.00		0.00
d_p, Pedestrian Delay [s]		51.34		51.34		51.34		51.34
I_p,int, Pedestrian LOS Score for Intersection		3.155		3.268		2.167		2.267
Crosswalk LOS		C		C		B		B
s_b, Saturation Flow Rate of the bicycle lane		2000		2000		2000		2000
c_b, Capacity of the bicycle lane [bicycles/h]		350		1217		650		0
d_b, Bicycle Delay [s]		40.84		9.20		27.34		60.00
I_b,int, Bicycle LOS Score for Intersection		2.053		3.080		2.634		4.132
Bicycle LOS		B		C		B		D

Sequence

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



Intersection Level Of Service Report
Intersection 3: Redlands Avenue at 4th Street

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	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												
Base Volume Input [veh/h]	23	297	10	34	274	739	611	21	23	5	10	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	7	57	0	0	190	39	65	0	25	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	372	11	36	480	822	713	22	49	5	11	21
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	102	3	10	132	226	196	6	13	1	3	6
Total Analysis Volume [veh/h]	34	409	12	40	527	903	784	24	54	5	12	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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	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]	10	26	0	13	29	0	38	30	0	51	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	21	0	0	21	0	0	34	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	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	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	64	64	4	64	64	30	36	36	1	7	7
g / C, Green / Cycle	0.03	0.53	0.53	0.03	0.53	0.53	0.25	0.30	0.30	0.01	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.01	0.02	0.15	0.32	0.23	0.01	0.03	0.00	0.01	0.01
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	2813	3459	1870	1589	1781	1870	1589
c, Capacity [veh/h]	50	1882	840	55	1891	1495	860	560	476	14	109	93
d1, Uniform Delay [s]	57.75	15.06	13.43	57.65	15.48	19.42	43.80	29.85	30.50	59.22	53.54	53.97
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.48	0.27	0.03	16.66	0.37	1.82	4.21	0.03	0.10	14.51	0.44	1.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.22	0.01	0.73	0.28	0.60	0.91	0.04	0.11	0.36	0.11	0.25
d, Delay for Lane Group [s/veh]	72.23	15.32	13.46	74.31	15.84	21.24	48.01	29.88	30.61	73.73	53.98	55.35
Lane Group LOS	E	B	B	E	B	C	D	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.23	3.03	0.16	1.46	4.03	8.84	11.74	0.50	1.16	0.21	0.36	0.70
50th-Percentile Queue Length [ft/ln]	30.64	75.70	4.05	36.46	100.78	220.93	293.42	12.56	28.95	5.20	8.94	17.52
95th-Percentile Queue Length [veh/ln]	2.21	5.45	0.29	2.63	7.26	13.71	17.36	0.90	2.08	0.37	0.64	1.26
95th-Percentile Queue Length [ft/ln]	55.16	136.25	7.29	65.63	181.41	342.81	433.88	22.61	52.11	9.37	16.10	31.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.23	15.32	13.46	74.31	15.84	21.24	48.01	29.88	30.61	73.73	53.98	55.35
Movement LOS	E	B	B	E	B	C	D	C	C	E	D	E
d_A, Approach Delay [s/veh]	19.53			20.75			46.42			57.23		
Approach LOS	B			C			D			E		
d_I, Intersection Delay [s/veh]	28.89											
Intersection LOS	C											
Intersection V/C	0.581											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.637	3.244	2.762	2.338
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	417	433	650
d_b, Bicycle Delay [s]	40.02	37.60	36.82	27.34
I_b,int, Bicycle LOS Score for Intersection	1.935	2.772	2.982	1.593
Bicycle LOS	A	C	C	A

Sequence




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



Intersection Level Of Service Report
Intersection 4: Redlands Avenue at Ellis Avenue

Control Type:	All-way stop	Delay (sec / veh):	19.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.776

Intersection Setup

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

Volumes

Name	Southbound		Eastbound		Westbound	
Base Volume Input [veh/h]	21	112	192	7	6	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	74	141	42	187	59	22
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	260	246	194	65	32
Peak Hour Factor	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	75	71	56	19	9
Total Analysis Volume [veh/h]	110	299	282	223	75	37
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	684	650	557	627
Degree of Utilization, x	0.60	0.78	0.13	0.06

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	3.99	7.39	0.46	0.19
95th-Percentile Queue Length [ft]	99.81	184.77	11.57	4.69
Approach Delay [s/veh]	15.76	24.99	9.71	
Approach LOS	C	C	A	
Intersection Delay [s/veh]	19.65			
Intersection LOS	C			

Intersection Level Of Service Report
Intersection 5: Case Road at Ellis Avenue

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

Intersection Setup

Name	Case Rd			Case Rd								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			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	Case Rd			Case Rd								
Base Volume Input [veh/h]	0	212	80	135	218	0	0	1	2	21	4	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	115	0	175	0	0	0	0	54	34	55	145	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	115	225	260	143	231	0	0	55	36	77	149	84
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	60	69	38	61	0	0	15	10	20	40	22
Total Analysis Volume [veh/h]	122	239	277	152	246	0	0	59	38	82	159	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	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	44	0	30	74	0	0	46	0	0	46	0
Vehicle Extension [s]	0.0	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	7	0	0	7	0	0	14	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]	0.0	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]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	70	70	12	86	26	26
g / C, Green / Cycle	0.58	0.58	0.10	0.72	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.25	0.17	0.09	0.13	0.06	0.20
s, saturation flow rate [veh/h]	1465	1589	1781	1870	1697	1672
c, Capacity [veh/h]	892	925	183	1343	396	398
d1, Uniform Delay [s]	14.89	12.71	52.80	5.50	39.11	45.69
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.14
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.36	0.83	9.26	0.30	0.32	5.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.30	0.83	0.18	0.25	0.83
d, Delay for Lane Group [s/veh]	16.25	13.54	62.06	5.80	39.42	51.36
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.42	3.53	4.77	1.63	2.43	10.18
50th-Percentile Queue Length [ft/ln]	135.46	88.29	119.35	40.77	60.67	254.51
95th-Percentile Queue Length [veh/ln]	9.24	6.36	8.36	2.94	4.37	15.41
95th-Percentile Queue Length [ft/ln]	230.90	158.92	208.93	73.39	109.20	385.33

Movement, Approach, & Intersection Results

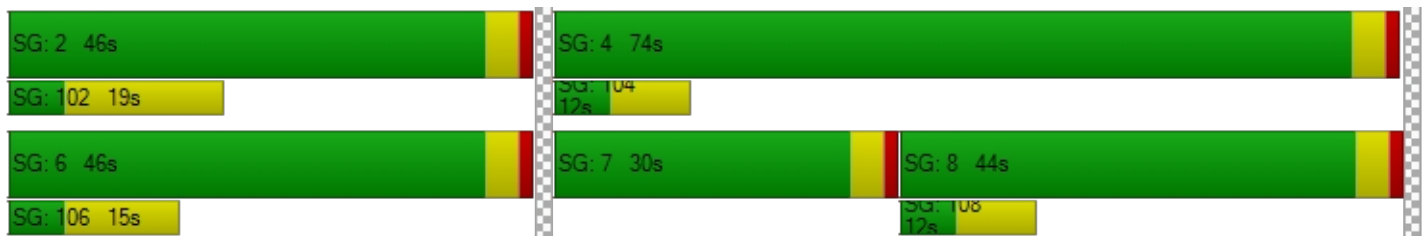
d_M, Delay for Movement [s/veh]	16.25	16.25	13.54	62.06	5.80	5.80	39.42	39.42	39.42	51.36	51.36	51.36
Movement LOS	B	B	B	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.07			27.28			39.42			51.36		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	28.20											
Intersection LOS	C											
Intersection V/C	0.529											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.670	2.388	2.088	2.129
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]	667	1167	700	700
d_b, Bicycle Delay [s]	26.67	10.42	25.35	25.35
I_b,int, Bicycle LOS Score for Intersection	2.612	2.216	1.720	2.104
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Case Road at Murrieta Road

Control Type:	All-way stop	Delay (sec / veh):	19.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.802

Intersection Setup

Name	Case Rd		Case Rd		Case Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵↵		↵↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Case Rd		Case Rd		Case Rd	
Base Volume Input [veh/h]	132	19	189	48	19	169
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	86	89	0	29	290
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	106	289	51	49	469
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	28	76	13	13	123
Total Analysis Volume [veh/h]	146	111	302	53	51	491
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	491	587	589	666	564	612
Degree of Utilization, x	0.30	0.19	0.51	0.08	0.09	0.80

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.23	0.69	2.92	0.26	0.30	7.95
95th-Percentile Queue Length [ft]	30.87	17.27	73.04	6.46	7.42	198.87
Approach Delay [s/veh]	11.88		14.10		26.34	
Approach LOS	B		B		D	
Intersection Delay [s/veh]	19.35					
Intersection LOS	C					

**Intersection Level Of Service Report
Intersection 7: Case Rd at Mapes Rd**

Control Type:	All-way stop	Delay (sec / veh):	24.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.806

Intersection Setup

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	13.00	13.00	13.00	14.00	14.00	14.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Base Volume Input [veh/h]	0	0	0	56	0	45	65	162	0	0	139	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	319	175	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	59	0	367	244	172	0	0	147	76
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	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	17	0	106	70	50	0	0	42	22
Total Analysis Volume [veh/h]	0	0	0	68	0	423	281	198	0	0	169	88
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	486	643	595	585
Degree of Utilization, x	0.00	0.76	0.81	0.44

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	7.06	8.01	2.23
95th-Percentile Queue Length [ft]	0.00	176.52	200.22	55.72
Approach Delay [s/veh]	0.00	24.34	29.45	13.88
Approach LOS	A	C	D	B
Intersection Delay [s/veh]	24.14			
Intersection LOS	C			

Intersection Level Of Service Report

Intersection 8: Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.324

Intersection Setup

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔↔		↑		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	14.00	16.00	13.00	13.00	12.00	14.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Base Volume Input [veh/h]	3	194	0	0	207	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	175	0	0	319	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	381	0	0	538	1
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	102	0	0	144	0
Total Analysis Volume [veh/h]	3	407	0	0	575	1
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Permissive	Unsignalized	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	10	0	14	0	96	110
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	0	54	58
g / C, Green / Cycle	0.45	0.00	0.45	0.48
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.32	0.00
s, saturation flow rate [veh/h]	1852	1945	1781	1945
c, Capacity [veh/h]	830	0	804	943
d1, Uniform Delay [s]	18.30	0.00	26.64	15.92
k, delay calibration	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	5.38	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.00	0.71	0.00
d, Delay for Lane Group [s/veh]	18.30	0.00	32.02	15.92
Lane Group LOS	B	A	C	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.05	0.00	13.70	0.01
50th-Percentile Queue Length [ft/ln]	1.21	0.00	342.51	0.34
95th-Percentile Queue Length [veh/ln]	0.09	0.00	19.77	0.02
95th-Percentile Queue Length [ft/ln]	2.18	0.00	494.27	0.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.30	0.00	0.00	0.00	32.02	15.92
Movement LOS	B		A	A	C	B
d_A, Approach Delay [s/veh]	18.30		0.00		32.00	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	31.93					
Intersection LOS	C					
Intersection V/C	0.324					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	100	167	1767
d_b, Bicycle Delay [s]	54.15	50.42	0.82
I_b,int, Bicycle LOS Score for Intersection	1.560	1.560	2.510
Bicycle LOS	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 9: I-215 SB Ramps at SR-74/Bonnie Dr

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

Intersection Setup

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵↑		↑↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	13.00	13.00	20.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Base Volume Input [veh/h]	173	551	598	28	40	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	241	4	13	79	120	55
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	424	588	647	109	162	219
Peak Hour Factor	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	118	164	180	30	45	61
Total Analysis Volume [veh/h]	473	656	721	122	181	244
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Unsignalized
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	50	102	52	0	18	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	34	98	60	60	14
g / C, Green / Cycle	0.28	0.82	0.50	0.50	0.12
(v / s)_i Volume / Saturation Flow Rate	0.27	0.34	0.37	0.07	0.10
s, saturation flow rate [veh/h]	1781	1945	1945	1653	1781
c, Capacity [veh/h]	508	1589	970	824	207
d1, Uniform Delay [s]	41.76	3.03	23.97	16.28	52.15
k, delay calibration	0.24	0.50	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.31	0.79	5.15	0.38	10.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.41	0.74	0.15	0.87
d, Delay for Lane Group [s/veh]	57.07	3.83	29.12	16.66	63.02
Lane Group LOS	E	A	C	B	E
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	15.08	2.64	16.16	1.79	5.84
50th-Percentile Queue Length [ft/ln]	377.02	65.88	404.07	44.63	146.05
95th-Percentile Queue Length [veh/ln]	21.45	4.74	22.76	3.21	9.81
95th-Percentile Queue Length [ft/ln]	536.24	118.59	568.90	80.34	245.14

Movement, Approach, & Intersection Results

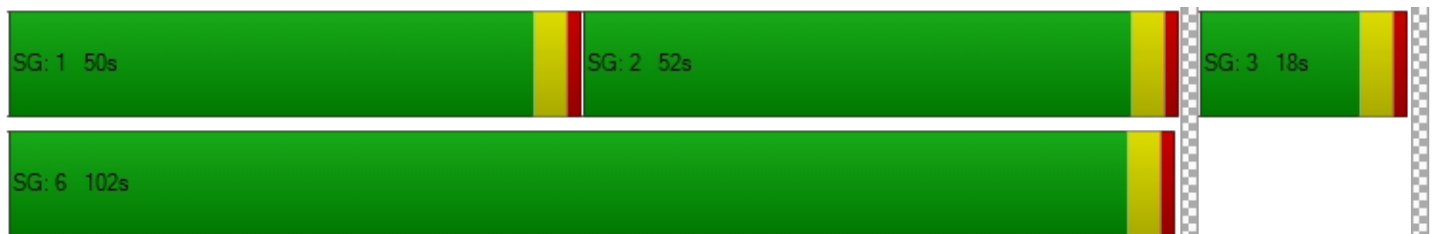
d_M, Delay for Movement [s/veh]	57.07	3.83	29.12	16.66	63.02	0.00
Movement LOS	E	A	C	B	E	
d_A, Approach Delay [s/veh]	26.13		27.32		63.02	
Approach LOS	C		C		E	
d_I, Intersection Delay [s/veh]	29.70					
Intersection LOS	C					
Intersection V/C	0.738					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1633	800	233
d_b, Bicycle Delay [s]	2.02	21.60	46.82
I_b,int, Bicycle LOS Score for Intersection	3.422	2.951	1.560
Bicycle LOS	C	C	A

Sequence




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



Intersection Level Of Service Report
Intersection 10: I-215 NB Ramps at SR-74

Control Type:	Signalized	Delay (sec / veh):	22.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

Intersection Setup

Name	I-215 NB Ramps		SR-74		SR-74	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	20.00	20.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	240.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	I-215 NB Ramps		SR-74		SR-74	
Base Volume Input [veh/h]	168	10	9	727	687	843
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	13	229	51	17	16	4
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	191	240	61	788	744	898
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	64	16	211	200	241
Total Analysis Volume [veh/h]	205	258	65	845	798	964
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protected	Permissive	Permissive	Unsignalized
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	10	10	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	82	0	10	38	28	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	L	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	34	6	78	68
g / C, Green / Cycle	0.29	0.05	0.65	0.57
(v / s)_i Volume / Saturation Flow Rate	0.27	0.04	0.24	0.22
s, saturation flow rate [veh/h]	1736	1781	3560	3560
c, Capacity [veh/h]	499	83	2300	2015
d1, Uniform Delay [s]	41.55	56.58	9.86	14.58
k, delay calibration	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.07	14.47	0.45	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.78	0.37	0.40
d, Delay for Lane Group [s/veh]	49.62	71.05	10.32	15.16
Lane Group LOS	D	E	B	B
Critical Lane Group	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	14.30	2.22	4.58	5.65
50th-Percentile Queue Length [ft/ln]	357.53	55.56	114.42	141.27
95th-Percentile Queue Length [veh/ln]	20.50	4.00	8.09	9.55
95th-Percentile Queue Length [ft/ln]	512.58	100.01	202.14	238.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.62	49.62	71.05	10.32	15.16	0.00
Movement LOS	D	D	E	B	B	
d_A, Approach Delay [s/veh]	49.62		14.65		15.16	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	22.30					
Intersection LOS	C					
Intersection V/C	0.527					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1300	567	400
d_b, Bicycle Delay [s]	7.35	30.82	38.40
I_b,int, Bicycle LOS Score for Intersection	2.324	2.310	2.218
Bicycle LOS	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.039

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	37	123	138	0	0	44	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	37	123	168	0	0	60	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	10	32	44	0	0	16	0
Total Analysis Volume [veh/h]	0	0	0	0	0	39	129	177	0	0	63	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.04	0.08	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.73	13.29	9.16	13.29	13.44	8.74	7.55	0.00	0.00	7.57	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.12	0.12	0.12	0.27	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	3.04	3.04	3.04	6.85	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.06			8.74			3.18			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	3.22											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	22	69	69	0	0	22	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	22	69	99	0	0	38	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	6	18	26	0	0	10	0
Total Analysis Volume [veh/h]	0	0	0	0	0	23	73	104	0	0	40	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.93	11.09	8.79	10.78	11.17	8.57	7.41	0.00	0.00	7.42	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.07	0.07	0.07	0.15	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.71	1.71	1.71	3.66	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.27			8.57			3.05			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	3.07											
Intersection LOS	A											

Newcastle Ellis Avenue Warehouse

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Scenario 3 OY CP PM

Report File: K:\...\3 OY CP PM.pdf

6/28/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-215 NB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	NB Left	0.780	32.8	C
2	I-215 SB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	EB Right	0.651	32.3	C
3	Redlands Avenue at 4th Street	Signalized	HCM 7th Edition	EB Left	0.678	47.2	D
4	Redlands Avenue at Ellis Avenue	All-way stop	HCM 7th Edition	EB Left	0.707	16.2	C
5	Case Road at Ellis Avenue	Signalized	HCM 7th Edition	SB Left	0.617	31.2	C
6	Case Road at Murrieta Road	All-way stop	HCM 7th Edition	EB Thru	1.160	59.3	F
7	Case Rd at Mapes Rd	All-way stop	HCM 7th Edition	EB Left	1.252	81.4	F
8	Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd	Signalized	HCM 7th Edition	EB Right	0.296	30.1	C
9	I-215 SB Ramps at SR-74/Bonnie Dr	Signalized	HCM 7th Edition	NB Left	0.854	46.1	D
10	I-215 NB Ramps at SR-74	Signalized	HCM 7th Edition	EB Left	0.586	21.6	C
11	Ellis Avenue at West Project Driveway	Two-way stop	HCM 7th Edition	SB Right	0.207	10.4	B
12	Ellis Avenue at East Project Driveway	Two-way stop	HCM 7th Edition	SB Right	0.067	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: I-215 NB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	32.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.780

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	← ↑ →			↑ ↑ ↑ ↑ →						← ↑ →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	1	0	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	1	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	1000.00	0.00	300.00	0.00	0.00	0.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	169	650	0	0	785	122	0	0	0	298	2	481
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0000	1.0000	1.0600	1.0600	1.0000	1.0000	1.0000	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	219	434	0	0	422	410	0	0	0	48	0	401
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	398	1123	0	0	1254	539	0	0	0	364	2	911
Peak Hour Factor	0.9750	0.9750	1.0000	1.0000	0.9750	0.9750	1.0000	1.0000	1.0000	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	102	288	0	0	322	138	0	0	0	93	1	234
Total Analysis Volume [veh/h]	408	1152	0	0	1286	553	0	0	0	373	2	934
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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	20	69	0	0	49	0	0	0	0	0	51	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	16	71	51	51		41	41	41
g / C, Green / Cycle	0.13	0.59	0.42	0.42		0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.12	0.32	0.19	0.35		0.21	0.31	0.27
s, saturation flow rate [veh/h]	3459	3560	6792	1589		1781	1590	1589
c, Capacity [veh/h]	459	2103	2883	675		610	545	545
d1, Uniform Delay [s]	51.16	14.87	24.52	30.48		32.78	37.79	35.72
k, delay calibration	0.11	0.50	0.50	0.50		0.12	0.32	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	6.02	1.03	0.50	10.71		1.09	16.18	6.05
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	0.89	0.55	0.45	0.82		0.61	0.92	0.80
d, Delay for Lane Group [s/veh]	57.18	15.90	25.02	41.20		33.87	53.97	41.77
Lane Group LOS	E	B	C	D		C	D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.40	9.46	6.56	15.82		9.16	16.32	12.36
50th-Percentile Queue Length [ft/ln]	160.07	236.46	164.03	395.58		229.12	407.93	309.08
95th-Percentile Queue Length [veh/ln]	10.55	14.50	10.76	22.35		14.13	22.94	18.13
95th-Percentile Queue Length [ft/ln]	263.81	362.55	269.05	558.67		353.24	573.55	453.24

Movement, Approach, & Intersection Results

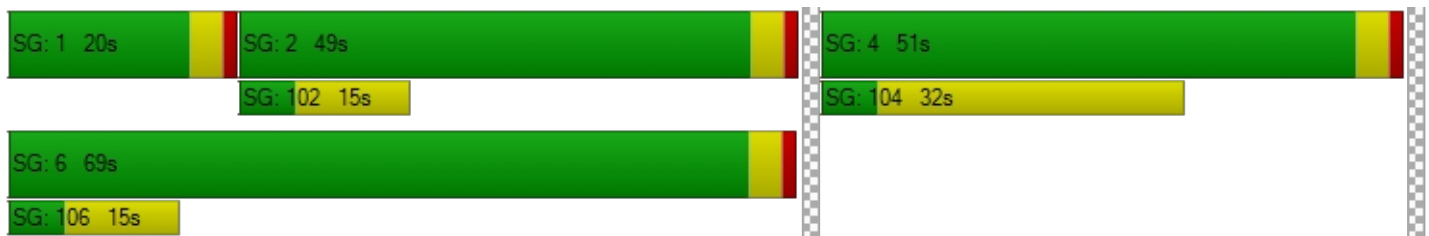
d_M, Delay for Movement [s/veh]	57.18	15.90	0.00	0.00	25.02	41.20	0.00	0.00	0.00	33.87	53.97	48.27
Movement LOS	E	B			C	D				C	D	D
d_A, Approach Delay [s/veh]	26.70				29.88		0.00				44.18	
Approach LOS	C				C		A				D	
d_I, Intersection Delay [s/veh]	32.80											
Intersection LOS	C											
Intersection V/C	0.780											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.133	3.156	2.268	2.381
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1083	750	0	783
d_b, Bicycle Delay [s]	12.60	23.44	60.00	22.20
I_b,int, Bicycle LOS Score for Intersection	2.847	2.318	4.132	3.719
Bicycle LOS	C	B	D	D

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 SB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	32.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration							+					
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	3	0	0	0	0	0	1
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	100.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	620	435	415	702	0	157	0	198	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0600	1.0600	1.0600	1.0600	1.0000	1.0600	1.0600	1.0600	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	252	38	410	60	0	401	0	120	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	909	499	850	804	0	567	0	330	0	0	0
Peak Hour Factor	1.0000	0.9370	0.9370	0.9370	0.9370	1.0000	0.9370	0.9370	0.9370	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	243	133	227	215	0	151	0	88	0	0	0
Total Analysis Volume [veh/h]	0	970	533	907	858	0	605	0	352	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	56	77	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	34	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	45	45	35	85	27	27	27	
g / C, Green / Cycle	0.38	0.38	0.29	0.70	0.23	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.14	0.19	0.26	0.24	0.18	0.18	0.20	
s, saturation flow rate [veh/h]	6792	2813	3459	3560	1781	1758	1589	
c, Capacity [veh/h]	2567	1063	1013	2507	408	403	364	
d1, Uniform Delay [s]	27.08	28.64	40.67	6.92	43.46	43.57	44.54	
k, delay calibration	0.50	0.50	0.11	0.50	0.13	0.13	0.17	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.43	1.69	3.09	0.37	3.94	4.37	9.94	
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	0.50	0.90	0.34	0.78	0.79	0.87	
d, Delay for Lane Group [s/veh]	27.51	30.33	43.76	7.29	47.40	47.94	54.48	
Lane Group LOS	C	C	D	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.12	6.11	13.16	4.06	9.35	9.41	10.06	
50th-Percentile Queue Length [ft/ln]	127.94	152.72	328.98	101.62	233.74	235.18	251.43	
95th-Percentile Queue Length [veh/ln]	8.83	10.16	19.11	7.32	14.36	14.44	15.26	
95th-Percentile Queue Length [ft/ln]	220.69	254.06	477.71	182.91	359.11	360.93	381.45	

Movement, Approach, & Intersection Results

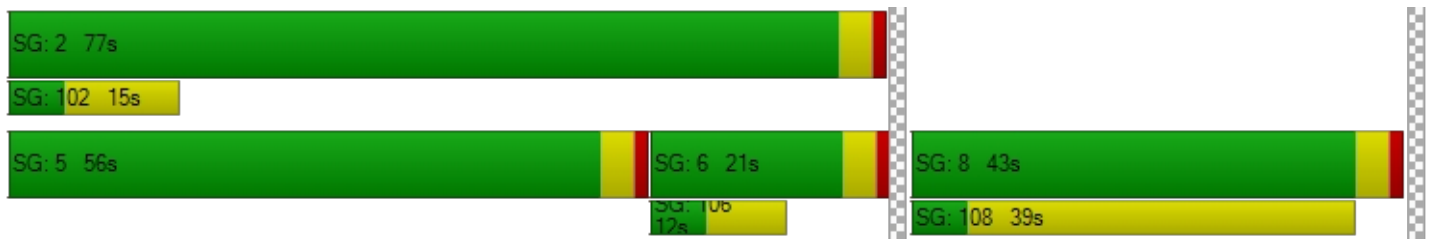
d_M, Delay for Movement [s/veh]	0.00	27.51	30.33	43.76	7.29	0.00	47.65	47.94	53.86	0.00	0.00	0.00
Movement LOS		C	C	D	A		D	D	D			
d_A, Approach Delay [s/veh]	28.51			26.03			49.93			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	32.33											
Intersection LOS	C											
Intersection V/C	0.651											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0		9.0		9.0		9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00
d_p, Pedestrian Delay [s]	51.34		51.34		51.34		51.34
I_p,int, Pedestrian LOS Score for Intersection	3.158		3.307		2.266		2.432
Crosswalk LOS	C		C		B		B
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000
c_b, Capacity of the bicycle lane [bicycles/h]	283		1217		650		0
d_b, Bicycle Delay [s]	44.20		9.20		27.34		60.00
I_b,int, Bicycle LOS Score for Intersection	2.180		3.016		3.139		4.132
Bicycle LOS	B		C		C		D

Sequence

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



Intersection Level Of Service Report
Intersection 3: Redlands Avenue at 4th Street

Control Type:	Signalized	Delay (sec / veh):	47.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.678

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	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												
Base Volume Input [veh/h]	69	272	9	18	215	652	781	21	78	10	16	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	33	214	0	0	83	97	76	0	12	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	502	10	19	311	788	904	22	95	11	17	49
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	135	3	5	83	211	242	6	25	3	5	13
Total Analysis Volume [veh/h]	114	538	11	20	333	845	969	24	102	12	18	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	32	0	10	30	0	35	30	0	48	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	21	0	0	21	0	0	34	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	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	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	61	61	2	56	56	31	38	38	2	9	9
g / C, Green / Cycle	0.07	0.51	0.51	0.02	0.47	0.47	0.26	0.32	0.32	0.01	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.06	0.15	0.01	0.01	0.09	0.30	0.28	0.01	0.06	0.01	0.01	0.03
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	2813	3459	1870	1589	1781	1870	1589
c, Capacity [veh/h]	119	1821	813	36	1656	1309	893	598	508	27	143	122
d1, Uniform Delay [s]	55.84	16.87	14.42	58.23	18.93	24.53	44.50	28.13	29.67	58.59	51.67	52.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.12	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	29.71	0.41	0.03	12.37	0.27	2.47	43.29	0.03	0.19	11.12	0.39	2.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.96	0.30	0.01	0.55	0.20	0.65	1.08	0.04	0.20	0.45	0.13	0.44
d, Delay for Lane Group [s/veh]	85.55	17.28	14.45	70.60	19.21	27.00	87.79	28.16	29.86	69.72	52.06	55.39
Lane Group LOS	F	B	B	E	B	C	F	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.42	4.35	0.16	0.73	2.80	9.46	18.53	0.49	2.18	0.45	0.52	1.61
50th-Percentile Queue Length [ft/ln]	110.45	108.64	3.88	18.17	70.12	236.57	463.13	12.14	54.59	11.13	13.07	40.33
95th-Percentile Queue Length [veh/ln]	7.86	7.76	0.28	1.31	5.05	14.51	26.83	0.87	3.93	0.80	0.94	2.90
95th-Percentile Queue Length [ft/ln]	196.62	194.10	6.98	32.71	126.21	362.69	670.74	21.85	98.26	20.04	23.53	72.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	85.55	17.28	14.45	70.60	19.21	27.00	87.79	28.16	29.86	69.72	52.06	55.39
Movement LOS	F	B	B	E	B	C	F	C	C	E	D	E
d_A, Approach Delay [s/veh]	28.98			25.56			81.08			56.74		
Approach LOS	C			C			F			E		
d_I, Intersection Delay [s/veh]	47.16											
Intersection LOS	D											
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 [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.648	3.251	2.805	2.342
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	467	433	433	650
d_b, Bicycle Delay [s]	35.27	36.82	36.82	27.34
I_b,int, Bicycle LOS Score for Intersection	2.107	2.548	3.366	1.628
Bicycle LOS	B	B	C	A

Sequence




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



Intersection Level Of Service Report
Intersection 4: Redlands Avenue at Ellis Avenue

Control Type:	All-way stop	Delay (sec / veh):	16.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

Intersection Setup

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

Volumes

Name	Southbound		Eastbound		Westbound	
Base Volume Input [veh/h]	23	176	155	15	3	61
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	35	60	148	67	182	100
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	247	312	83	185	165
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	69	87	23	52	46
Total Analysis Volume [veh/h]	66	275	347	92	206	184
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	644	620	579	653
Degree of Utilization, x	0.53	0.71	0.36	0.28

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	3.12	5.78	1.60	1.15
95th-Percentile Queue Length [ft]	77.99	144.55	40.06	28.81
Approach Delay [s/veh]	14.71	21.59	11.39	
Approach LOS	B	C	B	
Intersection Delay [s/veh]	16.18			
Intersection LOS	C			

Intersection Level Of Service Report
Intersection 5: Case Road at Ellis Avenue

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

Intersection Setup

Name	Case Rd			Case Rd								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			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	Case Rd			Case Rd								
Base Volume Input [veh/h]	0	278	67	102	327	0	0	2	0	95	3	97
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	45	0	61	0	0	0	0	154	121	166	77	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	295	132	108	347	0	0	156	121	267	80	103
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	81	36	30	95	0	0	43	33	73	22	28
Total Analysis Volume [veh/h]	49	324	145	119	381	0	0	171	133	293	88	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	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	43	0	18	61	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	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	7	0	0	7	0	0	14	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]	0.0	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]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	57	10	71	41	41
g / C, Green / Cycle	0.48	0.48	0.08	0.59	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.22	0.09	0.07	0.20	0.18	0.33
s, saturation flow rate [veh/h]	1666	1589	1781	1870	1710	1514
c, Capacity [veh/h]	829	759	147	1109	612	563
d1, Uniform Delay [s]	20.73	18.04	54.13	12.48	31.66	36.86
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.25
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	0.56	10.12	0.85	0.63	9.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.19	0.81	0.34	0.50	0.88
d, Delay for Lane Group [s/veh]	22.49	18.60	64.25	13.32	32.29	46.77
Lane Group LOS	C	B	E	B	C	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.64	2.25	3.80	4.81	7.16	15.25
50th-Percentile Queue Length [ft/ln]	165.96	56.31	95.01	120.37	178.94	381.21
95th-Percentile Queue Length [veh/ln]	10.86	4.05	6.84	8.41	11.55	21.65
95th-Percentile Queue Length [ft/ln]	271.60	101.35	171.02	210.33	288.64	541.32

Movement, Approach, & Intersection Results

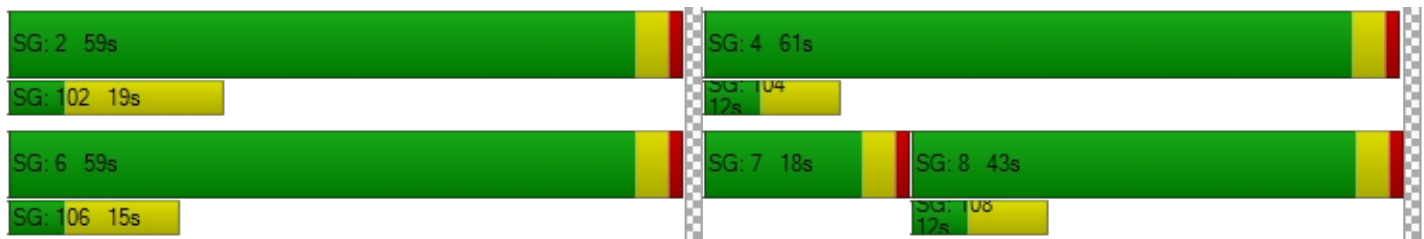
d_M, Delay for Movement [s/veh]	22.49	22.49	18.60	64.25	13.32	13.32	32.29	32.29	32.29	46.77	46.77	46.77
Movement LOS	C	C	B	E	B	B	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	21.40			25.45			32.29			46.77		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	31.24											
Intersection LOS	C											
Intersection V/C	0.617											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.162	2.514	2.015	2.183
Crosswalk LOS	C	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]	650	950	917	917
d_b, Bicycle Delay [s]	27.34	16.54	17.60	17.60
I_b,int, Bicycle LOS Score for Intersection	2.414	2.385	2.061	2.375
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Case Road at Murrieta Road

Control Type:	All-way stop	Delay (sec / veh):	59.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.160

Intersection Setup

Name	Case Rd		Case Rd		Case Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Case Rd		Case Rd		Case Rd	
Base Volume Input [veh/h]	86	16	314	101	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	56	287	0	92	106
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	73	620	107	109	388
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	21	175	30	31	109
Total Analysis Volume [veh/h]	103	82	700	121	123	438
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	455	535	700	685	549	594
Degree of Utilization, x	0.23	0.15	1.16	0.18	0.22	0.74

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.86	0.54	23.33	0.64	0.85	6.35
95th-Percentile Queue Length [ft]	21.55	13.46	583.21	15.96	21.31	158.67
Approach Delay [s/veh]	11.92		96.08		21.04	
Approach LOS	B		F		C	
Intersection Delay [s/veh]	59.28					
Intersection LOS	F					

**Intersection Level Of Service Report
Intersection 7: Case Rd at Mapes Rd**

Control Type:	All-way stop	Delay (sec / veh):	81.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.252

Intersection Setup

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	13.00	13.00	13.00	14.00	14.00	14.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Base Volume Input [veh/h]	0	0	0	81	0	69	86	184	0	0	252	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	198	343	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	86	0	271	434	195	0	0	267	102
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
Other Adjustment Factor	1.0000	1.0000	1.0000	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	25	0	77	124	56	0	0	76	29
Total Analysis Volume [veh/h]	0	0	0	98	0	309	495	222	0	0	304	116
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	437	574	717	580
Degree of Utilization, x	0.00	0.71	1.25	0.72

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	5.75	27.74	6.03
95th-Percentile Queue Length [ft]	0.00	143.72	693.58	150.75
Approach Delay [s/veh]	0.00	23.16	148.27	23.71
Approach LOS	A	C	F	C
Intersection Delay [s/veh]	81.41			
Intersection LOS	F			

Intersection Level Of Service Report

Intersection 8: Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.296

Intersection Setup

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↻		↵		↵↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	14.00	16.00	13.00	13.00	12.00	14.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Base Volume Input [veh/h]	0	311	0	2	262	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	343	0	0	198	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	673	0	2	476	3
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	186	0	1	131	1
Total Analysis Volume [veh/h]	0	742	0	2	525	3
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Permissive	Unsignalized	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	10	0	14	0	96	110
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	1	54	58
g / C, Green / Cycle	0.45	0.01	0.45	0.49
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.29	0.00
s, saturation flow rate [veh/h]	1852	1653	1781	1945
c, Capacity [veh/h]	825	9	799	948
d1, Uniform Delay [s]	0.00	59.42	25.84	15.77
k, delay calibration	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	11.91	4.19	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.22	0.66	0.00
d, Delay for Lane Group [s/veh]	0.00	71.33	30.03	15.77
Lane Group LOS	A	E	C	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	0.09	11.96	0.04
50th-Percentile Queue Length [ft/ln]	0.00	2.25	298.92	1.02
95th-Percentile Queue Length [veh/ln]	0.00	0.16	17.63	0.07
95th-Percentile Queue Length [ft/ln]	0.00	4.05	440.69	1.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	71.33	71.33	30.03	15.77
Movement LOS	A		E	E	C	B
d_A, Approach Delay [s/veh]	0.00		71.33		29.95	
Approach LOS	A		E		C	
d_I, Intersection Delay [s/veh]	30.11					
Intersection LOS	C					
Intersection V/C	0.296					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	100	167	1767
d_b, Bicycle Delay [s]	54.15	50.42	0.82
I_b,int, Bicycle LOS Score for Intersection	1.560	1.563	2.431
Bicycle LOS	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 9: I-215 SB Ramps at SR-74/Bonnie Dr

Control Type:	Signalized	Delay (sec / veh):	46.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵↑		↑↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	13.00	13.00	20.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Base Volume Input [veh/h]	226	339	849	33	23	303
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	146	14	5	53	249	94
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	386	373	905	88	273	415
Peak Hour Factor	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	99	95	231	22	70	106
Total Analysis Volume [veh/h]	395	381	925	90	279	424
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Unsignalized
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	32	96	64	0	24	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	92	60	60	20
g / C, Green / Cycle	0.23	0.77	0.50	0.50	0.17
(v / s)_i Volume / Saturation Flow Rate	0.22	0.20	0.48	0.05	0.16
s, saturation flow rate [veh/h]	1781	1945	1945	1653	1781
c, Capacity [veh/h]	416	1491	972	827	297
d1, Uniform Delay [s]	45.32	4.06	28.61	15.86	49.41
k, delay calibration	0.37	0.50	0.50	0.50	0.18
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.44	0.41	19.24	0.27	19.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.26	0.95	0.11	0.94
d, Delay for Lane Group [s/veh]	72.76	4.48	47.85	16.13	68.89
Lane Group LOS	E	A	D	B	E
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	14.21	2.06	27.91	1.29	9.62
50th-Percentile Queue Length [ft/ln]	355.36	51.49	697.70	32.16	240.41
95th-Percentile Queue Length [veh/ln]	20.40	3.71	36.57	2.32	14.70
95th-Percentile Queue Length [ft/ln]	509.93	92.68	914.30	57.89	367.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.76	4.48	47.85	16.13	68.89	0.00
Movement LOS	E	A	D	B	E	
d_A, Approach Delay [s/veh]	39.24		45.04		68.89	
Approach LOS	D		D		E	
d_I, Intersection Delay [s/veh]	46.08					
Intersection LOS	D					
Intersection V/C	0.854					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1533	1000	333
d_b, Bicycle Delay [s]	3.27	15.00	41.67
I_b,int, Bicycle LOS Score for Intersection	2.840	3.234	1.560
Bicycle LOS	C	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: I-215 NB Ramps at SR-74

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

Intersection Setup

Name	I-215 NB Ramps		SR-74		SR-74	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	20.00	20.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	240.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	I-215 NB Ramps		SR-74		SR-74	
Base Volume Input [veh/h]	227	25	14	1034	596	832
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	5	141	77	22	20	14
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	246	168	92	1118	652	896
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	45	25	299	174	239
Total Analysis Volume [veh/h]	263	179	98	1194	697	957
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protected	Permissive	Permissive	Unsignalized
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	10	10	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	87	0	19	33	14	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	L	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	32	8	80	67
g / C, Green / Cycle	0.27	0.07	0.66	0.56
(v / s)_i Volume / Saturation Flow Rate	0.25	0.06	0.34	0.20
s, saturation flow rate [veh/h]	1766	1781	3560	3560
c, Capacity [veh/h]	478	124	2358	1993
d1, Uniform Delay [s]	42.54	54.98	10.29	14.47
k, delay calibration	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.99	10.76	0.78	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.79	0.51	0.35
d, Delay for Lane Group [s/veh]	50.53	65.75	11.07	14.95
Lane Group LOS	D	E	B	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.70	3.19	6.94	4.84
50th-Percentile Queue Length [ft/ln]	342.43	79.86	173.62	121.03
95th-Percentile Queue Length [veh/ln]	19.77	5.75	11.27	8.45
95th-Percentile Queue Length [ft/ln]	494.17	143.75	281.67	211.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.53	50.53	65.75	11.07	14.95	0.00
Movement LOS	D	D	E	B	B	
d_A, Approach Delay [s/veh]	50.53		15.22		14.95	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	21.56					
Intersection LOS	C					
Intersection V/C	0.586					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1383	483	167
d_b, Bicycle Delay [s]	5.70	34.50	50.42
I_b,int, Bicycle LOS Score for Intersection	2.289	2.626	2.135
Bicycle LOS	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.207

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	166	58	44	0	0	116	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	166	58	84	0	0	184	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	44	15	22	0	0	48	0
Total Analysis Volume [veh/h]	0	0	0	0	0	175	61	88	0	0	194	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.21	0.04	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.74	12.03	8.71	12.86	13.14	10.35	7.73	0.00	0.00	7.39	0.00	0.00
Movement LOS	B	B	A	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.77	0.77	0.77	0.14	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	19.34	19.34	19.34	3.47	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.83			10.35			3.17			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.41											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	58	22	22	0	0	58	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	58	22	62	0	0	126	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	15	6	16	0	0	33	0
Total Analysis Volume [veh/h]	0	0	0	0	0	61	23	65	0	0	133	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.07	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.78	10.56	8.60	10.43	10.84	9.21	7.52	0.00	0.00	7.34	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.21	0.21	0.21	0.05	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	5.34	5.34	5.34	1.21	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.98			9.21			1.97			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.61											
Intersection LOS	A											

APPENDIX D-4

**INTERSECTION ANALYSIS
WORKSHEETS –
OPENING YEAR 2025 CUMULATIVE
PLUS PROJECT CONDITIONS**

Newcastle Ellis Avenue Warehouse

Vistro File: K:\...\Ellis Newcastle BASE - AM.vistro

Scenario 4 OY CP WP AM

Report File: K:\...4 OY CP WP AM.pdf

6/28/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-215 NB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	NB Left	0.475	25.5	C
2	I-215 SB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	EB Right	0.477	26.2	C
3	Redlands Avenue at 4th Street	Signalized	HCM 7th Edition	SB Left	0.583	28.9	C
4	Redlands Avenue at Ellis Avenue	All-way stop	HCM 7th Edition	EB Thru	0.924	31.3	D
5	Case Road at Ellis Avenue	Signalized	HCM 7th Edition	SB Left	0.542	28.6	C
6	Case Road at Murrieta Road	All-way stop	HCM 7th Edition	WB Thru	0.891	24.7	C
7	Case Rd at Mapes Rd	All-way stop	HCM 7th Edition	EB Left	0.867	31.7	D
8	Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd	Signalized	HCM 7th Edition	WB Left	0.353	35.0	D
9	I-215 SB Ramps at SR-74/Bonnie Dr	Signalized	HCM 7th Edition	EB Left	0.765	32.0	C
10	I-215 NB Ramps at SR-74	Signalized	HCM 7th Edition	EB Left	0.551	23.4	C
11	Ellis Avenue at West Project Driveway	Two-way stop	HCM 7th Edition	NB Left	0.063	15.5	C
12	Ellis Avenue at East Project Driveway	Two-way stop	HCM 7th Edition	NB Left	0.013	11.1	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: I-215 NB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	25.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐⇐⇐						⇐⇐⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	1	0	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	1	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	1000.00	0.00	300.00	0.00	0.00	0.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	133	611	0	0	949	132	0	0	0	409	2	393
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0000	1.0000	1.0600	1.0600	1.0000	1.0000	1.0000	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	81	134	0	0	142	117	0	0	0	20	0	127
Site-Generated Trips [veh/h]	4	6	0	0	15	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	226	788	0	0	1163	257	0	0	0	454	2	544
Peak Hour Factor	0.9390	0.9390	1.0000	1.0000	0.9390	0.9390	1.0000	1.0000	1.0000	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	210	0	0	310	68	0	0	0	121	1	145
Total Analysis Volume [veh/h]	241	839	0	0	1239	274	0	0	0	483	2	579
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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	17	33	0	0	16	0	0	0	0	0	87	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	10	81	67	67		31	31	31
g / C, Green / Cycle	0.09	0.68	0.56	0.56		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.07	0.24	0.18	0.17		0.20	0.21	0.22
s, saturation flow rate [veh/h]	3459	3560	6792	1589		1781	1655	1589
c, Capacity [veh/h]	300	2409	3779	884		457	425	408
d1, Uniform Delay [s]	53.78	8.22	14.44	14.27		41.38	42.17	42.65
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	4.99	0.40	0.23	0.91		2.85	4.35	5.75
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	0.80	0.35	0.33	0.31		0.78	0.83	0.87
d, Delay for Lane Group [s/veh]	58.77	8.61	14.68	15.18		44.23	46.52	48.40
Lane Group LOS	E	A	B	B		D	D	D
Critical Lane Group	Yes	No	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.78	4.46	4.56	4.16		10.06	10.40	10.65
50th-Percentile Queue Length [ft/ln]	94.44	111.46	114.06	103.93		251.61	260.05	266.32
95th-Percentile Queue Length [veh/ln]	6.80	7.92	8.07	7.48		15.27	15.69	16.01
95th-Percentile Queue Length [ft/ln]	170.00	198.03	201.63	187.08		381.68	392.29	400.14

Movement, Approach, & Intersection Results

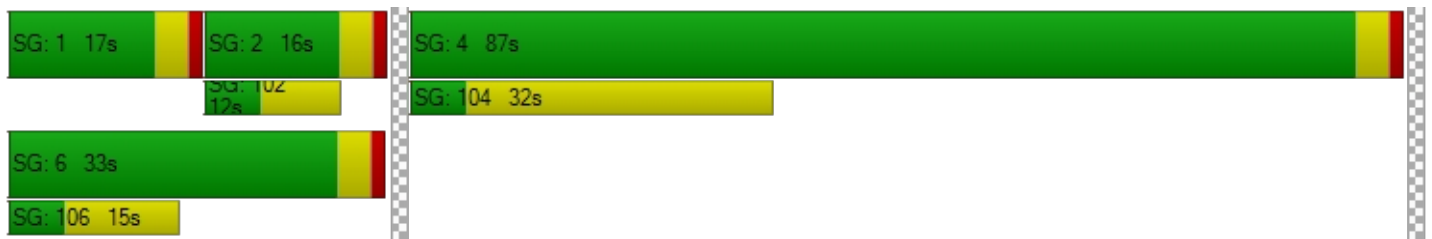
d_M, Delay for Movement [s/veh]	58.77	8.61	0.00	0.00	14.68	15.18	0.00	0.00	0.00	44.84	46.52	47.67
Movement LOS	E	A			B	B				D	D	D
d_A, Approach Delay [s/veh]	19.81				14.77		0.00		46.39			
Approach LOS	B				B		A		D			
d_I, Intersection Delay [s/veh]	25.46											
Intersection LOS	C											
Intersection V/C	0.475											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.082	3.017	2.123	2.301
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	483	200	0	1383
d_b, Bicycle Delay [s]	34.50	48.60	60.00	5.70
I_b,int, Bicycle LOS Score for Intersection	2.451	2.184	4.132	3.315
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 SB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	3	0	0	0	0	0	1
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	100.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	616	290	507	914	0	118	3	141	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0600	1.0600	1.0600	1.0600	1.0000	1.0600	1.0600	1.0600	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	89	32	117	45	0	127	0	186	0	0	0
Site-Generated Trips [veh/h]	0	10	0	0	15	0	0	0	15	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	752	339	654	1029	0	252	3	350	0	0	0
Peak Hour Factor	1.0000	0.9050	0.9050	0.9050	0.9050	1.0000	0.9050	0.9050	0.9050	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	208	94	181	284	0	70	1	97	0	0	0
Total Analysis Volume [veh/h]	0	831	375	723	1137	0	278	3	387	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing m	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing mi	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	25	0	52	77	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	34	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	60	60	28	93	19	19	19	
g / C, Green / Cycle	0.50	0.50	0.24	0.77	0.16	0.16	0.16	
(v / s)_i Volume / Saturation Flow Rate	0.12	0.13	0.21	0.32	0.13	0.13	0.13	
s, saturation flow rate [veh/h]	6792	2813	3459	3560	1781	1626	1589	
c, Capacity [veh/h]	3399	1408	821	2745	289	264	258	
d1, Uniform Delay [s]	17.06	17.28	44.12	4.62	48.55	48.63	48.65	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.17	0.46	3.30	0.46	5.63	6.49	6.72	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.24	0.27	0.88	0.41	0.82	0.83	0.83	
d, Delay for Lane Group [s/veh]	17.23	17.74	47.42	5.08	54.18	55.12	55.38	
Lane Group LOS	B	B	D	A	D	E	E	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.29	3.06	10.68	4.13	7.27	6.79	6.67	
50th-Percentile Queue Length [ft/ln]	82.33	76.58	267.02	103.13	181.80	169.72	166.78	
95th-Percentile Queue Length [veh/ln]	5.93	5.51	16.04	7.43	11.69	11.06	10.91	
95th-Percentile Queue Length [ft/ln]	148.19	137.85	401.02	185.63	292.37	276.54	272.68	

Movement, Approach, & Intersection Results

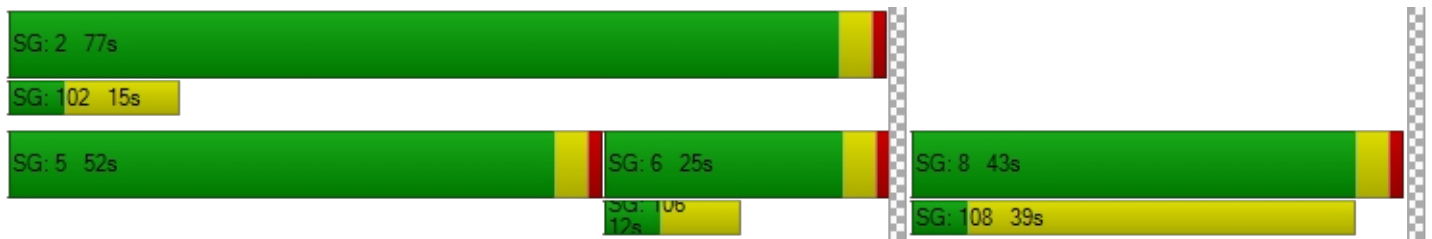
d_M, Delay for Movement [s/veh]	0.00	17.23	17.74	47.42	5.08	0.00	54.35	55.12	55.27	0.00	0.00	0.00
Movement LOS		B	B	D	A		D	E	E			
d_A, Approach Delay [s/veh]	17.39			21.54			54.87			0.00		
Approach LOS	B			C			D			A		
d_I, Intersection Delay [s/veh]	26.16											
Intersection LOS	C											
Intersection V/C	0.477											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	3.160			3.271			2.173			2.267		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	350			1217			650			0		
d_b, Bicycle Delay [s]	40.84			9.20			27.34			60.00		
I_b,int, Bicycle LOS Score for Intersection	2.057			3.094			2.662			4.132		
Bicycle LOS	B			C			B			D		

Sequence

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



Intersection Level Of Service Report
Intersection 3: Redlands Avenue at 4th Street

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	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												
Base Volume Input [veh/h]	23	297	10	34	274	739	611	21	23	5	10	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	7	57	0	0	190	39	65	0	25	0	0	0
Site-Generated Trips [veh/h]	4	10	0	0	30	0	0	0	15	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	382	11	36	510	822	713	22	64	5	11	21
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	105	3	10	140	226	196	6	18	1	3	6
Total Analysis Volume [veh/h]	38	420	12	40	560	903	784	24	70	5	12	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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	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]	10	26	0	13	29	0	38	30	0	51	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	21	0	0	21	0	0	34	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	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	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	64	64	4	64	64	30	36	36	1	7	7
g / C, Green / Cycle	0.03	0.53	0.53	0.03	0.53	0.53	0.25	0.30	0.30	0.01	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.01	0.02	0.16	0.32	0.23	0.01	0.04	0.00	0.01	0.01
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	2813	3459	1870	1589	1781	1870	1589
c, Capacity [veh/h]	53	1882	840	55	1885	1490	860	560	476	14	109	93
d1, Uniform Delay [s]	57.68	15.11	13.43	57.65	15.76	19.56	43.80	29.85	30.82	59.22	53.54	53.97
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.96	0.27	0.03	16.66	0.40	1.84	4.21	0.03	0.14	14.51	0.44	1.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.22	0.01	0.73	0.30	0.61	0.91	0.04	0.15	0.36	0.11	0.25
d, Delay for Lane Group [s/veh]	73.64	15.38	13.46	74.31	16.16	21.40	48.01	29.88	30.97	73.73	53.98	55.35
Lane Group LOS	E	B	B	E	B	C	D	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.38	3.12	0.16	1.46	4.35	8.88	11.74	0.50	1.52	0.21	0.36	0.70
50th-Percentile Queue Length [ft/ln]	34.51	78.01	4.05	36.46	108.78	221.93	293.42	12.56	37.94	5.20	8.94	17.52
95th-Percentile Queue Length [veh/ln]	2.48	5.62	0.29	2.63	7.77	13.76	17.36	0.90	2.73	0.37	0.64	1.26
95th-Percentile Queue Length [ft/ln]	62.12	140.42	7.29	65.63	194.30	344.09	433.88	22.61	68.28	9.37	16.10	31.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.64	15.38	13.46	74.31	16.16	21.40	48.01	29.88	30.97	73.73	53.98	55.35
Movement LOS	E	B	B	E	B	C	D	C	C	E	D	E
d_A, Approach Delay [s/veh]	20.04			20.85			46.16			57.23		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	28.91											
Intersection LOS	C											
Intersection V/C	0.583											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.648	3.248	2.766	2.338
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	417	433	650
d_b, Bicycle Delay [s]	40.02	37.60	36.82	27.34
I_b,int, Bicycle LOS Score for Intersection	1.947	2.800	3.008	1.593
Bicycle LOS	A	C	C	A

Sequence




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



Intersection Level Of Service Report
Intersection 4: Redlands Avenue at Ellis Avenue

Control Type:	All-way stop	Delay (sec / veh):	31.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.924

Intersection Setup

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

Volumes

Name	Southbound		Eastbound		Westbound	
Base Volume Input [veh/h]	21	112	192	7	6	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	74	141	42	187	59	22
Site-Generated Trips [veh/h]	45	0	0	55	16	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	260	246	249	81	46
Peak Hour Factor	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	75	71	71	23	13
Total Analysis Volume [veh/h]	162	299	282	286	93	53
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	634	615	519	580
Degree of Utilization, x	0.73	0.92	0.18	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	6.20	11.96	0.65	0.30
95th-Percentile Queue Length [ft]	154.99	298.99	16.16	7.52
Approach Delay [s/veh]	22.25	43.96	10.56	
Approach LOS	C	E	B	
Intersection Delay [s/veh]	31.29			
Intersection LOS	D			

**Intersection Level Of Service Report
Intersection 5: Case Road at Ellis Avenue**

Control Type:	Signalized	Delay (sec / veh):	28.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.542

Intersection Setup

Name	Case Rd			Case Rd								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			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	Case Rd			Case Rd								
Base Volume Input [veh/h]	0	212	80	135	218	0	0	1	2	21	4	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	115	0	175	0	0	0	0	54	34	55	145	0
Site-Generated Trips [veh/h]	0	0	48	0	0	0	0	7	0	14	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]	115	225	308	143	231	0	0	62	36	91	151	84
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	60	82	38	61	0	0	16	10	24	40	22
Total Analysis Volume [veh/h]	122	239	328	152	246	0	0	66	38	97	161	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	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	44	0	30	74	0	0	46	0	0	46	0
Vehicle Extension [s]	0.0	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	7	0	0	7	0	0	14	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]	0.0	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]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	69	69	12	85	27	27
g / C, Green / Cycle	0.57	0.57	0.10	0.71	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.25	0.21	0.09	0.13	0.06	0.21
s, saturation flow rate [veh/h]	1459	1589	1781	1870	1707	1660
c, Capacity [veh/h]	872	906	183	1321	417	415
d1, Uniform Delay [s]	15.78	13.96	52.81	5.95	38.12	44.95
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.45	1.12	9.27	0.31	0.31	6.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.36	0.83	0.19	0.25	0.84
d, Delay for Lane Group [s/veh]	17.23	15.08	62.07	6.27	38.43	51.58
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.64	4.53	4.77	1.74	2.57	10.79
50th-Percentile Queue Length [ft/ln]	140.93	113.22	119.36	43.55	64.20	269.69
95th-Percentile Queue Length [veh/ln]	9.53	8.02	8.36	3.14	4.62	16.17
95th-Percentile Queue Length [ft/ln]	238.27	200.48	208.95	78.38	115.55	404.35

Movement, Approach, & Intersection Results

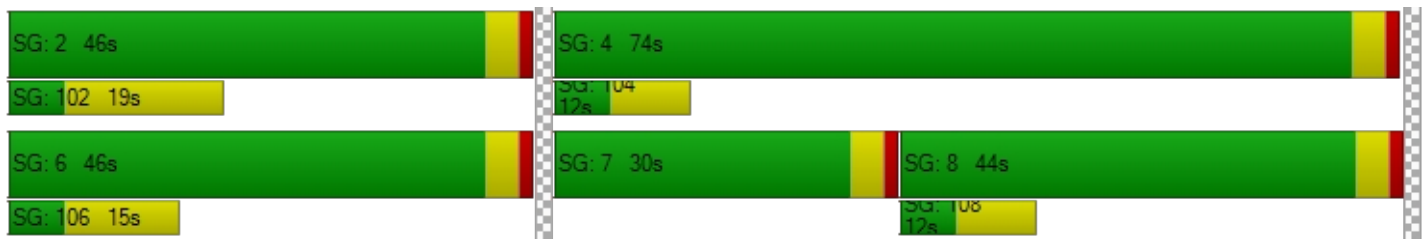
d_M, Delay for Movement [s/veh]	17.23	17.23	15.08	62.07	6.27	6.27	38.43	38.43	38.43	51.58	51.58	51.58
Movement LOS	B	B	B	E	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.21			27.58			38.43			51.58		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	28.63											
Intersection LOS	C											
Intersection V/C	0.542											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.731			2.388			2.092			2.165		
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]	667			1167			700			700		
d_b, Bicycle Delay [s]	26.67			10.42			25.35			25.35		
I_b,int, Bicycle LOS Score for Intersection	2.696			2.216			1.731			2.132		
Bicycle LOS	B			B			A			B		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Case Road at Murrieta Road

Control Type:	All-way stop	Delay (sec / veh):	24.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.891

Intersection Setup

Name	Northbound		Eastbound		Westbound	
Approach						
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Northbound		Eastbound		Westbound	
Base Volume Input [veh/h]	132	19	189	48	19	169
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	86	89	0	29	290
Site-Generated Trips [veh/h]	0	0	14	0	0	48
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	106	303	51	49	517
Peak Hour Factor	0.9560	0.9560	0.9560	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	28	79	13	13	135
Total Analysis Volume [veh/h]	146	111	317	53	51	541
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	479	571	580	654	560	607
Degree of Utilization, x	0.30	0.19	0.55	0.08	0.09	0.89

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.28	0.71	3.29	0.26	0.30	10.69
95th-Percentile Queue Length [ft]	31.89	17.87	82.30	6.59	7.49	267.23
Approach Delay [s/veh]	12.20		15.08		36.16	
Approach LOS	B		C		E	
Intersection Delay [s/veh]	24.71					
Intersection LOS	C					

**Intersection Level Of Service Report
Intersection 7: Case Rd at Mapes Rd**

Control Type:	All-way stop	Delay (sec / veh):	31.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.867

Intersection Setup

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	13.00	13.00	13.00	14.00	14.00	14.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Base Volume Input [veh/h]	0	0	0	56	0	45	65	162	0	0	139	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	319	175	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	48	14	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	59	0	415	258	172	0	0	147	76
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	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	17	0	120	74	50	0	0	42	22
Total Analysis Volume [veh/h]	0	0	0	68	0	478	297	198	0	0	169	88
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	463	630	571	557
Degree of Utilization, x	0.00	0.87	0.87	0.46

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	9.98	9.68	2.41
95th-Percentile Queue Length [ft]	0.00	249.61	241.97	60.32
Approach Delay [s/veh]	0.00	34.61	37.29	14.87
Approach LOS	A	D	E	B
Intersection Delay [s/veh]	31.72			
Intersection LOS	D			

Intersection Level Of Service Report

Intersection 8: Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd

Control Type:	Signalized	Delay (sec / veh):	35.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.353

Intersection Setup

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔↔		↑		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	14.00	16.00	13.00	13.00	12.00	14.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Base Volume Input [veh/h]	3	194	0	0	207	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	175	0	0	319	0
Site-Generated Trips [veh/h]	0	14	0	0	48	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	395	0	0	586	1
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	106	0	0	157	0
Total Analysis Volume [veh/h]	3	422	0	0	626	1
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Permissive	Unsignalized	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	10	0	14	0	96	110
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	0	54	58
g / C, Green / Cycle	0.45	0.00	0.45	0.48
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.35	0.00
s, saturation flow rate [veh/h]	1852	1945	1781	1945
c, Capacity [veh/h]	830	0	804	943
d1, Uniform Delay [s]	18.30	0.00	27.82	15.92
k, delay calibration	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.00	7.32	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.00	0.78	0.00
d, Delay for Lane Group [s/veh]	18.30	0.00	35.13	15.92
Lane Group LOS	B	A	D	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.05	0.00	15.84	0.01
50th-Percentile Queue Length [ft/ln]	1.21	0.00	396.04	0.34
95th-Percentile Queue Length [veh/ln]	0.09	0.00	22.37	0.02
95th-Percentile Queue Length [ft/ln]	2.18	0.00	559.23	0.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.30	0.00	0.00	0.00	35.13	15.92
Movement LOS	B		A	A	D	B
d_A, Approach Delay [s/veh]	18.30		0.00		35.10	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	35.02					
Intersection LOS	D					
Intersection V/C	0.353					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	100	167	1767
d_b, Bicycle Delay [s]	54.15	50.42	0.82
I_b,int, Bicycle LOS Score for Intersection	1.560	1.560	2.594
Bicycle LOS	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 9: I-215 SB Ramps at SR-74/Bonnie Dr

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.765

Intersection Setup

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵↑		↑↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	13.00	13.00	20.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Base Volume Input [veh/h]	173	551	598	28	40	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	241	4	13	79	120	55
Site-Generated Trips [veh/h]	35	0	0	13	8	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	459	588	647	122	170	225
Peak Hour Factor	0.8970	0.8970	0.8970	0.8970	0.8970	0.8970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	128	164	180	34	47	63
Total Analysis Volume [veh/h]	512	656	721	136	190	251
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Unsignalized
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	50	102	52	0	18	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	37	98	57	57	14
g / C, Green / Cycle	0.31	0.82	0.48	0.48	0.12
(v / s)_i Volume / Saturation Flow Rate	0.29	0.34	0.37	0.08	0.11
s, saturation flow rate [veh/h]	1781	1945	1945	1653	1781
c, Capacity [veh/h]	545	1588	928	789	208
d1, Uniform Delay [s]	40.55	3.04	26.06	17.87	52.41
k, delay calibration	0.28	0.50	0.50	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.43	0.80	6.35	0.47	14.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.41	0.78	0.17	0.91
d, Delay for Lane Group [s/veh]	57.98	3.84	32.40	18.34	66.93
Lane Group LOS	E	A	C	B	E
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	16.55	2.65	17.24	2.12	6.34
50th-Percentile Queue Length [ft/ln]	413.66	66.14	430.96	53.05	158.57
95th-Percentile Queue Length [veh/ln]	23.22	4.76	24.05	3.82	10.47
95th-Percentile Queue Length [ft/ln]	580.44	119.06	601.18	95.48	261.82

Movement, Approach, & Intersection Results

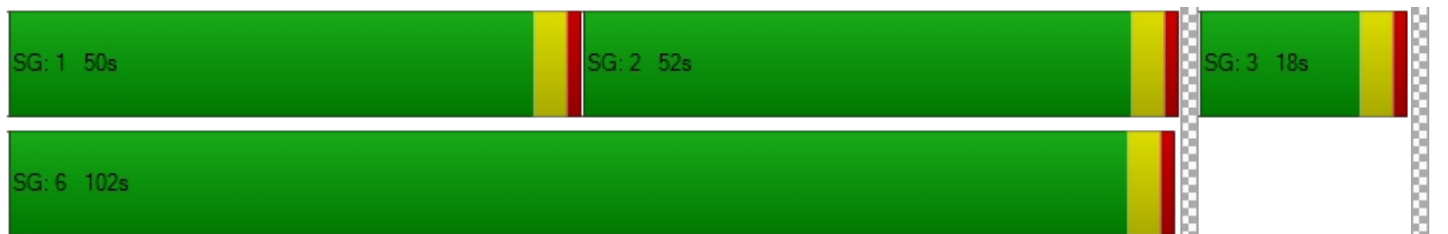
d_M, Delay for Movement [s/veh]	57.98	3.84	32.40	18.34	66.93	0.00
Movement LOS	E	A	C	B	E	
d_A, Approach Delay [s/veh]	27.57		30.17		66.93	
Approach LOS	C		C		E	
d_I, Intersection Delay [s/veh]	31.95					
Intersection LOS	C					
Intersection V/C	0.765					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1633	800	233
d_b, Bicycle Delay [s]	2.02	21.60	46.82
I_b,int, Bicycle LOS Score for Intersection	3.487	2.974	1.560
Bicycle LOS	C	C	A

Sequence




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



Intersection Level Of Service Report
Intersection 10: I-215 NB Ramps at SR-74

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.551

Intersection Setup

Name	I-215 NB Ramps		SR-74		SR-74	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	20.00	20.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	240.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	I-215 NB Ramps		SR-74		SR-74	
Base Volume Input [veh/h]	168	10	9	727	687	843
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	13	229	51	17	16	4
Site-Generated Trips [veh/h]	0	28	4	2	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	191	268	65	790	751	898
Peak Hour Factor	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	72	17	212	201	241
Total Analysis Volume [veh/h]	205	288	70	848	806	964
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protected	Permissive	Permissive	Unsignalized
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	10	10	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	82	0	10	38	28	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	L	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	37	6	75	65
g / C, Green / Cycle	0.31	0.05	0.63	0.54
(v / s)_i Volume / Saturation Flow Rate	0.28	0.04	0.24	0.23
s, saturation flow rate [veh/h]	1730	1781	3560	3560
c, Capacity [veh/h]	530	89	2233	1936
d1, Uniform Delay [s]	40.39	56.37	10.95	16.14
k, delay calibration	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.86	14.01	0.49	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.79	0.38	0.42
d, Delay for Lane Group [s/veh]	48.25	70.38	11.44	16.80
Lane Group LOS	D	E	B	B
Critical Lane Group	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	15.13	2.38	4.95	6.11
50th-Percentile Queue Length [ft/ln]	378.18	59.44	123.69	152.81
95th-Percentile Queue Length [veh/ln]	21.51	4.28	8.60	10.17
95th-Percentile Queue Length [ft/ln]	537.64	106.99	214.88	254.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.25	48.25	70.38	11.44	16.80	0.00
Movement LOS	D	D	E	B	B	
d_A, Approach Delay [s/veh]	48.25		15.93		16.80	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	23.44					
Intersection LOS	C					
Intersection V/C	0.551					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1300	567	400
d_b, Bicycle Delay [s]	7.35	30.82	38.40
I_b,int, Bicycle LOS Score for Intersection	2.373	2.317	2.225
Bicycle LOS	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.063

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	37	123	138	0	0	44	0
Site-Generated Trips [veh/h]	22	0	0	0	0	0	0	26	74	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	0	0	0	0	37	123	194	74	0	68	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	0	0	0	10	32	51	19	0	18	0
Total Analysis Volume [veh/h]	23	0	0	0	0	39	129	204	78	0	72	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.00	0.04	0.08	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.46	14.81	10.18	14.29	14.78	8.78	7.57	0.00	0.00	7.81	0.00	0.00
Movement LOS	C	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.20	0.20	0.20	0.12	0.12	0.12	0.28	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.99	4.99	4.99	3.07	3.07	3.07	6.90	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.46			8.78			2.38			0.00		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	3.07											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	22	69	69	0	0	22	0
Site-Generated Trips [veh/h]	8	0	0	0	0	0	0	0	26	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	0	0	0	22	69	99	26	0	38	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	6	18	26	7	0	10	0
Total Analysis Volume [veh/h]	8	0	0	0	0	23	73	104	27	0	40	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.14	11.28	8.94	10.90	11.38	8.57	7.41	0.00	0.00	7.48	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.07	0.07	0.07	0.15	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.02	1.02	1.02	1.71	1.71	1.71	3.66	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.14			8.57			2.65			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	3.01											
Intersection LOS	B											

Newcastle Ellis Avenue Warehouse

Vistro File: K:\...\Ellis Newcastle BASE - PM.vistro

Scenario 4 OY CP WP PM

Report File: K:\...4 OY CP WP PM.pdf

6/28/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	I-215 NB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	NB Left	0.784	33.1	C
2	I-215 SB Ramps at Redlands Avenue	Signalized	HCM 7th Edition	EB Right	0.653	32.4	C
3	Redlands Avenue at 4th Street	Signalized	HCM 7th Edition	NB Left	0.686	48.4	D
4	Redlands Avenue at Ellis Avenue	All-way stop	HCM 7th Edition	EB Left	0.785	19.5	C
5	Case Road at Ellis Avenue	Signalized	HCM 7th Edition	SB Left	0.691	33.3	C
6	Case Road at Murrieta Road	All-way stop	HCM 7th Edition	EB Thru	1.274	82.1	F
7	Case Rd at Mapes Rd	All-way stop	HCM 7th Edition	EB Left	1.392	111.9	F
8	Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd	Signalized	HCM 7th Edition	EB Right	0.309	31.2	C
9	I-215 SB Ramps at SR-74/Bonnie Dr	Signalized	HCM 7th Edition	EB Left	0.881	52.8	D
10	I-215 NB Ramps at SR-74	Signalized	HCM 7th Edition	EB Left	0.596	22.6	C
11	Ellis Avenue at West Project Driveway	Two-way stop	HCM 7th Edition	NB Left	0.222	18.9	C
12	Ellis Avenue at East Project Driveway	Two-way stop	HCM 7th Edition	NB Left	0.065	11.6	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: I-215 NB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.784

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	0	0	1	0	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	1	0	0	0	1	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	1000.00	0.00	300.00	0.00	0.00	0.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	169	650	0	0	785	122	0	0	0	298	2	481
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0000	1.0000	1.0600	1.0600	1.0000	1.0000	1.0000	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	219	434	0	0	422	410	0	0	0	48	0	401
Site-Generated Trips [veh/h]	14	14	0	0	5	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	412	1137	0	0	1259	539	0	0	0	364	2	911
Peak Hour Factor	0.9750	0.9750	1.0000	1.0000	0.9750	0.9750	1.0000	1.0000	1.0000	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	292	0	0	323	138	0	0	0	93	1	234
Total Analysis Volume [veh/h]	423	1166	0	0	1291	553	0	0	0	373	2	934
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		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	20	69	0	0	49	0	0	0	0	0	51	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	16	71	51	51		41	41	41
g / C, Green / Cycle	0.13	0.59	0.42	0.42		0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.12	0.33	0.19	0.35		0.21	0.31	0.27
s, saturation flow rate [veh/h]	3459	3560	6792	1589		1781	1590	1589
c, Capacity [veh/h]	461	2103	2879	674		610	545	545
d1, Uniform Delay [s]	51.35	14.96	24.59	30.54		32.78	37.79	35.72
k, delay calibration	0.11	0.50	0.50	0.50		0.12	0.32	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	7.74	1.06	0.51	10.79		1.09	16.18	6.05
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	0.92	0.55	0.45	0.82		0.61	0.92	0.80
d, Delay for Lane Group [s/veh]	59.09	16.02	25.09	41.33		33.87	53.97	41.77
Lane Group LOS	E	B	C	D		C	D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.76	9.63	6.60	15.85		9.16	16.32	12.36
50th-Percentile Queue Length [ft/ln]	169.06	240.80	165.02	396.26		229.12	407.93	309.08
95th-Percentile Queue Length [veh/ln]	11.03	14.72	10.81	22.38		14.13	22.94	18.13
95th-Percentile Queue Length [ft/ln]	275.67	368.04	270.35	559.49		353.24	573.55	453.24

Movement, Approach, & Intersection Results

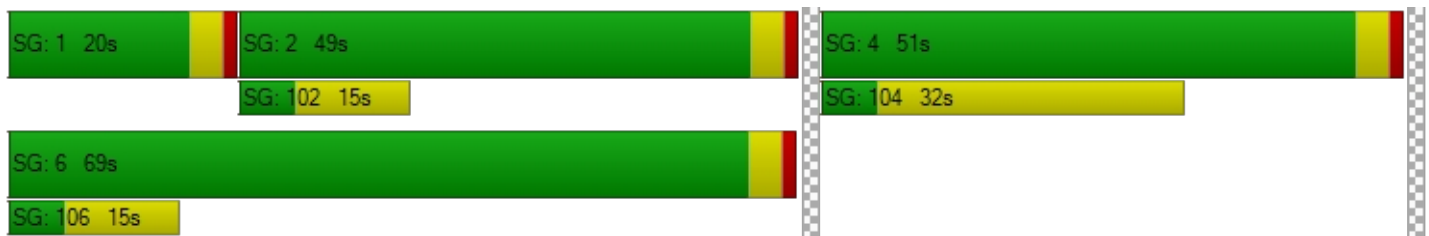
d_M, Delay for Movement [s/veh]	59.09	16.02	0.00	0.00	25.09	41.33	0.00	0.00	0.00	33.87	53.97	48.27
Movement LOS	E	B			C	D				C	D	D
d_A, Approach Delay [s/veh]	27.48				29.96		0.00				44.18	
Approach LOS	C				C		A				D	
d_I, Intersection Delay [s/veh]	33.06											
Intersection LOS	C											
Intersection V/C	0.784											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.137	3.158	2.273	2.381
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1083	750	0	783
d_b, Bicycle Delay [s]	12.60	23.44	60.00	22.20
I_b,int, Bicycle LOS Score for Intersection	2.871	2.320	4.132	3.719
Bicycle LOS	C	B	D	D

Sequence

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



Intersection Level Of Service Report
Intersection 2: I-215 SB Ramps at Redlands Avenue

Control Type:	Signalized	Delay (sec / veh):	32.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach												
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	3	0	0	0	0	0	1
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	100.00
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			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	620	435	415	702	0	157	0	198	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0600	1.0600	1.0600	1.0600	1.0000	1.0600	1.0600	1.0600	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	252	38	410	60	0	401	0	120	0	0	0
Site-Generated Trips [veh/h]	0	28	0	0	5	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	937	499	850	809	0	567	0	335	0	0	0
Peak Hour Factor	1.0000	0.9370	0.9370	0.9370	0.9370	1.0000	0.9370	0.9370	0.9370	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	250	133	227	216	0	151	0	89	0	0	0
Total Analysis Volume [veh/h]	0	1000	533	907	863	0	605	0	358	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	56	77	0	0	43	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	34	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	45	45	35	84	28	28	28	
g / C, Green / Cycle	0.38	0.38	0.29	0.70	0.23	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.19	0.26	0.24	0.18	0.18	0.20	
s, saturation flow rate [veh/h]	6792	2813	3459	3560	1781	1756	1589	
c, Capacity [veh/h]	2556	1059	1013	2501	411	405	367	
d1, Uniform Delay [s]	27.36	28.79	40.67	7.01	43.32	43.45	44.45	
k, delay calibration	0.50	0.50	0.11	0.50	0.13	0.14	0.18	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.45	1.71	3.09	0.38	3.95	4.42	10.13	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.39	0.50	0.90	0.35	0.78	0.79	0.87	
d, Delay for Lane Group [s/veh]	27.82	30.50	43.76	7.39	47.27	47.88	54.58	
Lane Group LOS	C	C	D	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.32	6.13	13.16	4.13	9.39	9.46	10.15	
50th-Percentile Queue Length [ft/ln]	133.02	153.22	328.98	103.19	234.70	236.42	253.87	
95th-Percentile Queue Length [veh/ln]	9.10	10.19	19.11	7.43	14.41	14.50	15.38	
95th-Percentile Queue Length [ft/ln]	227.60	254.73	477.71	185.74	360.33	362.50	384.53	

Movement, Approach, & Intersection Results

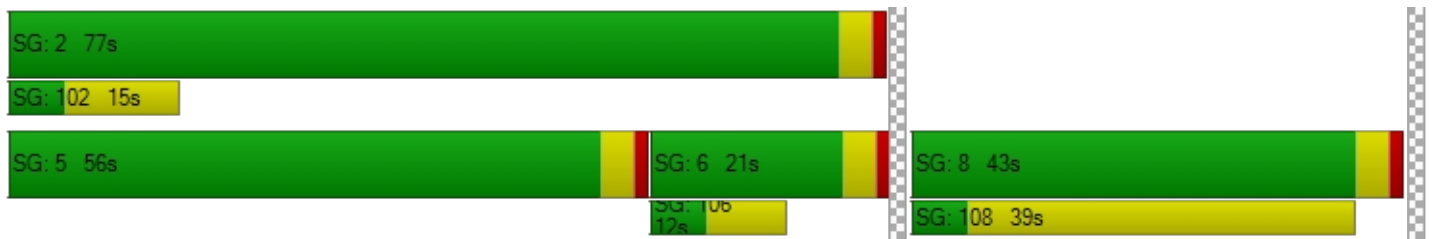
d_M, Delay for Movement [s/veh]	0.00	27.82	30.50	43.76	7.39	0.00	47.55	47.88	53.88	0.00	0.00	0.00
Movement LOS		C	C	D	A		D	D	D			
d_A, Approach Delay [s/veh]	28.75			26.03			49.90			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	32.39											
Intersection LOS	C											
Intersection V/C	0.653											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0		9.0		9.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	51.34		51.34		51.34		51.34	
I_p,int, Pedestrian LOS Score for Intersection	3.163		3.311		2.268		2.432	
Crosswalk LOS	C		C		B		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	283		1217		650		0	
d_b, Bicycle Delay [s]	44.20		9.20		27.34		60.00	
I_b,int, Bicycle LOS Score for Intersection	2.192		3.020		3.149		4.132	
Bicycle LOS	B		C		C		D	

Sequence

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



Intersection Level Of Service Report
Intersection 3: Redlands Avenue at 4th Street

Control Type:	Signalized	Delay (sec / veh):	48.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.686

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	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	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	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												
Base Volume Input [veh/h]	69	272	9	18	215	652	781	21	78	10	16	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	33	214	0	0	83	97	76	0	12	0	0	0
Site-Generated Trips [veh/h]	14	28	0	0	10	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	530	10	19	321	788	904	22	100	11	17	49
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	142	3	5	86	211	242	6	27	3	5	13
Total Analysis Volume [veh/h]	129	568	11	20	344	845	969	24	107	12	18	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	32	0	10	30	0	35	30	0	48	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	21	0	0	21	0	0	34	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	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	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	61	61	2	56	56	31	38	38	2	9	9
g / C, Green / Cycle	0.07	0.51	0.51	0.02	0.47	0.47	0.26	0.32	0.32	0.01	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.07	0.16	0.01	0.01	0.10	0.30	0.28	0.01	0.07	0.01	0.01	0.03
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	2813	3459	1870	1589	1781	1870	1589
c, Capacity [veh/h]	119	1821	813	36	1656	1309	893	598	508	27	143	122
d1, Uniform Delay [s]	56.00	17.04	14.42	58.23	19.00	24.53	44.50	28.13	29.77	58.59	51.67	52.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.12	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	63.97	0.45	0.03	12.37	0.28	2.47	43.29	0.03	0.20	11.12	0.39	2.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.09	0.31	0.01	0.55	0.21	0.65	1.08	0.04	0.21	0.45	0.13	0.44
d, Delay for Lane Group [s/veh]	119.97	17.49	14.45	70.60	19.28	27.00	87.79	28.16	29.98	69.72	52.06	55.39
Lane Group LOS	F	B	B	E	B	C	F	C	C	E	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.70	4.64	0.16	0.73	2.91	9.46	18.53	0.49	2.30	0.45	0.52	1.61
50th-Percentile Queue Length [ft/ln]	142.51	115.88	3.88	18.17	72.69	236.57	463.13	12.14	57.47	11.13	13.07	40.33
95th-Percentile Queue Length [veh/ln]	9.87	8.17	0.28	1.31	5.23	14.51	26.83	0.87	4.14	0.80	0.94	2.90
95th-Percentile Queue Length [ft/ln]	246.66	204.15	6.98	32.71	130.84	362.69	670.74	21.85	103.44	20.04	23.53	72.60

Movement, Approach, & Intersection Results

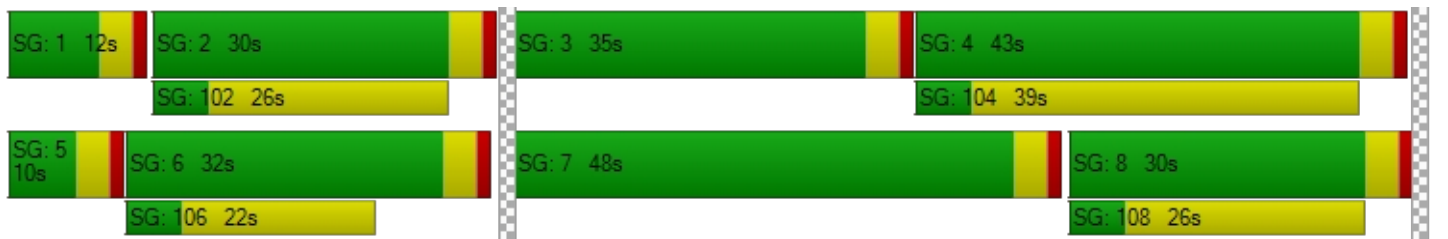
d_M, Delay for Movement [s/veh]	119.97	17.49	14.45	70.60	19.28	27.00	87.79	28.16	29.98	69.72	52.06	55.39
Movement LOS	F	B	B	E	B	C	F	C	C	E	D	E
d_A, Approach Delay [s/veh]	36.11			25.52			80.86			56.74		
Approach LOS	D			C			F			E		
d_I, Intersection Delay [s/veh]	48.41											
Intersection LOS	D											
Intersection V/C	0.686											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.658	3.255	2.808	2.342
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	467	433	433	650
d_b, Bicycle Delay [s]	35.27	36.82	36.82	27.34
I_b,int, Bicycle LOS Score for Intersection	2.144	2.557	3.375	1.628
Bicycle LOS	B	B	C	A

Sequence




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



Intersection Level Of Service Report
Intersection 4: Redlands Avenue at Ellis Avenue

Control Type:	All-way stop	Delay (sec / veh):	19.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.785

Intersection Setup

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

Volumes

Name	Southbound		Eastbound		Westbound	
Base Volume Input [veh/h]	23	176	155	15	3	61
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0600	1.0600	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	35	60	148	67	182	100
Site-Generated Trips [veh/h]	15	0	0	25	64	42
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	247	312	107	249	203
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	69	87	30	69	57
Total Analysis Volume [veh/h]	81	275	347	119	277	226
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	607	594	560	630
Degree of Utilization, x	0.59	0.79	0.49	0.36

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	3.80	7.47	2.73	1.63
95th-Percentile Queue Length [ft]	95.03	186.64	68.20	40.67
Approach Delay [s/veh]	17.02	27.65	13.61	
Approach LOS	C	D	B	
Intersection Delay [s/veh]	19.46			
Intersection LOS	C			

**Intersection Level Of Service Report
Intersection 5: Case Road at Ellis Avenue**

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

Intersection Setup

Name	Case Rd			Case Rd								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			55.00			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	Case Rd			Case Rd								
Base Volume Input [veh/h]	0	278	67	102	327	0	0	2	0	95	3	97
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	45	0	61	0	0	0	0	154	121	166	77	0
Site-Generated Trips [veh/h]	0	0	22	0	0	0	0	3	0	57	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
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	295	154	108	347	0	0	159	121	324	87	103
Peak Hour Factor	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110	0.9110
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	81	42	30	95	0	0	44	33	89	24	28
Total Analysis Volume [veh/h]	49	324	169	119	381	0	0	175	133	356	95	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	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	43	0	18	61	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	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	7	0	0	7	0	0	14	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]	0.0	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]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	50	50	10	64	48	48
g / C, Green / Cycle	0.42	0.42	0.08	0.53	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.23	0.11	0.07	0.20	0.18	0.39
s, saturation flow rate [veh/h]	1595	1589	1781	1870	1712	1444
c, Capacity [veh/h]	696	660	146	992	720	631
d1, Uniform Delay [s]	26.58	22.98	54.17	16.62	25.99	32.84
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.36
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.95	0.94	10.35	1.13	0.40	13.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.26	0.81	0.38	0.43	0.89
d, Delay for Lane Group [s/veh]	29.53	23.92	64.52	17.75	26.40	46.36
Lane Group LOS	C	C	E	B	C	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	8.31	3.10	3.81	5.87	6.46	17.71
50th-Percentile Queue Length [ft/ln]	207.82	77.39	95.23	146.69	161.47	442.78
95th-Percentile Queue Length [veh/ln]	13.04	5.57	6.86	9.84	10.63	24.61
95th-Percentile Queue Length [ft/ln]	326.04	139.30	171.42	246.00	265.66	615.33

Movement, Approach, & Intersection Results

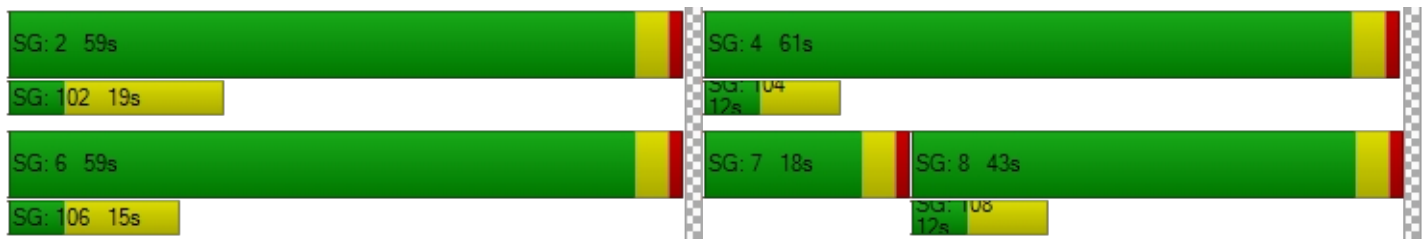
d_M, Delay for Movement [s/veh]	29.53	29.53	23.92	64.52	17.75	17.75	26.40	26.40	26.40	46.36	46.36	46.36
Movement LOS	C	C	C	E	B	B	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	27.78			28.88			26.40			46.36		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	33.32											
Intersection LOS	C											
Intersection V/C	0.691											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.303	2.514	2.020	2.231
Crosswalk LOS	C	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]	650	950	917	917
d_b, Bicycle Delay [s]	27.34	16.54	17.60	17.60
I_b,int, Bicycle LOS Score for Intersection	2.454	2.385	2.068	2.490
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Case Road at Murrieta Road

Control Type:	All-way stop	Delay (sec / veh):	82.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.274

Intersection Setup

Name	Case Rd		Case Rd		Case Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	100.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Case Rd		Case Rd		Case Rd	
Base Volume Input [veh/h]	86	16	314	101	16	266
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	56	287	0	92	106
Site-Generated Trips [veh/h]	0	0	57	0	0	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	73	677	107	109	410
Peak Hour Factor	0.8860	0.8860	0.8860	0.8860	0.8860	0.8860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	21	191	30	31	116
Total Analysis Volume [veh/h]	103	82	764	121	123	463
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	452	531	764	680	549	594
Degree of Utilization, x	0.23	0.15	1.27	0.18	0.22	0.78

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.87	0.54	30.07	0.64	0.85	7.33
95th-Percentile Queue Length [ft]	21.69	13.55	751.84	16.09	21.33	183.34
Approach Delay [s/veh]	11.98		135.50		23.60	
Approach LOS	B		F		C	
Intersection Delay [s/veh]	82.10					
Intersection LOS	F					

**Intersection Level Of Service Report
Intersection 7: Case Rd at Mapes Rd**

Control Type:	All-way stop	Delay (sec / veh):	111.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.392

Intersection Setup

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	13.00	13.00	13.00	14.00	14.00	14.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Base Volume Input [veh/h]	0	0	0	81	0	69	86	184	0	0	252	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	198	343	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	22	57	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	86	0	293	491	195	0	0	267	102
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
Other Adjustment Factor	1.0000	1.0000	1.0000	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	25	0	84	140	56	0	0	76	29
Total Analysis Volume [veh/h]	0	0	0	98	0	334	560	222	0	0	304	116
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	431	573	782	571
Degree of Utilization, x	0.00	0.75	1.39	0.74

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.00	6.67	35.72	6.26
95th-Percentile Queue Length [ft]	0.00	166.64	893.09	156.44
Approach Delay [s/veh]	0.00	25.99	206.10	24.78
Approach LOS	A	D	F	C
Intersection Delay [s/veh]	111.88			
Intersection LOS	F			

Intersection Level Of Service Report

Intersection 8: Mapes Rd at Bonnie Dr/S Perris Metrolink Sta Rd

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.309

Intersection Setup

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔↔		↑		↔↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	14.00	16.00	13.00	13.00	12.00	14.00
No. of Lanes in Entry Pocket	0	1	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	150.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Mapes Rd		S Perris Metrolink Sta Rd		Bonnie Dr	
Base Volume Input [veh/h]	0	311	0	2	262	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	343	0	0	198	0
Site-Generated Trips [veh/h]	0	57	0	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	730	0	2	498	3
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	201	0	1	137	1
Total Analysis Volume [veh/h]	0	805	0	2	549	3
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Permissive	Unsignalized	Permissive	Permissive	Protected	Permissive
Signal Group	3	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	10	0	5	10
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	10	0	14	0	96	110
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	1	54	58
g / C, Green / Cycle	0.45	0.01	0.45	0.49
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00	0.31	0.00
s, saturation flow rate [veh/h]	1852	1653	1781	1945
c, Capacity [veh/h]	825	9	799	948
d1, Uniform Delay [s]	0.00	59.42	26.34	15.77
k, delay calibration	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	11.91	4.77	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.22	0.69	0.00
d, Delay for Lane Group [s/veh]	0.00	71.33	31.12	15.77
Lane Group LOS	A	E	C	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	0.09	12.81	0.04
50th-Percentile Queue Length [ft/ln]	0.00	2.25	320.35	1.02
95th-Percentile Queue Length [veh/ln]	0.00	0.16	18.68	0.07
95th-Percentile Queue Length [ft/ln]	0.00	4.05	467.12	1.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	71.33	71.33	31.12	15.77
Movement LOS	A		E	E	C	B
d_A, Approach Delay [s/veh]	0.00		71.33		31.03	
Approach LOS	A		E		C	
d_I, Intersection Delay [s/veh]	31.18					
Intersection LOS	C					
Intersection V/C	0.309					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	100	167	1767
d_b, Bicycle Delay [s]	54.15	50.42	0.82
I_b,int, Bicycle LOS Score for Intersection	1.560	1.563	2.470
Bicycle LOS	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 9: I-215 SB Ramps at SR-74/Bonnie Dr

Control Type:	Signalized	Delay (sec / veh):	52.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.881

Intersection Setup

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵↑		↑↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	13.00	13.00	20.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	SR-74		I-215 SB Ramps		Bonnie Dr	
Base Volume Input [veh/h]	226	339	849	33	23	303
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	146	14	5	53	249	94
Site-Generated Trips [veh/h]	15	0	0	7	32	25
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	401	373	905	95	305	440
Peak Hour Factor	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	95	231	24	78	112
Total Analysis Volume [veh/h]	410	381	925	97	312	450
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

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

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Unsignalized
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	32	96	64	0	24	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	92	60	60	20
g / C, Green / Cycle	0.23	0.77	0.50	0.50	0.17
(v / s)_i Volume / Saturation Flow Rate	0.23	0.20	0.48	0.06	0.18
s, saturation flow rate [veh/h]	1781	1945	1945	1653	1781
c, Capacity [veh/h]	416	1491	972	827	297
d1, Uniform Delay [s]	45.81	4.06	28.61	15.94	50.00
k, delay calibration	0.39	0.50	0.50	0.50	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	35.98	0.41	19.24	0.29	49.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.99	0.26	0.95	0.12	1.05
d, Delay for Lane Group [s/veh]	81.80	4.48	47.85	16.22	99.69
Lane Group LOS	F	A	D	B	F
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	15.74	2.06	27.91	1.39	12.72
50th-Percentile Queue Length [ft/ln]	393.62	51.49	697.70	34.83	318.03
95th-Percentile Queue Length [veh/ln]	22.25	3.71	36.57	2.51	19.03
95th-Percentile Queue Length [ft/ln]	556.30	92.68	914.30	62.69	475.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	81.80	4.48	47.85	16.22	99.69	0.00
Movement LOS	F	A	D	B	F	
d_A, Approach Delay [s/veh]	44.55		44.85		99.69	
Approach LOS	D		D		F	
d_I, Intersection Delay [s/veh]	52.79					
Intersection LOS	D					
Intersection V/C	0.881					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1533	1000	333
d_b, Bicycle Delay [s]	3.27	15.00	41.67
I_b,int, Bicycle LOS Score for Intersection	2.865	3.246	1.560
Bicycle LOS	C	C	A

Sequence




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



Intersection Level Of Service Report
Intersection 10: I-215 NB Ramps at SR-74

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

Intersection Setup

Name	I-215 NB Ramps		SR-74		SR-74	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	20.00	20.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	240.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	1	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	30.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	I-215 NB Ramps		SR-74		SR-74	
Base Volume Input [veh/h]	227	25	14	1034	596	832
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	5	141	77	22	20	14
Site-Generated Trips [veh/h]	0	12	18	7	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	246	180	110	1125	655	896
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	48	29	300	175	239
Total Analysis Volume [veh/h]	263	192	118	1202	700	957
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
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	Protected	Permissive	Permissive	Unsignalized
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	10	10	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	87	0	19	33	14	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	L	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	33	10	79	65
g / C, Green / Cycle	0.28	0.08	0.65	0.54
(v / s)_i Volume / Saturation Flow Rate	0.26	0.07	0.34	0.20
s, saturation flow rate [veh/h]	1763	1781	3560	3560
c, Capacity [veh/h]	491	145	2330	1922
d1, Uniform Delay [s]	42.07	54.22	10.81	15.82
k, delay calibration	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.99	10.41	0.82	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.81	0.52	0.36
d, Delay for Lane Group [s/veh]	50.05	64.63	11.63	16.35
Lane Group LOS	D	E	B	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	14.07	3.81	7.26	5.17
50th-Percentile Queue Length [ft/ln]	351.82	95.26	181.54	129.14
95th-Percentile Queue Length [veh/ln]	20.22	6.86	11.68	8.89
95th-Percentile Queue Length [ft/ln]	505.62	171.48	292.02	222.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.05	50.05	64.63	11.63	16.35	0.00
Movement LOS	D	D	E	B	B	
d_A, Approach Delay [s/veh]	50.05		16.37		16.35	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	22.56					
Intersection LOS	C					
Intersection V/C	0.596					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000
Crosswalk LOS	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1383	483	167
d_b, Bicycle Delay [s]	5.70	34.50	50.42
I_b,int, Bicycle LOS Score for Intersection	2.310	2.649	2.137
Bicycle LOS	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.222

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	166	58	44	0	0	116	0
Site-Generated Trips [veh/h]	70	0	0	0	0	0	0	14	26	0	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	0	0	0	0	166	58	96	26	0	216	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	0	0	0	44	15	25	7	0	57	0
Total Analysis Volume [veh/h]	74	0	0	0	0	175	61	101	27	0	227	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.00	0.00	0.00	0.00	0.22	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	18.86	15.66	11.89	13.63	13.96	10.64	7.81	0.00	0.00	7.47	0.00	0.00
Movement LOS	C	C	B	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.83	0.83	0.83	0.82	0.82	0.82	0.14	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	20.87	20.87	20.87	20.39	20.39	20.39	3.57	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.86			10.64			2.52			0.00		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	5.62											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.065

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	116	44	0	0	0	0	0
Site-Generated Trips [veh/h]	36	0	0	0	0	0	0	0	14	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	0	0	0	0	116	44	38	14	0	64	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	0	0	31	12	10	4	0	17	0
Total Analysis Volume [veh/h]	38	0	0	0	0	122	46	40	15	0	67	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.00	0.12	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.60	10.81	8.95	10.44	10.93	9.12	7.42	0.00	0.00	7.32	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.21	0.21	0.21	0.42	0.42	0.42	0.09	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.21	5.21	5.21	10.42	10.42	10.42	2.32	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.60			9.12			3.38			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	5.78											
Intersection LOS	B											

APPENDIX D-5

**INTERSECTION ANALYSIS
WORKSHEETS -
OPENING YEAR 2025 CUMULATIVE
PLUS PROJECT WITH
IMPROVEMENTS**

Option 1: Install Traffic Signal

Number	6					
Intersection	Case Road at Murrieta Road					
Control Type	Signalized					
Analysis Method	HCM 7th Edition					
Name			Case Rd		Case Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑↵		↵↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Base Volume Input [veh/h]	132	19	189	48	19	169
Total Analysis Volume [veh/h]	146	111	317	53	51	541

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Semi-actuated					
Lost time [s]	0.00					
Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	10	0	0	10
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	39	0	81	0	0	81
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	14	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.11	0.11	0.82	0.82	0.82	0.82
(v / s)_i Volume / Saturation Flow Rate	0.09	0.08	0.19	0.04	0.06	0.32
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1603	1431	1683	1431	911	1683
c, Capacity [veh/h]	180	161	1382	1175	745	1382
X, volume / capacity	0.81	0.69	0.23	0.05	0.07	0.39
d, Delay for Lane Group [s/veh]	60.51	56.51	2.75	2.07	4.08	3.66
Lane Group LOS	E	E	A	A	A	A

Critical Lane Group	Yes	NO	NO	NO	NO	Yes
50th-Percentile Queue Length [veh/ln]	4.72	3.45	0.90	0.13	0.26	1.85
50th-Percentile Queue Length [ft/ln]	117.96	86.27	22.40	3.22	6.60	46.16
95th-Percentile Queue Length [veh/ln]	8.28	6.21	1.61	0.23	0.48	3.32
95th-Percentile Queue Length [ft/ln]	207.02	155.29	40.32	5.80	11.88	83.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.51	56.51	2.75	2.07	4.08	3.66
Movement LOS	E	E	A	A	A	A
Critical Movement	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	58.78		2.65		3.70	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	15.00					
Intersection LOS	B					
Intersection V/C	0.413					

Option 1: Install Traffic Signal

Number	6					
Intersection	Case Road at Murrieta Road					
Control Type	Signalized					
Analysis Method	HCM 7th Edition					
Name			Case Rd		Case Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑↵		↵↑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Base Volume Input [veh/h]	86	16	314	101	16	266
Total Analysis Volume [veh/h]	103	82	764	121	123	463

Intersection Settings

Cycle Length [s]	120					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Semi-actuated					
Lost time [s]	0.00					
Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	10	0	0	10
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	32	0	88	0	0	88
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	14	0	10	0	0	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.08	0.08	0.85	0.85	0.85	0.85
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.45	0.08	0.22	0.28
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3	
s, saturation flow rate [veh/h]	1603	1431	1683	1431	565	1683
c, Capacity [veh/h]	135	120	1429	1215	450	1429
X, volume / capacity	0.76	0.68	0.53	0.10	0.27	0.32
d, Delay for Lane Group [s/veh]	62.36	59.96	3.94	1.66	8.87	2.49
Lane Group LOS	E	E	A	A	A	A

Critical Lane Group	Yes	NO	Yes	NO	NO	NO
50th-Percentile Queue Length [veh/ln]	3.37	2.63	1.94	0.19	1.18	0.87
50th-Percentile Queue Length [ft/ln]	84.19	65.67	48.59	4.63	29.39	21.65
95th-Percentile Queue Length [veh/ln]	6.06	4.73	3.50	0.33	2.12	1.56
95th-Percentile Queue Length [ft/ln]	151.54	118.21	87.46	8.33	52.89	38.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.36	59.96	3.94	1.66	8.87	2.49
Movement LOS	E	E	A	A	A	A
Critical Movement	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	61.29		3.63		3.83	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	10.14					
Intersection LOS	B					
Intersection V/C	0.518					

Option 1: Install Traffic Signal. Add EB Left-Turn Lane.

Number	7											
Intersection	Case Rd at Mapes Rd											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	0	56	0	45	65	162	0	0	139	72
Total Analysis Volume [veh/h]	0	0	0	68	0	478	297	198	0	0	169	88

Intersection Settings

Cycle Length [s]	80											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	39	0	0	39	0	23	41	0	0	18	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	11	0	0	7	0	0	8	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.46	0.46	0.21	0.44	0.18
(v / s)_i Volume / Saturation Flow Rate	0.00	0.37	0.19	0.12	0.16
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900
Arrival type	3	3	3	3	3
s, saturation flow rate [veh/h]	1750	1479	1603	1683	1587
c, Capacity [veh/h]	848	730	335	742	334
X, volume / capacity	0.00	0.75	0.89	0.27	0.77
d, Delay for Lane Group [s/veh]	0.00	25.34	38.50	14.35	35.72
Lane Group LOS	A	C	D	B	D

Critical Lane Group	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	9.27	5.68	1.92	4.69
50th-Percentile Queue Length [ft/ln]	0.00	231.71	141.90	48.12	117.14
95th-Percentile Queue Length [veh/ln]	0.00	14.26	9.58	3.46	8.24
95th-Percentile Queue Length [ft/ln]	0.00	356.53	239.58	86.62	205.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	25.34	25.34	25.34	38.50	14.35	14.35	35.72	35.72	35.72
Movement LOS	A	A	A	C	C	C	D	B	B	D	D	D
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	0.00			25.34			28.84			35.72		
Approach LOS	A			C			C			D		
d_I, Intersection Delay [s/veh]	28.73											
Intersection LOS	C											
Intersection V/C	0.716											

Option 1: Install Traffic Signal. Add EB Left-Turn Lane.

Number	7											
Intersection	Case Rd at Mapes Rd											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name	Mapes Rd			Mapes Rd			Case Rd			Case Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	0	81	0	69	86	184	0	0	252	96
Total Analysis Volume [veh/h]	0	0	0	98	0	334	560	222	0	0	304	116

Intersection Settings

Cycle Length [s]	80											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	0	25	0	32	55	0	0	23	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	14	0	0	7	0	0	8	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.26	0.26	0.35	0.64	0.24
(v / s)_i Volume / Saturation Flow Rate	0.00	0.30	0.35	0.13	0.26
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900
Arrival type	3	3	3	3	3
s, saturation flow rate [veh/h]	1650	1462	1603	1683	1605
c, Capacity [veh/h]	478	439	561	1073	426
X, volume / capacity	0.00	0.98	1.00	0.21	0.99
d, Delay for Lane Group [s/veh]	0.00	69.82	59.57	6.15	57.61
Lane Group LOS	A	E	E	A	E

Critical Lane Group	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	13.06	14.21	1.06	10.46
50th-Percentile Queue Length [ft/ln]	0.00	326.57	355.17	26.50	261.43
95th-Percentile Queue Length [veh/ln]	0.00	18.99	20.39	1.91	15.76
95th-Percentile Queue Length [ft/ln]	0.00	474.76	509.71	47.70	394.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	69.82	69.82	69.82	59.57	6.15	6.15	57.61	57.61	57.61
Movement LOS	A	A	A	E	E	E	E	A	A	E	E	E
Critical Movement	No	No	No	No	No	Yes	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	0.00			69.82			44.40			57.61		
Approach LOS	A			E			D			E		
d_I, Intersection Delay [s/veh]	54.52											
Intersection LOS	D											
Intersection V/C	0.907											

APPENDIX D

CUMULATIVE PROJECTS INFORMATION

TOTAL CUMULATIVE PROJECTS TRAFFIC

		AM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	I-215 NB Ramps at Redlands Ave	81	134	0	0	142	117	0	0	0	20	0	127
2	I-215 SB Ramps at Redlands Ave	0	89	32	117	45	0	127	0	186	0	0	0
3	Redlands Ave at 4th St	7	57	0	0	190	39	65	0	25	0	0	0
4	Redlands Ave at Ellis Ave	0	0	0	74	0	141	42	187	0	0	59	22
5	Case Rd at Ellis Ave	115	0	175	0	0	0	0	54	34	55	145	0
6	Case Rd at Murrieta Rd	0	0	86	0	0	0	0	89	0	29	290	0
7	Case Rd at Mapes Rd	0	0	0	0	0	319	175	0	0	0	0	0
8	Mapes Rd at Bonnie Dr/Perris Metrolink Station	0	0	175	0	0	0	0	0	0	319	0	0
9	I-215 SB Ramps at Bonnie Dr	241	4	0	0	13	79	120	0	55	0	0	0
10	I-215 NB Ramps at SR-74	0	0	0	13	0	229	51	17	0	0	16	4
11	Ellis Ave at West Project Driveway	0	0	0	0	0	37	123	138	0	0	44	0
12	Ellis Ave at East Project Driveway	0	0	0	0	0	22	69	69	0	0	22	0

		PM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	I-215 NB Ramps at Redlands Ave	219	434	0	0	422	410	0	0	0	48	0	401
2	I-215 SB Ramps at Redlands Ave	0	252	38	410	60	0	401	0	120	0	0	0
3	Redlands Ave at 4th St	33	214	0	0	83	97	76	0	12	0	0	0
4	Redlands Ave at Ellis Ave	0	0	0	35	0	60	148	67	0	0	182	100
5	Case Rd at Ellis Ave	45	0	61	0	0	0	0	154	121	166	77	0
6	Case Rd at Murrieta Rd	0	0	56	0	0	0	0	287	0	92	106	0
7	Case Rd at Mapes Rd	0	0	0	0	0	198	343	0	0	0	0	0
8	Mapes Rd at Bonnie Dr/Perris Metrolink Station	0	0	343	0	0	0	0	0	0	198	0	0
9	I-215 SB Ramps at Bonnie Dr	146	14	0	0	5	53	249	0	94	0	0	0
10	I-215 NB Ramps at SR-74	0	0	0	5	0	141	77	22	0	0	20	14
11	Ellis Ave at West Project Driveway	0	0	0	0	0	166	58	44	0	0	116	0
12	Ellis Ave at East Project Driveway	0	0	0	0	0	58	22	22	0	0	58	0

Int. #: 5 Case Rd at Ellis Ave

Zone # 5 11,12,13,15,16,19,20,21

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	15%										15%	
Y	0%	0%	0%	0%	0%	0%	0%	15%	15%	0%	0%	0%
AM Out												
PM In	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	15%	15%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	769	115	0	0	0	0	0	0	0	0	0	115	0
AM Out	229	0	0	0	0	0	0	0	34	34	0	0	0
PM In	301	45	0	0	0	0	0	0	0	0	0	45	0
PM Out	809	0	0	0	0	0	0	0	121	121	0	0	0

Zone # 6 25,27,28,29,30,31

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											3%	
Y	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	816	0	0	0	0	0	0	0	0	0	0	24	0
AM Out	212	0	0	0	0	0	0	6	0	0	0	0	0
PM In	447	0	0	0	0	0	0	0	0	0	0	13	0
PM Out	843	0	0	0	0	0	0	25	0	0	0	0	0

Zone # 7 17

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	43	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	13	0	0	0	0	0	0	0	0	0	0	0	0
PM In	17	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	46	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 8 26

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											5%	
Y	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	36	0	0	0	0	0	0	0	0	0	0	2	0
AM Out	35	0	0	0	0	0	0	2	0	0	0	0	0
PM In	42	0	0	0	0	0	0	0	0	0	0	2	0
PM Out	42	0	0	0	0	0	0	2	0	0	0	0	0

Zone # 9 10 (Trucks)

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In			100%									
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
AM Out												
PM In	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	138	0	0	138	0	0	0	0	0	0	0	0	0
AM Out	44	0	0	0	0	0	0	0	0	0	44	0	0
PM In	44	0	0	44	0	0	0	0	0	0	0	0	0
PM Out	116	0	0	0	0	0	0	0	0	0	116	0	0

Int. #: 6 Case Rd at Murrieta Rd

Zone # 5 11,12,13,15,16,19,20,21

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											15%	
Y	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	769	0	0	0	0	0	0	0	0	0	0	115	0
AM Out	229	0	0	0	0	0	0	0	34	0	0	0	0
PM In	301	0	0	0	0	0	0	0	0	0	0	45	0
PM Out	809	0	0	0	0	0	0	0	121	0	0	0	0

Zone # 6 25,27,28,29,30,31

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	816	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	212	0	0	0	0	0	0	0	0	0	0	0	0
PM In	447	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	843	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 7 17

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	43	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	13	0	0	0	0	0	0	0	0	0	0	0	0
PM In	17	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	46	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 8 26

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	36	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	35	0	0	0	0	0	0	0	0	0	0	0	0
PM In	42	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	42	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 9 10 (Trucks)

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											100%	
Y	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	138	0	0	0	0	0	0	0	0	0	0	138	0
AM Out	44	0	0	0	0	0	0	0	44	0	0	0	0
PM In	44	0	0	0	0	0	0	0	0	0	0	44	0
PM Out	116	0	0	0	0	0	0	0	116	0	0	0	0

Enter only in blue cells Yellow cells calculate

Int. #: 7 Case Rd at Mapes Rd

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM In	0	0	0	0	0	319	0	0	0	0	0	0	
AM Out	0	0	0	0	0	0	175	0	0	0	0	0	
AM Tot	0	0	0	0	0	319	175	0	0	0	0	0	
PM In	0	0	0	0	0	198	0	0	0	0	0	0	
PM Out	0	0	0	0	0	0	343	0	0	0	0	0	
PM Tot	0	0	0	0	0	198	343	0	0	0	0	0	

Zone # 1 6,7,9,23

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	423	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	391	0	0	0	0	0	0	0	0	0	0	0	0
PM In	1,336	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	1,367	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 2 10 (Passenger Cars),14

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In						30%						
Y	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	123	0	0	0	0	0	37	0	0	0	0	0	0
AM Out	37	0	0	0	0	0	0	11	0	0	0	0	0
PM In	58	0	0	0	0	0	17	0	0	0	0	0	0
PM Out	166	0	0	0	0	0	0	50	0	0	0	0	0

Zone # 3 2,8,22,24

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	65	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	108	0	0	0	0	0	0	0	0	0	0	0	0
PM In	161	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	127	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 4 1,3,4,5

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In						15%						
Y	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	196	0	0	0	0	0	29	0	0	0	0	0	0
AM Out	570	0	0	0	0	0	0	86	0	0	0	0	0
PM In	615	0	0	0	0	0	92	0	0	0	0	0	0
PM Out	372	0	0	0	0	0	0	56	0	0	0	0	0

Int. #: 7 Case Rd at Mapes Rd

Zone # 5 11,12,13,15,16,19,20,21

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In						15%						
Y	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	15%	15%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	769	0	0	0	0	0	115	0	0	0	0	0	0
AM Out	229	0	0	0	0	0	0	34	0	0	0	0	0
PM In	301	0	0	0	0	0	45	0	0	0	0	0	0
PM Out	809	0	0	0	0	0	0	121	0	0	0	0	0

Zone # 6 25,27,28,29,30,31

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	816	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	212	0	0	0	0	0	0	0	0	0	0	0	0
PM In	447	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	843	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 7 17

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	43	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	13	0	0	0	0	0	0	0	0	0	0	0	0
PM In	17	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	46	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 8 26

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	36	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	35	0	0	0	0	0	0	0	0	0	0	0	0
PM In	42	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	42	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 9 10 (Trucks)

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In						100%						
Y	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	138	0	0	0	0	0	138	0	0	0	0	0	0
AM Out	44	0	0	0	0	0	0	44	0	0	0	0	0
PM In	44	0	0	0	0	0	44	0	0	0	0	0	0
PM Out	116	0	0	0	0	0	0	116	0	0	0	0	0

Enter only in blue cells Yellow cells calculate

Int. #: 9 I-215 SB Ramps at Bonnie Dr

N

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM In	241	0	0	0	13	79	0	0	0	0	0	0	
AM Out	0	4	0	0	0	0	120	0	55	0	0	0	
AM Tot	241	4	0	0	13	79	120	0	55	0	0	0	
PM In	146	0	0	0	5	53	0	0	0	0	0	0	
PM Out	0	14	0	0	0	0	249	0	94	0	0	0	
PM Tot	146	14	0	0	5	53	249	0	94	0	0	0	

Zone # 1 6,7,9,23

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	423	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	391	0	0	0	0	0	0	0	0	0	0	0	0
PM In	1,336	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	1,367	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 2 10 (Passenger Cars),14

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30%											
N	0%	0%	0%	0%	0%	0%	20%	0%	10%	0%	0%	0%
AM Out							20%		10%			
PM In	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	20%	0%	10%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	123	37	0	0	0	0	0	0	0	0	0	0	0
AM Out	37	0	0	0	0	0	0	7	0	4	0	0	0
PM In	58	17	0	0	0	0	0	0	0	0	0	0	0
PM Out	166	0	0	0	0	0	0	33	0	17	0	0	0

Zone # 3 2,8,22,24

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	65	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	108	0	0	0	0	0	0	0	0	0	0	0	0
PM In	161	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	127	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 4 1,3,4,5

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	10%					5%						
N	0%	0%	0%	0%	0%	0%	10%	0%	5%	0%	0%	0%
AM Out							10%		5%			
PM In	10%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	10%	0%	5%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	196	20	0	0	0	0	10	0	0	0	0	0	0
AM Out	570	0	0	0	0	0	0	57	0	29	0	0	0
PM In	615	62	0	0	0	0	31	0	0	0	0	0	0
PM Out	372	0	0	0	0	0	0	37	0	19	0	0	0

Int. #: 9 I-215 SB Ramps at Bonnie Dr

Zone # 5 11,12,13,15,16,19,20,21

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	15%											
N	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%
AM Out							15%					
PM In	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	769	115	0	0	0	0	0	0	0	0	0	0	0
AM Out	229	0	0	0	0	0	0	34	0	0	0	0	0
PM In	301	45	0	0	0	0	0	0	0	0	0	0	0
PM Out	809	0	0	0	0	0	0	121	0	0	0	0	0

Zone # 6 25,27,28,29,30,31

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	816	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	212	0	0	0	0	0	0	0	0	0	0	0	0
PM In	447	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	843	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 7 17

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In					30%							
N	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out		30%										
PM In	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	43	0	0	0	0	13	0	0	0	0	0	0	0
AM Out	13	0	4	0	0	0	0	0	0	0	0	0	0
PM In	17	0	0	0	0	5	0	0	0	0	0	0	0
PM Out	46	0	14	0	0	0	0	0	0	0	0	0	0

Zone # 8 26

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	36	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	35	0	0	0	0	0	0	0	0	0	0	0	0
PM In	42	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	42	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 9 10 (Trucks)

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	50%					50%						
N	0%	0%	0%	0%	0%	0%	50%	0%	50%	0%	0%	0%
AM Out							50%		50%			
PM In	50%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	50%	0%	50%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	138	69	0	0	0	0	69	0	0	0	0	0	0
AM Out	44	0	0	0	0	0	0	22	0	22	0	0	0
PM In	44	22	0	0	0	0	22	0	0	0	0	0	0
PM Out	116	0	0	0	0	0	0	58	0	58	0	0	0

Enter only in blue cells Yellow cells calculate

Int. #: 10 I-215 NB Ramps at SR-74

N

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
AM In	0	0	0	13	0	229	0	13	0	0	12	0	
AM Out	0	0	0	0	0	0	51	4	0	0	4	4	
AM Tot	0	0	0	13	0	229	51	17	0	0	16	4	
PM In	0	0	0	5	0	141	0	5	0	0	6	0	
PM Out	0	0	0	0	0	0	77	17	0	0	14	14	
PM Tot	0	0	0	5	0	141	77	22	0	0	20	14	

Zone # 1 6,7,9,23

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	423	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	391	0	0	0	0	0	0	0	0	0	0	0	0
PM In	1,336	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	1,367	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 2 10 (Passenger Cars),14

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In						20%					10%	
N	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%
AM Out								10%				
PM In	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	10%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	123	0	0	0	0	0	25	0	0	0	0	12	0
AM Out	37	0	0	0	0	0	0	4	0	0	0	0	0
PM In	58	0	0	0	0	0	12	0	0	0	0	6	0
PM Out	166	0	0	0	0	0	0	17	0	0	0	0	0

Zone # 3 2,8,22,24

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	65	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	108	0	0	0	0	0	0	0	0	0	0	0	0
PM In	161	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	127	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 4 1,3,4,5

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In						10%						
N	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
AM Out							5%					
PM In	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	196	0	0	0	0	0	20	0	0	0	0	0	0
AM Out	570	0	0	0	0	0	0	29	0	0	0	0	0
PM In	615	0	0	0	0	0	62	0	0	0	0	0	0
PM Out	372	0	0	0	0	0	0	19	0	0	0	0	0

Int. #: 10 I-215 NB Ramps at SR-74

Zone # 5 11,12,13,15,16,19,20,21

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In						15%						
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	769	0	0	0	0	0	115	0	0	0	0	0	0
AM Out	229	0	0	0	0	0	0	0	0	0	0	0	0
PM In	301	0	0	0	0	0	45	0	0	0	0	0	0
PM Out	809	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 6 25,27,28,29,30,31

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	816	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	212	0	0	0	0	0	0	0	0	0	0	0	0
PM In	447	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	843	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 7 17

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In				30%				30%				
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	30%
AM Out										30%	30%	
PM In	0%	0%	0%	30%	0%	0%	0%	30%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	30%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	43	0	0	0	13	0	0	0	13	0	0	0	0
AM Out	13	0	0	0	0	0	0	0	0	0	4	4	
PM In	17	0	0	0	5	0	0	0	5	0	0	0	0
PM Out	46	0	0	0	0	0	0	0	0	0	14	14	

Zone # 8 26

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	36	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	35	0	0	0	0	0	0	0	0	0	0	0	0
PM In	42	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	42	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 9 10 (Trucks)

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In						50%						
N	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%
AM Out						50%						
PM In	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	138	0	0	0	0	0	69	0	0	0	0	0	0
AM Out	44	0	0	0	0	0	0	22	0	0	0	0	0
PM In	44	0	0	0	0	0	22	0	0	0	0	0	0
PM Out	116	0	0	0	0	0	0	58	0	0	0	0	0

Int. #: 12 Ellis Ave at East Project Driveway

Zone # 5 11,12,13,15,16,19,20,21

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	769	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	229	0	0	0	0	0	0	0	0	0	0	0	0
PM In	301	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	809	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 6 25,27,28,29,30,31

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	816	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	212	0	0	0	0	0	0	0	0	0	0	0	0
PM In	447	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	843	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 7 17

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	43	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	13	0	0	0	0	0	0	0	0	0	0	0	0
PM In	17	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	46	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 8 26

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	36	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	35	0	0	0	0	0	0	0	0	0	0	0	0
PM In	42	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	42	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 9 10 (Trucks)

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In							50%	50%				
Y	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	50%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	50%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	138	0	0	0	0	0	0	69	69	0	0	0	0
AM Out	44	0	0	0	0	0	22	0	0	0	0	22	0
PM In	44	0	0	0	0	0	0	22	22	0	0	0	0
PM Out	116	0	0	0	0	0	58	0	0	0	0	58	0

APPENDIX E

**TRAFFIC SIGNAL WARRANT
ANALYSIS WORKSHEETS**

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: Case Road EB WB # OF APPROACH LANES:

MINOR STREET: Murrieta Road NB SB # OF APPROACH LANES:

CITY, STATE: Menifee, CA

COMMENTS: Existing Year Plus Project
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N):
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N):

	MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2	WARRANT 3
			MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	Four-Hour	Peak Hour
THRESHOLD VALUES			350	105		525	53		280	84		420	42			
06:00 AM TO 07:00 AM	0	0														
07:00 AM TO 08:00 AM	487	151	Y	Y	Y		Y		Y	Y	Y	Y	Y	Y	Y	
08:00 AM TO 09:00 AM	0	0														
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	776	102	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
05:00 PM TO 06:00 PM	0	0														
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
09:00 PM TO 10:00 PM	0	0														
	1,263	253	2	1	1	1	2	1	2	2	2	2	2	2	2	0
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	NOT SATISFIED

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: Case Road EB WB # OF APPROACH LANES:

MINOR STREET: Murrieta Road NB SB # OF APPROACH LANES:

CITY, STATE: Menifee, CA

COMMENTS: Opening Year 2024 Cumulative Volumes
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N):
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N):

	MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2	WARRANT 3
			MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	Four-Hour	Peak Hour
THRESHOLD VALUES			350	105		525	53		280	84		420	42			
06:00 AM TO 07:00 AM	0	0														
07:00 AM TO 08:00 AM	858	246	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
08:00 AM TO 09:00 AM	0	0														
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	1,224	164	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
05:00 PM TO 06:00 PM	0	0														
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
09:00 PM TO 10:00 PM	0	0														
	2,082	410	2	2	2	2	2	2	2	2	2	2	2	2	2	2
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	SATISFIED

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: Case Road EB WB # OF APPROACH LANES:

MINOR STREET: Murrieta Road NB SB # OF APPROACH LANES:

CITY, STATE: Menifee, CA

COMMENTS: Opening Year 2024 Cumulative Plus Project Volumes
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N):
 85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N):

	MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2	WARRANT 3
			MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	Four-Hour	Peak Hour
THRESHOLD VALUES			350	105		525	53		280	84		420	42			
06:00 AM TO 07:00 AM	0	0														
07:00 AM TO 08:00 AM	920	246	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
08:00 AM TO 09:00 AM	0	0														
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	1,303	164	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
05:00 PM TO 06:00 PM	0	0														
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
09:00 PM TO 10:00 PM	0	0														
	2,223	410	2	2	2	2	2	2	2	2	2	2	2	2	2	
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	SATISFIED

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: Case Road EB WB # OF APPROACH LANES:

MINOR STREET: Mapes Road NB SB # OF APPROACH LANES:

CITY, STATE: Menifee, CA

COMMENTS: Existing Year Plus Project
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N):
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N):

	MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
			MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75		400	120		600	60			
06:00 AM TO 07:00 AM	0	0														
07:00 AM TO 08:00 AM	452	149				Y		Y	Y	Y		Y				
08:00 AM TO 09:00 AM	0	0														
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	675	172	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y			
05:00 PM TO 06:00 PM	0	0														
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
09:00 PM TO 10:00 PM	0	0														
	1,127	321	1	1	1	0	2	0	2	2	2	1	2	1	0	
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	NOT SATISFIED

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: Case Road EB WB # OF APPROACH LANES:

MINOR STREET: Mapes Road NB SB # OF APPROACH LANES:

CITY, STATE: Menifee, CA

COMMENTS: Opening Year 2024 Cumulative Volumes
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N):
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N):

	MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
			MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES			500	150		750	75		400	120		600	60			
06:00 AM TO 07:00 AM	0	0														
07:00 AM TO 08:00 AM	639	426	Y	Y	Y		Y		Y	Y	Y	Y	Y	Y	Y	
08:00 AM TO 09:00 AM	0	0														
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	998	357	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
05:00 PM TO 06:00 PM	0	0														
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
09:00 PM TO 10:00 PM	0	0														
	1,637	783	2	2	2	1	2	1	2	2	2	2	2	2	2	
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	SATISFIED

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: Case Road EB WB # OF APPROACH LANES:

MINOR STREET: Mapes Road NB SB # OF APPROACH LANES:

CITY, STATE: Menifee, CA

COMMENTS: Opening Year 2024 Cumulative Plus Project Volumes
0

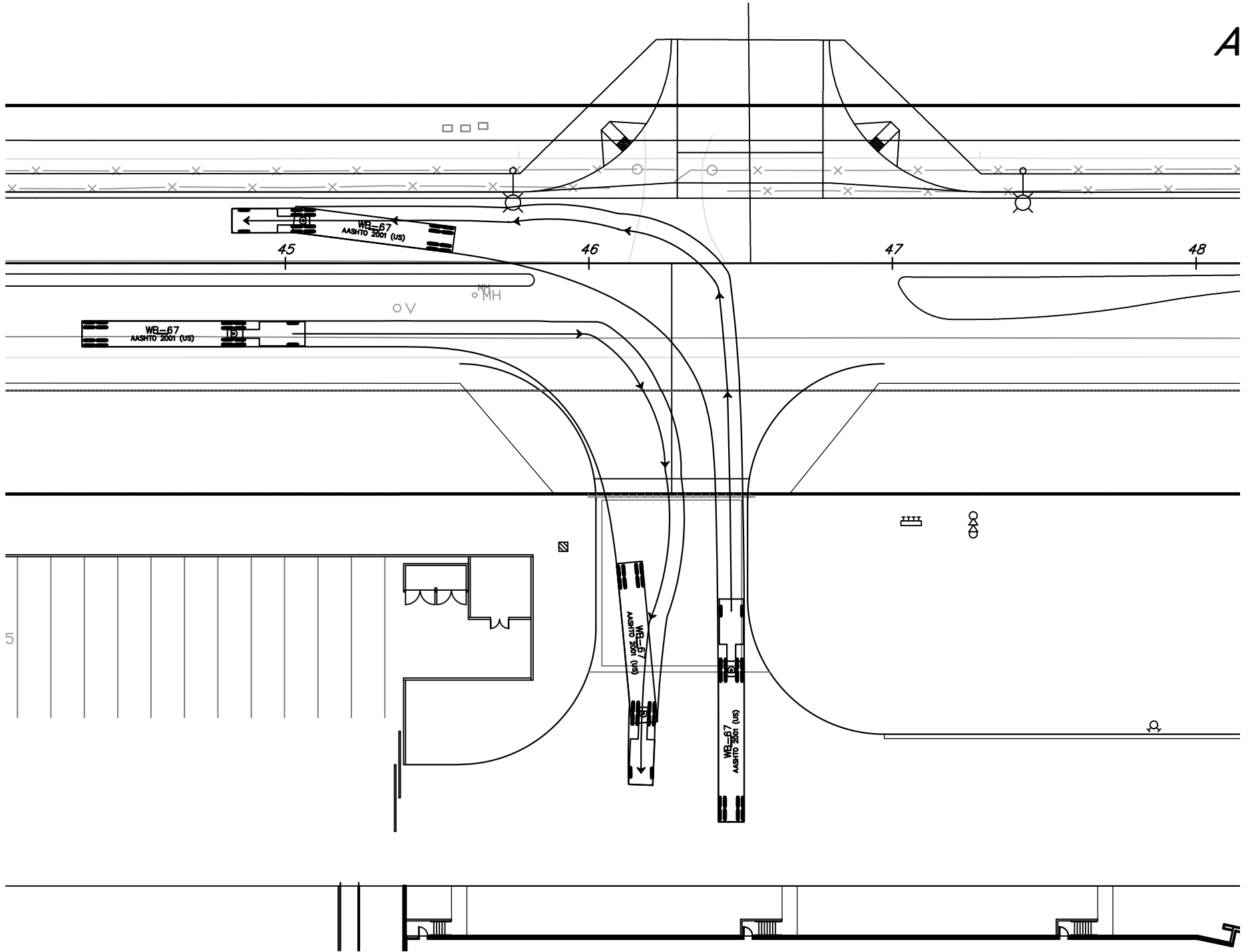
ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N):
 85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N):

	MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2	WARRANT 3
			MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	Four-Hour	Peak Hour
THRESHOLD VALUES			500	150		750	75		400	120		600	60			
06:00 AM TO 07:00 AM	0	0														
07:00 AM TO 08:00 AM	653	474	Y	Y	Y		Y		Y	Y	Y	Y	Y	Y	Y	Y
08:00 AM TO 09:00 AM	0	0														
09:00 AM TO 10:00 AM	0	0														
10:00 AM TO 11:00 AM	0	0														
11:00 AM TO 12:00 PM	0	0														
12:00 PM TO 01:00 PM	0	0														
01:00 PM TO 02:00 PM	0	0														
02:00 PM TO 03:00 PM	0	0														
03:00 PM TO 04:00 PM	0	0														
04:00 PM TO 05:00 PM	1,055	379	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
05:00 PM TO 06:00 PM	0	0														
06:00 PM TO 07:00 PM	0	0														
07:00 PM TO 08:00 PM	0	0														
08:00 PM TO 09:00 PM	0	0														
09:00 PM TO 10:00 PM	0	0														
	1,708	853	2	2	2	1	2	1	2	2	2	2	2	2	2	2
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	SATISFIED

APPENDIX G

TRUCK TURNING DIAGRAMS

A



APPENDIX H

**INTERSECTION ANALYSIS
WORKSHEETS FOR QUEUING ANALYSIS**

Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.039

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	37	123	138	0	0	44	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	37	123	168	0	0	60	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	10	32	44	0	0	16	0
Total Analysis Volume [veh/h]	0	0	0	0	0	39	129	177	0	0	63	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.04	0.08	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.73	13.29	9.16	13.29	13.44	8.74	7.55	0.00	0.00	7.57	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.12	0.12	0.12	0.27	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	3.04	3.04	3.04	6.85	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.06			8.74			3.18			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	3.22											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	22	69	69	0	0	22	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	22	69	99	0	0	38	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	6	18	26	0	0	10	0
Total Analysis Volume [veh/h]	0	0	0	0	0	23	73	104	0	0	40	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.93	11.09	8.79	10.78	11.17	8.57	7.41	0.00	0.00	7.42	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.07	0.07	0.07	0.15	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.71	1.71	1.71	3.66	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.27			8.57			3.05			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	3.07											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.207

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	166	58	44	0	0	116	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	166	58	84	0	0	184	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	44	15	22	0	0	48	0
Total Analysis Volume [veh/h]	0	0	0	0	0	175	61	88	0	0	194	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.21	0.04	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.74	12.03	8.71	12.86	13.14	10.35	7.73	0.00	0.00	7.39	0.00	0.00
Movement LOS	B	B	A	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.77	0.77	0.77	0.14	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	19.34	19.34	19.34	3.47	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.83			10.35			3.17			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.41											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	58	22	22	0	0	58	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	58	22	62	0	0	126	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	15	6	16	0	0	33	0
Total Analysis Volume [veh/h]	0	0	0	0	0	61	23	65	0	0	133	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.07	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.78	10.56	8.60	10.43	10.84	9.21	7.52	0.00	0.00	7.34	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.21	0.21	0.21	0.05	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	5.34	5.34	5.34	1.21	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.98			9.21			1.97			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.61											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	18.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.080

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	37	123	138	0	0	44	0
Site-Generated Trips [veh/h]	22	0	0	0	0	0	0	26	74	0	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	-74	74	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	0	0	0	0	37	123	194	0	74	68	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	0	0	0	10	32	51	0	19	18	0
Total Analysis Volume [veh/h]	23	0	0	0	0	39	129	204	0	78	72	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.00	0.04	0.08	0.00	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	18.56	17.43	10.38	16.78	16.50	8.78	7.57	0.00	0.00	7.72	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.26	0.26	0.26	0.12	0.12	0.12	0.28	0.00	0.00	0.14	0.14	0.14
95th-Percentile Queue Length [ft/ln]	6.45	6.45	6.45	3.07	3.07	3.07	6.90	0.00	0.00	3.40	3.40	3.40
d_A, Approach Delay [s/veh]	18.56			8.78			2.93			4.02		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	4.31											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	28	0	0	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
In-Process Volume [veh/h]	0	0	0	0	0	22	69	69	0	0	22	0
Site-Generated Trips [veh/h]	8	0	0	0	0	0	0	0	26	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	74	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	0	0	0	22	69	99	26	0	112	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	6	18	26	7	0	29	0
Total Analysis Volume [veh/h]	8	0	0	0	0	23	73	104	27	0	118	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.96	11.98	8.96	11.67	12.09	8.95	7.58	0.00	0.00	7.48	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.08	0.08	0.08	0.16	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.16	1.16	1.16	1.89	1.89	1.89	3.91	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.96			8.95			2.71			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	2.42											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 11: Ellis Avenue at West Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.241

Intersection Setup

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

Volumes

Name	Northbound			Southbound			Eastbound			Westbound		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	166	58	44	0	0	116	0
Site-Generated Trips [veh/h]	70	0	0	0	0	0	0	14	26	0	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	-26	26	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	0	0	0	0	166	58	96	0	26	216	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	0	0	0	44	15	25	0	7	57	0
Total Analysis Volume [veh/h]	74	0	0	0	0	175	61	101	0	27	227	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.24	0.00	0.00	0.00	0.00	0.22	0.05	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	20.43	16.88	12.46	14.27	14.40	10.64	7.81	0.00	0.00	7.44	0.00	0.00
Movement LOS	C	C	B	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.92	0.92	0.92	0.82	0.82	0.82	0.14	0.00	0.00	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	23.11	23.11	23.11	20.39	20.39	20.39	3.57	0.00	0.00	1.14	1.14	1.14
d_A, Approach Delay [s/veh]	20.43			10.64			2.94			0.79		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	6.09											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 12: Ellis Avenue at East Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	38	0	0	64	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	116	44	0	0	0	0	0
Site-Generated Trips [veh/h]	36	0	0	0	0	0	0	0	14	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	26	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	0	0	0	0	116	44	38	14	0	90	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	0	0	31	12	10	4	0	24	0
Total Analysis Volume [veh/h]	38	0	0	0	0	122	46	40	15	0	95	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.00	0.13	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.95	11.05	9.00	10.70	11.17	9.29	7.48	0.00	0.00	7.32	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.22	0.22	0.43	0.43	0.43	0.09	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.49	5.49	5.49	10.85	10.85	10.85	2.37	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.95			9.29			3.41			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	5.42											
Intersection LOS	B											