APPENDIX 11a

Traffic Impact Study

TRAFFIC IMPACT STUDY
FOR THE
AIRPORT GATEWAY SPECIFIC PLAN PROJECT
IN THE CITIES OF SAN BERNARDINO AND HIGHLAND

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INTRODUCTION

Purpose and Study Objectives

This traffic impact study has been prepared to address the traffic-related impacts of the proposed Airport Gateway Specific Plan located in the Cities of San Bernardino and Highland. This traffic impact study has been conducted in accordance with the traffic study requirements of the Cities of San Bernardino and Highland, and in accordance with the San Bernardino Association of Governments (SANBAG) Congestion Management Program (CMP) requirements.

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

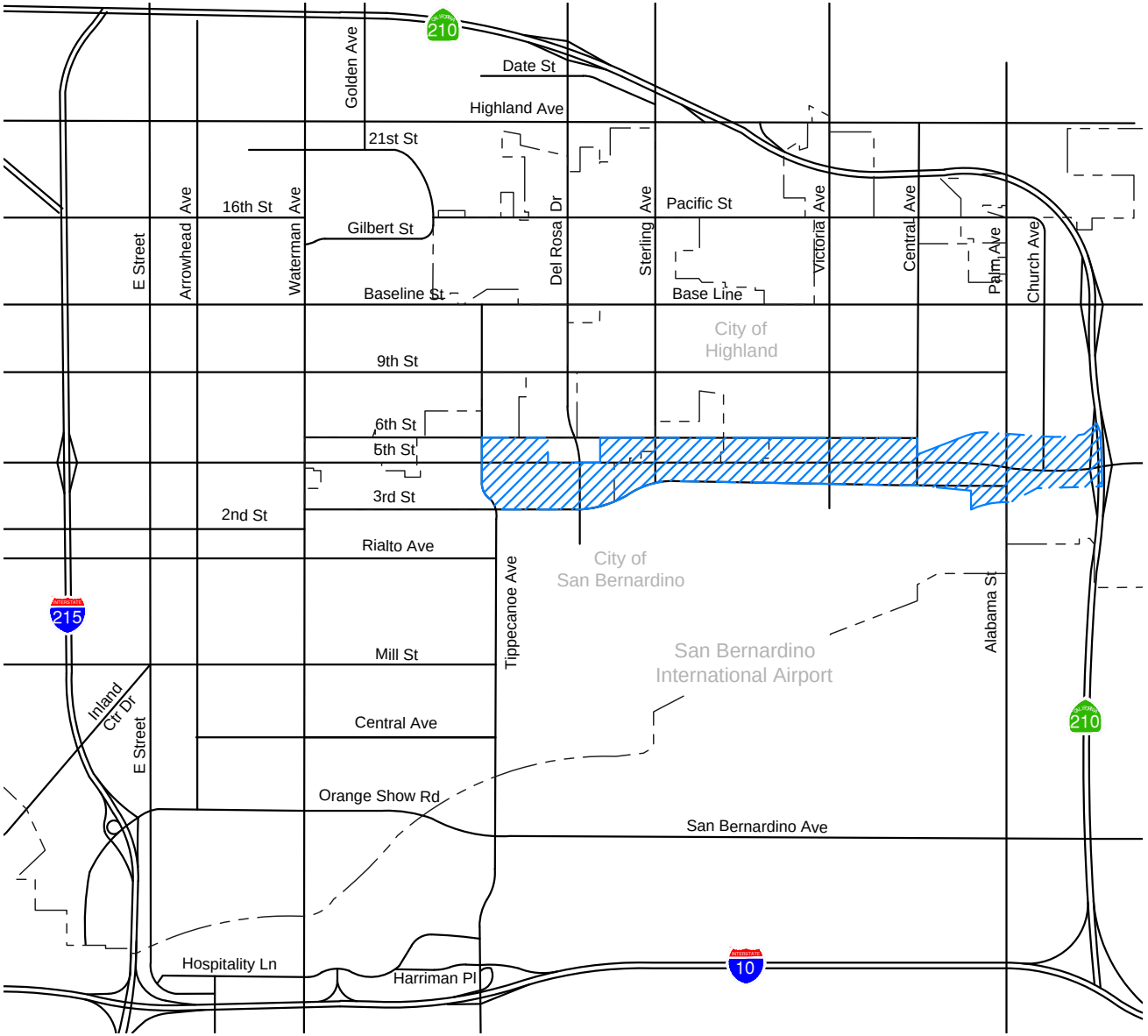
PROJECT DESCRIPTION

The Airport Gateway Specific Plan (AGSP) area covers approximately 679.2 acres, located immediately north of the San Bernardino International Airport (SBIA). The Specific Plan area is bounded generally by 6th Street and Highland Creek on the north, 3rd Street and the SBIA on the south, State Route 210 (SR-210) on the east, and Tippecanoe Avenue on the west. North of the Specific Plan area (on the north side of 6th Street) is bordered by a mix of low- and medium-density residential uses and vacant parcels, as well as several public facilities including Indian Springs High School, Cypress Elementary School, Highland Community Park and the Highland Branch Library.

The Specific Plan area includes parcels in both the City of Highland (485 acres) and the City of San Bernardino (194.2 acres). The Project site is shown in its regional setting on Figure 1. The Specific Plan area is depicted on Figure 2.

The existing uses within the Specific Plan area include single-family and multi-family residential, small-lot commercial, educational facilities, and industrial uses. Vacant parcels make up approximately 209 acres of the Specific Plan area.

The AGSP would replace the existing uses within the Specific Plan area with approximately 9.2 million square feet of Industrial Mixed Uses, consisting of industrial warehouse, high-cube logistics warehouse, tech business park, and a small amount of commercial/retail/hotel uses. Development of the Specific Plan area will be accomplished over time, as market conditions allow, and as developers are successful in assembling individual parcels into parcels large enough for the allowed uses.



NOT TO SCALE

LEGEND:

= Specific Plan Area

= City Boundaries

FIGURE 1
VICINITY MAP

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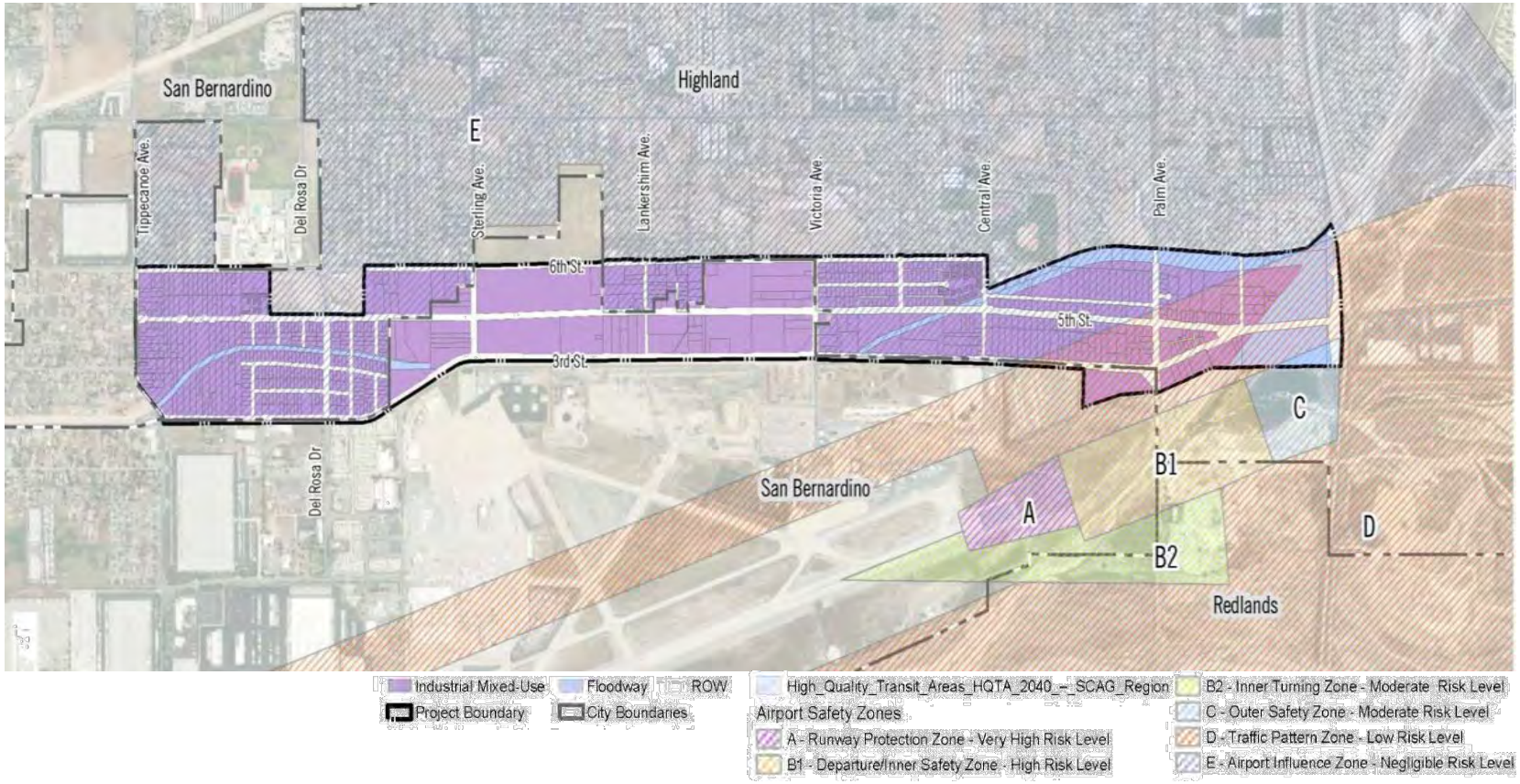


FIGURE 2
SPECIFIC PLAN AREA

ANALYSIS SCENARIOS AND METHODOLOGY

Analysis Scenarios

The project will be evaluated for the following study scenarios:

- Existing Conditions
- Existing Plus Project
- Future Build-Out 2040
- Future Build-Out 2040 Plus Project
    - With Mitigation, if necessary

Study Locations

The study locations were established in consultation with traffic engineering staff from the Cities of San Bernardino and Highland through the Scoping Agreement process. A copy of the approved Scope of Study Forms is provided in *Appendix A*.

The study locations are shown on Figure 3.

Study Intersections:

Int. #	Intersection	Jurisdiction	Traffic Control
1	Del Rosa Avenue at I-210 WB Ramps	Caltrans	S
2	Del Rosa Avenue at I-210 EB Ramps	Caltrans	S
3	Date Street at Del Rosa Avenue	San Bernardino	S
4	Highland Avenue at Del Rosa Avenue	San Bernardino	S
5	Highland Avenue at I-210 EB Off-Ramp	Caltrans	S
6	Highland Avenue at I-210 WB Off-Ramp	Caltrans	S
7	Victoria Avenue at Highland Avenue	Highland	S
8	Del Rosa Drive at Pacific Street	Highland	S
9	Victoria Avenue at Pacific Street	Highland	S
10	Victoria Avenue at 14th Street	Highland	S
11	Tippecanoe Avenue at Baseline Street	San Bernardino	S
12	Del Rosa Drive at Baseline Street	San Bernardino	S
13	Sterling Avenue at Base Line	Highland	S
14	Victoria Avenue at Base Line	Highland	S
15	Tippecanoe Avenue at 9th Street	Highland	S
16	Del Rosa Drive at 9th Street	San Bernardino	S
17	Sterling Avenue at 9th Street	Highland	S
18	Victoria Avenue at 9th Street	Highland	S

Int. #	Intersection	Jurisdiction [1]	Traffic Control
19	Del Rosa Drive at 6th Street	San Bernardino	S
20	Sterling Avenue at 6th Street	San Bernardino	U
21	Victoria Avenue at 6th Street	Highland	U
22	Central Avenue at 6th Street	San Bernardino	U
23	5th Street at I-215 SB Ramps	Caltrans	S
24	5th Street at I-215 NB Ramps	Caltrans	S
25	E Street at 5th Street	San Bernardino	S
26	Arrowhead Avenue at 5th Street	San Bernardino	S
27	Waterman Avenue at 5th Street	San Bernardino	S
28	Tippecanoe Avenue at 5th Street	Highland	S
29	Del Rosa Drive at 5th Street	Highland	S
30	Sterling Avenue at 5th Street	San Bernardino	S
31	Victoria Avenue at 5th Street	Highland	S
32	Central Avenue at 5th Street	Highland	S
33	Palm Avenue at 5th Street	Highland	S
34	Church Avenue at 5th Street	Highland	S
35	5th Street at SR-210 EB Ramps	Caltrans/Highland	S
36	5th Street at SR-210 WB Ramps	Caltrans/Highland	S
37	Tippecanoe Avenue at 3rd Street	San Bernardino	S
38	Del Rosa Avenue at 3rd Street	San Bernardino	S
39	Sterling Avenue at 3rd Street	San Bernardino	S
40	Victoria Avenue at 3rd Street	Highland	S
41	Central Avenue at 3rd Street	Highland	U
42	Palm Avenue at 3rd Street	Highland	S
43	Tippecanoe Avenue at Rialto Avenue	San Bernardino	S
44	Tippecanoe Avenue at Mill Street	San Bernardino	S
45	Tippecanoe Avenue at Central Avenue	San Bernardino	S
46	Tippecanoe Avenue at San Bernardino Avenue/ Orange Show Road	San Bernardino	S
47	Tippecanoe Avenue at Hospitality Lane	San Bernardino	S
48	Tippecanoe Avenue at I-10 WB Off-Ramp / Harriman Place	Caltrans	S
49	Tippecanoe Avenue at I-10 EB Ramps	Caltrans	S

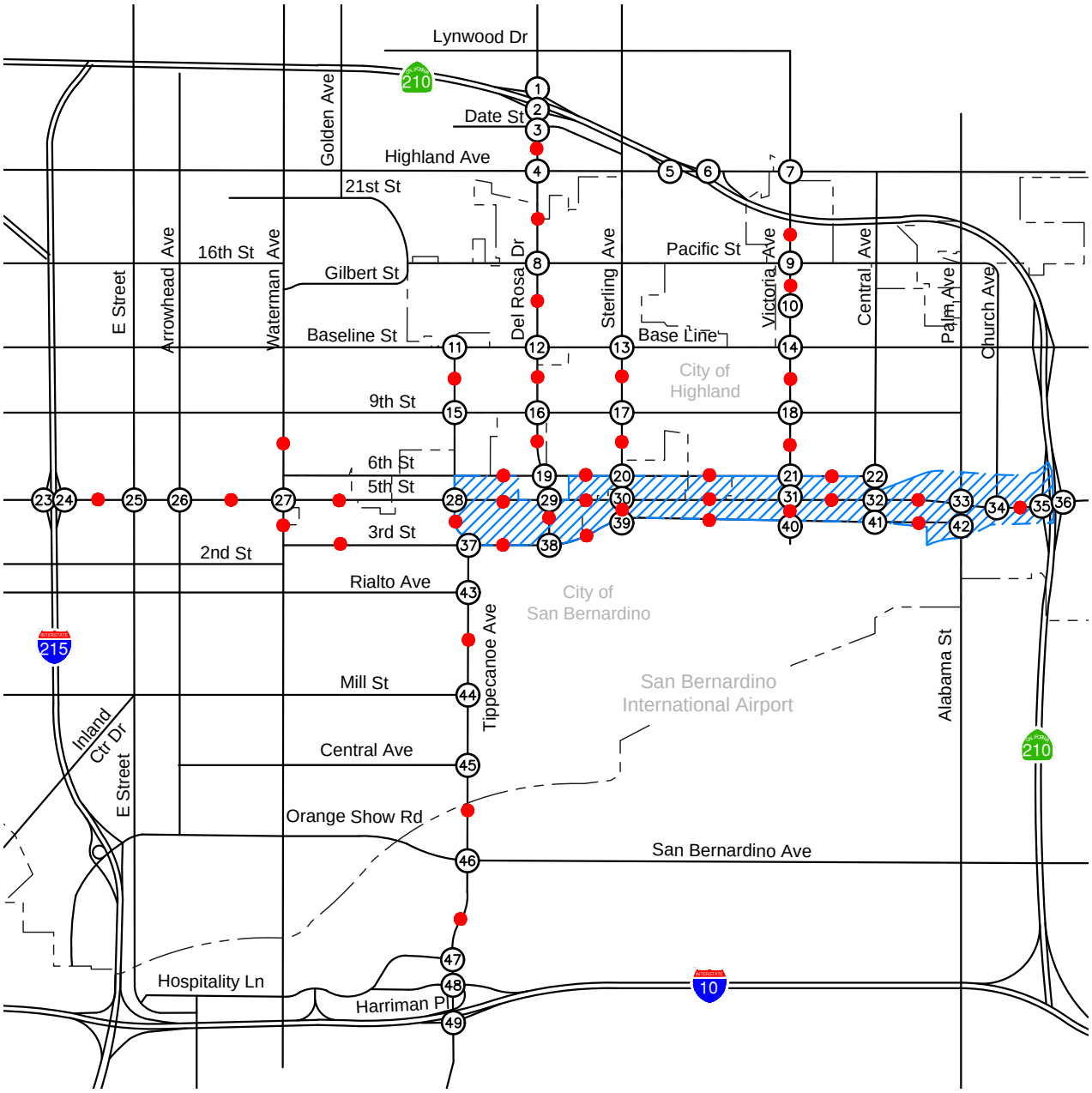
[1] Intersections located on the border between the two cities are shown on this table according to which city/jurisdiction is responsible for the maintenance of the signal.

S = Signalized U = Unsignalized

Study Roadway Segments

1. Waterman Avenue – Baseline Street to 5th Street
2. Waterman Avenue – 5th Street to 3rd Street
3. Tippecanoe Avenue – Baseline Street to 6th Street
4. Tippecanoe Avenue – 6th Street to 3rd Street
5. Tippecanoe Avenue – 3rd Street to Mill Street
6. Tippecanoe Avenue – Mill Street to Orange Show Road / San Bernardino Avenue
7. Tippecanoe Avenue – Orange Show/San Bernardino Ave to Harriman Place/I-10 WB Ramps
8. Del Rosa Drive – SR-210 EB Ramps to Highland Avenue
9. Del Rosa Drive – Highland Avenue to Pacific Street
10. Del Rosa Drive – Pacific Street to Baseline Street
11. Del Rosa Drive – Baseline Street to 9th Street
12. Del Rosa Drive – 9th Street to 6th Street
13. Del Rosa Drive – 6th Street to 3rd Street
14. Sterling Avenue – Base Line to 9th Street
15. Sterling Avenue – 9th Street to 6th Street
16. Sterling Avenue – 6th Street to 3rd Street
17. Victoria Avenue – Highland Avenue to Pacific Street
18. Victoria Avenue – Pacific Street to Base Line
19. Victoria Avenue – Base Line to 9th Street
20. Victoria Avenue – 9th Street to 6th Street
21. Victoria Avenue – 6th Street to 3rd Street
22. 6th Street – Tippecanoe Avenue to Del Rosa Drive
23. 6th Street – Del Rosa Drive to Sterling Avenue
24. 6th Street – Sterling Avenue to Victoria Avenue
25. 6th Street – Victoria Avenue to Central Avenue
26. 5th Street – I-215 NB Ramps to E Street
27. 5th Street – E Street to Waterman Avenue
28. 5th Street – Waterman Avenue to Tippecanoe Avenue
29. 5th Street – Tippecanoe Avenue to Del Rosa Drive
30. 5th Street – Del Rosa Drive to Sterling Avenue
31. 5th Street – Sterling Avenue to Victoria Avenue
32. 5th Street – Victoria Avenue to Central Avenue
33. 5th Street – Central Avenue to Palm Avenue
34. 5th Street – Palm Avenue to SR-210 EB Ramps
35. 3rd Street – Waterman Avenue to Tippecanoe Avenue
36. 3rd Street – Tippecanoe Avenue to Del Rosa Drive
37. 3rd Street – Del Rosa Drive to Sterling Avenue
38. 3rd Street – Sterling Avenue to Victoria Avenue
39. 3rd Street – Victoria Avenue to Palm Avenue

NOT TO SCALE



LEGEND:

= Specific Plan Area

= City Boundaries

= Study Intersection

= Study Roadway Segment

FIGURE 3
STUDY AREA

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ANALYSIS METHODOLOGY

Intersection Analysis – HCM Methodology

Peak hour intersection operations are evaluated using the methodology outlined in the Highway Capacity Manual (HCM), consistent with the requirements of the Cities of San Bernardino and Highland and the San Bernardino County CMP. The intersection analysis was conducted using the Vistro software program and using the input parameters specified in the San Bernardino County CMP.

Per the HCM Methodology, Level of Service (LOS) for signalized intersections is defined in terms of average vehicle delay for all intersection movements during the peak hour. Specifically, LOS criteria are stated in terms of the average control delay per vehicle, which includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay. Level of Service for unsignalized intersections is based on the average vehicle delay for the intersection approach or movement that has the worst (highest) delay.

The following charts provide a description of the operating characteristics of each Level of Service and average seconds of delay for signalized and unsignalized intersections.

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

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS		
Level of Service [1]	Signalized Intersection (Average delay per vehicle, in seconds) [2]	Unsignalized Intersections (Average delay per vehicle, in seconds) [3]
A	≤ 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

[1] Per the San Bernardino County CMP, intersections will be considered operating at LOS F if the critical v/c ratio equals or exceeds 1.00.
[2] Source: Highway Capacity Manual (HCM 6th Edition), Exhibit 18-4.
[3] Source: Highway Capacity Manual (HCM 6th Edition), Exhibits 19-1 and 20-2.

Roadway Segment Analysis

The roadway segment analysis will address the project's impact on daily operating conditions on roadways within the project vicinity. Roadway segments are evaluated by comparing the daily traffic volume to the daily capacity of that segment, to determine the volume-to-capacity (v/c) ratio. Daily capacity is based on the roadway classification in the City of San Bernardino, as shown in the following chart:

DAILY ROADWAY CAPACITY		
Roadway Classification	Number of Lanes	Daily Capacity (Vehicles per day)
Major Arterial	6	60,000
Major Arterial	4	40,000
Major Arterial	2	15,000
Secondary Arterial	4	30,000
Secondary Arterial	2	12,000
Collector Street	4	25,000
Collector Street	2	10,000
Source: City of San Bernardino General Plan		

Many of the study roadway segments cross city boundaries between the Cities of San Bernardino and Highland. In several cases, the city boundary runs down the middle of the roadway and the Cities of San Bernardino and Highland have assigned different functional classifications to the roadway.

It should also be noted that the City of Highland evaluates roadway segments using a different methodology, based on the HCM Base Free-Flow Speed (BFFS) approach. For purposes of this joint study, all roadway segments are evaluated using the daily capacity methodology presented above. If a roadway segment located wholly within the City of Highland is found to be deficient based on the daily capacity methodology, that roadway segment will be re-evaluated using the BFFS approach to determine if the deficient roadway within the City of Highland would operate acceptably during the AM and PM peak hours.

Corridor Analysis

Per request from the City of Highland, a corridor analysis was conducted to evaluate the operations of the roadway segment of 5th Street between I-215 Southbound Ramps and SR-210 Westbound Ramps. Corridor operations were evaluated based on the Highway Capacity Manual 2000 (HCM 2000) Urban Street methodology or the arterial level of service analysis within Synchro software. It should be noted that the City does not have any significance criteria for arterial level of service and the results are stated for informational purposes.

For urban street segments, the level of service is based on travel time as defined in the chart below. 5th Street is a Class II arterial.

URBAN STREET LEVEL OF SERVICE DEFINITION				
Urban Class	I	II	III	IV
Range of free-flow speeds (FFS)	55 to 45 mph	45 to 35 mph	35 to 30 mph	35 to 25 mph
Typical FFS	50 mph	40 mph	35 mph	30 mph
LOS	Average Travel Speed (mph)			
A	> 42	> 35	> 30	> 25
B	> 34 - 42	> 28 - 35	> 24 - 30	> 19 - 25
C	> 27 - 34	> 22 - 28	> 18 - 24	> 13 - 19
D	> 21 - 27	> 17 - 22	> 14 - 18	> 9 - 13
E	> 16 - 21	> 13 - 17	> 10 - 14	> 7 - 9
F	≤ 16	≤ 13	≤ 10	≤ 7

Source: Transportation Research Board, Highway Capacity Manual 2000, National Research Council, 2000

Level of Service Standards and Measure of Significance

City of San Bernardino

The City of San Bernardino General Plan Circulation Element establishes minimum Level of Service standards, which require that City intersections operate at LOS D or better during the morning and evening peak hours, and that roadway segments operate at LOS C or better. Traffic impacts at an intersection are considered to be significant when any of the following changes in the volume-to-capacity (V/C) ratio occurs between the "without project" and the "with project" conditions:

LOS Without Project	V/C Difference
C	> 0.0400
D	> 0.0200
E, F	> 0.0100

New development is required to mitigate impacts where the project results in a significant impact as shown above.

City of Highland

The Level of Service standard for intersections in the City of Highland is LOS D or better for peak hour operations and LOS C or better for roadway segments. Based on the City of Highland's Public Works Policies, Procedures, and Standards, Section 9.0 (Traffic), all intersection levels of service below "D" and all roadway segment levels of service below "C" shall be mitigated.

State-Controlled Intersections (Caltrans)

For State-controlled intersections, Caltrans' Level of Service standards and impact criteria will apply. The Caltrans *Guide for the Preparation of Traffic Impact Studies* (2003) states that, "Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE (measure of effectiveness) should be maintained.

General Plan Circulation Plans

The City of San Bernardino General Plan Circulation Plan and the City of Highland General Plan Circulation Element provide roadway designations for the roadway system serving the Specific Plan area and the surrounding vicinity. A copy of the City of San Bernardino Circulation Plan and Standard Cross Sections is provided on Figure 4. A copy of the City of Highland Circulation Element and Standard Cross Sections is provided on Figure 5.

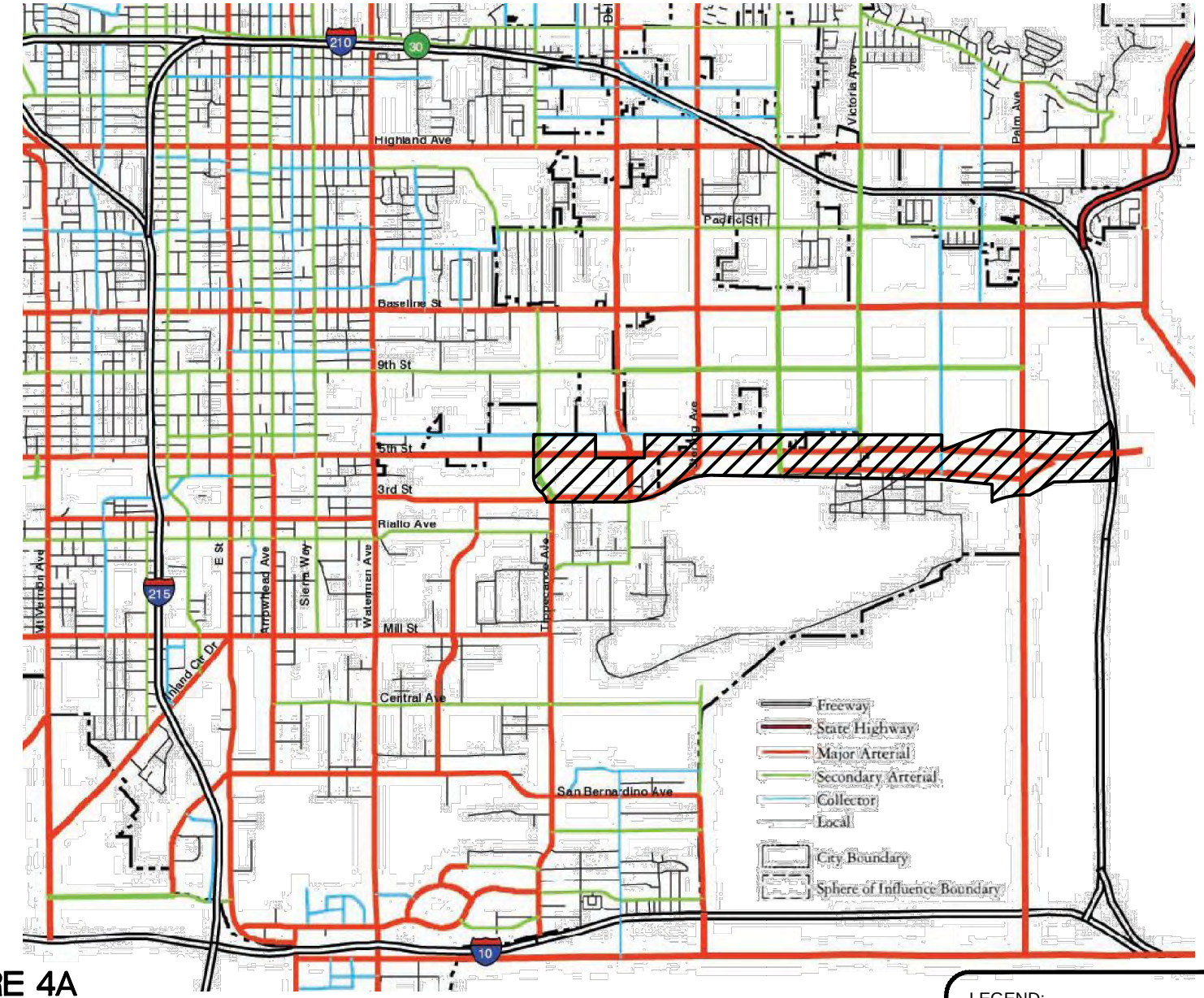

FIGURE 4A
CITY OF SAN BERNARDINO
CIRCULATION PLAN

LEGEND:
= Specific Plan Area

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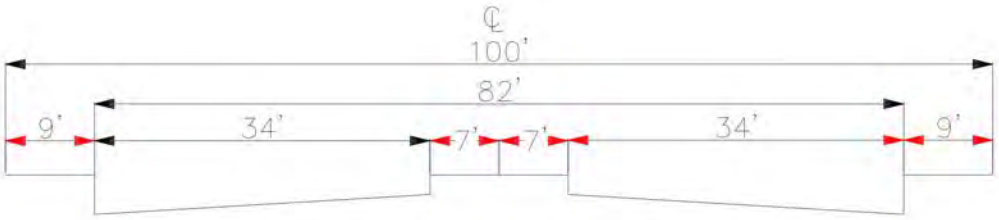
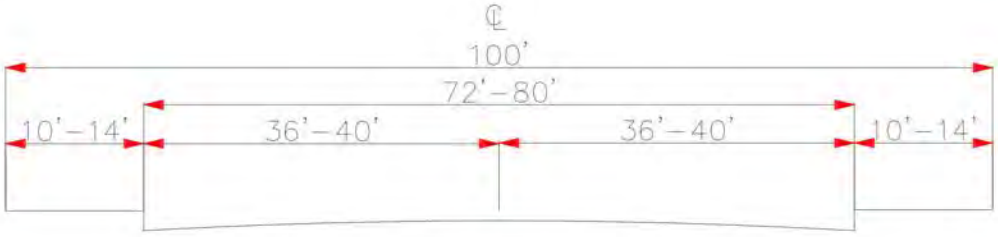
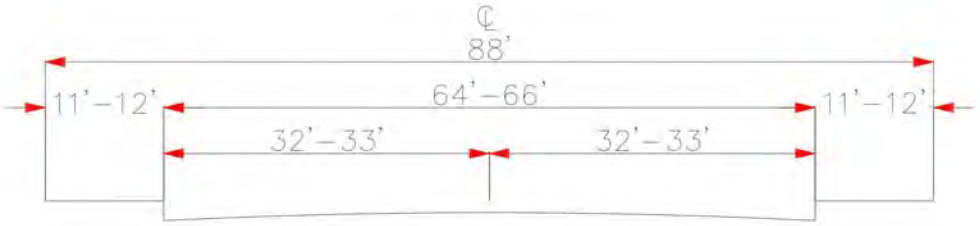


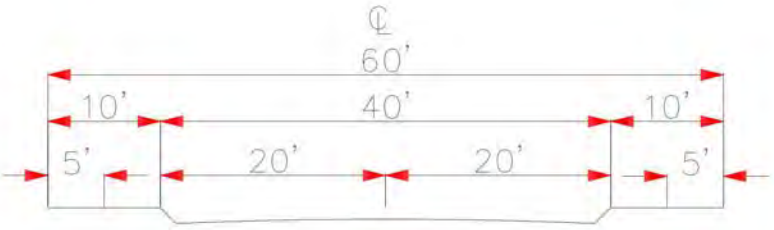
MAJOR DIVIDED HIGHWAYS



MAJOR HIGHWAY



SECONDARY HIGHWAY



COLLECTOR STREET

FOR USE IN QUARTER MILE STREETS,
SCHOOL AND INDUSTRIAL AREAS.

FIGURE 4B
CITY OF SAN BERNARDINO
STANDARD CROSS SECTIONS

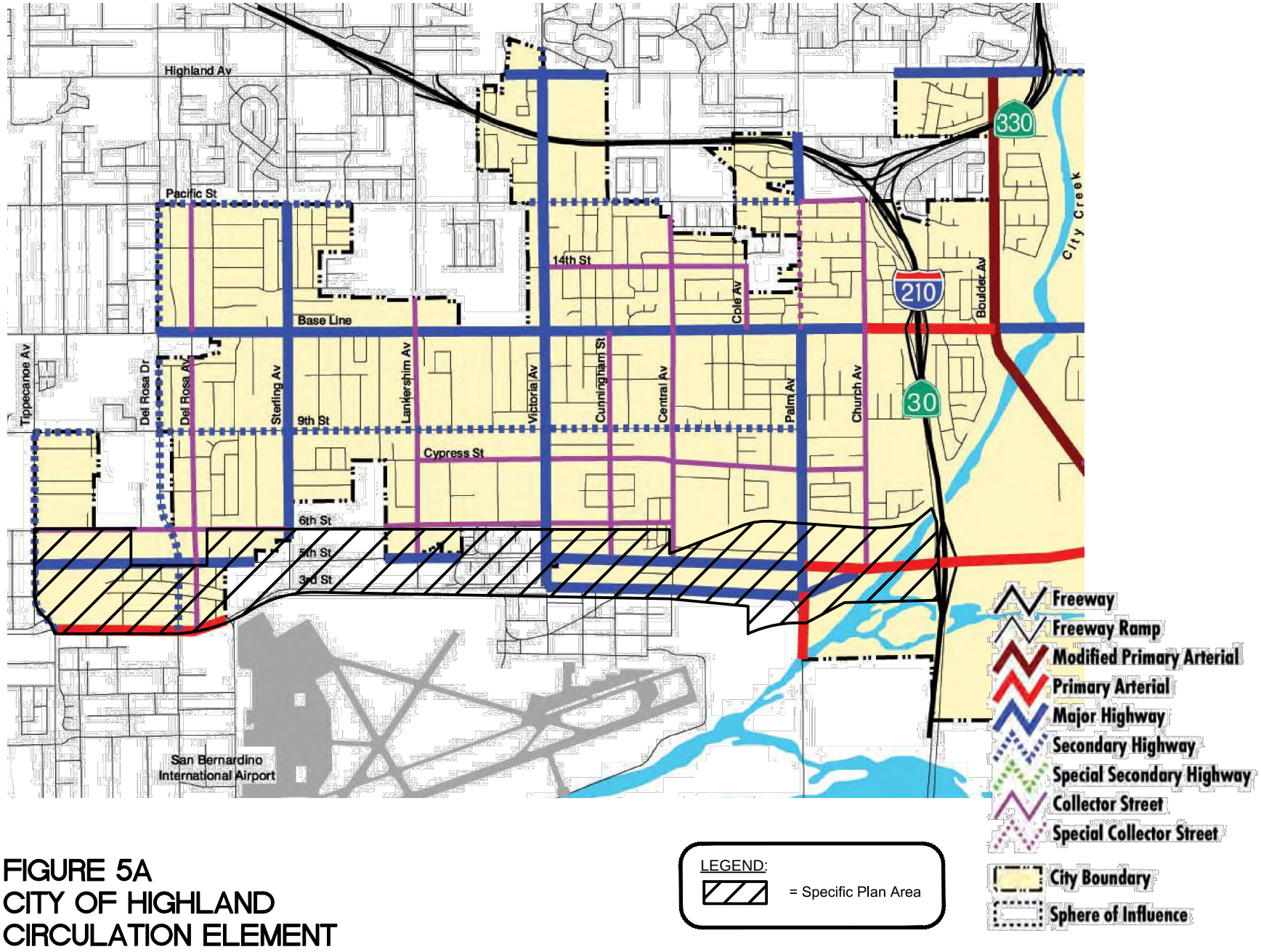


FIGURE 5A
CITY OF HIGHLAND
CIRCULATION ELEMENT

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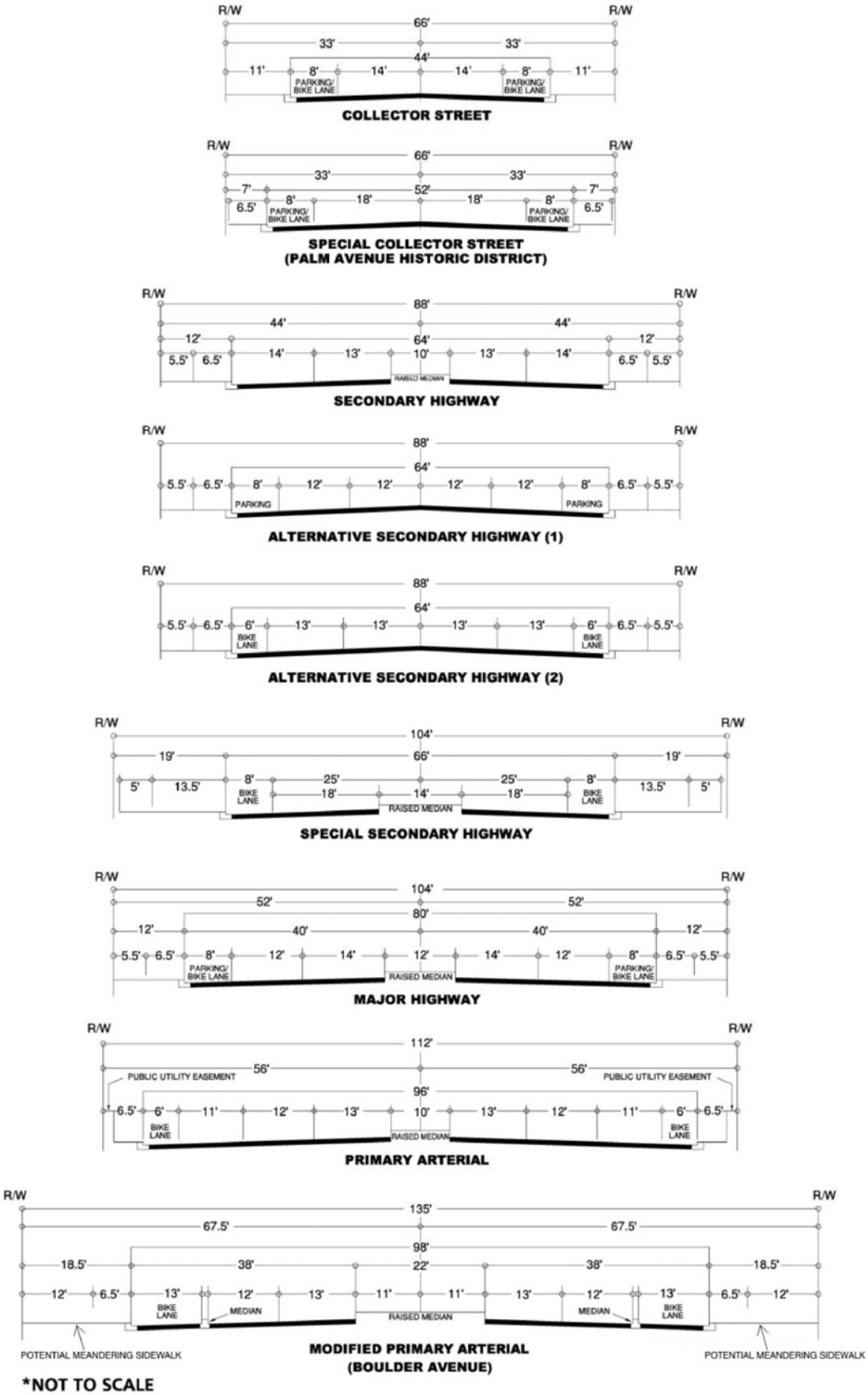


FIGURE 5B
CITY OF HIGHLAND
STANDARD CROSS SECTIONS

EXISTING TRAFFIC CONDITIONS

Existing Street System

Regional access to the site is provided primarily by the Interstate 215 (I-215) Freeway, located approximately 2 miles to the west of the Specific Plan area. In addition, the I-10 Freeway is located approximately 3 miles to the south of the project. State Route 210 (SR-210) is oriented in an east-west direction approximately 2.5 miles to the north of the Specific Plan area, and then turns southward and is oriented in a north-south direction adjacent to the Specific Plan eastern boundary.

The following provides a description of the roadways surrounding the Specific Plan area.

Waterman Avenue is a north-south roadway that provides two to three lanes in each direction, with either a raised median or a center two-way left-turn lane in the project vicinity. The speed limit is 40 miles per hour (MPH) and on-street parking is prohibited on both sides. Waterman Avenue is designated on the City of San Bernardino's Circulation Plan as a Major Arterial.

Tippecanoe Avenue is a north-south roadway that provides two to three lanes in each direction, with either a raised median or a center two-way left-turn lane. Tippecanoe Avenue will form the westernmost boundary of the Specific Plan area. The speed limit ranges from 30 to 45 MPH and on-street parking is prohibited on both sides. Tippecanoe Avenue is designated on the City of San Bernardino's Circulation Plan as a Secondary Arterial north of 3rd Street and a Major Arterial south of 3rd Street; Tippecanoe Avenue is designated on the City of Highland's Circulation Element as a Secondary Highway.

Del Rosa Drive is a north-south roadway that provides one to two lanes in each direction, with either a raised median or a center two-way left-turn lane in the project vicinity. Del Rosa Drive extends through and beyond the Specific Plan boundary in both the north and south directions. The speed limit ranges from 35 to 45 MPH, with a 25-MPH school zone from Baseline Street to 6th Street. Del Rosa Drive is designated on the City of San Bernardino's Circulation Plan as a Major Arterial and is designated on the City of Highland's Circulation Element as a Secondary Highway.

Sterling Avenue is a north-south roadway that provides two lanes in each direction, with a center two-way left-turn lane in the project vicinity. Sterling Avenue starts at 3rd Street, and extends northward through and beyond the Specific Plan boundary. The speed limit is 40 MPH. Sterling Avenue is designated on the City of San Bernardino's Circulation Plan as a Major Arterial and is designated on the City of Highland's Circulation Element as a Major Highway.

Victoria Avenue is a north-south roadway that provides two lanes in each direction, with a center two-way left-turn lane in the project vicinity. Victoria Avenue extends through and beyond the Specific Plan boundary in both the north and south directions. The speed limit ranges from 40 to 45 MPH and on-street parking is prohibited on both sides. Victoria Avenue is designated on the City of San Bernardino's Circulation Plan as a Secondary Arterial and is designated on the City of Highland's Circulation Element as a Major Highway.

Central Avenue is a north-south undivided roadway that provides one lane in each direction. Central Avenue starts at 3rd Street and extends northward through and beyond the Specific Plan boundary. On-street parking is permitted on both sides. Central Avenue is designated on the City of San Bernardino's Circulation Plan as a Collector and is designated on the City of Highland's Circulation Element as a Collector Street.

Palm Avenue is a north-south roadway that provides two lanes in each direction, with either a raised median or a center two-way left-turn lane in the project vicinity. Palm Avenue extends through and beyond Specific Plan boundary in both the north and south directions. The speed limit is 45 MPH. Palm Avenue is designated on the City of San Bernardino's Circulation Plan as a Major Arterial and in the City of Highland's Circulation Element as a Major Highway north of Pacific Street and between Base Line Street and 3rd Street; a Special Collector Street between Pacific Street and Base Line Street; and a Primary Arterial south of 3rd Street.

Church Avenue is a north-south undivided roadway that provides one lane in each direction. Church Avenue started at 5th Street and extends northward to Pacific Street. The speed limit ranges from 35 MPH. Church Avenue is designated on the City of Highland's Circulation Element as a Collector Street.

6th Street is an east-west undivided roadway that provides one travel lane in each direction. 6th Street will form the northern boundary of the Specific Plan area from Tippecanoe Avenue to Central Avenue. The posted speed limit is 40 MPH, with a 25-MPH school zone from Tippecanoe Avenue to Del Rosa Drive. 6th Street is designated as a Collector Street on the City of San Bernardino's Circulation Plan and on the City of Highland's Circulation Element.

5th Street is an east-west roadway that provides one to two lanes in each direction in the project vicinity, with a center two-way left-turn lane in some sections. 5th Street provides a direct connection to both the I-215 Freeway to the West and the SR-210 Freeway to the East. 5th Street will traverse the entire length of the Specific Plan area and will have development on both sides of the street. The speed limit ranges from 40 to 45 MPH, with a 25-MPH school zone to the east of Waterman Avenue. 5th Street is designated on the City of San Bernardino's Circulation Plan as a Major Arterial and in the City of Highland's Circulation Element as a Major Highway west of Palm Avenue within the City's boundary and as a Primary Arterial east of Palm Avenue.

3rd Street is an east-west roadway that provides two lanes in each direction, with a center two-way left-turn lane. The speed limit ranges from 45 to 50 MPH. 3rd Street is designated on the City of San Bernardino's Circulation Plan as a Major Arterial and is designated on the City of Highland's Circulation Element as a Primary Arterial. 3rd Street will form the southern boundary of the Specific Plan area from Tippecanoe Avenue to its eastern terminus.

3rd Street currently dead-ends southwest of the intersection of 5th Street at Church Avenue, in the City of Highland. The City has approved an improvement project that will connect 3rd Street to 5th Street to the east and west of Church Avenue. The future connection to the east of Church Avenue will allow eastbound traffic on 3rd Street to merge onto eastbound 5th Street. The connection to the west of Church Avenue will allow limited access from 5th Street to westbound 3rd Street. The timing for completion of this improvement is uncertain.

Existing Transit Service

Transit service to the project area is provided by OmniTrans, which serves the Cities of San Bernardino, Highland and other surrounding cities. Currently only Route 15 travels on any of the streets within the Specific Plan area.

OmniTrans Route 15 operates between the City of Redlands and the City of Fontana, traveling through the Specific Plan area along Tippecanoe Avenue, Del Rosa Avenue, Central Avenue, and Palm Avenue. Key stops along Route 15 include The San Bernardino County Court Building, Redlands Mall, San Bernardino Stadium, San Bernardino Valley College, Fontana Metrolink, and the San Bernardino Transit Center. At the San Bernardino Transit Center, passengers can transfer to other OmniTrans routes, as well as to Riverside Transit (RTA), Mountain Transit, Pass Transit and Victor Valley Transit Authority (VVTA) routes, or to Metrolink.

Route 15 operates on weekdays from 6:40 AM to 10:40 PM with approximately 30-minute headways (the time between bus arrivals), and on Saturdays and Sundays from approximately 6:40 AM to 7:25 PM with approximately 1-hour headways.

The OmniTrans bus stops located closest to the Specific Plan area are as follows:

- Tippecanoe Avenue at 3rd Street
- Del Rosa Drive at 3rd Street
- Del Rosa Drive at 6th Street
- Central Avenue at 5th Street
- Palm Avenue at 5th Street

Existing Traffic Volumes

Intersection and roadway traffic volumes at the study locations were obtained from traffic studies for other projects in the vicinity, where available; and were collected at the study locations where counts were not available. Copies of the traffic count data worksheets are provided in *Appendix B*.

The traffic counts included vehicle classifications for passenger cars, 2-axle trucks, 3-axle trucks, and 4+-axle trucks. The vehicle classification data was used to develop Passenger Car Equivalent (PCE) volumes by applying a PCE factor of 2.0 PCE for 2-axle trucks, 2.5 PCE for 3-axle trucks, and 3.0 PCE for 4+-axle trucks. For locations without vehicle classification data, the percentage of trucks was estimated from classification counts at surrounding locations.

Existing lane configurations and traffic control at the study intersections are shown on Figure 6. Existing morning and evening peak hour intersection volumes are presented on Figure 7. Daily roadway volumes are presented on Figure 8. The existing volumes on Figures 7 and 8 reflect the PCE factors described above.

Existing Operating Conditions

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. The results are shown on Table 1. Review of this table indicates that all study intersections currently operate at an acceptable Level of Service in both peak hours, with the exception of the following intersections:

- #20 – Sterling Avenue at 6th Street (unsignalized): AM – LOS F; PM – LOS E
- #41 – Central Avenue at 3rd Street (unsignalized): PM – LOS E

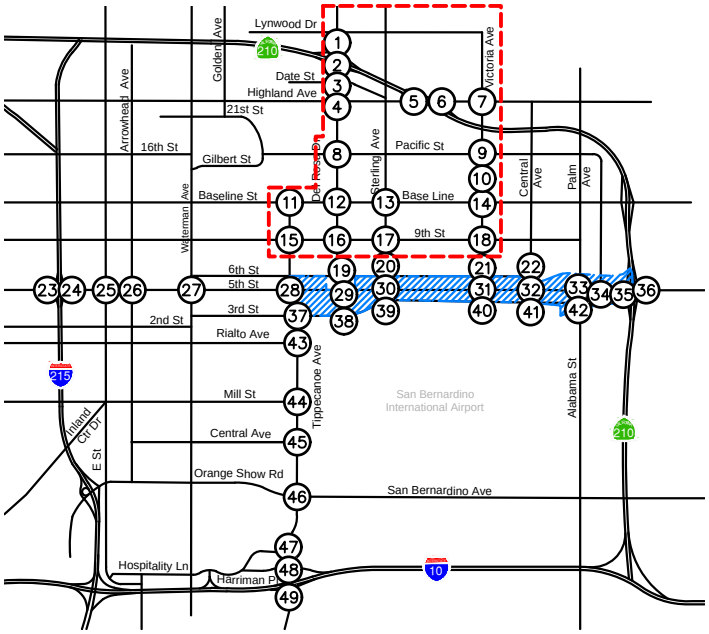
Copies of the intersection analysis worksheets are provided in *Appendix C*.

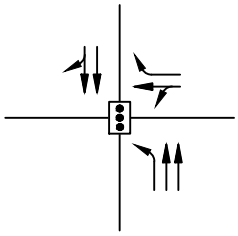
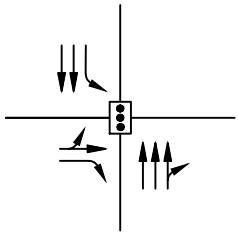
These two intersections are unsignalized. As described in the methodology section, the Level of Service for unsignalized intersections is based on the average vehicle delay for the intersection approach or movement that has the worst (highest) delay. In the case of these intersections, vehicles on the side street stop-controlled movements (6th Street at intersection #20, and Central Avenue at intersection #41) experience delay as they wait for a gap in the through traffic on the main arterial. Under current conditions, neither intersection would warrant a signal based on the peak hour volumes.

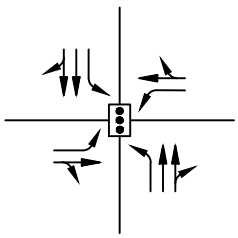
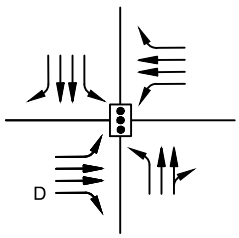
Daily Roadway Operating Conditions

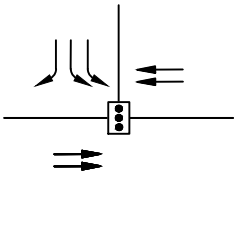
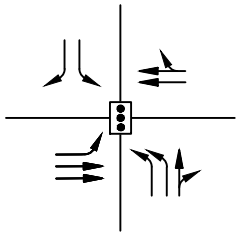
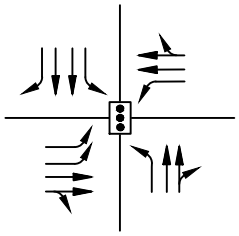
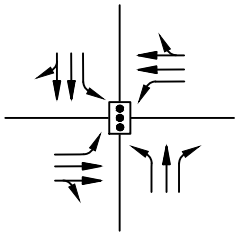
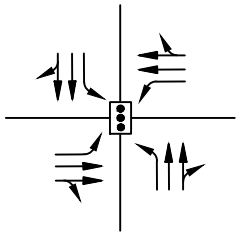
Roadway Level of Service analysis was conducted based on the roadway capacities presented previously in this report. The results are shown on Table 2. Review of this table indicates that the following study roadway segments are currently operating at an unacceptable Level of Service:

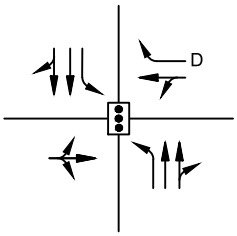
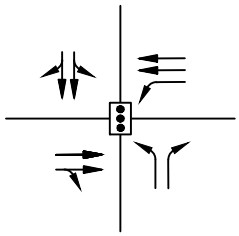
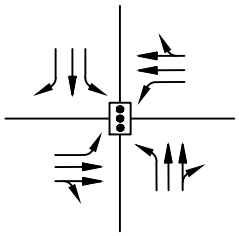
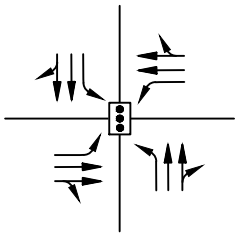
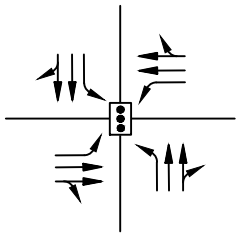
- Tippecanoe Avenue: Mill Street to Orange Show Road / San Bernardino Avenue (LOS D)
- Del Rosa Drive: Highland Avenue to Pacific Street (LOS F)

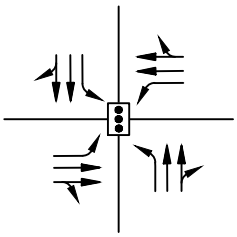
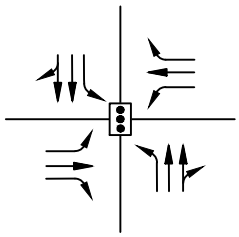
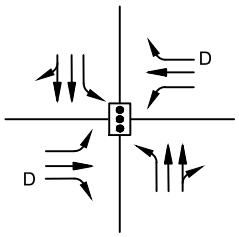
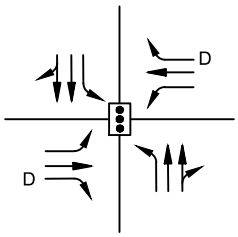


1. Del Rosa Ave at SR-210 WB Ramps	2. Del Rosa Ave at SR-210 EB Ramps
	

3. Del Rosa Ave at Date St	4. Del Rosa Ave at Highland Ave
	

5. Highland Ave at SR-210 EB Off-Ramp	6. Highland Ave at SR-210 WB Off-Ramp	7. Victoria Ave at Highland Ave	8. Del Rosa Dr at Pacific St	9. Victoria Ave at Pacific St
				

10. Victoria Ave at 14th St	11. Tippecanoe Ave at Baseline St	12. Del Rosa Dr at Baseline St	13. Sterling Ave at Base Line	14. Victoria Ave at Base Line
				

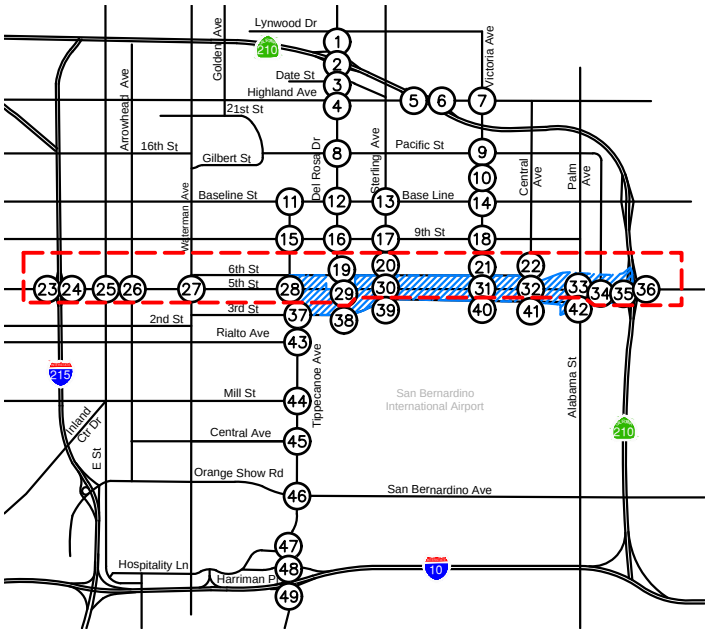
15. Tippecanoe Ave at 9th St	16. Del Rosa Ave at 9th St	17. Sterling Ave at 9th St	18. Victoria Ave at 9th St
			

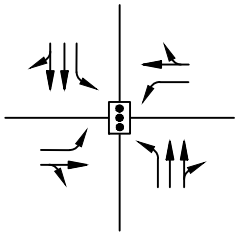
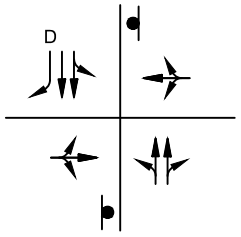
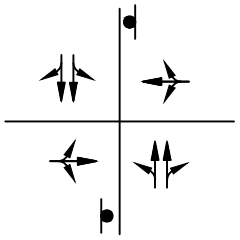
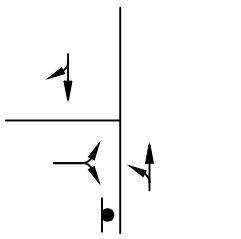
NOT TO SCALE

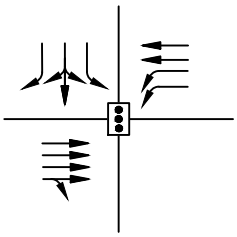
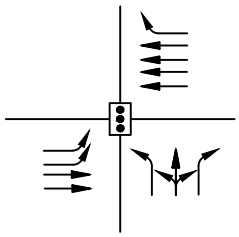
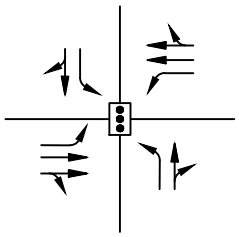
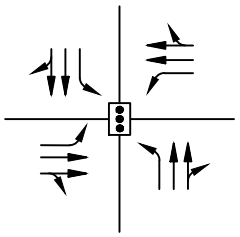
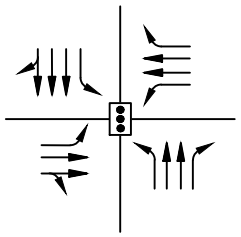
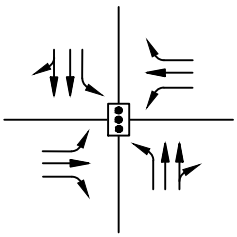
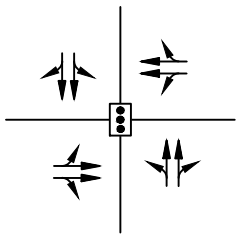
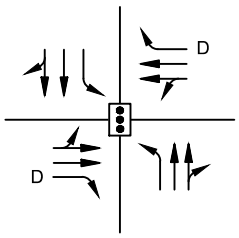
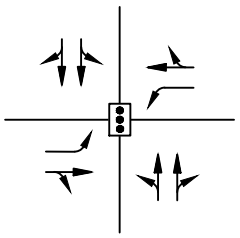
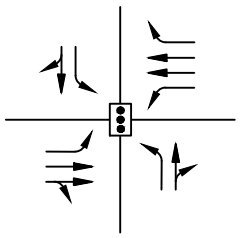
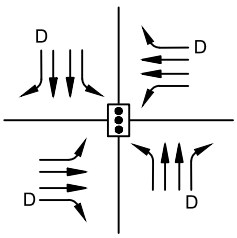
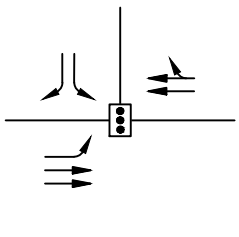
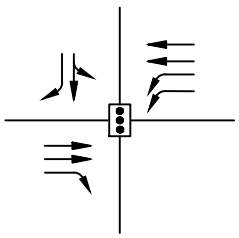
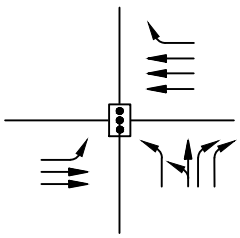
LEGEND:

- X = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign
- D = Defacto Right Turn
- = Intersection Analysis Boundary (by Sheet)

FIGURE 6A
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL



19. Del Rosa Dr at 6th St	20. Sterling Ave at 6th St
	
21. Victoria Ave at 6th St	**22. Central Ave at 6th St**
	

23. I-215 SB Ramps at 5th St	24. I-215 NB Ramps at 5th St	25. E Street at 5th St	26. Arrowhead Ave at 5th St	27. Waterman Ave at 5th St
				
28. Tippecanoe Ave at 5th St	**29. Del Rosa Dr at 5th St**	**30. Sterling Ave at 5th St**	**31. Victoria Ave at 5th St**	**32. Central Ave at 5th St**
				
33. Palm Ave at 5th St	**34. Church Ave at 5th St**	**35. SR-210 EB Ramps at 5th St**	**36. SR-210 WB Ramps at 5th St**	
				

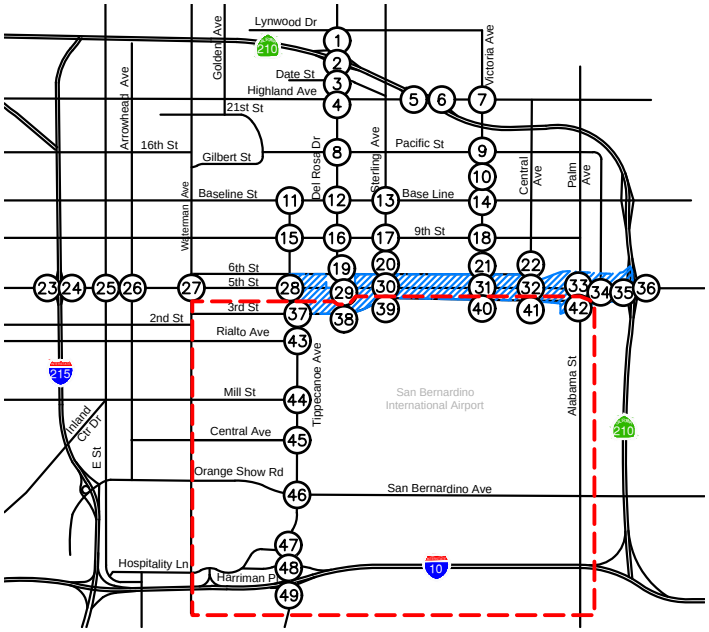
NOT TO SCALE

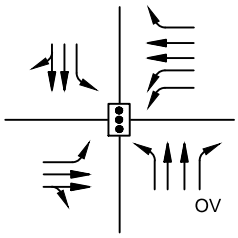
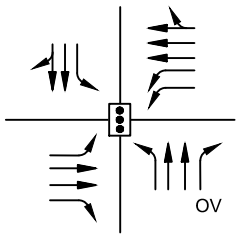
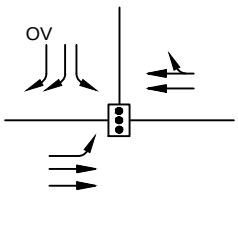
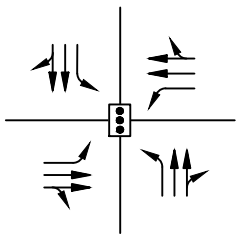
LEGEND:

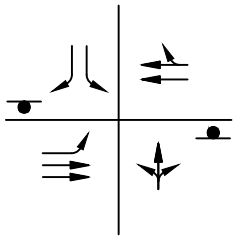
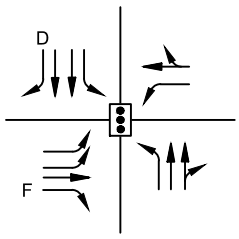
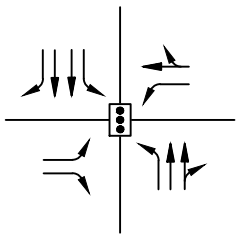
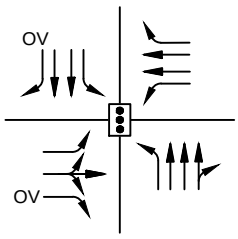
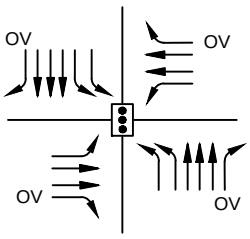
- (X) = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign
- D = Defacto Right Turn
- = Intersection Analysis Boundary (by Sheet)

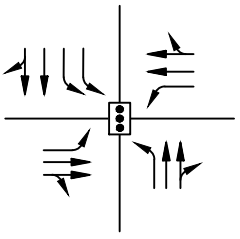
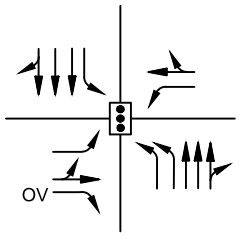
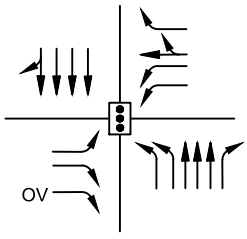
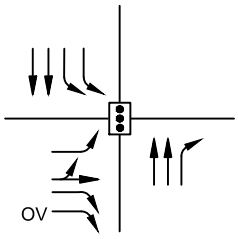
FIGURE 6B
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

Kimley»Horn



37. Tippecanoe Ave at 3rd St	38. Del Rosa Dr at 3rd St
	
39. Sterling Ave at 3rd St	**40. Victoria Ave at 3rd St**
	

41. Central Ave at 3rd St	42. Palm Ave at 3rd St	43. Tippecanoe Ave at Rialto Ave	44. Tippecanoe Ave at Mill St	45. Tippecanoe Ave at Central Ave
				

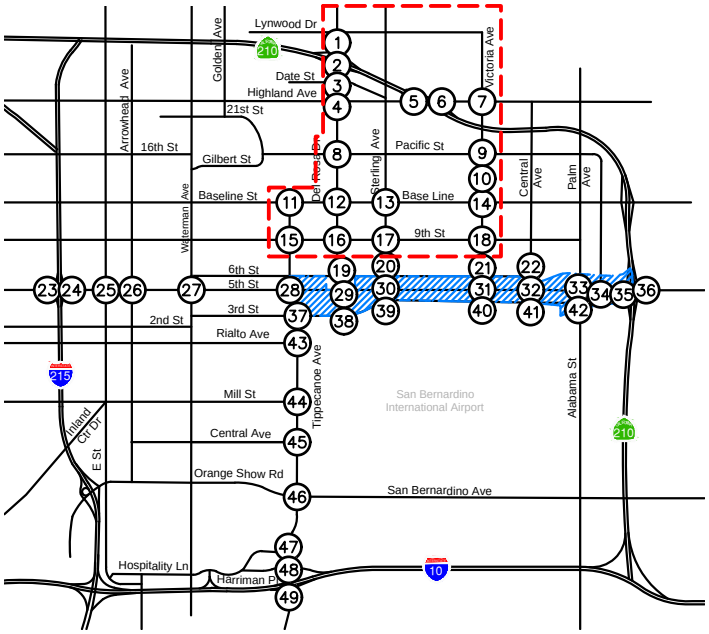
46. Tippecanoe Ave at Orange Show Rd	47. Tippecanoe Ave at Hospitality Ln	48. Tippecanoe Ave at I-10 WB Ramps	49. Tippecanoe Ave at I-10 EB Ramps
			

LEGEND:

- X = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign
- D = Defacto Right Turn
- F = Free Right Turn
- OV = Right-Turn Overlap
- = Intersection Analysis Boundary (by Sheet)

NOT TO SCALE

FIGURE 6C
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL



1. Del Rosa Ave at SR-210 WB Ramps	2. Del Rosa Ave at SR-210 EB Ramps
664/373 ← 443/353 ↖ 121/226 ← 125/128	402/361 ← 170/121
587/627 ↑ 543/713 ↑	360/387 → 1/1 → 695/715 ↘ 817/949 ↑ 84/120 ↑

3. Del Rosa Ave at Date St	4. Del Rosa Ave at Highland Ave
69/113 ← 846/727 ← 179/240 ↖ 153/206 ← 28/71 ← 15/46	123/113 ← 568/406 ← 122/165 ↖ 135/160 ← 273/422 ← 47/72
112/126 → 31/57 → 39/51 ↘ 30/58 ↑ 628/736 ↑ 21/48 ↑	51/174 → 267/628 → 119/160 ↘ 104/174 ↑ 412/510 ↑ 36/65 ↑

5. Highland Ave at SR-210 EB Off-Ramp	6. Highland Ave at SR-210 WB Off-Ramp	7. Victoria Ave at Highland Ave	8. Del Rosa Dr at Pacific St	9. Victoria Ave at Pacific St
160/155 ← 911/1025 ← 329/577	6/9 ← 1/3 ↖ 6/8 ← 933/1488	284/591 ← 215/146 ← 68/183 ↖ 88/127 ← 348/567 ← 45/62	200/146 ← 342/319 ← 38/65 ↖ 42/35 ← 280/191 ← 69/29	103/66 ← 282/279 ← 58/54 ↖ 89/60 ← 331/247 ← 50/42
293/702 →	2/14 → 917/1358 → 230/263 ↑ 1/1 ↑ 144/129 ↑	448/672 → 372/507 → 119/164 ↘ 241/237 ↑ 243/191 ↑ 42/57 ↑	154/147 → 236/339 → 27/25 ↘ 44/20 ↑ 214/402 ↑ 28/69 ↑	113/71 → 252/358 → 206/190 ↘ 165/145 ↑ 321/379 ↑ 30/55 ↑

10. Victoria Ave at 14th St	11. Tippecanoe Ave at Baseline St	12. Del Rosa Dr at Baseline St	13. Sterling Ave at Base Line	14. Victoria Ave at Base Line
2/12 ← 523/471 ← 27/31 ↖ 52/52 ← 3/4 ← 19/27	← 446/499 ← 191/165	125/90 ← 279/204 ← 31/81 ↖ 35/50 ← 378/461 ← 92/26	66/83 ← 398/309 ← 163/202 ↖ 195/216 ← 338/354 ← 44/60	122/122 ← 329/276 ← 85/99 ↖ 74/98 ← 245/327 ← 33/38
2/13 → 0/10 → 0/3 ↘ 0/27 ↑ 442/17 ↑ 11/54 ↑	306/651 → 198/167 ↘ 167/283 ↑ 161/249 ↑	49/127 → 232/693 → 134/37 ↘ 50/44 ↑ 208/314 ↑ 77/64 ↑	60/127 → 225/551 → 40/49 ↘ 28/69 ↑ 252/447 ↑ 35/76 ↑	105/115 → 211/494 → 30/59 ↘ 48/62 ↑ 265/339 ↑ 20/74 ↑

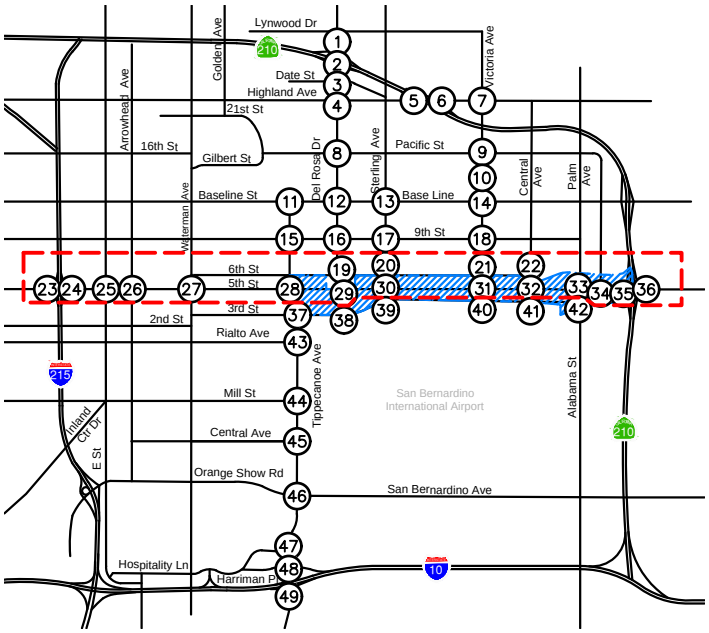
15. Tippecanoe Ave at 9th St	16. Del Rosa Ave at 9th St	17. Sterling Ave at 9th St	18. Victoria Ave at 9th St
23/35 ← 349/265 ← 24/12 ↖ 21/22 ← 295/246 ← 72/48	70/43 ← 199/261 ← 130/52 ↖ 44/46 ← 233/287 ← 31/40	83/75 ← 362/234 ← 55/71 ↖ 85/73 ← 256/176 ← 52/50	65/60 ← 249/216 ← 44/59 ↖ 55/56 ← 99/120 ← 32/19
27/61 → 351/370 → 81/75 ↘ 111/116 ↑ 251/511 ↑ 76/57 ↑	48/38 → 421/219 → 123/65 ↘ 78/80 ↑ 119/390 ↑ 137/75 ↑	80/97 → 172/270 → 22/34 ↘ 22/33 ↑ 171/360 ↑ 36/106 ↑	54/83 → 91/178 → 40/45 ↘ 45/46 ↑ 161/303 ↑ 16/27 ↑

Note: Existing volumes reflect PCE adjustments.
See PCE Worksheets in Appendix C.

NOT TO SCALE

LEGEND:
- (X) = Study Intersection
- xx/yy = AM/PM Peak Hour Turning Movement Volumes
- = Intersection Analysis Boundary (by Sheet)

FIGURE 7A
EXISTING PEAK HOUR TRAFFIC VOLUMES



19. Del Rosa Dr at 6th St	20. Sterling Ave at 6th St
95/30 ↙ 274/230 ← 43/14 ↖ 43/19 ← 144/86 ↖ 86/39 155/55 → 144/124 → 53/14 ↘ 71/10 ↑ 199/313 ↑ 37/122	43/23 ↙ 469/237 ← 24/26 ↖ 14/18 ← 116/76 ↖ 9/10 37/55 → 102/104 → 12/11 ↘ 12/15 ↑ 138/458 ↑ 9/38
21. Victoria Ave at 6th St	**22. Central Ave at 6th St**
23/24 ↙ 299/203 ← 13/16 ↖ 18/10 ← 32/29 ↖ 9/3 23/26 → 33/44 → 41/25 ↘ 31/46 ↑ 120/341 ↑ 1/5	33/30 ↙ 107/75 44/50 → 27/27 ↘ 9/22 ↑ 80/173 ↑

23. I-215 SB Ramps at 5th St	24. I-215 NB Ramps at 5th St	25. E Street at 5th St	26. Arrowhead Ave at 5th St	27. Waterman Ave at 5th St
193/186 ↙ 5/6 ↙ 532/198 ← 504/805 ← 315/498 442/589 → 350/393 ↘	148/644 ← 509/925 150/225 → 840/561 → 290/380 ↑ 0/3 ↑ 542/418 ↑	17/60 ↙ 132/163 ↙ 10/21 ← 7/20 ← 421/838 ← 7/33 75/26 → 937/543 → 37/42 ↘ 27/94 ↑ 102/281 ↑ 20/27 ↑	24/51 ↙ 174/142 ↙ 26/27 ← 12/20 ← 394/588 ← 39/39 43/46 → 628/490 → 131/30 ↘ 38/95 ↑ 98/305 ↑ 32/64 ↑	110/132 ↙ 519/574 ↙ 14/52 ← 16/33 ← 297/212 ← 76/62 70/137 → 169/395 → 153/132 ↘ 117/143 ↑ 382/678 ↑ 48/97 ↑
28. Tippecanoe Ave at 5th St	**29. Del Rosa Dr at 5th St**	**30. Sterling Ave at 5th St**	**31. Victoria Ave at 5th St**	**32. Central Ave at 5th St**
41/24 ↙ 360/297 ↙ 17/35 ← 19/28 ← 193/122 ← 20/26 17/59 → 55/414 → 32/48 ↘ 36/57 ↑ 176/468 ↑ 11/34 ↑	49/32 ↙ 316/215 ↙ 32/48 ← 47/36 ← 284/119 ← 27/16 64/71 → 69/398 → 16/18 ↘ 8/21 ↑ 192/343 ↑ 7/24 ↑	55/42 ↙ 330/182 ↙ 9/35 ← 10/30 ← 269/124 ← 24/11 22/83 → 73/366 → 11/29 ↘ 8/6 ↑ 97/310 ↑ 2/14 ↑	30/14 ↙ 230/137 ↙ 76/75 ← 78/109 ← 266/138 ← 257/30 9/48 → 60/362 → 3/11 ↘ 1/2 ↑ 74/248 ↑ 13/116 ↑	33/14 ↙ 56/31 ↙ 42/50 ← 44/73 ← 683/299 ← 33/6 15/21 → 191/616 → 14/5 ↘ 5/2 ↑ 4/110 ↑
33. Palm Ave at 5th St	**34. Church Ave at 5th St**	**35. SR-210 EB Ramps at 5th St**	**36. SR-210 WB Ramps at 5th St**	
73/30 ↙ 584/246 ↙ 125/174 ← 92/132 ← 568/250 ← 358/190 11/70 → 203/700 → 63/60 ↘ 33/88 ↑ 150/569 ↑ 258/534 ↑	84/30 ↙ 154/79 ← 70/77 ← 983/511 25/58 → 564/1317 →	121/118 ↙ 7/6 ↙ 122/310 ← 951/482 ← 745/279 326/933 → 396/489 ↘	392/267 ← 1336/575 82/182 → 371/1041 → 363/207 ↑ 319/435 ↑	

Note: Existing volumes reflect PCE adjustments.
See PCE Worksheets in Appendix C.

NOT TO SCALE

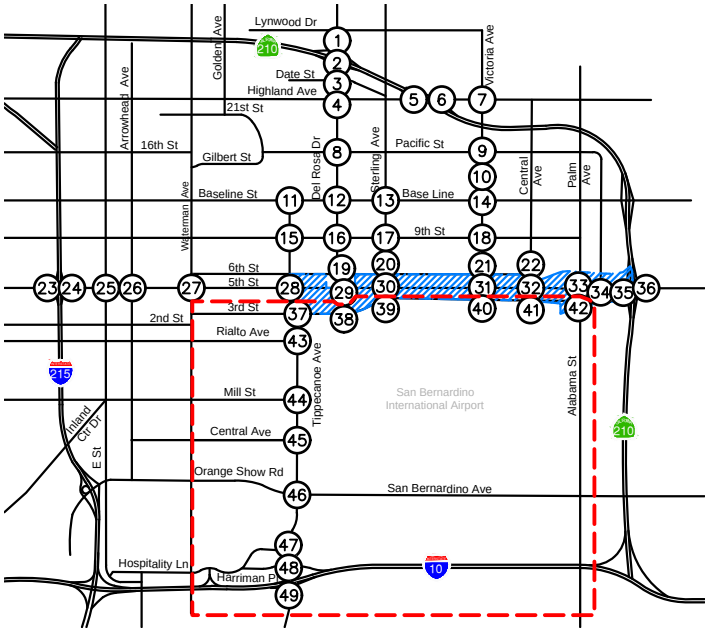
LEGEND:

(X) = Study Intersection

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

= Intersection Analysis Boundary (by Sheet)

FIGURE 7B
EXISTING PEAK HOUR TRAFFIC VOLUMES



37. Tippecanoe Ave at 3rd St	38. Del Rosa Dr at 3rd St
32/25 ↙ 500/299 ↓ 37/42 ↘ 25/50 ← 549/198 ← 302/215	86/69 ↙ 228/131 ↓ 26/44 ↘ 12/26 ← 815/351 ← 230/61
30/42 → 170/616 → 44/59 ↘ 58/60 ↑ 265/499 ↑ 176/488	73/116 → 210/975 → 28/6 ↘ 13/12 ↑ 89/207 ↑ 97/337

39. Sterling Ave at 3rd St	40. Victoria Ave at 3rd St
333/118 ↙ 39/59 ↘ 23/40 ← 795/262	452/105 ↙ 30/20 ↓ 55/48 ↘ 13/38 ← 328/167 ← 23/32
98/268 → 223/1128 →	82/318 → 156/830 → 24/7 ↘ 12/18 ↑ 10/32 ↑ 22/41

41. Central Ave at 3rd St	42. Palm Ave at 3rd St	43. Tippecanoe Ave at Rialto Ave	44. Tippecanoe Ave at Mill St	45. Tippecanoe Ave at Central Ave
70/24 ↙ 22/21 ↘ 3/20 ← 306/212	149/84 ↙ 800/391 ↓ 30/12 ↘ 45/23 ← 5/3 ← 6/9	81/59 ↙ 692/647	4/121 ↙ 602/776 ↓ 167/2 ↘ 165/3 ← 38/27 ← 120/25	100/143 ↙ 626/752 ↓ 238/237 ↘ 195/258 ← 95/174 ← 26/59
20/177 → 216/728 → 0/1 ↑ 0/3 ↑	106/419 → 3/32 → 170/192 ↑ 364/769 ↑ 6/6 ↑	85/111 → 94/53 ↘ 66/98 ↑ 451/975 ↑	30/244 → 14/8 → 5/224 ↘ 6/109 ↑ 722/1005 ↑ 142/0 ↑	82/122 → 204/192 → 46/55 ↘ 45/61 ↑ 562/869 ↑ 127/69 ↑

46. Tippecanoe Ave at Orange Show Rd	47. Tippecanoe Ave at Hospitality Ln	48. Tippecanoe Ave at I-10 WB Ramps	49. Tippecanoe Ave at I-10 EB Ramps
64/47 ↙ 590/627 ↓ 109/224 ↘ 116/183 ← 256/516 ← 88/174	43/114 ↙ 570/816 ↓ 51/45 ↘ 39/23 ← 53/65 ← 79/82	60/180 ↙ 714/1174 ↘ 369/267 ← 137/215 ← 528/180	830/664 ↙ 161/674
122/183 → 157/664 → 128/145 ↘ 75/129 ↑ 512/664 ↑ 48/105 ↑	56/213 → 19/88 → 62/306 ↘ 382/425 ↑ 808/516 ↑ 40/78 ↑	38/157 → 179/670 ↘ 125/300 ↑ 817/599 ↑	691/425 → 4/2 → 611/302 ↘ 641/952 ↑ 298/343 ↑

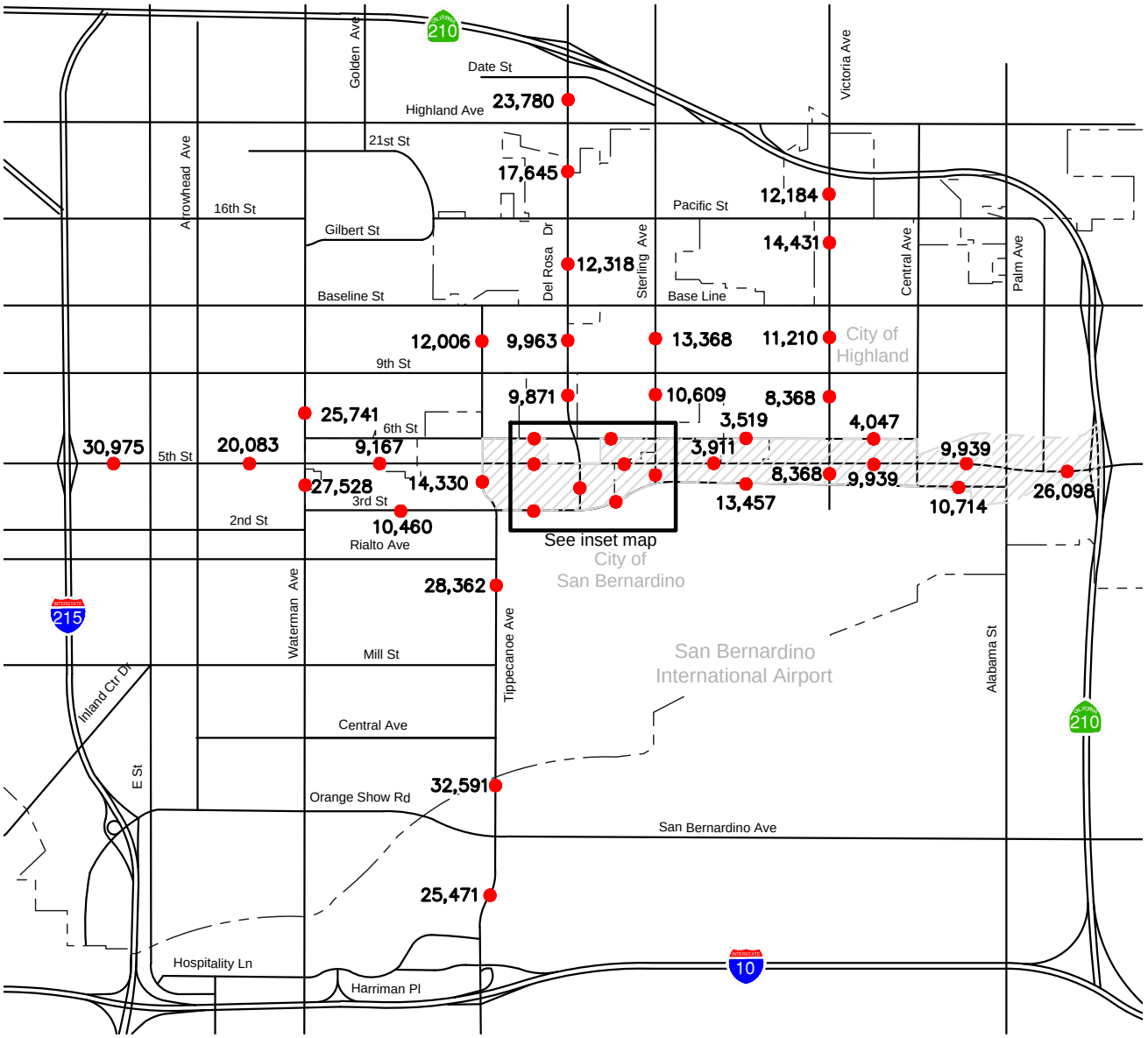
Note: Existing volumes reflect PCE adjustments.
See PCE Worksheets in Appendix C.

NOT TO SCALE

LEGEND:
- (X) = Study Intersection
- XX/YY = AM/PM Peak Hour Turning Movement Volumes
- = Intersection Analysis Boundary (by Sheet)

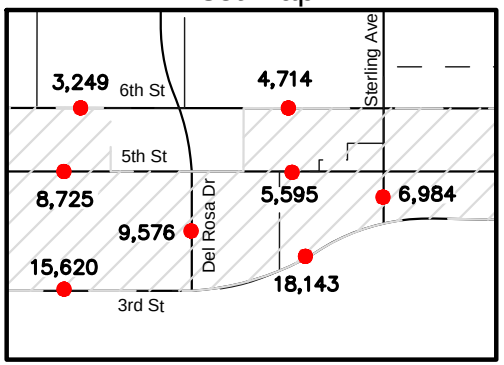
FIGURE 7C
EXISTING PEAK HOUR TRAFFIC VOLUMES

Kimley»Horn



NOT TO SCALE

Inset Map



LEGEND:

= Specific Plan Boundary

X,XXX = Average Daily Traffic Volume

FIGURE 8
EXISTING AVERAGE DAILY ROADWAY VOLUMES

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Traffic Control	Jurisdiction	Peak Hour	Existing Conditions		
					Delay (sec/veh)	V/C	LOS
1	Del Rosa Drive at SR-210 WB Ramps	S	C	AM	54.3	0.947	D
				PM	32.7	0.814	C
2	Del Rosa Drive at SR-210 EB Ramps	S	C	AM	31.6	0.742	D
				PM	32.4	0.778	D
3	Del Rosa Drive at Date Street	S	SB	AM	14.6	0.387	B
				PM	19.6	0.484	B
4	Del Rosa Drive at Highland Avenue	S	SB	AM	28.1	0.355	C
				PM	35.9	0.517	D
5	Highland Avenue at SR-210 EB Off-Ramp	S	C	AM	23.0	0.449	C
				PM	20.9	0.531	C
6	Highland Avenue at SR-210 WB Off-Ramp	S	C	AM	10.4	0.366	B
				PM	11.4	0.515	B
7	Victoria Avenue at Highland Avenue	S	H	AM	28.3	0.567	C
				PM	29.1	0.824	C
8	Del Rosa Drive at Pacific Street	S	H	AM	30.1	0.420	C
				PM	27.4	0.440	C
9	Victoria Avenue at Pacific Street	S	H	AM	36.4	0.569	D
				PM	31.9	0.399	C
10	Victoria Avenue at 14th Street	S	H	AM	7.1	0.263	A
				PM	13.4	0.223	B
11	Tippecanoe Avenue at Baseline Street	S	SB	AM	21.2	0.437	C
				PM	24.4	0.520	C
12	Del Rosa Drive at Baseline Street	S	SB	AM	31.7	0.403	C
				PM	35.2	0.415	D
13	Sterling Avenue at Base Line	S	H	AM	30.7	0.419	C
				PM	33.9	0.562	C
14	Victoria Avenue at Base Line	S	H	AM	29.8	0.366	C
				PM	33.3	0.386	C
15	Tippecanoe Avenue at 9th Street	S	H	AM	31.2	0.438	C
				PM	28.7	0.339	C
16	Del Rosa Drive at 9th Street	S	SB	AM	33.0	0.518	C
				PM	28.6	0.392	C
17	Sterling Avenue at 9th Street	S	H	AM	29.1	0.390	C
				PM	29.2	0.412	C
18	Victoria Avenue at 9th Street	S	H	AM	27.1	0.254	C
				PM	28.3	0.262	C
19	Del Rosa Drive at 6th Street	S	SB	AM	33.9	0.540	C
				PM	21.0	0.267	C
20	Sterling Avenue at 6th Street	U	SB	AM	53.8	0.269	F
				PM	39.3	0.226	E
21	Victoria Avenue at 6th Street	U	H	AM	15.6	0.062	C
				PM	18.7	0.144	C
22	Central Avenue at 6th Street	U	SB	AM	10.7	0.085	B
				PM	11.0	0.083	B
23	I-215 SB Ramps at 5th Street	S	C	AM	24.6	0.513	C
				PM	20.2	0.521	C
24	I-215 NB Ramps at 5th Street	S	C	AM	28.9	0.425	C
				PM	24.1	0.669	C
25	E Street at 5th Street	S	SB	AM	13.6	0.383	B
				PM	18.5	0.505	B
26	Arrowhead Avenue at 5th Street	S	SB	AM	12.2	0.288	B
				PM	16.2	0.310	B

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Traffic Control	Jurisdiction	Peak Hour	Existing Conditions		
					Delay (sec/veh)	V/C	LOS
27	Waterman Avenue at 5th Street	S	SB	AM	24.7	0.361	C
				PM	25.4	0.425	C
28	Tippecanoe Avenue at 5th Street	S	H	AM	22.5	0.281	C
				PM	27.6	0.470	C
29	Del Rosa Drive at 5th Street	S	H	AM	19.0	0.330	B
				PM	21.6	0.311	C
30	Sterling Avenue at 5th Street	S	SB	AM	19.8	0.135	B
				PM	23.1	0.281	C
31	Victoria Avenue at 5th Street	S	H	AM	13.0	0.335	B
				PM	13.7	0.423	B
32	Central Avenue at 5th Street	S	H	AM	12.5	0.300	B
				PM	17.0	0.284	B
33	Palm Avenue at 5th Street	S	H	AM	54.0	0.591	D
				PM	46.3	0.876	D
34	Church Avenue at 5th Street	S	H	AM	10.5	0.441	B
				PM	6.0	0.472	A
35	SR-210 EB Ramps at 5th Street	S	C/H	AM	25.5	0.661	C
				PM	26.7	0.657	C
36	SR-210 WB Ramps at 5th Street/Greenspot Road	S	C/H	AM	24.4	0.488	C
				PM	28.9	0.487	C
37	Tippecanoe Avenue at 3rd Street	S	SB	AM	29.2	0.384	C
				PM	29.7	0.636	C
38	Del Rosa Drive at 3rd Street	S	SB	AM	33.3	0.417	C
				PM	28.9	0.612	C
39	Sterling Avenue at 3rd Street	S	SB	AM	19.6	0.476	B
				PM	13.7	0.421	B
40	Victoria Avenue at 3rd Street	S	H	AM	33.8	0.499	C
				PM	22.5	0.372	C
41	Central Avenue at 3rd Street	U	H	AM	14.1	0.057	B
				PM	40.5	0.010	E
42	Palm Avenue at 3rd Street	S	H	AM	17.9	0.450	B
				PM	26.1	0.429	C
43	Tippecanoe Avenue at Rialto Avenue	S	SB	AM	11.8	0.360	B
				PM	10.2	0.371	B
44	Tippecanoe Avenue at Mill Street	S	SB	AM	19.9	0.442	B
				PM	17.9	0.471	B
45	Tippecanoe Avenue at Central Avenue	S	SB	AM	24.5	0.406	C
				PM	26.6	0.528	C
46	Tippecanoe Ave at Orange Show/San Bernardino Ave	S	SB	AM	26.2	0.460	C
				PM	33.8	0.634	C
47	Tippecanoe Avenue at Hospitality Lane	S	SB	AM	20.7	0.376	C
				PM	28.7	0.594	C
48	Tippecanoe Ave at I-10 WB Ramps / Harriman Place	S	C	AM	24.8	0.467	C
				PM	28.3	0.611	C
49	Tippecanoe Avenue at I-10 EB Ramps	S	C	AM	23.1	0.524	C
				PM	26.9	0.650	C

Notes:
- Level of Service is based on the delay value.
- Bold and shaded values indicate intersections operating at LOS E or F or significant impact to intersection per City or Caltrans standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the movement with the highest delay.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, 6th Edition.
- S = Signalized; U = Unsignalized
- C = Caltrans; SB = San Bernardino; H = Highland

TABLE 2
SUMMARY OF ROADWAY SEGMENT ANALYSIS
EXISTING CONDITIONS

Roadway	Segment	Jurisdiction	Existing Configuration	LOS E Capacity[1]	Existing ADT [2]	V/C	LOS
Waterman Avenue	Baseline Street to 5th Street	SB	4 Lanes Divided	40,000	25,741	0.644	B
	5th Street to 3rd Street	SB	6 Lanes Divided	60,000	27,528	0.459	A
Tippecanoe Avenue	Baseline Street to 6th Street	SB / H	4 Lanes Undivided	30,000	12,006	0.400	A
	6th Street to 3rd Street	SB / H	4 Lanes Undivided	30,000	14,330	0.478	A
	3rd Street to Mill Street	SB	6 Lanes Divided	60,000	28,362	0.473	A
	Mill Street to Orange Show Road / San Bernardino Avenue	SB	4 Lanes Divided	40,000	32,591	0.815	D
	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	SB	6 Lanes Divided	60,000	25,471	0.425	A
Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	SB	4 Lanes Divided	40,000	23,780	0.595	A
	Highland Avenue to Pacific Street	SB	2 Lanes Undivided	12,000	17,645	1.470	F
	Pacific Street to Baseline Street	SB / H	4 Lanes Undivided	30,000	12,318	0.411	A
	Baseline Street to 9th Street	SB / H	4 Lanes Divided	40,000	9,963	0.249	A
	9th Street to 6th Street	SB	4 Lanes Divided	40,000	9,871	0.247	A
	6th Street to 3rd Street	SB / H	4 Lanes Undivided	30,000	9,576	0.319	A
Sterling Avenue	Base Line to 9th Street	H	4 Lanes Divided	40,000	13,368	0.334	A
	9th Street to 6th Street	H	4 Lanes Divided	40,000	10,609	0.265	A
	6th Street to 3rd Street	SB / H	4 Lanes Divided	40,000	6,984	0.175	A
Victoria Avenue	Highland Avenue to Pacific Street	H	4 Lanes Divided	40,000	12,184	0.305	A
	Pacific Street to Base Line	H	4 Lanes Divided	40,000	14,431	0.361	A
	Base Line to 9th Street	H	4 Lanes Undivided	30,000	11,210	0.374	A
	9th Street to 6th Street	H	4 Lanes Undivided	30,000	8,368	0.279	A
	6th Street to 3rd Street	SB / H	4 Lanes Undivided	30,000	8,368	0.279	A
6th Street	Tippecanoe Avenue to Del Rosa Drive	SB / H	2 Lanes Undivided	10,000	3,249	0.325	A
	Del Rosa Drive to Sterling Avenue	H	2 Lanes Undivided	10,000	4,714	0.471	A
	Sterling Avenue to Victoria Avenue	SB / H	2 Lanes Undivided	10,000	3,519	0.352	A
	Victoria Avenue to Central Avenue	H	2 Lanes Undivided	10,000	4,047	0.405	A
5th Street	I-215 NB Ramps to E Street	SB	4 Lanes Divided	40,000	30,975	0.774	C
	E Street to Waterman Avenue	SB	4 Lanes Divided	40,000	20,083	0.502	A
	Waterman Avenue to Tippecanoe Avenue	SB	2 Lanes Undivided	15,000	9,167	0.611	B
	Tippecanoe Avenue to Del Rosa Drive	H	2 Lanes Undivided	15,000	8,725	0.582	A
	Del Rosa Drive to Sterling Avenue	SB / H	4 Lanes Undivided	40,000	5,595	0.140	A
	Sterling Avenue to Victoria Avenue	SB / H	2 Lanes Undivided	15,000	3,911	0.261	A
	Victoria Avenue to Central Avenue	H	4 Lane Divided	40,000	9,939	0.248	A
	Central Avenue to Palm Avenue	H	4 Lane Divided	40,000	9,939	0.248	A
	Palm Avenue to SR-210 EB Ramps	H	4 Lanes Divided	40,000	26,098	0.652	B
3rd Street	Waterman Avenue to Tippecanoe Avenue	SB	4 Lanes Divided	40,000	10,460	0.262	A
	Tippecanoe Avenue to Del Rosa Drive	SB / H	4 Lanes Divided	40,000	15,620	0.391	A
	Del Rosa Drive to Sterling Avenue	SB / H	4 Lanes Divided	40,000	18,143	0.454	A
	Sterling Avenue to Victoria Avenue	SB	4 Lanes Undivided	40,000	13,457	0.336	A
	Victoria Avenue to Palm Avenue	SB / H	4 Lanes Divided	40,000	10,714	0.268	A

Notes: [1] Source: City of San Bernardino General Plan Update (2005)

[2] Existing daily traffic volumes include passenger car equivalent (PCE) factors for trucks: 2-axle - 2.0; 3-axle - 2.5; 4+-axle - 3.0

LOS = Level of Service ADT = Average Daily Traffic V/C = Volume-to-Capacity

Jurisdiction: SB = San Bernardino, H = Highland, SB / H = Portions of the roadway segment are in both cities

PROJECT TRAFFIC

Project Trip Generation

The AGSP would replace the land uses currently existing within the Specific Plan area with approximately 9.2 million square feet of Industrial Mixed Uses, consisting of industrial warehouse, high-cube logistics warehouse, tech business park, and a small amount of commercial / retail uses.

Trip generation estimates for the Airport Gateway Specific Plan project are based on daily and peak hour trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition).

Based on the uses and intensities (expressed as floor area ratio, or FAR) allowed in the Specific Plan, the AGSP mix of uses assumed for this analysis and the associated ITE Land Use Category for each land use are as follows:

Land Use	ITE Land Use Code	Quantity	Unit
Industrial Warehouse	150	6,310,472	Sq. Ft.
High-Cube Warehouse	154	1,352,244	Sq. Ft.
Research and Development	760	1,302,161	Sq. Ft.
Retail / Commercial	820	205,483	Sq. Ft.
Hotel	310	150	Room

Passenger vehicle and truck mix assumptions were applied to the warehouse and high cube components of the project, based on the City of Fontana Truck Trip Generation Study. Passenger car equivalent (PCE) factors were then applied to the truck types, based on number of axles (2.0 PCE for 2-axle trucks, 2.5 PCE for 3-axle trucks, and 3.0 PCE for 4+-axle trucks) to determine the total PCE trips to be generated by the project.

Trip credits were taken into account for the existing uses in the Specific Plan area that would be removed. For a conservative analysis, the trip generation estimates for the existing uses were reduced by 25%. A summary of existing land uses and the associated trip generation is provided on Table B-2 in *Appendix A*.

The trip generation rates, truck mix, PCE factors, and the resulting trip generation estimates for the project are summarized on Table 3. The AGSP project is estimated to generate 30,972 net PCE trips on a daily basis, with 1,772 net PCE trips in the morning peak hour, and 2,220 net PCE trips in the evening peak hour. The net project trips, including the existing land use credits, were divided proportionately into smaller zones within the Specific Plan. The smaller zones were based on access to adjacent streets.

TABLE 3
SUMMARY OF PROJECT TRIP GENERATION
AIRPORT GATEWAY SPECIFIC PLAN

TRIP GENERATION RATES [1]

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	150	KSF	1.740	0.131	0.039	0.170	0.051	0.139	0.190
High-Cube Transload and Short-Term Storage	154	KSF	1.40	0.06	0.02	0.08	0.03	0.07	0.10
Research and Development Center	760	KSF	11.26	0.32	0.11	0.42	0.07	0.42	0.49
Shopping Center	820	KSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81
Hotel	310	Room	8.36	0.28	0.19	0.47	0.31	0.29	0.60

PROJECT TRIP GENERATION

Project Land Use	Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	6,310.472	KSF	10,980	827	246	1,073	322	877	1,199
High-Cube Transload and Short-Term Storage	1,352.244	KSF	1,893	84	24	108	38	97	135
Research and Development Center	1,302.161	KSF	14,662	410	137	547	96	543	639
Shopping Center	65.233	KSF	2,463	38	23	61	119	129	248
Pass-by Trips	25%		-616	-10	-6	-16	-30	-32	-62
Total Shopping Center Trips			1,847	28	17	45	89	97	186
Hotel	150	Room	1,254	42	29	71	46	44	90
Shopping Center (Additional)	140.250	KSF	5,294	82	50	132	257	278	535
Pass-by Trips	25%		-1,324	-21	-13	-34	-64	-70	-134
Total Shopping Center Trips			3,970	61	37	98	193	208	401
Total Project Trips			34,606	1,452	490	1,942	784	1,866	2,650

PASSENGER CAR EQUIVALENT (PCE) ADJUSTMENTS FOR WAREHOUSE USES

Vehicle Type	Vehicle Mix [2]	Daily Vehicles	PCE Factor [3]	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing										
Passenger Vehicles	79.57%	8,737	1.0	8,737	658	196	854	256	698	954
2-Axle Trucks	3.46%	380	2.0	760	57	17	74	22	61	83
3-Axle Trucks	4.64%	509	2.5	1,273	96	29	125	37	102	139
4+ Axle Trucks	12.33%	1,354	3.0	4,062	306	91	397	119	324	443
Total Truck PCE Trips				6,095	459	137	596	178	487	665
Total Warehousing PCE Trips				**14,832**	**1,117**	**333**	**1,450**	**434**	**1,185**	**1,619**
High-Cube Transload and Short-Term Storage										
Passenger Vehicles	51.0%	965	1.0	965	43	12	55	19	49	68
2-Axle Trucks	0.0%	0	2.0	0	0	0	0	0	0	0
3-Axle Trucks	0.0%	0	2.5	0	0	0	0	0	0	0
4+ Axle Trucks	49.0%	928	3.0	2,784	123	36	159	57	144	201
Total Truck PCE Trips				2,784	123	36	159	57	144	201
Total High-Cube Transload and Short-Term Storage PCE Trips				**3,749**	**166**	**48**	**214**	**76**	**193**	**269**

TOTAL SPECIFIC PLAN TRIPS

Total Specific Plan Passenger Car Trips	**31,435**	**1,242**	**428**	**1,670**	**699**	**1,639**	**2,338**
Total Specific Plan Truck (PCE) Trips	**8,879**	**582**	**173**	**755**	**235**	**631**	**866**
Total Specific Plan Trips	**40,314**	**1,824**	**601**	**2,425**	**934**	**2,270**	**3,204**

TRIP GENERATION FOR EXISTING USES IN SPECIFIC PLAN AREA

Existing Uses Trip Generation [4]	9,342	358	295	653	450	534	984
Specific Plan Net New Trips	30,972	1,466	306	1,772	484	1,736	2,220

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

[2] Source: Truck Trip Generation Study - City of Fontana, August 2003.

[3] Source: City of San Bernardino Traffic Impact Study Guidelines, June 2015.

[4] Source: PlaceWorks - **See Table A, Appendix A**

PCE = Passenger Car Equivalent KSF = Thousand Square Feet

Trip Distribution and Assignment

Trip distribution assumptions for the project were developed taking into account the proposed Specific Plan uses, the roadway system serving the project area, and the routes to and from the freeway system for the warehouse trucks. The Specific Plan area was divided into smaller zones based on access to adjacent streets and modeled using the Vistro software. The internal project trip distribution and assignment were proportional to the land use intensities within the smaller zones. Separate distribution patterns were assumed for passenger car trips and truck trips. Project trucks are assumed to use 3rd Street or 5th Street to enter the warehouse developments. No truck entrances will be located on 6th Street. Passenger car entrances will be located on the north-south streets, where feasible, to minimize project traffic on 6th Street. Trip distribution assumptions are shown on Figure 9.

Trip distribution percentages were applied to the project trip generation to determine the project trips through each study intersection and on the study roadway segments. The resulting project-related peak hour volumes are shown on Figure 10. Daily roadway volumes are shown on Figure 11.

EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project analysis scenario is a hypothetical scenario that assumes completion of the project and full absorption of the project traffic on the surrounding street network at the current time. The Existing Plus Project scenario is required by the California Environmental Quality Act (CEQA).

Project-related traffic was added to the Existing traffic volumes. The Existing Plus Project traffic volumes at the study intersections are shown on Figure 12. Existing Plus Project daily roadway volumes are shown on Figure 13.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the Existing Plus Project condition. The results are shown on Table 4. Copies of the intersection analysis worksheets are provided in *Appendix C*.

Review of this table indicates that, with the addition of Project traffic, the following intersections would operate at an unacceptable Level of Service:

- #1 - Del Rosa Drive at SR-210 WB Ramps: AM – LOS E
- #20 - Sterling Avenue at 6th Street: AM – LOS F; PM – LOS F
- #21 - Victoria Avenue at 6th Street: PM – LOS F
- #33 - Palm Avenue at 5th Street: AM – LOS E; PM – LOS F
- #41 - Central Avenue at 3rd Street: PM – LOS F

Based on the impact criteria presented earlier in the report for the Cities of San Bernardino and Highland and for Caltrans, the Project impact at each of these intersections would be considered to be a significant project impact.

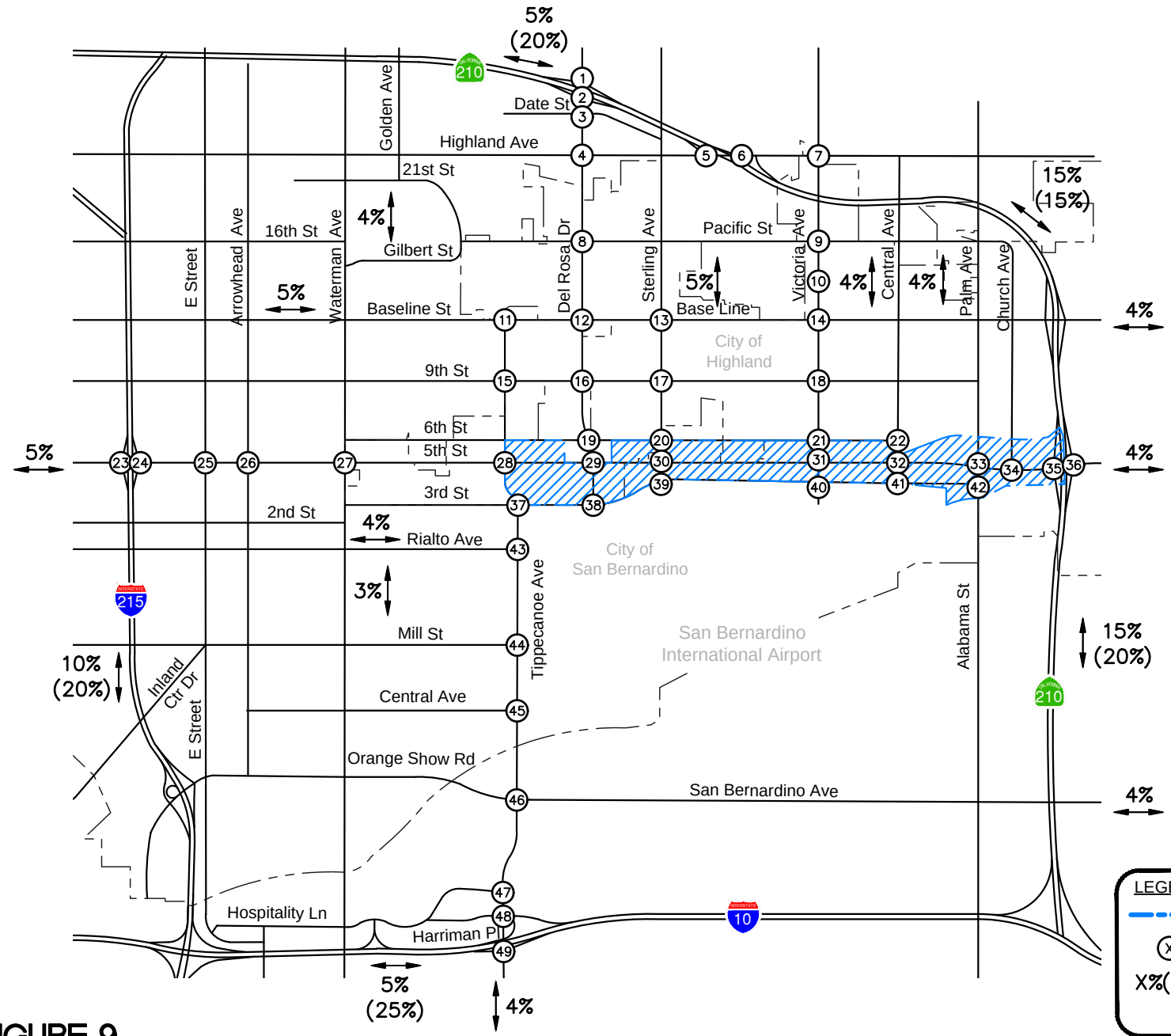
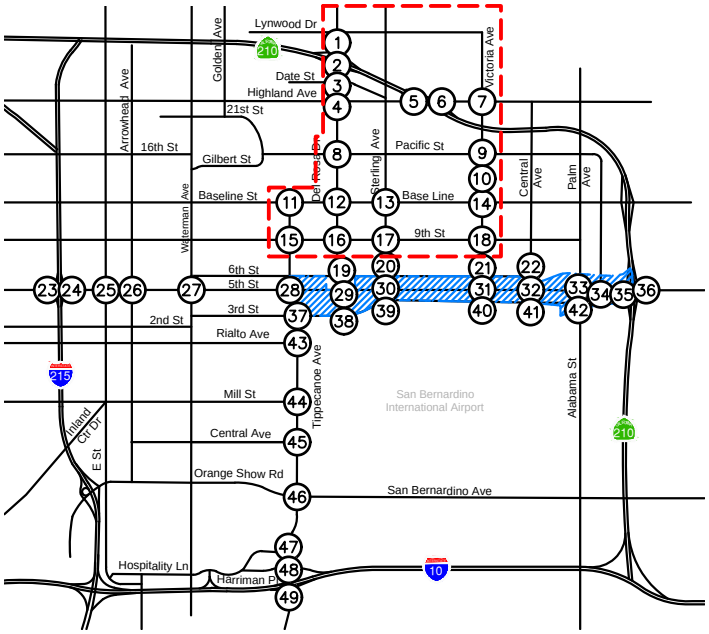


FIGURE 9
PROJECT TRIP DISTRIBUTION



1. Del Rosa Ave at SR-210 WB Ramps	2. Del Rosa Ave at SR-210 EB Ramps
15/68 ↑	76/18 ↘ 15/68 ↑

3. Del Rosa Ave at Date St	4. Del Rosa Ave at Highland Ave
←50/12 26/6 ↘ ↖4/14 11/54 ↑	←50/12 11/54 ↑

5. Highland Ave at SR-210 EB Off-Ramp	6. Highland Ave at SR-210 WB Off-Ramp	7. Victoria Ave at Highland Ave	8. Del Rosa Dr at Pacific St	9. Victoria Ave at Pacific St
46/19 ↙ ←5/20	←18/89 29/14 →	←39/16 29/14 ↘ 18/89 ↑ 6/51 ↑	←50/12 11/54 ↑	←68/30 17/5 ↘ 24/140 ↑

10. Victoria Ave at 14th St	11. Tippecanoe Ave at Baseline St	12. Del Rosa Dr at Baseline St	13. Sterling Ave at Base Line	14. Victoria Ave at Base Line
←85/35 24/140 ↑	←17/86 70/36 → 19/4 ↘	←50/12 ←0/10 70/36 ↘ 17/76 ↑ 11/54 ↑	←76/30 0/10 ↑ 14/58 ↑	←85/35 24/140 ↑

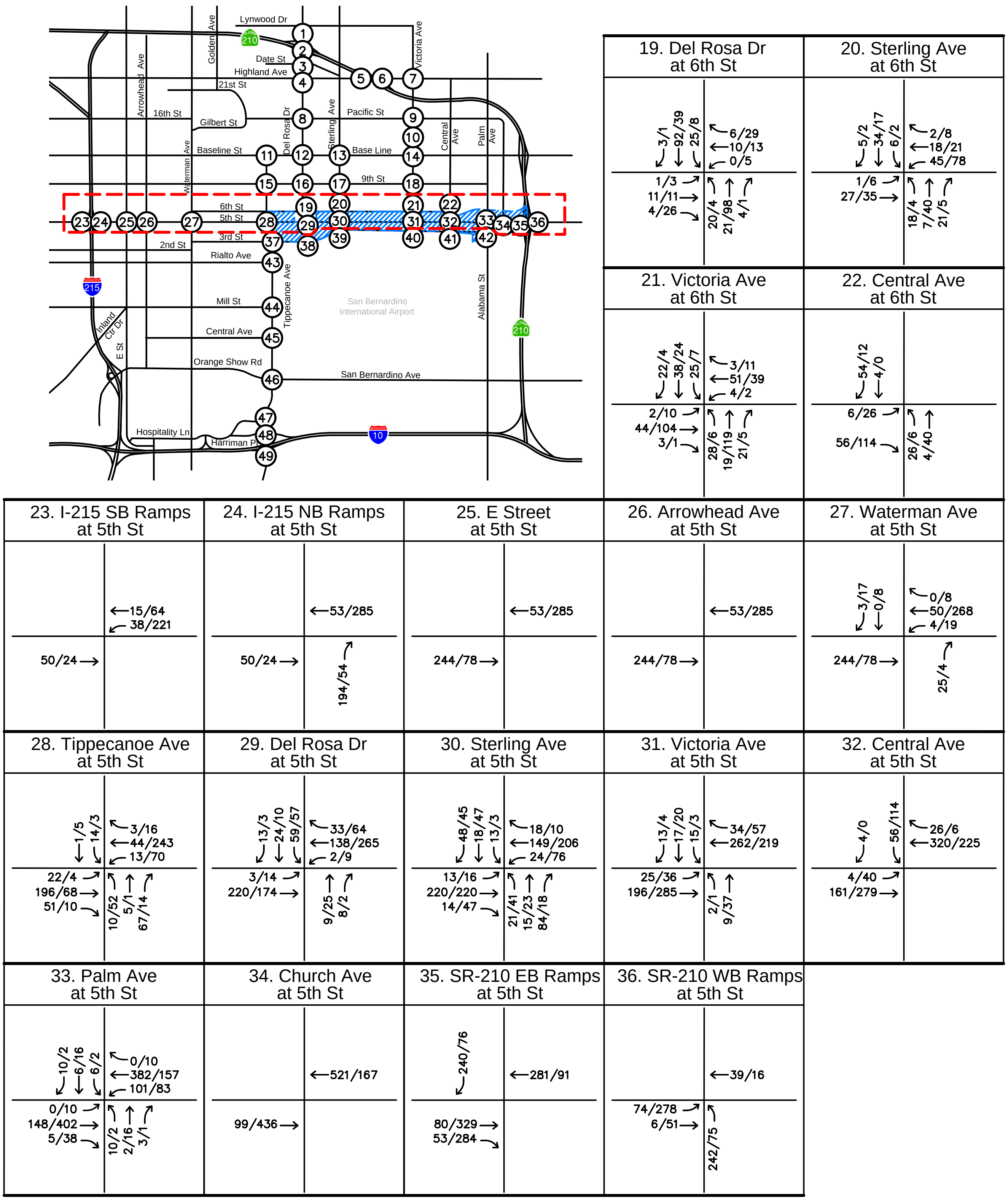
15. Tippecanoe Ave at 9th St	16. Del Rosa Ave at 9th St	17. Sterling Ave at 9th St	18. Victoria Ave at 9th St
←19/4	←120/48 28/130 ↑	←45/21 31/9 ↙ ↖4/14 10/54 ↑	←85/35 24/140 ↑

NOT TO SCALE

LEGEND:

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

FIGURE 10A
PROJECT-RELATED PEAK HOUR TRAFFIC VOLUMES

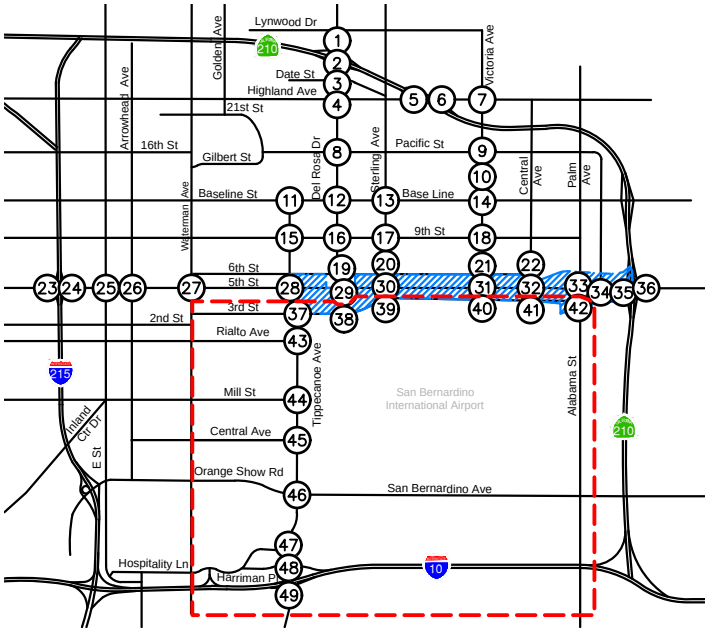

Lynwood Dr
Date St
Highland Ave
21st St
16th St
Gilbert St
Pacific St
Baseline St
Base Line
9th St
6th St
5th St
3rd St
2nd St
Rialto Ave
Mill St
Central Ave
Orange Show Rd
San Bernardino Ave
Hospitality Ln
Harriman Pl
Golden Ave
Arrowhead Ave
Waterman Ave
Del Rosa Dr
Sterling Ave
Victoria Ave
Central Ave
Palm Ave
Tippecanoe Ave
Alabama St
Inland Ctr Dr
E St
San Bernardino International Airport
210
215
10
19. Del Rosa Dr at 6th St
3/1 92/39 25/8 6/29 10/13 0/5 1/3 11/11 4/26 20/4 21/98 4/1
20. Sterling Ave at 6th St
5/2 34/17 6/2 2/8 18/21 45/78 1/6 27/35 18/4 7/40 21/5
21. Victoria Ave at 6th St
22/4 38/24 25/7 3/11 51/39 4/2 2/10 44/104 3/1 28/6 19/119 21/5
22. Central Ave at 6th St
54/12 4/0 6/26 56/114 26/6 4/40
23. I-215 SB Ramps at 5th St
15/64 38/221 50/24
24. I-215 NB Ramps at 5th St
53/285 50/24 194/54
25. E Street at 5th St
53/285 244/78
26. Arrowhead Ave at 5th St
53/285 244/78
27. Waterman Ave at 5th St
3/17 0/8 0/8 50/268 4/19 244/78 25/4
28. Tippecanoe Ave at 5th St
1/5 14/3 3/16 44/243 13/70 22/4 196/68 51/10 10/52 5/1 67/14
29. Del Rosa Dr at 5th St
13/3 24/10 59/57 33/64 138/265 2/9 3/14 220/174 9/25 8/2
30. Sterling Ave at 5th St
48/45 18/47 13/3 18/10 149/206 24/76 13/16 220/220 14/47 21/41 15/23 84/18
31. Victoria Ave at 5th St
13/4 17/20 15/3 34/57 262/219 25/36 196/285 2/1 9/37
32. Central Ave at 5th St
4/0 56/114 26/6 320/225 4/40 161/279
33. Palm Ave at 5th St
10/2 6/16 6/2 0/10 382/157 101/83 0/10 148/402 5/38 10/2 2/16 3/1
34. Church Ave at 5th St
521/167 99/436
35. SR-210 EB Ramps at 5th St
240/76 281/91 80/329 53/284
36. SR-210 WB Ramps at 5th St
39/16 74/278 6/51 242/75
N
NOT TO SCALE

LEGEND:

- (X) = Study Intersection
- XX/YY = AM/PM Peak Hour Turning Movement Volumes
- [red dashed box] = Intersection Analysis Boundary (by Sheet)

FIGURE 10B
PROJECT-RELATED
PEAK HOUR TRAFFIC VOLUMES

Kimley»Horn



37. Tippecanoe Ave at 3rd St	38. Del Rosa Dr at 3rd St
←14/75 ↙51/10 ↖10/52 ←3/47 ←28/170 42/6 → ↑72/15 ↑139/65	↙17/17 ↙9/2 ↖2/9 ←60/225 15/18 ↗ 191/98 →
39. Sterling Ave at 3rd St	**40. Victoria Ave at 3rd St**
↙33/112 ↙23/58 ↖25/61 ←40/97 95/21 ↗ 79/89 →	↙6/1 ↙11/19 ↖9/26 ←86/137 2/12 ↗ 73/161 →

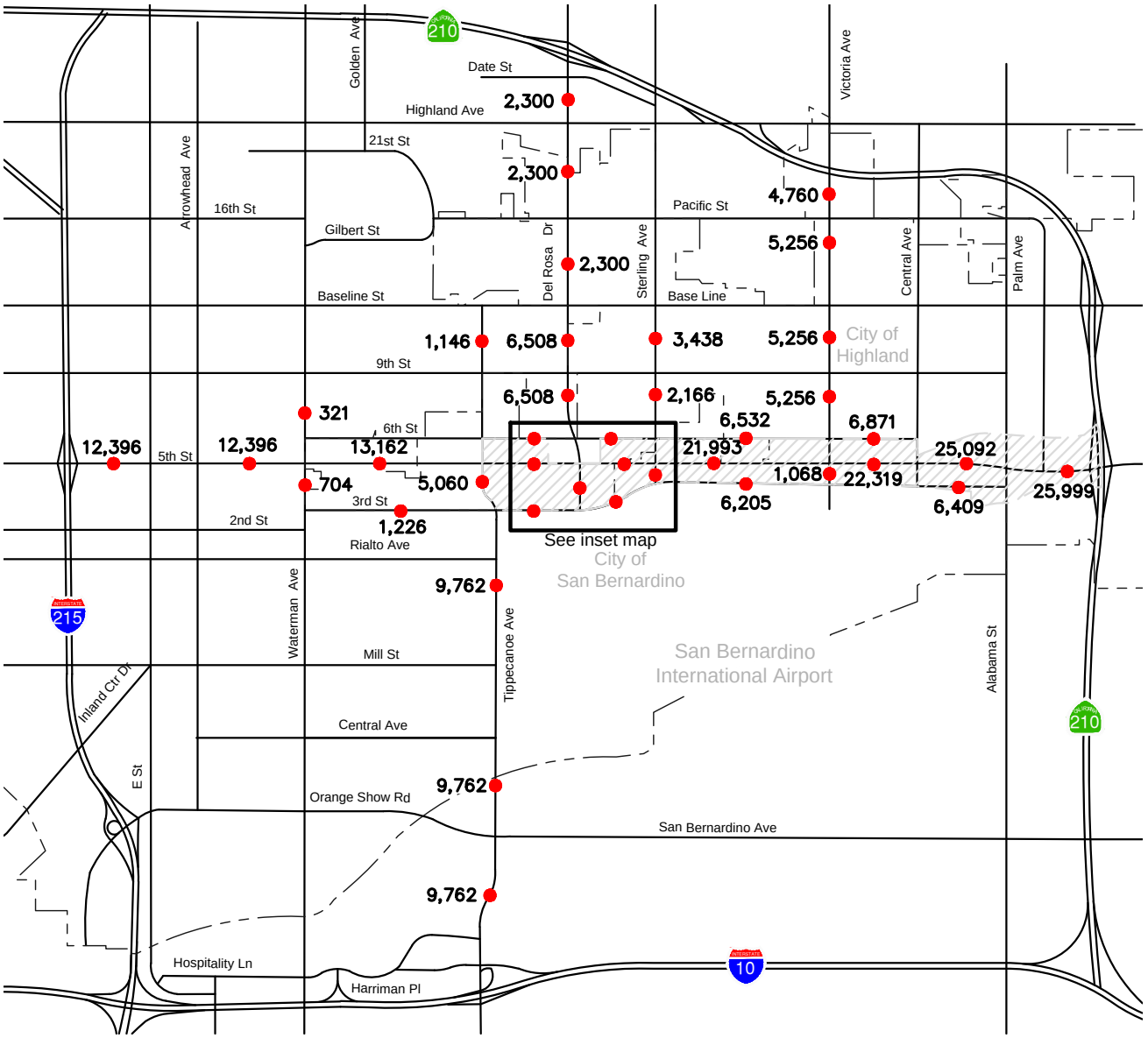
41. Central Ave at 3rd St	42. Palm Ave at 3rd St	43. Tippecanoe Ave at Rialto Ave	44. Tippecanoe Ave at Mill St	45. Tippecanoe Ave at Central Ave
←102/147 67/186 →	↙98/92 ↙5/43 ↙9/2 ←1/7 2/16 ↗ 39/168 → 1/8 ↘ ↑27/13 ↑13/3	↙2/14 ↙40/231 4/14 ↗ ↑207/66	←40/231 ↑207/66	←40/231 ↑207/66

46. Tippecanoe Ave at Orange Show Rd	47. Tippecanoe Ave at Hospitality Ln	48. Tippecanoe Ave at I-10 WB Ramps	49. Tippecanoe Ave at I-10 EB Ramps
←40/231 ↑207/66	←40/231 ↑207/66	←40/231 ↑207/66	←6/51 167/50 ↗ ↑40/16

NOT TO SCALE

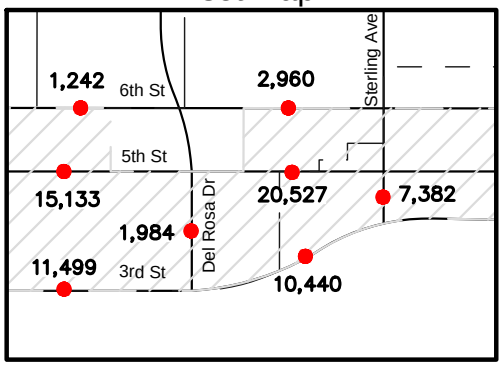
LEGEND:
- (X) = Study Intersection
- XX/YY = AM/PM Peak Hour Turning Movement Volumes
- = Intersection Analysis Boundary (by Sheet)

FIGURE 10C
PROJECT-RELATED
PEAK HOUR TRAFFIC VOLUMES



NOT TO SCALE

Inset Map



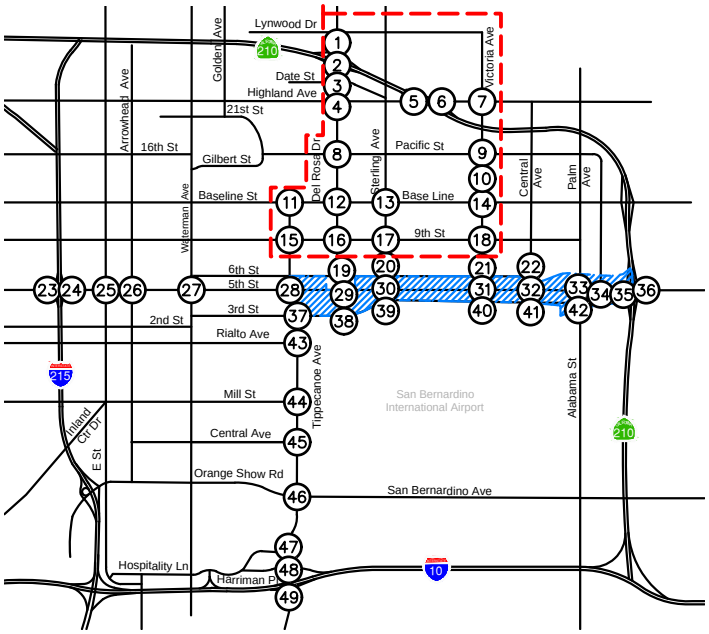
LEGEND:

= Specific Plan Boundary

X,XXX = Average Daily Traffic Volume

FIGURE 11
PROJECT-RELATED ROADWAY TRAFFIC VOLUMES

Kimley»Horn



1. Del Rosa Ave at SR-210 WB Ramps

664/373 ← 443/353 → 121/226 ← 125/128

602/695 → 543/713 ←

2. Del Rosa Ave at SR-210 EB Ramps

402/361 ← 170/121

360/387 → 1/1 → 771/733 ↘

832/1017 ← 84/120

3. Del Rosa Ave at Date St

69/113 ← 896/739 ← 205/246 → 157/220 ← 28/71 ← 15/46

112/126 → 31/57 → 39/51 ↘

30/58 → 639/790 ← 21/48

4. Del Rosa Ave at Highland Ave

123/113 ← 618/418 ← 122/165 → 135/160 ← 273/422 ← 47/72

51/174 → 267/628 → 119/160 ↘

104/174 → 423/564 ← 36/65

5. Highland Ave at SR-210 EB Off-Ramp

160/155 ← 957/1044 ← 334/597

293/702 →

6. Highland Ave at SR-210 WB Off-Ramp

6/9 ← 1/3 → 6/8 ← 951/1577

2/14 → 946/1372 → 230/263 → 1/1 ← 144/129

7. Victoria Ave at Highland Ave

284/591 ← 254/162 ← 68/183 → 88/127 ← 348/567 ← 45/62

448/672 → 372/507 → 148/178 ↘

259/326 → 249/242 ← 42/57

8. Del Rosa Dr at Pacific St

200/146 ← 392/331 ← 38/65 → 42/35 ← 280/191 ← 69/29

154/147 → 236/339 → 27/25 ↘

44/20 → 225/456 ← 28/69

9. Victoria Ave at Pacific St

103/66 ← 350/309 ← 58/54 → 89/60 ← 331/247 ← 50/42

113/71 → 252/358 → 223/195 ↘

165/145 → 345/519 ← 30/55

10. Victoria Ave at 14th St

2/12 ← 608/506 ← 27/31 → 52/52 ← 3/4 ← 19/27

2/13 → 0/10 → 0/3 ↘

0/27 → 466/157 ← 11/54

11. Tippecanoe Ave at Baseline St

← 463/585 ← 191/165

376/687 → 217/171 ↘

167/283 → 161/249

12. Del Rosa Dr at Baseline St

125/90 ← 329/216 ← 31/81 → 35/50 ← 378/471 ← 92/26

49/127 → 232/693 → 204/73 ↘

67/120 → 219/368 ← 77/64

13. Sterling Ave at Base Line

66/83 ← 474/339 ← 163/202 → 195/216 ← 338/354 ← 44/60

60/127 → 225/551 → 40/49 ↘

28/79 → 266/505 ← 35/76

14. Victoria Ave at Base Line

122/122 ← 414/311 ← 85/99 → 74/98 ← 245/327 ← 33/38

105/115 → 211/494 → 30/59 ↘

48/62 → 289/479 ← 20/74

15. Tippecanoe Ave at 9th St

23/35 ← 368/269 ← 24/12 → 21/22 ← 295/246 ← 72/48

27/61 → 351/370 → 81/75 ↘

111/116 → 251/511 ← 76/57

16. Del Rosa Ave at 9th St

70/43 ← 319/309 ← 130/52 → 44/46 ← 233/287 ← 31/40

48/38 → 421/219 → 123/65 ↘

78/80 → 147/520 ← 137/75

17. Sterling Ave at 9th St

83/75 ← 407/255 ← 86/80 → 89/87 ← 256/176 ← 52/50

80/97 → 172/270 → 22/34 ↘

22/33 → 181/414 ← 36/106

18. Victoria Ave at 9th St

65/60 ← 334/251 ← 44/59 → 55/56 ← 99/120 ← 32/19

54/83 → 91/178 → 40/45 ↘

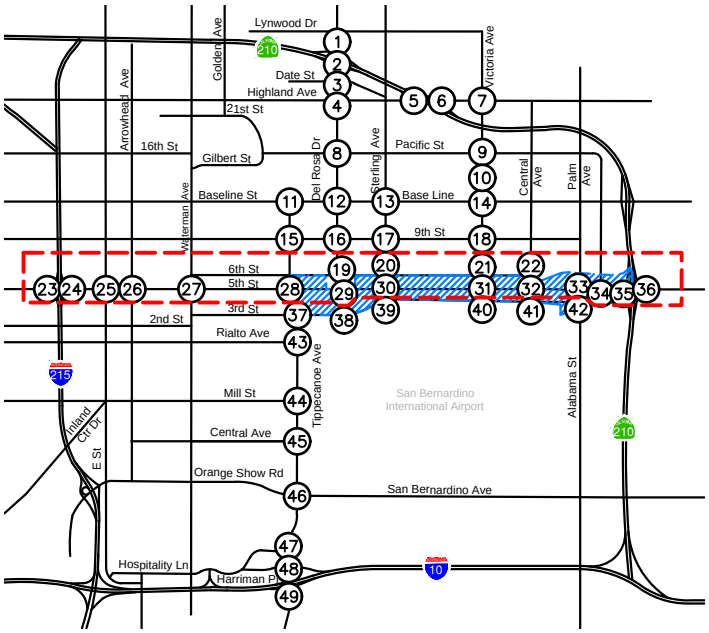
45/46 → 185/443 ← 16/27

NOT TO SCALE

LEGEND:

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

FIGURE 12A
EXISTING PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES



19. Del Rosa Dr at 6th St

98/31 ↙ 366/269 ↓ 68/22 ↘
49/48 ↑ 154/99 ← 86/44 ↖
156/58 → 155/135 → 57/40 ↘
91/14 ↑ 220/411 ↑ 41/123 ↑

20. Sterling Ave at 6th St

48/25 ↙ 503/254 ↓ 30/28 ↘
16/26 ↑ 134/97 ← 54/88 ↖
38/61 → 129/139 → 12/11 ↘
30/19 ↑ 145/498 ↑ 30/43 ↑

21. Victoria Ave at 6th St

45/28 ↙ 337/227 ↓ 38/23 ↘
21/21 ↑ 83/68 ← 13/5 ↖
25/36 → 77/148 → 44/26 ↘
59/52 ↑ 139/460 ↑ 22/10 ↑

22. Central Ave at 6th St

87/42 ↙ 111/75 ↓
50/76 → 83/141 ↘
35/28 ↑ 84/213 ↑

23. I-215 SB Ramps at 5th St

193/186 ↙ 5/6 ↓ 532/198 ↘
519/869 ← 353/719 ↖
492/613 → 350/393 ↘

24. I-215 NB Ramps at 5th St

148/644 ↑ 562/1210 ← ↖
150/225 → 890/585 → ↘
290/380 ↑ 0/3 ↑ 736/472 ↑

25. E Street at 5th St

17/60 ↙ 132/163 ↓ 10/21 ↘
7/20 ↑ 474/1123 ← 7/33 ↖
75/26 → 1181/621 → 37/42 ↘
27/94 ↑ 102/281 ↑ 20/27 ↑

26. Arrowhead Ave at 5th St

24/51 ↙ 174/142 ↓ 26/27 ↘
12/20 ↑ 447/873 ← 39/39 ↖
43/46 → 872/568 → 131/30 ↘
38/95 ↑ 98/305 ↑ 32/64 ↑

27. Waterman Ave at 5th St

113/149 ↙ 519/582 ↓ 14/52 ↘
16/41 ↑ 347/480 ← 80/81 ↖
70/137 → 413/473 → 153/132 ↘
117/143 ↑ 382/678 ↑ 73/101 ↑

28. Tippecanoe Ave at 5th St

41/24 ↙ 361/302 ↓ 31/38 ↘
22/44 ↑ 237/365 ← 33/96 ↖
39/63 → 251/482 → 83/58 ↘
46/109 ↑ 181/469 ↑ 78/48 ↑

29. Del Rosa Dr at 5th St

62/35 ↙ 340/225 ↓ 91/105 ↘
80/100 ↑ 422/384 ← 29/25 ↖
67/85 → 289/572 → 16/18 ↘
8/21 ↑ 201/368 ↑ 15/26 ↑

30. Sterling Ave at 5th St

103/87 ↙ 348/229 ↓ 22/38 ↘
28/40 ↑ 418/330 ← 48/87 ↖
35/99 → 293/586 → 25/76 ↘
29/47 ↑ 112/333 ↑ 86/32 ↑

31. Victoria Ave at 5th St

43/18 ↙ 247/157 ↓ 91/78 ↘
112/166 ↑ 528/357 ← 257/30 ↖
34/84 → 256/647 → 3/11 ↘
3/3 ↑ 83/285 ↑ 13/116 ↑

32. Central Ave at 5th St

37/14 ↙ 56/31 ↓ 98/164 ↘
70/79 ↑ 1003/524 ← 33/6 ↖
19/61 → 352/895 → 14/5 ↘
5/2 ↑ 19/88 ↑ 4/110 ↑

33. Palm Ave at 5th St

83/32 ↙ 590/262 ↓ 131/176 ↘
92/142 ↑ 950/407 ← 459/273 ↖
11/80 → 351/1102 → 68/98 ↘
43/90 ↑ 152/585 ↑ 261/535 ↑

34. Church Ave at 5th St

84/30 ↙ 154/79 ↓ ↘
70/77 ↑ 1504/678 ← ↖
25/58 → 663/1753 → ↘

35. SR-210 EB Ramps at 5th St

361/194 ↙ 7/6 ↓ 122/310 ↘
1232/573 ← 745/279 ↖
406/1262 → 449/773 ↘

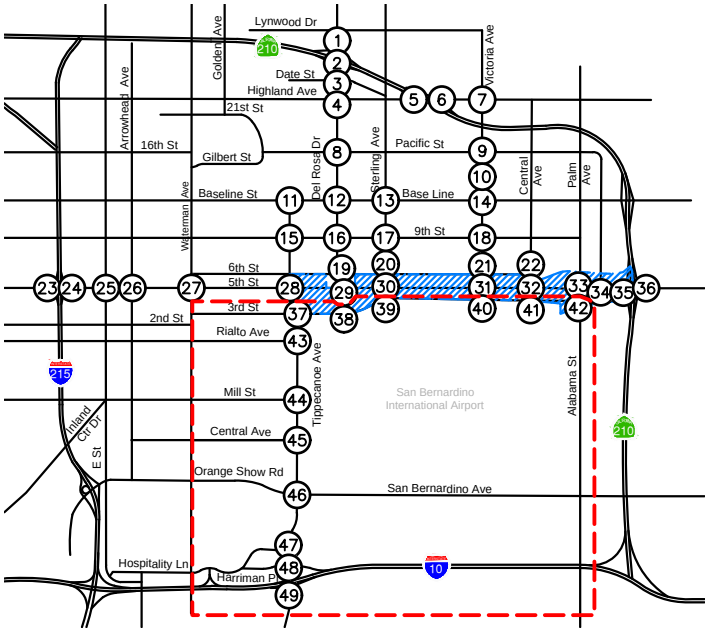
36. SR-210 WB Ramps at 5th St

392/267 ↑ 1375/591 ← ↖
156/460 → 377/1092 → ↘
605/282 ↑ 319/435 ↑

NOT TO SCALE

LEGEND:
- (X) = Study Intersection
- XX/YY = AM/PM Peak Hour Turning Movement Volumes
- = Intersection Analysis Boundary (by Sheet)

FIGURE 12B
EXISTING PLUS PROJECT
PEAK HOUR TRAFFIC VOLUMES



37. Tippecanoe Ave at 3rd St

32/25 ↙ 514/374 ↓ 88/52 ↘ 35/102 ← 552/245 ← 330/385

30/42 → 212/622 → 44/59 ↘ 58/60 ↑ 337/514 ↑ 315/553

38. Del Rosa Dr at 3rd St

103/86 ↙ 228/131 ↓ 35/46 ↘ 14/35 ← 875/576 ← 230/61

88/134 → 401/1073 → 28/6 ↘ 13/12 ↑ 89/207 ↑ 97/337

39. Sterling Ave at 3rd St

366/230 ↙ 62/117 ↘ 48/101 ← 835/359

193/289 → 302/1217 →

40. Victoria Ave at 3rd St

458/106 ↙ 30/20 ↓ 66/67 ↘ 22/64 ← 414/304 ← 23/32

84/330 → 229/991 → 24/7 ↘ 12/18 ↑ 10/32 ↑ 22/41

41. Central Ave at 3rd St

70/24 ↙ 22/21 ↘ 3/20 ← 408/359

20/177 → 283/914 → 0/1 ↑ 0/3 ↑

42. Palm Ave at 3rd St

247/176 ↙ 805/434 ↓ 39/14 ↘ 45/23 ← 6/10 ← 6/9

108/435 → 42/200 → 1/8 ↘ 197/205 ↑ 377/772 ↑ 6/6 ↑

43. Tippecanoe Ave at Rialto Ave

83/73 ↙ 732/878

89/125 → 94/53 ↘ 66/98 ↑ 658/1041 ↑

44. Tippecanoe Ave at Mill St

4/121 ↙ 642/1007 ↓ 167/2 ↘ 165/3 ← 38/27 ← 120/25

30/244 → 14/8 → 5/224 ↘ 6/109 ↑ 929/1071 ↑ 142/0 ↑

45. Tippecanoe Ave at Central Ave

100/143 ↙ 666/983 ↓ 238/237 ↘ 195/258 ← 95/174 ← 26/59

82/122 → 204/192 → 46/55 ↘ 45/61 ↑ 769/935 ↑ 127/69 ↑

46. Tippecanoe Ave at Orange Show Rd

64/47 ↙ 630/858 ↓ 109/224 ↘ 116/183 ← 256/516 ← 88/174

122/183 → 157/664 → 128/145 ↘ 75/129 ↑ 719/730 ↑ 48/105 ↑

47. Tippecanoe Ave at Hospitality Ln

43/114 ↙ 610/1047 ↓ 51/45 ↘ 39/23 ← 53/65 ← 79/82

56/213 → 19/88 → 62/306 ↘ 382/425 ↑ 1015/582 ↑ 40/78 ↑

48. Tippecanoe Ave at I-10 WB Ramps

60/180 ↙ 754/1405 ↘ 369/267 ← 137/215 ← 528/180

38/157 → 179/670 ↘ 125/300 ↑ 1024/665 ↑

49. Tippecanoe Ave at I-10 EB Ramps

836/715 ← 161/674 ↘

858/475 → 4/2 → 611/302 ↘ 681/968 ↑ 298/343 ↑

NOT TO SCALE

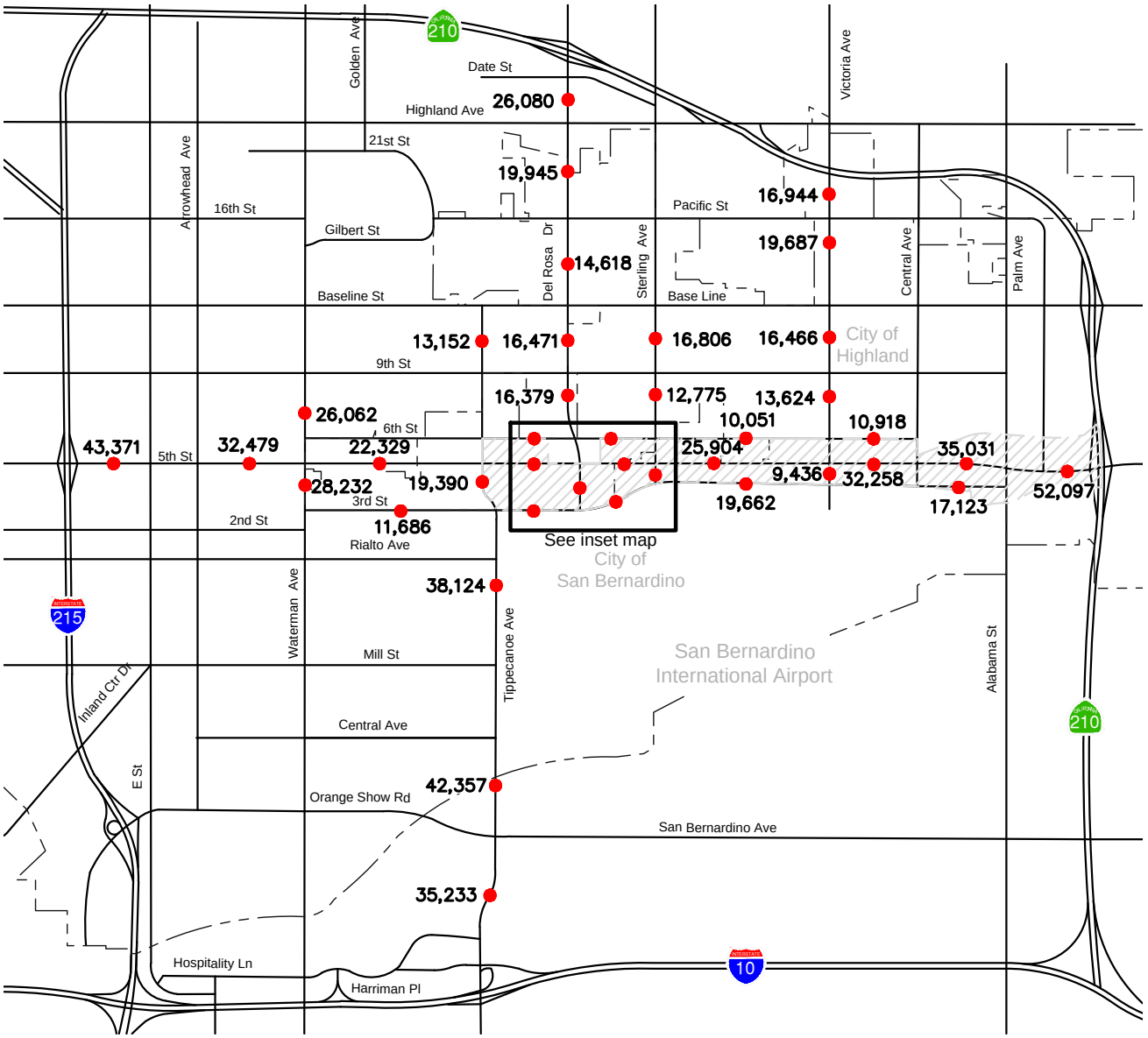
LEGEND:

(X) = Study Intersection

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

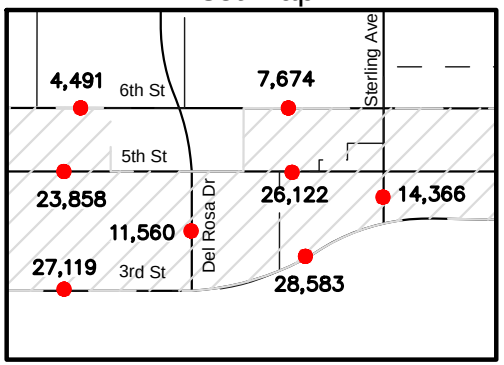
= Intersection Analysis Boundary (by Sheet)

FIGURE 12C
EXISTING PLUS PROJECT
PEAK HOUR TRAFFIC VOLUMES



NOT TO SCALE

Inset Map



LEGEND:

= Specific Plan Boundary

X,XXX = Average Daily Traffic Volume

FIGURE 13
EXISTING PLUS PROJECT ROADWAY TRAFFIC VOLUMES

Kimley»Horn

TABLE 4
SUMMARY OF INTERSECTION OPERATION
EXISTING PLUS PROJECT CONDITIONS

Int. #	Intersection	Traffic Control	Juris-diction	Peak Hour	Existing Conditions			Existing Plus Project Conditions			Project Impact / Significance		
					Delay (sec/veh)	V/C	LOS	Delay (sec/veh)	V/C	LOS	Delay (sec/veh)	V/C	Impact Sig?
1	Del Rosa Drive at SR-210 WB Ramps	S	C	AM	54.3	0.947	D	57.2	0.957	E	2.9	0.010	Yes
				PM	32.7	0.814	C	37.4	0.858	D	4.7	0.044	No
2	Del Rosa Drive at SR-210 EB Ramps	S	C	AM	31.6	0.742	D	34.4	0.795	D	2.8	0.053	No
				PM	32.4	0.778	D	34.0	0.803	D	1.6	0.025	No
3	Del Rosa Drive at Date Street	S	SB	AM	14.6	0.387	B	14.7	0.404	B	0.1	0.017	No
				PM	19.6	0.484	B	20.3	0.513	C	0.7	0.029	No
4	Del Rosa Drive at Highland Avenue	S	SB	AM	28.1	0.355	C	27.7	0.369	C	-0.4	0.014	No
				PM	35.9	0.517	D	36.3	0.533	D	0.4	0.016	No
5	Highland Avenue at SR-210 EB Off-Ramp	S	C	AM	23.0	0.449	C	22.8	0.467	C	-0.2	0.018	No
				PM	20.9	0.531	C	20.9	0.537	C	0.0	0.006	No
6	Highland Avenue at SR-210 WB Off-Ramp	S	C	AM	10.4	0.366	B	10.8	0.375	B	0.4	0.009	No
				PM	11.4	0.515	B	11.6	0.540	B	0.2	0.025	No
7	Victoria Avenue at Highland Avenue	S	H	AM	28.3	0.567	C	28.2	0.574	C	-0.1	0.007	No
				PM	29.1	0.824	C	29.4	0.824	C	0.3	0.000	No
8	Del Rosa Drive at Pacific Street	S	H	AM	30.1	0.420	C	29.6	0.435	C	-0.5	0.015	No
				PM	27.4	0.440	C	26.9	0.471	C	-0.5	0.031	No
9	Victoria Avenue at Pacific Street	S	H	AM	36.4	0.569	D	36.0	0.595	D	-0.4	0.026	No
				PM	31.9	0.399	C	30.5	0.410	C	-1.4	0.011	No
10	Victoria Avenue at 14th Street	S	H	AM	7.1	0.263	A	6.8	0.295	A	-0.3	0.032	No
				PM	13.4	0.223	B	11.3	0.234	B	-2.1	0.011	No
11	Tippecanoe Avenue at Baseline Street	S	SB	AM	21.2	0.437	C	20.6	0.467	C	-0.6	0.030	No
				PM	24.4	0.520	C	24.0	0.532	C	-0.4	0.012	No
12	Del Rosa Drive at Baseline Street	S	SB	AM	31.7	0.403	C	31.4	0.474	C	-0.3	0.071	No
				PM	35.2	0.415	D	39.0	0.462	D	3.8	0.047	No
13	Sterling Avenue at Base Line	S	H	AM	30.7	0.419	C	29.9	0.424	C	-0.8	0.005	No
				PM	33.9	0.562	C	33.5	0.579	C	-0.4	0.017	No
14	Victoria Avenue at Base Line	S	H	AM	29.8	0.366	C	28.6	0.393	C	-1.2	0.027	No
				PM	33.3	0.386	C	31.9	0.425	C	-1.4	0.039	No
15	Tippecanoe Avenue at 9th Street	S	H	AM	31.2	0.438	C	31.1	0.445	C	-0.1	0.007	No
				PM	28.7	0.339	C	28.7	0.339	C	0.0	0.000	No
16	Del Rosa Drive at 9th Street	S	SB	AM	33.0	0.518	C	32.1	0.518	C	-0.9	0.000	No
				PM	28.6	0.392	C	27.2	0.433	C	-1.4	0.041	No
17	Sterling Avenue at 9th Street	S	H	AM	29.1	0.390	C	29.2	0.404	C	0.1	0.014	No
				PM	29.2	0.412	C	28.9	0.436	C	-0.3	0.024	No
18	Victoria Avenue at 9th Street	S	H	AM	27.1	0.254	C	25.0	0.282	C	-2.1	0.028	No
				PM	28.3	0.262	C	25.7	0.302	C	-2.6	0.040	No
19	Del Rosa Drive at 6th Street	S	SB	AM	33.9	0.540	C	35.6	0.613	D	1.7	0.073	No
				PM	21.0	0.267	C	22.4	0.331	C	1.4	0.064	No
20	Sterling Avenue at 6th Street	U	SB	AM	53.8	0.269	F	176.9	0.478	F	123.1	0.209	Yes
				PM	39.3	0.226	E	222.2	0.805	F	182.9	0.579	Yes
21	Victoria Avenue at 6th Street	U	H	AM	15.6	0.062	C	28.4	0.117	D	12.8	0.055	No
				PM	18.7	0.144	C	62.3	0.166	F	43.6	0.022	Yes
22	Central Avenue at 6th Street	U	SB	AM	10.7	0.085	B	12.1	0.116	B	1.4	0.031	No
				PM	11.0	0.083	B	12.0	0.137	B	1.0	0.054	No
23	I-215 SB Ramps at 5th Street	S	C	AM	24.6	0.513	C	24.7	0.526	C	0.1	0.013	No
				PM	20.2	0.521	C	32.0	0.598	C	11.8	0.077	No
24	I-215 NB Ramps at 5th Street	S	C	AM	28.9	0.425	C	27.8	0.503	C	-1.1	0.078	No
				PM	24.1	0.669	C	23.4	0.682	C	-0.7	0.013	No
25	E Street at 5th Street	S	SB	AM	13.6	0.383	B	13.5	0.452	B	-0.1	0.069	No
				PM	18.5	0.505	B	17.9	0.543	B	-0.6	0.038	No

TABLE 4
SUMMARY OF INTERSECTION OPERATION
EXISTING PLUS PROJECT CONDITIONS

Int. #	Intersection	Traffic Control	Juris-diction	Peak Hour	Existing Conditions			Existing Plus Project Conditions			Project Impact / Significance		
					Delay (sec/veh)	V/C	LOS	Delay (sec/veh)	V/C	LOS	Delay (sec/veh)	V/C	Impact Sig?
26	Arrowhead Avenue at 5th Street	S	SB	AM	12.2	0.288	B	11.9	0.359	B	-0.3	0.071	No
				PM	16.2	0.310	B	15.1	0.399	B	-1.1	0.089	No
27	Waterman Avenue at 5th Street	S	SB	AM	24.7	0.361	C	26.5	0.429	C	1.8	0.068	No
				PM	25.4	0.425	C	27.2	0.461	C	1.8	0.036	No
28	Tippecanoe Avenue at 5th Street	S	H	AM	22.5	0.281	C	28.5	0.334	C	6.0	0.053	No
				PM	27.6	0.470	C	32.8	0.570	C	5.2	0.100	No
29	Del Rosa Drive at 5th Street	S	H	AM	19.0	0.330	B	20.9	0.488	C	1.9	0.158	No
				PM	21.6	0.311	C	22.8	0.461	C	1.2	0.150	No
30	Sterling Avenue at 5th Street	S	SB	AM	19.8	0.135	B	23.4	0.364	C	3.6	0.229	No
				PM	23.1	0.281	C	25.7	0.574	C	2.6	0.293	No
31	Victoria Avenue at 5th Street	S	H	AM	13.0	0.335	B	13.8	0.533	B	0.8	0.198	No
				PM	13.7	0.423	B	16.7	0.603	B	3.0	0.180	No
32	Central Avenue at 5th Street	S	H	AM	12.5	0.300	B	12.4	0.428	B	-0.1	0.128	No
				PM	17.0	0.284	B	21.7	0.614	C	4.7	0.330	No
33	Palm Avenue at 5th Street	S	H	AM	54.0	0.591	D	81.2	0.716	F	27.2	0.125	Yes
				PM	46.3	0.876	D	93.3	1.068	F	47.0	0.192	Yes
34	Church Avenue at 5th Street	S	H	AM	10.5	0.441	B	10.9	0.600	B	0.4	0.159	No
				PM	6.0	0.472	A	6.1	0.611	A	0.1	0.139	No
35	SR-210 EB Ramps at 5th Street	S	C/H	AM	25.5	0.661	C	33.5	0.876	C	8.0	0.215	No
				PM	26.7	0.657	C	33.1	0.861	C	6.4	0.204	No
36	SR-210 WB Ramps at 5th Street/Greenspot Road	S	C/H	AM	24.4	0.488	C	25.7	0.612	C	1.3	0.124	No
				PM	28.9	0.487	C	29.1	0.650	C	0.2	0.163	No
37	Tippecanoe Avenue at 3rd Street	S	SB	AM	29.2	0.384	C	29.7	0.464	C	0.5	0.080	No
				PM	29.7	0.636	C	33.6	0.746	C	3.9	0.110	No
38	Del Rosa Drive at 3rd Street	S	SB	AM	33.3	0.417	C	33.5	0.454	C	0.2	0.037	No
				PM	28.9	0.612	C	29.0	0.646	C	0.1	0.034	No
39	Sterling Avenue at 3rd Street	S	SB	AM	19.6	0.476	B	23.2	0.582	C	3.6	0.106	No
				PM	13.7	0.421	B	16.8	0.498	B	3.1	0.077	No
40	Victoria Avenue at 3rd Street	S	H	AM	33.8	0.499	C	32.7	0.536	C	-1.1	0.037	No
				PM	22.5	0.372	C	21.6	0.432	C	-0.9	0.060	No
41	Central Avenue at 3rd Street	U	H	AM	14.1	0.057	B	16.9	0.073	C	2.8	0.016	No
				PM	40.5	0.010	E	65.4	0.016	F	24.9	0.006	Yes
42	Palm Avenue at 3rd Street	S	H	AM	17.9	0.450	B	19.0	0.469	B	1.1	0.019	No
				PM	26.1	0.429	C	27.0	0.450	C	0.9	0.021	No
43	Tippecanoe Avenue at Rialto Avenue	S	SB	AM	11.8	0.360	B	10.7	0.373	B	-1.1	0.013	No
				PM	10.2	0.371	B	10.2	0.427	B	0.0	0.056	No
44	Tippecanoe Avenue at Mill Street	S	SB	AM	19.9	0.442	B	19.6	0.485	B	-0.3	0.043	No
				PM	17.9	0.471	B	18.0	0.547	B	0.1	0.076	No
45	Tippecanoe Avenue at Central Avenue	S	SB	AM	24.5	0.406	C	23.5	0.452	C	-1.0	0.046	No
				PM	26.6	0.528	C	25.9	0.542	C	-0.7	0.014	No
46	Tippecanoe Ave at Orange Show/San Bernardino Ave	S	SB	AM	26.2	0.460	C	25.4	0.484	C	-0.8	0.024	No
				PM	33.8	0.634	C	34.3	0.674	C	0.5	0.040	No
47	Tippecanoe Avenue at Hospitality Lane	S	SB	AM	20.7	0.376	C	19.7	0.384	B	-1.0	0.008	No
				PM	28.7	0.594	C	28.9	0.640	C	0.2	0.046	No
48	Tippecanoe Ave at I-10 WB Ramps / Harriman Place	S	C	AM	24.8	0.467	C	24.0	0.519	C	-0.8	0.052	No
				PM	28.3	0.611	C	28.0	0.647	C	-0.3	0.036	No
49	Tippecanoe Avenue at I-10 EB Ramps	S	C	AM	23.1	0.524	C	24.0	0.556	C	0.9	0.032	No
				PM	26.9	0.650	C	27.9	0.670	C	1.0	0.020	No

Notes:
- Level of Service is based on the delay value.
- Bold and shaded values indicate intersections operating at LOS E or F or significant impact to intersection per City or Caltrans standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the movement with the highest delay.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, 6th Edition.
- S = Signalized; U = Unsignalized
- C = Caltrans; SB = San Bernardino; H = Highland

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted for the Existing Plus Project condition, and the results are summarized on Table 5. Review of this table indicates that with the addition of Project traffic, the following roadway segments would operate at an unacceptable Level of Service (LOS D or worse):

- Tippecanoe Avenue: Mill Street to Orange Show Road / San Bernardino Avenue (LOS F)
- Del Rosa Drive: Highland Avenue to Pacific Street (LOS F)
- 6th Street:
    - Sterling Avenue to Victoria Avenue (LOS F)
    - Victoria Avenue to Central Avenue (LOS F)
- 5th Street:
    - I-215 NB Ramps to E Street (LOS F)
    - E Street to Waterman Avenue (LOS D)
    - Waterman Avenue to Tippecanoe Avenue (LOS F)
    - Tippecanoe Avenue to Del Rosa Drive (LOS F)
    - Sterling Avenue to Victoria Avenue (LOS F)
    - Victoria Avenue to Central Avenue (LOS D)
    - Central Avenue to Palm Avenue (LOS D)
    - Palm Avenue to SR-210 EB Ramps (LOS F)

The Project impact on each of these roadway segments would be considered to be a significant project impact. With the exception of the Tippecanoe Avenue and Del Rosa Drive roadway segments, and the roadway segment of 5th Street from I-215 NB Ramps to Waterman Avenue; the deficient roadways are located within the Specific Plan boundaries and would require improvement as part of the future development of the Specific Plan, as discussed later in this report.

FUTURE CONDITIONS

The Airport Gateway Specific Plan is a programmatic policy-level plan that will be developed incrementally over time, as market conditions allow. There are no identified developers, end users, or even site-specific plans at this time. As developers purchase and assemble individual parcels into parcels large enough for the allowed uses and submit applications for development, a site-specific traffic study, among other technical studies, will be required as part of the entitlement process. Since the timing of development of any portion of the Specific Plan area is uncertain, the analysis of the project for future conditions will focus on build-out conditions for the area.

TABLE 5
SUMMARY OF ROADWAY SEGMENT ANALYSIS
EXISTING PLUS PROJECT

Roadway	Segment	Jurisdiction	LOS E Capacity[1]	Existing ADT[2]	Project ADT	Existing Plus Project ADT	V/C	LOS
Waterman Avenue	Baseline Street to 5th Street	SB	40,000	25,741	321	26,062	0.652	B
	5th Street to 3rd Street	SB	60,000	27,528	704	28,232	0.471	A
Tippecanoe Avenue	Baseline Street to 6th Street	SB / H	30,000	12,006	1,146	13,152	0.438	A
	6th Street to 3rd Street	SB / H	30,000	14,330	5,060	19,390	0.646	B
	3rd Street to Mill Street	SB	60,000	28,362	9,762	38,124	0.635	B
	Mill Street to Orange Show Road / San Bernardino Avenue	SB	40,000	32,591	9,762	42,353	1.059	F
	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	SB	60,000	25,471	9,762	35,233	0.587	A
Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	SB	40,000	23,780	2,300	26,080	0.652	B
	Highland Avenue to Pacific Street	SB	12,000	17,645	2,300	19,945	1.662	F
	Pacific Street to Baseline Street	SB / H	30,000	12,318	2,300	14,618	0.487	A
	Baseline Street to 9th Street	SB / H	40,000	9,963	6,508	16,471	0.412	A
	9th Street to 6th Street	SB	40,000	9,871	6,508	16,379	0.409	A
	6th Street to 3rd Street	SB / H	30,000	9,576	1,984	11,560	0.385	A
Sterling Avenue	Base Line to 9th Street	H	40,000	13,368	3,438	16,806	0.420	A
	9th Street to 6th Street	H	40,000	10,609	2,166	12,775	0.319	A
	6th Street to 3rd Street	SB / H	40,000	6,984	7,382	14,366	0.359	A
Victoria Avenue	Highland Avenue to Pacific Street	H	40,000	12,184	4,760	16,944	0.424	A
	Pacific Street to Base Line	H	40,000	14,431	5,256	19,687	0.492	A
	Base Line to 9th Street	H	30,000	11,210	5,256	16,466	0.549	A
	9th Street to 6th Street	H	30,000	8,368	5,256	13,624	0.454	A
	6th Street to 3rd Street	SB / H	30,000	8,368	1,068	9,436	0.315	A
6th Street	Tippecanoe Avenue to Del Rosa Drive	SB / H	10,000	3,249	1,242	4,491	0.449	A
	Del Rosa Drive to Sterling Avenue	H	10,000	4,714	2,960	7,674	0.767	C
	Sterling Avenue to Victoria Avenue	SB / H	10,000	3,519	6,532	10,051	1.005	F
	Victoria Avenue to Central Avenue	H	10,000	4,047	6,871	10,918	1.092	F
5th Street	I-215 NB Ramps to E Street	SB	40,000	30,975	12,396	43,371	1.084	F
	E Street to Waterman Avenue	SB	40,000	20,083	12,396	32,479	0.812	D
	Waterman Avenue to Tippecanoe Avenue	SB	15,000	9,167	13,162	22,329	1.489	F
	Tippecanoe Avenue to Del Rosa Drive	H	15,000	8,725	15,133	23,858	1.591	F
	Del Rosa Drive to Sterling Avenue	SB / H	40,000	5,595	20,527	26,122	0.653	B
	Sterling Avenue to Victoria Avenue	SB / H	15,000	3,911	21,993	25,904	1.727	F
	Victoria Avenue to Central Avenue	H	40,000	9,939	22,319	32,258	0.806	D
	Central Avenue to Palm Avenue	H	40,000	9,939	25,092	35,031	0.876	D
	Palm Avenue to SR-210 EB Ramps	H	40,000	26,098	25,999	52,097	1.302	F
3rd Street	Waterman Avenue to Tippecanoe Avenue	SB	40,000	10,460	1,226	11,686	0.292	A
	Tippecanoe Avenue to Del Rosa Drive	SB / H	40,000	15,620	11,499	27,119	0.678	B
	Del Rosa Drive to Sterling Avenue	SB / H	40,000	18,143	10,440	28,583	0.715	C
	Sterling Avenue to Victoria Avenue	SB	40,000	13,457	6,205	19,662	0.492	A
	Victoria Avenue to Palm Avenue	SB / H	40,000	10,714	6,409	17,123	0.428	A

Notes: [1] Source: City of San Bernardino General Plan Update (2005)

[2] Existing daily traffic volumes include passenger car equivalent (PCE) factors for trucks: 2-axle - 2.0; 3-axle - 2.5; 4+-axle - 3.0

LOS = Level of Service ADT = Average Daily Traffic V/C = Volume-to-Capacity

[3] The estimated Project ADTs are conservative to account for potential variability in traffic generation and distribution for different types of industrial users, employee shift schedules etc.

Future Build-Out 2040 Conditions

To develop Future Build-Out 2040 intersection and roadway traffic forecasts, the San Bernardino Transportation Analysis Model (SBTAM) Base Year 2012 and Build-out Year 2040 model outputs were used. The raw volumes obtained from the model output were post-processed by determining the annual growth between the base model year and the future model year and applying the growth increment to existing count volumes. This was accomplished using the B-Turns methodology, based on the National Cooperative Highway Research Program (NCHRP) Report 255, developed by the Federal Highway Administration (FHWA). As a conservative approach, if a future forecast volume produced by this process was less than the Existing volume, manual adjustments were made to assure that all forecast volumes would not be less than the Existing volumes. In addition, per request from the City of Highland, trips from the traffic studies for the following Cumulative Projects were added to the future forecasts, as they were not included in the SBTAM model projections: (1) SBIA Air Freight/Eastgate Warehouse project, (2) Duke Realty Warehouse project, and (3) Transition Properties project.

The Future Build-Out 2040 SBTAM forecasts include land use assumptions within the Specific Plan area, based on the current General Plan land use designation for the area – a combination of low- and medium-density residential, industrial, commercial, and institutional uses. For a conservative approach, the trips associated with these land uses were not deducted from the 2040 forecasts before adding the Specific Plan project-related trips. It should be noted that future forecasts and project trip assignments were manually adjusted to account for the future connection of 5th Street and 3rd Street, east and west of Church Avenue. Existing lane geometries at the study locations were assumed to remain for the Future Build-Out 2040 and Future Build-Out 2040 Plus Project scenarios.

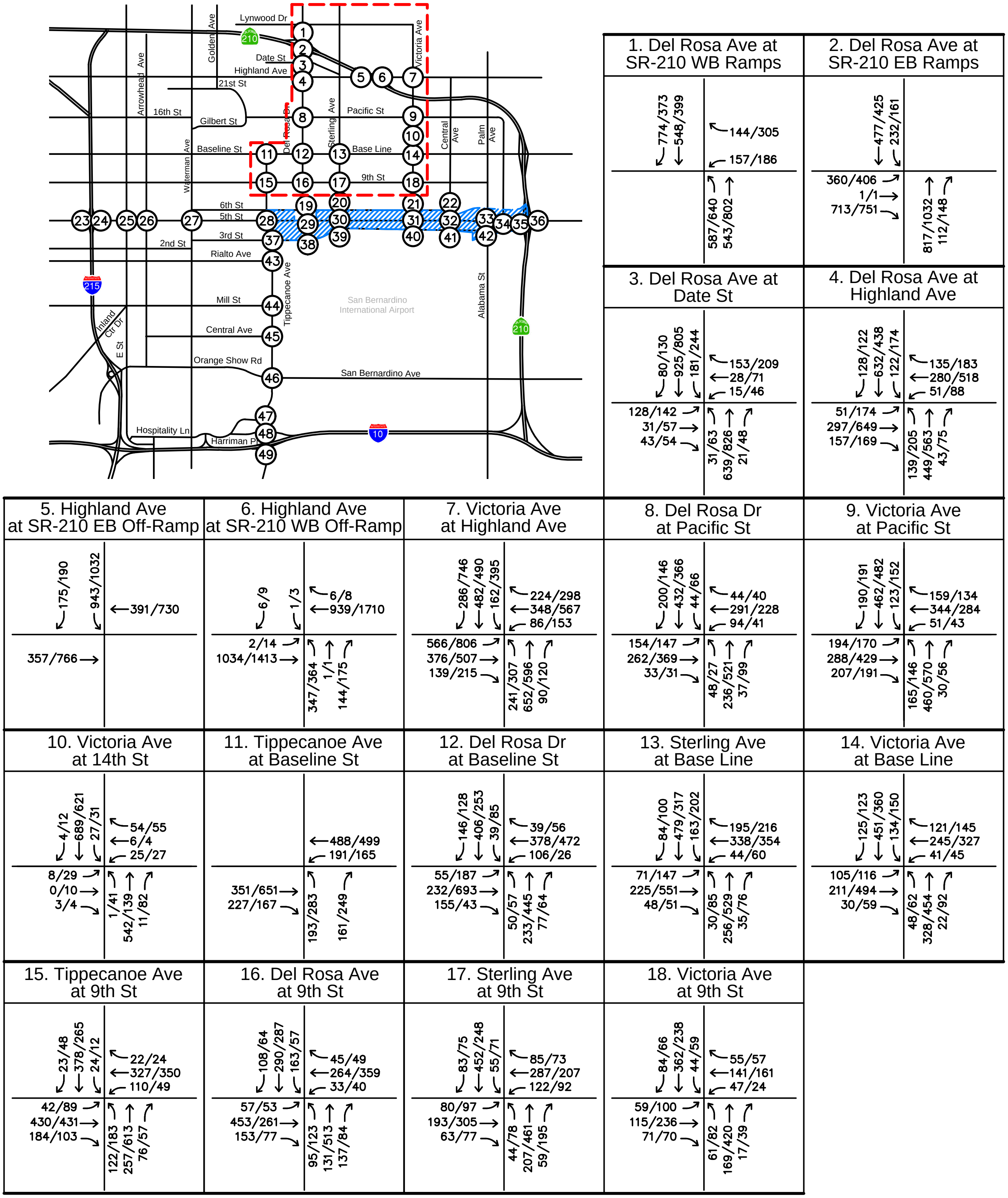
The SBTAM Model plots, B-Turns worksheets, and Cumulative Project traffic studies are provided in *Appendix D.* The resulting Future Build-Out 2040 peak hour intersection traffic volumes are shown on Figure 14. Daily roadway volumes are shown on Figure 15.

Peak Hour Operating Conditions

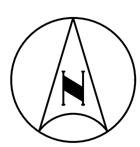
Intersection Level of Service analysis was conducted for the Future Build-Out 2040 condition, and the results are shown on Table 6. The intersection analysis worksheets are provided in *Appendix C.*

Review of this table indicates that, under Future Build-Out 2040 conditions, the following intersections would operate at an unacceptable Level of Service:

- #1 – Del Rosa Drive at SR-210 WB Ramps: AM – LOS E
- #20 – Sterling Avenue at 6th Street: AM LOS F; PM LOS F
- #21 – Victoria Avenue at 6th Street: PM – LOS E
- #38 – Del Rosa Drive at 3rd Street: PM – LOS E
- #41 – Central Avenue at 3rd Street: PM – LOS F
- #42 – Palm Avenue at 3rd Street: PM – LOS E
- #46 – Tippecanoe Avenue at Orange Show Road/San Bernardino Avenue: PM – LOS E



Lynwood Dr
Golden Ave
Arrowhead Ave
Victoria Ave
Date St
Highland Ave
21st St
16th St
Gilbert St
Pacific St
Sterling Ave
Del Rosa Dr
Central Ave
Palm Ave
Waterman Ave
Baseline St
Base Line
9th St
6th St
5th St
3rd St
2nd St
Rialto Ave
Tippecanoe Ave
Alabama St
Mill St
Central Ave
Inland Ctr Dr
E St
San Bernardino International Airport
Orange Show Rd
San Bernardino Ave
Hospitality Ln
Harriman Pl
210
215
10
1. Del Rosa Ave at SR-210 WB Ramps
774/373 548/399 144/305 157/186 587/640 543/802
2. Del Rosa Ave at SR-210 EB Ramps
477/425 232/161 360/406 1/1 713/751 817/1032 112/148
3. Del Rosa Ave at Date St
80/130 925/805 181/244 153/209 28/71 15/46 128/142 31/57 43/54 31/63 639/826 21/48
4. Del Rosa Ave at Highland Ave
128/122 632/438 122/174 135/183 280/518 51/88 51/174 297/649 157/169 139/205 449/563 43/75
5. Highland Ave at SR-210 EB Off-Ramp
175/190 943/1032 391/730 357/766
6. Highland Ave at SR-210 WB Off-Ramp
6/9 1/3 6/8 939/1710 2/14 1034/1413 347/364 1/1 144/175
7. Victoria Ave at Highland Ave
286/746 482/490 162/395 224/298 348/567 86/153 566/806 376/507 139/215 241/307 652/596 90/120
8. Del Rosa Dr at Pacific St
200/146 432/366 44/66 44/40 291/228 94/41 154/147 262/369 33/31 48/27 236/521 37/99
9. Victoria Ave at Pacific St
190/191 462/482 123/152 159/134 344/284 51/43 194/170 288/429 207/191 165/146 460/570 30/56
10. Victoria Ave at 14th St
4/12 689/621 27/31 54/55 6/4 25/27 8/29 0/10 3/4 1/41 542/139 11/82
11. Tippecanoe Ave at Baseline St
488/499 191/165 351/651 227/167 193/283 161/249
12. Del Rosa Dr at Baseline St
146/128 406/253 39/85 39/56 378/472 106/26 55/187 232/693 155/43 50/57 233/445 77/64
13. Sterling Ave at Base Line
84/100 479/317 163/202 195/216 338/354 44/60 71/147 225/551 48/51 30/85 256/529 35/76
14. Victoria Ave at Base Line
125/123 451/360 134/150 121/145 245/327 41/45 105/116 211/494 30/59 48/62 328/454 22/92
15. Tippecanoe Ave at 9th St
23/48 378/265 24/12 22/24 327/350 110/49 42/89 430/431 184/103 122/183 257/613 76/57
16. Del Rosa Ave at 9th St
108/64 290/287 163/57 45/49 264/359 33/40 57/53 453/261 153/77 95/123 131/513 137/84
17. Sterling Ave at 9th St
83/75 452/248 55/71 85/73 287/207 122/92 80/97 193/305 63/77 44/78 207/461 59/195
18. Victoria Ave at 9th St
84/66 362/238 44/59 55/57 141/161 47/24 59/100 115/236 71/70 61/82 169/420 17/39



NOT TO SCALE

LEGEND:

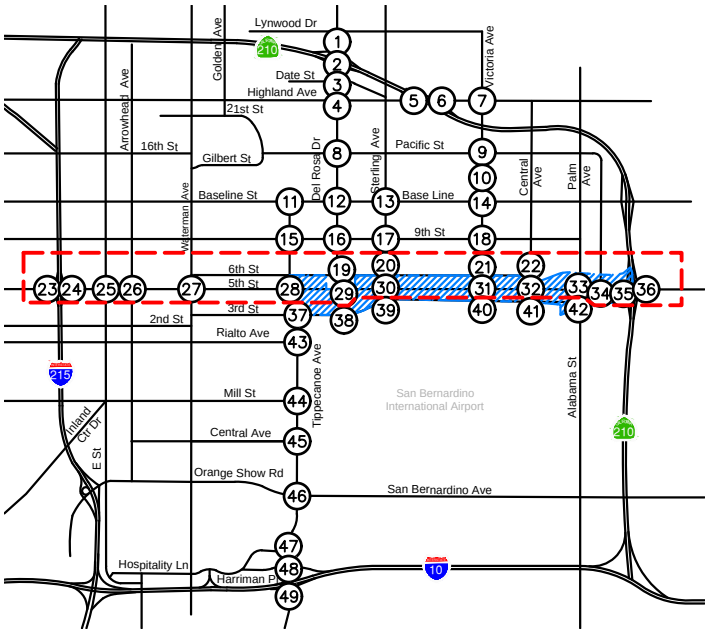
(X) = Study Intersection

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

= Intersection Analysis Boundary (by Sheet)

FIGURE 14A
FUTURE BUILD-OUT 2040
PEAK HOUR TRAFFIC VOLUMES

Kimley»Horn



19. Del Rosa Dr at 6th St

95/30 ↙ 404/261 ↓ 54/19 ↘ ← 44/36 ← 144/86 ← 97/40

155/55 → 144/124 → 56/14 ↘

71/10 ↑ 232/523 ↑ 40/132 ↖

20. Sterling Ave at 6th St

43/29 ↙ 677/372 ↓ 28/28 ↘ ← 15/18 ← 116/76 ← 9/10

44/55 → 102/104 → 14/11 ↘

15/19 ↑ 259/725 ↑ 13/41 ↖

21. Victoria Ave at 6th St

23/24 ↙ 456/240 ↓ 39/62 ↘ ← 38/32 ← 46/52 ← 62/30

23/26 → 57/65 → 41/25 ↘

31/46 ↑ 129/506 ↑ 7/74 ↖

22. Central Ave at 6th St

38/31 ↙ 111/81 ↓

45/56 → 27/28 ↘

10/22 ↑ 82/185 ↑

23. I-215 SB Ramps at 5th St

241/186 ↙ 7/6 ↓ 532/311 ↘ ← 704/816 ← 458/498

442/858 → 350/393 ↘

24. I-215 NB Ramps at 5th St

↖ 148/644 ← 829/936

150/225 → 840/951 → 312/380 ↑ 0/3 ↑ 542/480 ↑

25. E Street at 5th St

17/60 ↙ 143/163 ↓ 11/28 ↘ ← 12/24 ← 425/904 ← 14/44

75/26 → 994/611 → 40/42 ↘

27/94 ↑ 109/309 ↑ 26/45 ↑

26. Arrowhead Ave at 5th St

38/51 ↙ 227/146 ↓ 40/28 ↘ ← 12/30 ← 437/752 ← 39/52

46/60 → 806/575 → 144/35 ↘

46/107 ↑ 98/411 ↑ 38/77 ↑

27. Waterman Ave at 5th St

110/132 ↙ 656/597 ↓ 18/59 ↘ ← 16/34 ← 314/302 ← 152/94

70/137 → 283/514 → 248/159 ↘

128/254 ↑ 413/898 ↑ 104/207 ↑

28. Tippecanoe Ave at 5th St

41/24 ↙ 494/320 ↓ 41/60 ↘ ← 40/58 ← 348/268 ← 50/62

32/59 → 218/734 → 72/54 ↘

36/72 ↑ 176/582 ↑ 23/77 ↑

29. Del Rosa Dr at 5th St

380/268 ↙ 316/215 ↓ 32/48 ↘ ← 47/36 ← 288/130 ← 27/16

224/526 → 74/398 → 16/21 ↘

14/39 ↑ 192/343 ↑ 7/24 ↑

30. Sterling Ave at 5th St

55/42 ↙ 526/226 ↓ 80/170 ↘ ← 102/166 ← 269/124 ← 237/106

22/83 → 90/367 → 29/35 ↘

12/17 ↑ 151/523 ↑ 17/162 ↑

31. Victoria Ave at 5th St

77/39 ↙ 454/230 ↓ 76/75 ↘ ← 78/109 ← 413/238 ← 297/35

21/101 → 109/482 → 61/139 ↘

20/46 ↑ 139/523 ↑ 20/157 ↑

32. Central Ave at 5th St

33/16 ↙ 56/33 ↓ 44/51 ↘ ← 45/75 ← 798/345 ← 40/7

15/24 → 238/731 → 17/7 ↘

6/2 ↑ 19/88 ↑ 5/124 ↑

33. Palm Ave at 5th St

98/40 ↙ 685/288 ↓ 145/201 ↘ ← 107/146 ← 671/267 ← 393/204

14/95 → 224/794 → 71/69 ↘

36/99 ↑ 162/655 ↑ 267/564 ↑

34. Church Ave at 5th St

87/31 ↙ 324/327 ↓ ← 169/259 ← 1241/562

57/65 → 568/1714 →

35. SR-210 EB Ramps at 5th St

265/183 ↙ 11/9 ↓ 211/559 ↘ ← 1418/643 ← 958/389

427/1406 → 468/674 ↘

36. SR-210 WB Ramps at 5th St

← 393/398 ← 1817/803

103/314 → 539/1633 →

563/251 ↑ 401/610 ↑

NOT TO SCALE

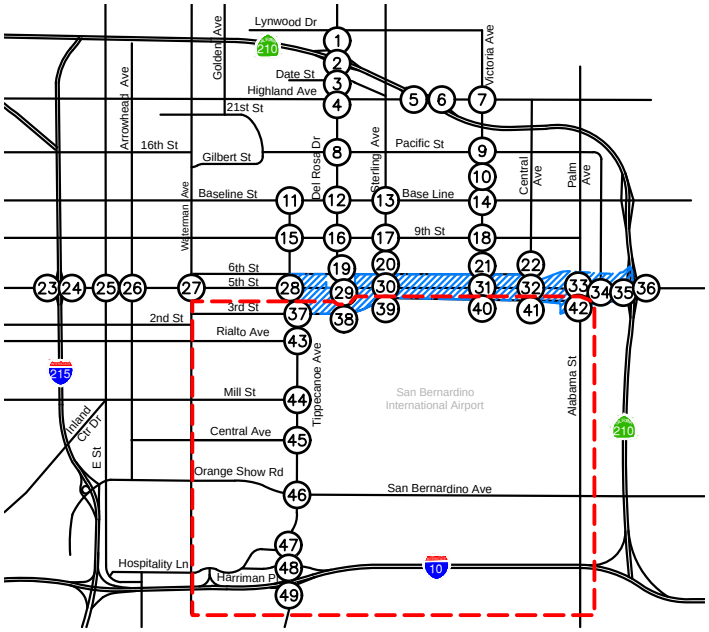
LEGEND:

(X) = Study Intersection

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

= Intersection Analysis Boundary (by Sheet)

FIGURE 14B
FUTURE BUILD-OUT 2040
PEAK HOUR TRAFFIC VOLUMES



37. Tippecanoe Ave at 3rd St

58/39 ↙ 664/338 ↓ 52/42 ↘
25/54 ↖ 718/335 ← 308/272 ↖
33/70 →
226/849 →
54/108 →
91/119 ↑ 272/643 ↑ 238/529 ↑

38. Del Rosa Dr at 3rd St

86/69 ↙ 228/131 ↓ 26/44 ↘
13/26 ↖ 1083/589 ← 716/351 ↖
73/116 →
380/1405 →
34/7 →
13/12 ↑ 89/207 ↑ 318/811 ↑

39. Sterling Ave at 3rd St

781/335 ↙ 64/68 ↓
28/56 ↖ 1198/605 ←
175/653 →
414/1553 →

40. Victoria Ave at 3rd St

605/189 ↙ 81/39 ↓ 156/166 ↘
52/156 ↖ 655/310 ← 55/43 ↖
142/530 →
272/1152 →
24/7 →
23/50 ↑ 16/52 ↑ 28/48 ↑

41. Central Ave at 3rd St

83/31 ↙ 24/22 ↓
4/26 ↖ 669/481 ←
24/193 →
422/1161 →
0/1 ↑ 0/3 ↑

42. Palm Ave at 3rd St

189/95 ↙ 858/404 ↓ 78/80 ↘
235/100 ↖ 104/27 ← 122/77 ↖
114/439 →
18/362 →
401/440 ↑ 372/861 ↑ 33/95 ↑

43. Tippecanoe Ave at Rialto Ave

101/64 ↙ 847/788 ↓
87/140 →
110/78 ↘
90/126 ↑ 551/1193 ↑

44. Tippecanoe Ave at Mill St

107/298 ↙ 1164/1220 ↓ 169/2 ↘
165/3 ↖ 211/33 ← 120/25 ↖
244/508 →
64/8 →
53/453 ↘
143/245 ↑ 1088/1502 ↑ 142/0 ↑

45. Tippecanoe Ave at Central Ave

131/154 ↙ 1171/1448 ↓ 238/237 ↘
195/258 ↖ 95/174 ← 37/96 ↖
101/139 →
204/192 →
86/112 ↘
87/106 ↑ 1029/1504 ↑ 170/100 ↑

46. Tippecanoe Ave at Orange Show Rd

76/63 ↙ 947/1117 ↓ 330/507 ↘
276/362 ↖ 263/535 ← 121/237 ↖
122/219 →
161/699 →
128/145 ↘
75/129 ↑ 918/1176 ↑ 94/164 ↑

47. Tippecanoe Ave at Hospitality Ln

43/114 ↙ 589/953 ↓ 101/130 ↘
82/49 ↖ 107/105 ← 180/154 ↖
64/262 →
46/238 →
77/332 ↘
458/487 ↑ 1008/782 ↑ 104/260 ↑

48. Tippecanoe Ave at I-10 WB Ramps

92/180 ↙ 744/1192 ↓
512/464 ↖ 177/215 ← 528/180 ↖
77/379 →
231/794 ↘
125/300 ↑ 817/599 ↑

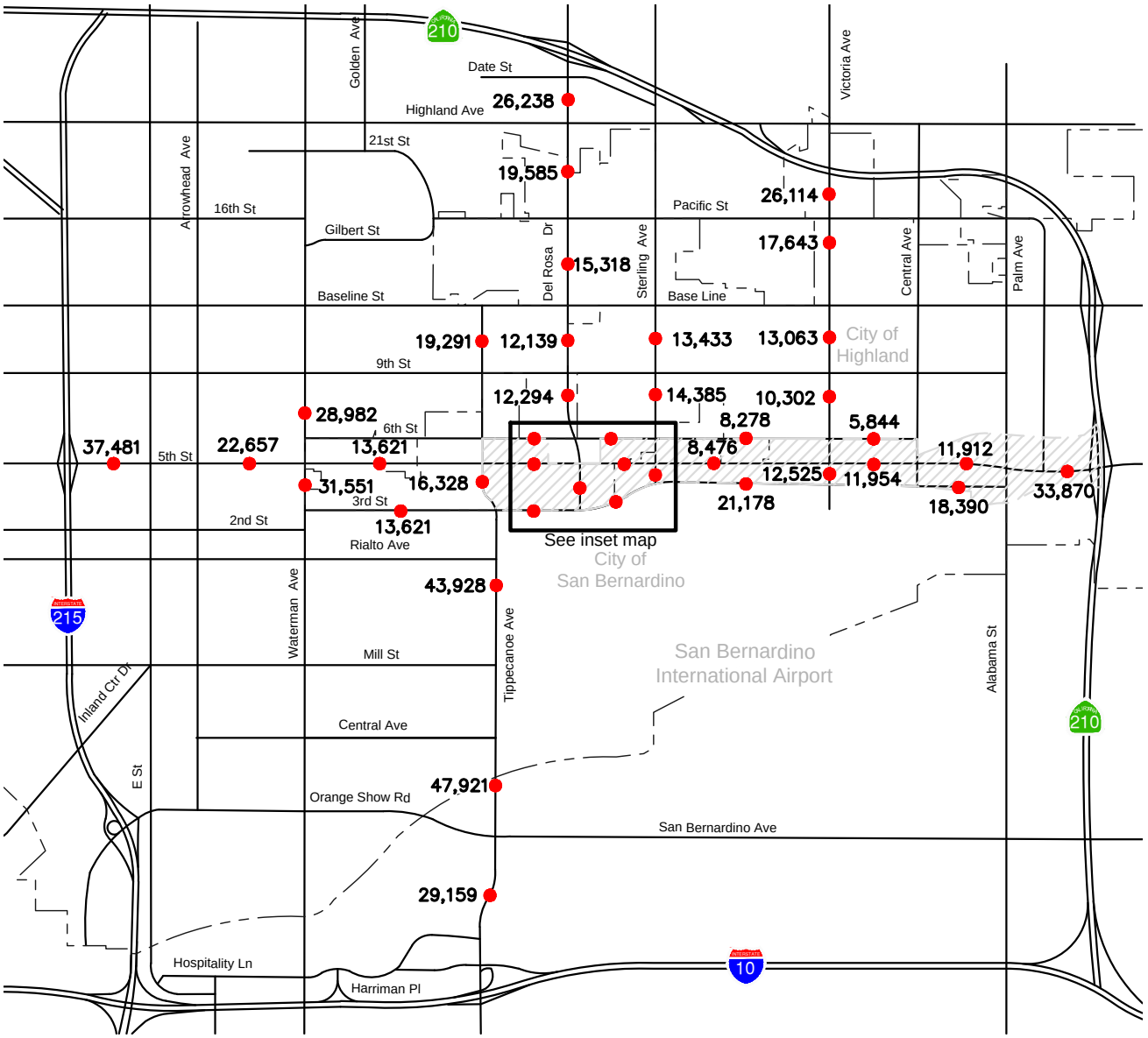
49. Tippecanoe Ave at I-10 EB Ramps

852/761 ← 161/692 ↓
989/781 →
6/3 →
976/551 ↘
641/1031 ↑ 308/343 ↑

NOT TO SCALE

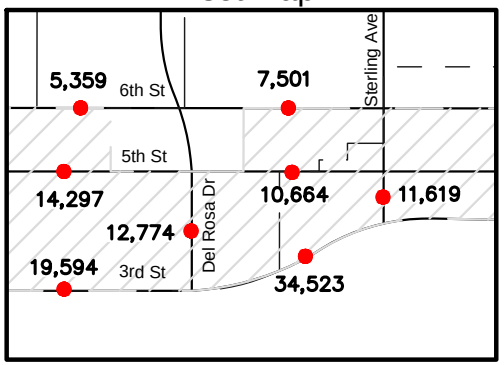
LEGEND:
- (X) = Study Intersection
- XX/YY = AM/PM Peak Hour Turning Movement Volumes
- = Intersection Analysis Boundary (by Sheet)

FIGURE 14C
FUTURE BUILD-OUT 2040
PEAK HOUR TRAFFIC VOLUMES



NOT TO SCALE

Inset Map



LEGEND:

= Specific Plan Boundary

X,XXX = Average Daily Traffic Volume

FIGURE 15
FUTURE BUILD-OUT 2040 ROADWAY TRAFFIC VOLUMES

Kimley»Horn

TABLE 6
SUMMARY OF INTERSECTION OPERATION
FUTURE BUILD-OUT 2040

Int. #	Intersection	Traffic Control	Jurisdiction	Peak Hour	Future Build-out 2040		
					Delay (sec/veh)	V/C	LOS
1	Del Rosa Drive at SR-210 WB Ramps	S	C	AM	56.3	0.959	E
				PM	35.9	0.836	D
2	Del Rosa Drive at SR-210 EB Ramps	S	C	AM	32.3	0.757	C
				PM	34.7	0.807	C
3	Del Rosa Drive at Date Street	S	SB	AM	14.9	0.393	B
				PM	20.1	0.487	C
4	Del Rosa Drive at Highland Avenue	S	SB	AM	28.1	0.388	C
				PM	36.8	0.541	D
5	Highland Avenue at SR-210 EB Off-Ramp	S	C	AM	22.8	0.396	C
				PM	20.2	0.524	C
6	Highland Avenue at SR-210 WB Off-Ramp	S	C	AM	12.0	0.388	B
				PM	13.7	0.575	B
7	Victoria Avenue at Highland Avenue	S	H	AM	30.3	0.673	C
				PM	51.9	0.945	D
8	Del Rosa Drive at Pacific Street	S	H	AM	29.5	0.405	C
				PM	27.1	0.494	C
9	Victoria Avenue at Pacific Street	S	H	AM	33.2	0.559	C
				PM	32.7	0.514	C
10	Victoria Avenue at 14th Street	S	H	AM	6.4	0.247	A
				PM	11.5	0.253	B
11	Tippecanoe Avenue at Baseline Street	S	SB	AM	27.5	0.412	C
				PM	23.6	0.492	C
12	Del Rosa Drive at Baseline Street	S	SB	AM	30.2	0.438	C
				PM	32.6	0.461	C
13	Sterling Avenue at Base Line	S	H	AM	29.6	0.386	C
				PM	32.6	0.556	C
14	Victoria Avenue at Base Line	S	H	AM	28.8	0.370	C
				PM	32.0	0.448	C
15	Tippecanoe Avenue at 9th Street	S	H	AM	32.1	0.435	C
				PM	30.4	0.381	C
16	Del Rosa Drive at 9th Street	S	SB	AM	32.3	0.461	C
				PM	31.7	0.436	C
17	Sterling Avenue at 9th Street	S	H	AM	29.8	0.388	C
				PM	29.5	0.461	C
18	Victoria Avenue at 9th Street	S	H	AM	26.9	0.280	C
				PM	29.0	0.316	C
19	Del Rosa Drive at 6th Street	S	SB	AM	30.0	0.391	C
				PM	19.0	0.305	B
20	Sterling Avenue at 6th Street	U	SB	AM	148.2	0.481	F
				PM	195.9	0.462	F
21	Victoria Avenue at 6th Street	U	H	AM	24.0	0.094	C
				PM	45.5	0.215	E
22	Central Avenue at 6th Street	U	SB	AM	10.2	0.063	B
				PM	11.1	0.091	B
23	I-215 SB Ramps at 5th Street	S	C	AM	25.4	0.534	C
				PM	20.1	0.514	C
24	I-215 NB Ramps at 5th Street	S	C	AM	30.0	0.408	C
				PM	22.9	0.648	C
25	E Street at 5th Street	S	SB	AM	13.8	0.385	B
				PM	18.2	0.475	B
26	Arrowhead Avenue at 5th Street	S	SB	AM	12.8	0.345	B
				PM	16.3	0.358	B

TABLE 6
SUMMARY OF INTERSECTION OPERATION
FUTURE BUILD-OUT 2040

Int. #	Intersection	Traffic Control	Jurisdiction	Peak Hour	Future Build-out 2040		
					Delay (sec/veh)	V/C	LOS
27	Waterman Avenue at 5th Street	S	SB	AM	25.9	0.465	C
				PM	30.0	0.526	C
28	Tippecanoe Avenue at 5th Street	S	H	AM	27.7	0.401	C
				PM	33.2	0.696	C
29	Del Rosa Drive at 5th Street	S	H	AM	19.2	0.585	B
				PM	22.4	0.686	C
30	Sterling Avenue at 5th Street	S	SB	AM	19.4	0.405	B
				PM	20.4	0.477	C
31	Victoria Avenue at 5th Street	S	H	AM	15.4	0.485	B
				PM	17.7	0.622	B
32	Central Avenue at 5th Street	S	H	AM	11.6	0.323	B
				PM	16.3	0.421	B
33	Palm Avenue at 5th Street	S	H	AM	53.3	0.570	D
				PM	42.1	0.848	D
34	Church Avenue at 5th Street	S	H	AM	17.1	0.629	B
				PM	13.5	0.689	B
35	SR-210 EB Ramps at 5th Street	S	C/H	AM	26.1	0.799	C
				PM	39.0	0.899	D
36	SR-210 WB Ramps at 5th Street/Greenspot Road	S	C/H	AM	20.6	0.596	C
				PM	28.1	0.698	C
37	Tippecanoe Avenue at 3rd Street	S	SB	AM	29.6	0.488	C
				PM	36.3	0.727	D
38	Del Rosa Drive at 3rd Street	S	SB	AM	31.2	0.511	C
				PM	57.6	0.742	E
39	Sterling Avenue at 3rd Street	S	SB	AM	28.4	0.737	C
				PM	21.8	0.713	C
40	Victoria Avenue at 3rd Street	S	H	AM	38.2	0.694	D
				PM	30.5	0.618	C
41	Central Avenue at 3rd Street	U	H	AM	25.5	0.123	D
				PM	115.4	0.028	F
42	Palm Avenue at 3rd Street	S	H	AM	42.9	0.747	D
				PM	71.5	0.661	E
43	Tippecanoe Avenue at Rialto Avenue	S	SB	AM	11.8	0.395	B
				PM	11.1	0.428	B
44	Tippecanoe Avenue at Mill Street	S	SB	AM	28.1	0.700	C
				PM	28.9	0.751	C
45	Tippecanoe Avenue at Central Avenue	S	SB	AM	21.8	0.478	C
				PM	25.7	0.639	C
46	Tippecanoe Ave at Orange Show/San Bernardino Ave	S	SB	AM	28.4	0.633	C
				PM	65.6	0.917	E
47	Tippecanoe Avenue at Hospitality Lane	S	SB	AM	24.1	0.473	C
				PM	31.5	0.652	C
48	Tippecanoe Ave at I-10 WB Ramps / Harriman Place	S	C	AM	29.1	0.469	C
				PM	35.5	0.741	D
49	Tippecanoe Avenue at I-10 EB Ramps	S	C	AM	24.7	0.614	C
				PM	31.9	0.745	C

Notes:
- Level of Service is based on the delay value.
- Bold and shaded values indicate intersections operating at LOS E or F or significant impact to intersection per City or Caltrans standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the movement with the highest delay.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, 6th Edition.
- F* = Per County of San Bernardino CMP guidelines, the Level of Service for an intersection with a v/c of 1.00 or greater is LOS F, regardless of the LOS based on delay.

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted for the Future Build-Out 2040 condition, and the results are summarized on Table 7. Review of this table indicates that for the Future Build-Out 2040 condition, all study roadway segments would operate at Level of Service C or better, except for the following roadway segments:

- Tippecanoe Avenue: Mill Street to Orange Show Road / San Bernardino Avenue (LOS F)
- Del Rosa Drive: Highland Avenue to Pacific Street (LOS F)
- 6th Street: Sterling Avenue to Victoria Avenue (LOS D)
- 5th Street:
    - I-215 NB Ramps to E Street (LOS E)
    - Waterman Avenue to Tippecanoe Ave (LOS E)
    - Tippecanoe Avenue to Del Rosa Drive (LOS E)
    - Palm Avenue to SR-210 EB Ramps (LOS D)
- 3rd Street: Del Rosa Drive to Sterling Avenue (LOS D)

Future Build-Out 2040 Plus Project Conditions

Project-related traffic was added to the Future Build-Out 2040 traffic volumes. The resulting Future Build-Out 2040 Plus Project peak hour intersection volumes are shown on Figure 16. Daily roadway volumes are shown on Figure 17.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the Future Build-Out 2040 Plus Project condition. The results are shown on Table 8. Copies of intersection analysis worksheets are provided in *Appendix C*.

Review of this table indicates that, with the addition of Project traffic, the following intersections would operate at an unacceptable Level of Service:

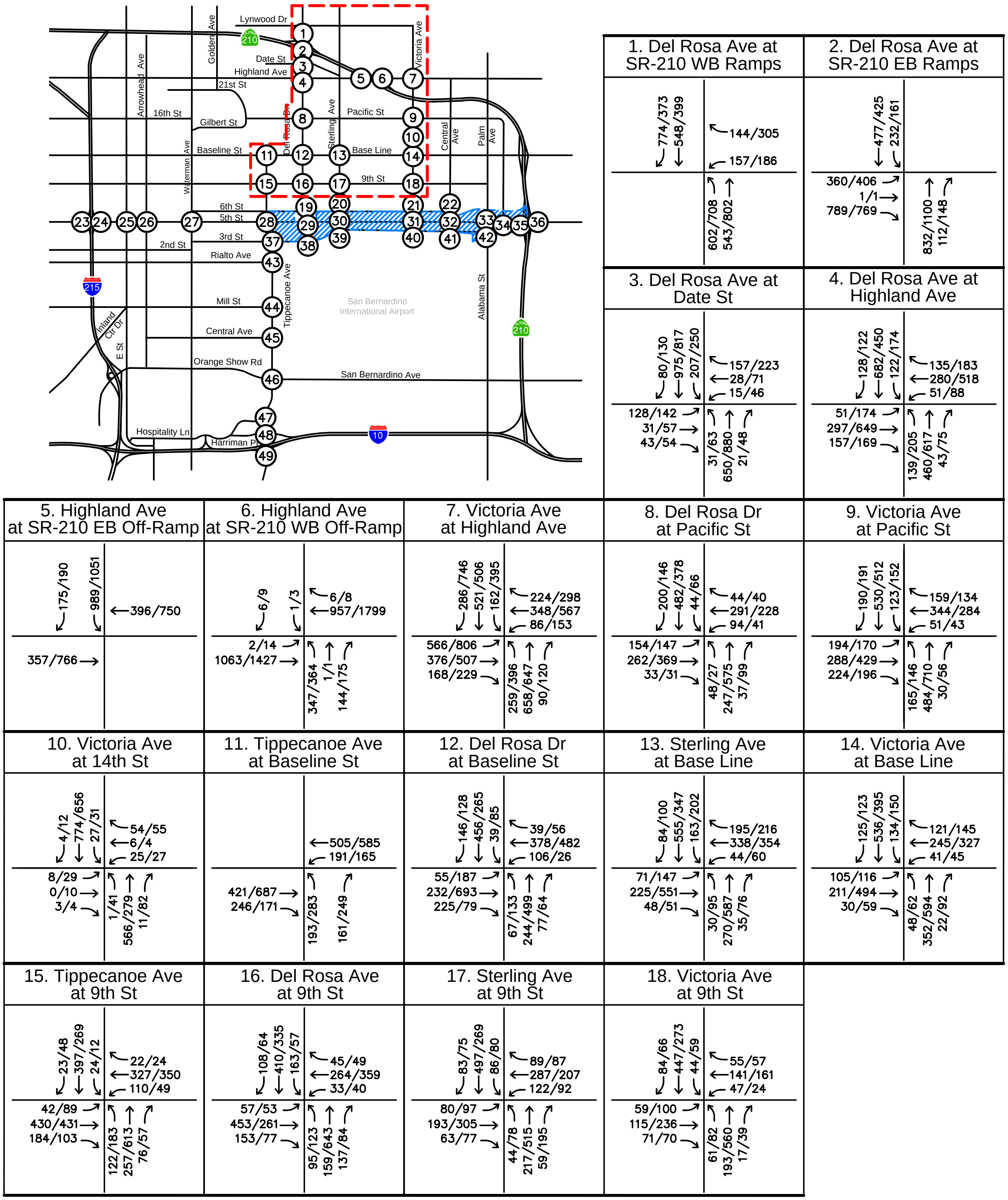
- #1 – Del Rosa Drive at SR-210 WB Ramps: AM – LOS E
- #7 – Victoria Avenue at Highland Avenue: PM – LOS E
- #20 – Sterling Avenue at 6th Street: AM LOS F; PM LOS F
- #21 – Victoria Avenue at 6th Street: AM – LOS F; PM – LOS F
- #33 – Palm Avenue at 5th Street: AM – LOS E; PM – LOS F
- #35 – SR-210 EB Ramps at 5th Street: PM – LOS F
- #38 – Del Rosa Drive at 3rd Street: PM – LOS E
- #41 – Central Avenue at 3rd Street: PM – LOS F
- #42 – Palm Avenue at 3rd Street: PM – LOS E
- #46 – Tippecanoe Avenue at Orange Show Road /San Bernardino Avenue: PM – LOS E

TABLE 7
SUMMARY OF ROADWAY SEGMENT ANALYSIS
FUTURE BUILD-OUT 2040

Roadway	Segment	Jurisdiction	LOS E Capacity [1]	Future Build-Out 2040 ADT	V/C	LOS
Waterman Avenue	Baseline Street to 5th Street	SB	40,000	28,982	0.725	C
	5th Street to 3rd Street	SB	60,000	31,551	0.526	A
Tippecanoe Avenue	Baseline Street to 6th Street	SB / H	30,000	19,291	0.643	B
	6th Street to 3rd Street	SB / H	30,000	16,328	0.544	A
	3rd Street to Mill Street	SB	60,000	43,928	0.732	C
	Mill Street to Orange Show Road / San Bernardino Avenue	SB	40,000	47,921	1.198	F
	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	SB	60,000	29,159	0.486	A
Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	SB	40,000	26,238	0.656	B
	Highland Avenue to Pacific Street	SB	12,000	19,585	1.632	F
	Pacific Street to Baseline Street	SB / H	30,000	15,318	0.511	A
	Baseline Street to 9th Street	SB / H	40,000	12,139	0.303	A
	9th Street to 6th Street	SB	40,000	12,294	0.307	A
	6th Street to 3rd Street	SB / H	30,000	12,774	0.426	A
Sterling Avenue	Base Line to 9th Street	H	40,000	13,433	0.336	A
	9th Street to 6th Street	H	40,000	14,385	0.360	A
	6th Street to 3rd Street	SB / H	40,000	11,619	0.290	A
Victoria Avenue	Highland Avenue to Pacific Street	H	40,000	26,114	0.653	B
	Pacific Street to Base Line	H	40,000	17,643	0.441	A
	Base Line to 9th Street	H	30,000	13,063	0.435	A
	9th Street to 6th Street	H	30,000	10,302	0.343	A
	6th Street to 3rd Street	SB / H	30,000	12,525	0.417	A
6th Street	Tippecanoe Avenue to Del Rosa Drive	SB / H	10,000	5,359	0.536	A
	Del Rosa Drive to Sterling Avenue	H	10,000	7,501	0.750	C
	Sterling Avenue to Victoria Avenue	SB / H	10,000	8,278	0.828	D
	Victoria Avenue to Central Avenue	H	10,000	5,844	0.584	A
5th Street	I-215 NB Ramps to E Street	SB	40,000	37,481	0.937	E
	E Street to Waterman Avenue	SB	40,000	22,657	0.566	A
	Waterman Avenue to Tippecanoe Avenue	SB	15,000	13,621	0.908	E
	Tippecanoe Avenue to Del Rosa Drive	H	15,000	14,297	0.953	E
	Del Rosa Drive to Sterling Avenue	SB / H	40,000	10,664	0.267	A
	Sterling Avenue to Victoria Avenue	SB / H	15,000	8,476	0.565	A
	Victoria Avenue to Central Avenue	H	40,000	11,954	0.299	A
	Central Avenue to Palm Avenue	H	40,000	11,912	0.298	A
	Palm Avenue to SR-210 EB Ramps	H	40,000	33,870	0.847	D
3rd Street	Waterman Avenue to Tippecanoe Avenue	SB	40,000	13,621	0.341	A
	Tippecanoe Avenue to Del Rosa Drive	SB / H	40,000	19,594	0.490	A
	Del Rosa Drive to Sterling Avenue	SB / H	40,000	34,523	0.863	D
	Sterling Avenue to Victoria Avenue	SB	40,000	21,178	0.529	A
	Victoria Avenue to Palm Avenue	SB / H	40,000	18,390	0.460	A

Notes: [1] Source: *City of San Bernardino General Plan Update (2005)*

LOS = Level of Service ADT = Average Daily Traffic V/C = Volume-to-Capacity



Lynwood Dr
Date St
Highland Ave
21st St
16th St
Gilbert St
Pacific St
Baseline St
Base Line
9th St
6th St
5th St
3rd St
2nd St
Rialto Ave
Mill St
Central Ave
Orange Show Rd
San Bernardino Ave
Hospitality Ln
Harriman Pl
Arrowhead Ave
Golden Ave
Waterman Ave
Del Rosa Dr
Sterling Ave
Victoria Ave
Central Ave
Palm Ave
Alabama St
Tippecanoe Ave
Inland Ctr Dr
E St
San Bernardino International Airport
210
215
10
1. Del Rosa Ave at SR-210 WB Ramps
774/373 548/399 144/305 157/186 602/708 543/802
2. Del Rosa Ave at SR-210 EB Ramps
477/425 232/161 360/406 1/1 789/769 832/1100 112/148
3. Del Rosa Ave at Date St
80/130 975/817 207/250 157/223 28/71 15/46 128/142 31/57 43/54 31/63 650/880 21/48
4. Del Rosa Ave at Highland Ave
128/122 682/450 122/174 135/183 280/518 51/88 51/174 297/649 157/169 139/205 460/617 43/75
5. Highland Ave at SR-210 EB Off-Ramp
175/190 989/1051 396/750 357/766
6. Highland Ave at SR-210 WB Off-Ramp
6/9 1/3 6/8 957/1799 2/14 1063/1427 347/364 1/1 144/175
7. Victoria Ave at Highland Ave
286/746 521/506 162/395 224/298 348/567 86/153 566/806 376/507 168/229 259/396 658/647 90/120
8. Del Rosa Dr at Pacific St
200/146 482/378 44/66 44/40 291/228 94/41 154/147 262/369 33/31 48/27 247/575 37/99
9. Victoria Ave at Pacific St
190/191 530/512 123/152 159/134 344/284 51/43 194/170 288/429 224/196 165/146 484/710 30/56
10. Victoria Ave at 14th St
4/12 774/656 27/31 54/55 6/4 25/27 8/29 0/10 3/4 1/41 566/279 11/82
11. Tippecanoe Ave at Baseline St
505/585 191/165 421/687 246/171 193/283 161/249
12. Del Rosa Dr at Baseline St
146/128 456/265 39/85 39/56 378/482 106/26 55/187 232/693 225/79 67/133 244/499 77/64
13. Sterling Ave at Base Line
84/100 555/347 163/202 195/216 338/354 44/60 71/147 225/551 48/51 30/95 270/587 35/76
14. Victoria Ave at Base Line
125/123 536/395 134/150 121/145 245/327 41/45 105/116 211/494 30/59 48/62 352/594 22/92
15. Tippecanoe Ave at 9th St
23/48 397/269 24/12 22/24 327/350 110/49 42/89 430/431 184/103 122/183 257/613 76/57
16. Del Rosa Ave at 9th St
108/64 410/335 163/57 45/49 264/359 33/40 57/53 453/261 153/77 95/123 159/643 137/84
17. Sterling Ave at 9th St
83/75 497/269 86/80 89/87 287/207 122/92 80/97 193/305 63/77 44/78 217/515 59/195
18. Victoria Ave at 9th St
84/66 447/273 44/59 55/57 141/161 47/24 59/100 115/236 71/70 61/82 193/560 17/39

NOT TO SCALE

LEGEND:

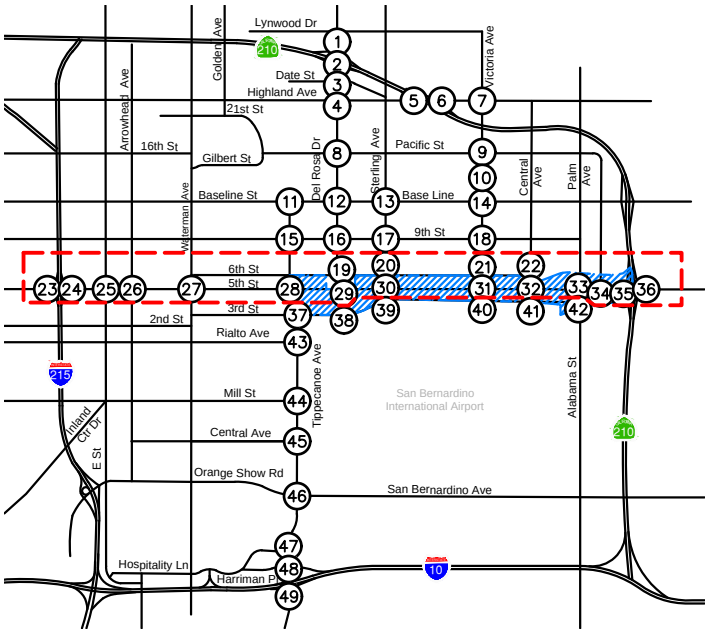
(X) = Study Intersection

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

= Intersection Analysis Boundary (by Sheet)

FIGURE 16A
FUTURE BUILD-OUT 2040 PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES

Kimley»Horn



19. Del Rosa Dr at 6th St

98/31 ↙ 496/300 ↓ 79/27 ↘ 50/65 ← 154/99 ← 97/45

156/58 → 155/135 → 60/40 ↘

91/14 ↑ 253/621 ↑ 44/133 ↑

20. Sterling Ave at 6th St

48/31 ↙ 711/389 ↓ 34/30 ↘ 17/26 ← 134/97 ← 54/88

45/61 → 129/139 → 14/11 ↘

33/23 ↑ 266/765 ↑ 34/46 ↑

21. Victoria Ave at 6th St

45/28 ↙ 494/264 ↓ 64/69 ↘ 41/43 ← 97/91 ← 66/32

25/36 → 101/169 → 44/26 ↘

59/52 ↑ 148/625 ↑ 28/79 ↑

22. Central Ave at 6th St

92/43 ↙ 115/81 ↓

51/82 → 83/142 ↘

36/28 ↑ 86/225 ↑

23. I-215 SB Ramps at 5th St

241/186 ↙ 7/6 ↓ 532/311 ↘ 719/880 ← 496/719

492/882 → 350/393 ↘

24. I-215 NB Ramps at 5th St

148/644 ← 882/1221

150/225 → 890/975 →

312/380 ↑ 0/3 ↑ 736/534 ↑

25. E Street at 5th St

17/60 ↙ 143/163 ↓ 11/28 ↘ 12/24 ← 478/1189 ← 14/44

75/26 → 1238/689 → 40/42 ↘

27/94 ↑ 109/309 ↑ 26/45 ↑

26. Arrowhead Ave at 5th St

38/51 ↙ 227/146 ↓ 40/28 ↘ 12/30 ← 490/1037 ← 39/52

46/60 → 1050/653 → 144/35 ↘

46/107 ↑ 98/411 ↑ 38/77 ↑

27. Waterman Ave at 5th St

113/149 ↙ 656/605 ↓ 18/59 ↘ 16/42 ← 364/570 ← 156/113

70/137 → 527/592 → 248/159 ↘

128/254 ↑ 413/898 ↑ 129/211 ↑

28. Tippecanoe Ave at 5th St

41/24 ↙ 495/325 ↓ 55/63 ↘ 43/74 ← 392/511 ← 63/132

54/63 → 414/802 → 123/64 ↘

46/124 ↑ 181/583 ↑ 90/91 ↑

29. Del Rosa Dr at 5th St

393/271 ↙ 340/225 ↓ 91/105 ↘ 80/100 ← 426/395 ← 29/25

227/540 → 294/572 → 16/21 ↘

14/39 ↑ 201/368 ↑ 15/26 ↑

30. Sterling Ave at 5th St

103/87 ↙ 544/273 ↓ 93/173 ↘ 120/176 ← 418/330 ← 261/182

35/99 → 310/587 → 43/82 ↘

33/58 ↑ 166/546 ↑ 101/180 ↑

31. Victoria Ave at 5th St

90/43 ↙ 471/250 ↓ 91/78 ↘ 112/166 ← 675/457 ← 297/35

46/137 → 305/767 → 61/139 ↘

22/47 ↑ 148/560 ↑ 20/157 ↑

32. Central Ave at 5th St

37/16 ↙ 56/33 ↓ 100/165 ↘ 71/81 ← 1118/570 ← 40/7

19/64 → 399/1010 → 17/7 ↘

6/2 ↑ 19/88 ↑ 5/124 ↑

33. Palm Ave at 5th St

108/42 ↙ 691/304 ↓ 151/203 ↘ 107/156 ← 1053/424 ← 494/287

14/105 → 372/1196 → 76/107 ↘

46/101 ↑ 164/671 ↑ 270/565 ↑

34. Church Ave at 5th St

87/31 ↙ 324/327 ↘ 169/259 ← 1762/729

57/65 → 667/2150 →

35. SR-210 EB Ramps at 5th St

505/259 ↙ 11/9 ↓ 211/559 ↘ 1699/734 ← 958/389

507/1735 → 521/958 ↘

36. SR-210 WB Ramps at 5th St

393/398 ← 1856/819

177/592 → 545/1684 →

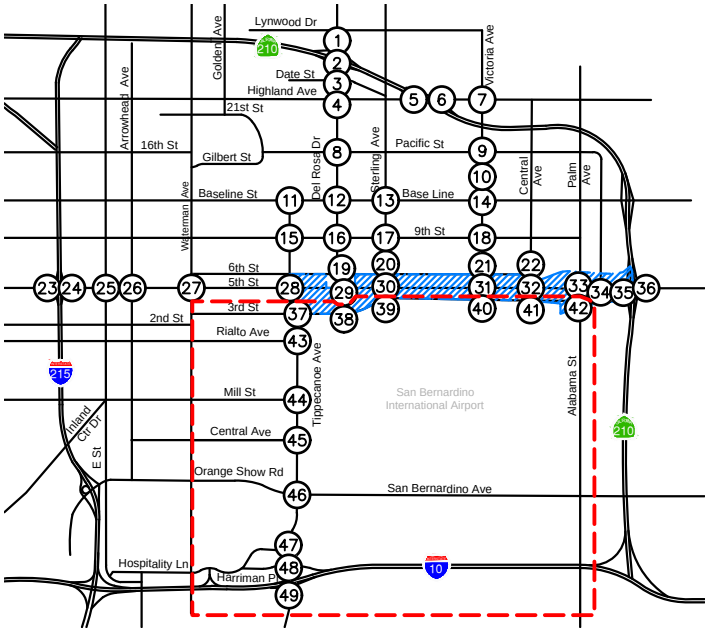
805/326 ↑ 401/610 ↑

NOT TO SCALE

LEGEND:

- (X) = Study Intersection
- xx/yy = AM/PM Peak Hour Turning Movement Volumes
- = Intersection Analysis Boundary (by Sheet)

FIGURE 16B
FUTURE BUILD-OUT 2040 PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES



37. Tippecanoe Ave at 3rd St

58/39 ↙ 678/413 ↓ 103/52 ↘
35/106 ↖ 721/382 ← 336/442 ↖
33/70 → 268/855 → 54/108 ↘
91/119 ↑ 344/658 ↑ 377/594 ↑

38. Del Rosa Dr at 3rd St

103/86 ↙ 228/131 ↓ 35/46 ↘
15/35 ↖ 1143/814 ← 716/351 ↖
88/134 → 571/1503 → 34/7 ↘
13/12 ↑ 89/207 ↑ 318/811 ↑

39. Sterling Ave at 3rd St

814/447 ↙ 87/126 ↘
53/117 ↖ 1238/702 ←
270/674 → 493/1642 →

40. Victoria Ave at 3rd St

611/190 ↙ 81/39 ↓ 167/185 ↘
61/182 ↖ 741/447 ← 55/43 ↖
144/542 → 345/1313 → 24/7 ↘
23/50 ↑ 16/52 ↑ 28/48 ↑

41. Central Ave at 3rd St

83/31 ↙ 24/22 ↓ 4/26 ↖ 771/628 ←
24/193 → 489/1347 →
0/1 ↑ 0/3 ↑

42. Palm Ave at 3rd St

257/176 ↙ 863/447 ↓ 87/82 ↘
235/100 ↖ 105/34 ← 122/77 ↖
108/435 → 57/530 → 1/8 ↘
412/447 ↑ 385/864 ↑ 33/95 ↑

43. Tippecanoe Ave at Rialto Ave

103/78 ↙ 887/1019 ←
91/154 →
110/78 ↘
90/126 ↑ 758/1259 ↑

44. Tippecanoe Ave at Mill St

107/298 ↙ 1204/1451 ↓ 169/2 ↘
165/3 ↖ 211/33 ← 120/25 ↖
244/508 → 64/8 → 53/453 ↘
143/245 ↑ 1295/1568 ↑ 142/0 ↑

45. Tippecanoe Ave at Central Ave

131/154 ↙ 1211/1679 ↓ 238/237 ↘
195/258 ↖ 95/174 ← 37/96 ↖
101/139 → 204/192 → 86/112 ↘
87/106 ↑ 1236/1570 ↑ 170/100 ↑

46. Tippecanoe Ave at Orange Show Rd

76/63 ↙ 987/1348 ↓ 330/507 ↘
276/362 ↖ 263/535 ← 121/237 ↖
122/219 → 161/699 → 128/145 ↘
75/129 ↑ 1125/1242 ↑ 94/164 ↑

47. Tippecanoe Ave at Hospitality Ln

43/114 ↙ 629/1184 ↓ 101/130 ↘
82/49 ↖ 107/105 ← 180/154 ↖
64/262 → 46/238 → 77/332 ↘
458/487 ↑ 1215/848 ↑ 104/260 ↑

48. Tippecanoe Ave at I-10 WB Ramps

92/180 ↙ 784/1423 ↓
512/464 ↖ 177/215 ← 528/180 ↖
77/379 → 231/794 ↘
125/300 ↑ 1024/665 ↑

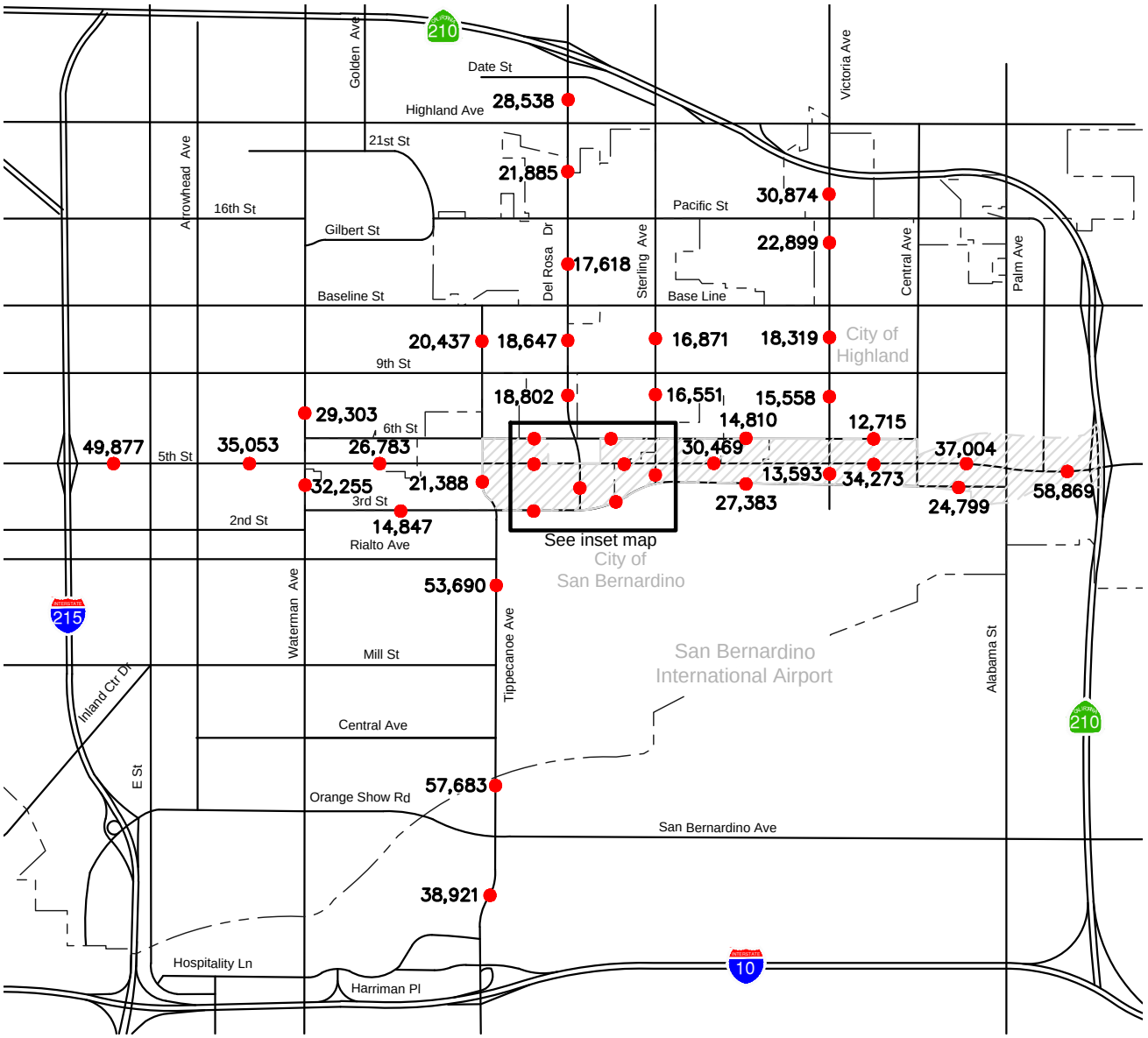
49. Tippecanoe Ave at I-10 EB Ramps

858/812 ← 161/692 ↘
1156/831 → 6/3 → 976/551 ↘
681/1047 ↑ 308/343 ↑

NOT TO SCALE

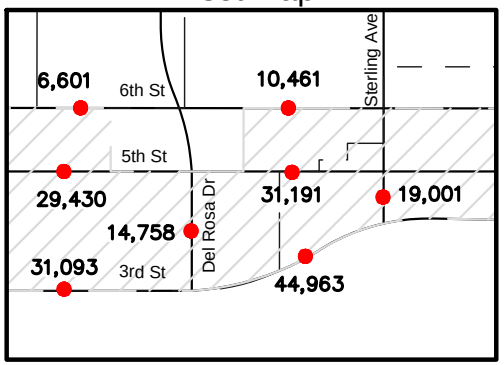
LEGEND:
- (X) = Study Intersection
- XX/YY = AM/PM Peak Hour Turning Movement Volumes
- = Intersection Analysis Boundary (by Sheet)

FIGURE 16C
FUTURE BUILD-OUT 2040 PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES



NOT TO SCALE

Inset Map



LEGEND:

= Specific Plan Boundary

X,XXX = Average Daily Traffic Volume

FIGURE 17
FUTURE BUILD-OUT 2040 PLUS PROJECT ROADWAY TRAFFIC VOLUMES

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TABLE 8
SUMMARY OF INTERSECTION OPERATIONS
FUTURE BUILD-OUT 2040 PLUS PROJECT

Int. #	Intersection	Traffic Control	Juris-diction	Peak Hour	Future Build-out 2040			Future Build-Out 2040 Plus Project			Project Impact / Significance		
					Delay (sec/veh)	V/C	LOS	Delay (sec/veh)	V/C	LOS	Delay	V/C	Sig.
1	Del Rosa Drive at SR-210 WB Ramps	S	C	AM	56.3	0.959	E	59.0	0.969	E	2.7	0.010	No
				PM	35.9	0.836	D	42.3	0.878	D	6.4	0.042	No
2	Del Rosa Drive at SR-210 EB Ramps	S	C	AM	32.3	0.757	C	35.4	0.808	D	3.1	0.051	No
				PM	34.7	0.807	C	37.1	0.831	D	2.4	0.024	No
3	Del Rosa Drive at Date Street	S	SB	AM	14.9	0.393	B	15.1	0.409	B	0.2	0.016	No
				PM	20.1	0.487	C	21.0	0.515	C	0.9	0.028	No
4	Del Rosa Drive at Highland Avenue	S	SB	AM	28.1	0.388	C	27.8	0.402	C	-0.3	0.014	No
				PM	36.8	0.541	D	37.1	0.556	D	0.3	0.015	No
5	Highland Avenue at SR-210 EB Off-Ramp	S	C	AM	22.8	0.396	C	22.8	0.412	C	0.0	0.016	No
				PM	20.2	0.524	C	20.2	0.529	C	0.0	0.005	No
6	Highland Avenue at SR-210 WB Off-Ramp	S	C	AM	12.0	0.388	B	11.9	0.396	B	-0.1	0.008	No
				PM	13.7	0.575	B	14.0	0.598	B	0.3	0.023	No
7	Victoria Avenue at Highland Avenue	S	H	AM	30.3	0.673	C	31.4	0.674	C	1.1	0.001	No
				PM	51.9	0.945	D	56.3	0.945	E	4.4	0.000	Yes
8	Del Rosa Drive at Pacific Street	S	H	AM	29.5	0.405	C	29.2	0.419	C	-0.3	0.014	No
				PM	27.1	0.494	C	26.8	0.524	C	-0.3	0.030	No
9	Victoria Avenue at Pacific Street	S	H	AM	33.2	0.559	C	33.2	0.578	C	0.0	0.019	No
				PM	32.7	0.514	C	32.3	0.537	C	-0.4	0.023	No
10	Victoria Avenue at 14th Street	S	H	AM	6.4	0.247	A	6.2	0.271	A	-0.2	0.024	No
				PM	11.5	0.253	B	10.3	0.263	B	-1.2	0.010	No
11	Tippecanoe Avenue at Baseline Street	S	SB	AM	27.5	0.412	C	19.7	0.438	B	-7.8	0.026	No
				PM	23.6	0.492	C	23.2	0.503	C	-0.4	0.011	No
12	Del Rosa Drive at Baseline Street	S	SB	AM	30.2	0.438	C	29.9	0.506	C	-0.3	0.068	No
				PM	32.6	0.461	C	37.5	0.496	D	4.9	0.035	No
13	Sterling Avenue at Base Line	S	H	AM	29.6	0.386	C	28.9	0.391	C	-0.7	0.005	No
				PM	32.6	0.556	C	32.7	0.572	C	0.1	0.016	No
14	Victoria Avenue at Base Line	S	H	AM	28.8	0.370	C	27.9	0.393	C	-0.9	0.023	No
				PM	32.0	0.448	C	31.0	0.485	C	-1.0	0.037	No
15	Tippecanoe Avenue at 9th Street	S	H	AM	32.1	0.435	C	32.1	0.440	C	0.0	0.005	No
				PM	30.4	0.381	C	30.3	0.382	C	-0.1	0.001	No
16	Del Rosa Drive at 9th Street	S	SB	AM	32.3	0.461	C	31.4	0.479	C	-0.9	0.018	No
				PM	31.7	0.436	C	30.5	0.472	C	-1.2	0.036	No
17	Sterling Avenue at 9th Street	S	H	AM	29.8	0.388	C	30.1	0.400	C	0.3	0.012	No
				PM	29.5	0.461	C	29.4	0.481	C	-0.1	0.020	No
18	Victoria Avenue at 9th Street	S	H	AM	26.9	0.280	C	25.3	0.303	C	-1.6	0.023	No
				PM	29.0	0.316	C	27.1	0.354	C	-1.9	0.038	No
19	Del Rosa Drive at 6th Street	S	SB	AM	30.0	0.391	C	30.5	0.439	C	0.5	0.048	No
				PM	19.0	0.305	B	20.5	0.364	C	1.5	0.059	No
20	Sterling Avenue at 6th Street	U	SB	AM	148.2	0.481	F	Ovflw	n/a	F	Ovflw	n/a	Yes
				PM	195.9	0.462	F	Ovflw	n/a	F	Ovflw	n/a	Yes
21	Victoria Avenue at 6th Street	U	H	AM	24.0	0.094	C	85.5	0.400	F	61.5	0.306	Yes
				PM	45.5	0.215	E	Ovflw	n/a	F	Ovflw	n/a	Yes
22	Central Avenue at 6th Street	U	SB	AM	10.2	0.063	B	11.1	0.084	B	0.9	0.021	No
				PM	11.1	0.091	B	12.1	0.145	B	1.0	0.054	No
23	I-215 SB Ramps at 5th Street	S	C	AM	25.4	0.534	C	25.5	0.547	C	0.1	0.013	No
				PM	20.1	0.514	C	22.1	0.586	C	2.0	0.072	No
24	I-215 NB Ramps at 5th Street	S	C	AM	30.0	0.408	C	29.0	0.477	C	-1.0	0.069	No
				PM	22.9	0.648	C	22.4	0.661	C	-0.5	0.013	No
25	E Street at 5th Street	S	SB	AM	13.8	0.385	B	13.7	0.451	B	-0.1	0.066	No
				PM	18.2	0.475	B	17.9	0.554	B	-0.3	0.079	No

TABLE 8
SUMMARY OF INTERSECTION OPERATIONS
FUTURE BUILD-OUT 2040 PLUS PROJECT

Int. #	Intersection	Traffic Control	Juris-diction	Peak Hour	Future Build-out 2040			Future Build-Out 2040 Plus Project			Project Impact / Significance		
					Delay (sec/veh)	V/C	LOS	Delay (sec/veh)	V/C	LOS	Delay	V/C	Sig.
26	Arrowhead Avenue at 5th Street	S	SB	AM	12.8	0.345	B	12.6	0.413	B	-0.2	0.068	No
				PM	16.3	0.358	B	15.6	0.437	B	-0.7	0.079	No
27	Waterman Avenue at 5th Street	S	SB	AM	25.9	0.465	C	28.1	0.526	C	2.2	0.061	No
				PM	30.0	0.526	C	31.4	0.559	C	1.4	0.033	No
28	Tippecanoe Avenue at 5th Street	S	H	AM	27.7	0.401	C	30.3	0.465	C	2.6	0.064	No
				PM	33.2	0.696	C	38.1	0.787	D	4.9	0.091	No
29	Del Rosa Drive at 5th Street	S	H	AM	19.2	0.585	B	20.9	0.665	C	1.7	0.080	No
				PM	22.4	0.686	C	22.0	0.768	C	-0.4	0.082	No
30	Sterling Avenue at 5th Street	S	SB	AM	19.4	0.405	B	19.9	0.540	B	0.5	0.135	No
				PM	20.4	0.477	C	24.1	0.666	C	3.7	0.189	No
31	Victoria Avenue at 5th Street	S	H	AM	15.4	0.485	B	20.2	0.661	C	4.8	0.176	No
				PM	17.7	0.622	B	34.8	0.752	C	17.1	0.130	No
32	Central Avenue at 5th Street	S	H	AM	11.6	0.323	B	12.0	0.445	B	0.4	0.122	No
				PM	16.3	0.421	B	20.2	0.579	C	3.9	0.158	No
33	Palm Avenue at 5th Street	S	H	AM	53.3	0.570	D	77.1	0.680	E	23.8	0.110	Yes
				PM	42.1	0.848	D	74.5	1.017	F*	32.4	0.169	Yes
34	Church Avenue at 5th Street	S	H	AM	17.1	0.629	B	21.7	0.773	C	4.6	0.144	No
				PM	13.5	0.689	B	16.1	0.816	B	2.6	0.127	No
35	SR-210 EB Ramps at 5th Street	S	C/H	AM	26.1	0.799	C	50.0	0.989	D	23.9	0.190	No
				PM	39.0	0.899	D	70.9	1.084	F*	31.9	0.185	Yes
36	SR-210 WB Ramps at 5th Street/Greenspot Road	S	C/H	AM	20.6	0.596	C	28.2	0.720	C	7.6	0.124	No
				PM	28.1	0.698	C	33.0	0.845	C	4.9	0.147	No
37	Tippecanoe Avenue at 3rd Street	S	SB	AM	29.6	0.488	C	30.3	0.539	C	0.7	0.051	No
				PM	36.3	0.727	D	44.1	0.831	D	7.8	0.104	No
38	Del Rosa Drive at 3rd Street	S	SB	AM	31.2	0.511	C	30.7	0.572	C	-0.5	0.061	No
				PM	57.6	0.742	E	59.6	0.762	E	2.0	0.020	Yes
39	Sterling Avenue at 3rd Street	S	SB	AM	28.4	0.737	C	37.4	0.828	D	9.0	0.091	No
				PM	21.8	0.713	C	30.7	0.817	C	8.9	0.104	No
40	Victoria Avenue at 3rd Street	S	H	AM	38.2	0.694	D	39.1	0.726	D	0.9	0.032	No
				PM	30.5	0.618	C	31.0	0.672	C	0.5	0.054	No
41	Central Avenue at 3rd Street	U	H	AM	25.5	0.123	D	31.7	0.157	D	6.2	0.034	No
				PM	115.4	0.028	F	203.3	0.046	F	87.9	0.018	Yes
42	Palm Avenue at 3rd Street	S	H	AM	42.9	0.747	D	46.2	0.756	D	3.3	0.009	No
				PM	71.5	0.661	E	76.8	0.754	E	5.3	0.093	Yes
43	Tippecanoe Avenue at Rialto Avenue	S	SB	AM	11.8	0.395	B	10.9	0.406	B	-0.9	0.011	No
				PM	11.1	0.428	B	11.3	0.475	B	0.2	0.047	No
44	Tippecanoe Avenue at Mill Street	S	SB	AM	28.1	0.700	C	28.3	0.712	C	0.2	0.012	No
				PM	28.9	0.751	C	35.9	0.816	D	7.0	0.065	No
45	Tippecanoe Avenue at Central Avenue	S	SB	AM	21.8	0.478	C	21.5	0.520	C	-0.3	0.042	No
				PM	25.7	0.639	C	25.8	0.652	C	0.1	0.013	No
46	Tippecanoe Ave at Orange Show/San Bernardino Ave	S	SB	AM	28.4	0.633	C	29.4	0.691	C	1.0	0.058	No
				PM	65.6	0.917	E	72.7	0.936	E	7.1	0.019	Yes
47	Tippecanoe Avenue at Hospitality Lane	S	SB	AM	24.1	0.473	C	23.5	0.512	C	-0.6	0.039	No
				PM	31.5	0.652	C	32.9	0.695	C	1.4	0.043	No
48	Tippecanoe Ave at I-10 WB Ramps / Harriman Place	S	C	AM	29.1	0.469	C	28.1	0.519	C	-1.0	0.050	No
				PM	35.5	0.741	D	36.9	0.775	D	1.4	0.034	No
49	Tippecanoe Avenue at I-10 EB Ramps	S	C	AM	24.7	0.614	C	26.1	0.614	C	1.4	0.000	No
				PM	31.9	0.745	C	32.2	0.764	C	0.3	0.019	No

Notes:
- Level of Service is based on the delay value.
- Bold and shaded values indicate intersections operating at LOS E or F or significant impact to intersection per City or Caltrans standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the movement with the highest delay.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, 6th Edition.
- F* = Per County of San Bernardino CMP guidelines, the Level of Service for an intersection with a v/c of 1.00 or greater is LOS F, regardless of the LOS based on delay.

Based on the impact criteria presented earlier in the report for the Cities of San Bernardino and Highland and for Caltrans, the Project impact at each of these intersections would be considered to be a significant project impact.

Mitigation measures and improvements for all deficient intersections are identified in the Mitigation Section of this report.

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted for the Future Build-Out 2040 Plus Project condition, and the results are summarized on Table 9. Review of this table indicates that with the addition of Project traffic, the following study roadway segments would operate at an unacceptable Level of Service:

- Tippecanoe Avenue:
  - 3rd Street to Mill Street (LOS D)
  - Mill Street to Orange Show/San Bernardino Avenue (LOS F)
- Del Rosa Drive: Highland Avenue to Pacific Street (LOS F)
- 6th Street:
  - Del Rosa Drive to Sterling Avenue (LOS F)
  - Sterling Avenue to Victoria Avenue (LOS F)
  - Victoria Avenue to Central Avenue (LOS F)
- 5th Street:
  - I-215 NB Ramps to E Street (LOS F)
  - E Street to Waterman Avenue (LOS D)
  - Waterman Avenue to Tippecanoe Avenue (LOS F)
  - Tippecanoe Avenue to Del Rosa Drive (LOS F)
  - Sterling Avenue to Victoria Avenue (LOS F)
  - Victoria Avenue to Central Avenue (LOS D)
  - Central Avenue to Palm Avenue (LOS E)
  - Palm Avenue to SR-210 EB Ramps (LOS F)
- 3rd Street: Del Rosa Drive to Sterling Avenue (LOS F)

The Project impact on each of these roadway segments would be considered to be a significant project impact. Mitigation measures for these segments are identified in the Mitigation Section of this report.

TABLE 9
SUMMARY OF ROADWAY SEGMENT ANALYSIS
FUTURE BUILD-OUT 2040 PLUS PROJECT

Roadway	Segment	Jurisdiction	LOS E Capacity	Future Build-Out 2040 ADT	Project ADT	Future Build-Out 2040 Plus Project ADT	V/C	LOS
Waterman Avenue	Baseline Street to 5th Street	SB	40,000	28,982	321	29,303	0.733	C
	5th Street to 3rd Street	SB	60,000	31,551	704	32,255	0.538	A
Tippecanoe Avenue	Baseline Street to 6th Street	SB / H	30,000	19,291	1,146	20,437	0.681	B
	6th Street to 3rd Street	SB / H	30,000	16,328	5,060	21,388	0.713	C
	3rd Street to Mill Street	SB	60,000	43,928	9,762	53,690	0.895	D
	Mill Street to Orange Show Road / San Bernardino Avenue	SB	40,000	47,921	9,762	57,683	1.442	F
	Orange Show Road/ San Bernardino Avenue to Harriman Place / I-10 WB Ramps	SB	60,000	29,159	9,762	38,921	0.649	B
Del Rosa Drive	SR-210 EB Ramps to Highland Avenue	SB	40,000	26,238	2,300	28,538	0.713	C
	Highland Avenue to Pacific Street	SB	12,000	19,585	2,300	21,885	1.824	F
	Pacific Street to Baseline Street	SB / H	30,000	15,318	2,300	17,618	0.587	A
	Baseline Street to 9th Street	SB / H	40,000	12,139	6,508	18,647	0.466	A
	9th Street to 6th Street	SB	40,000	12,294	6,508	18,802	0.470	A
	6th Street to 3rd Street	SB / H	30,000	12,774	1,984	14,758	0.492	A
Sterling Avenue	Base Line to 9th Street	H	40,000	13,433	3,438	16,871	0.422	A
	9th Street to 6th Street	H	40,000	14,385	2,166	16,551	0.414	A
	6th Street to 3rd Street	SB / H	40,000	11,619	7,382	19,001	0.475	A
Victoria Avenue	Highland Avenue to Pacific Street	H	40,000	26,114	4,760	30,874	0.772	C
	Pacific Street to Base Line	H	40,000	17,643	5,256	22,899	0.572	A
	Base Line to 9th Street	H	30,000	13,063	5,256	18,319	0.611	B
	9th Street to 6th Street	H	30,000	10,302	5,256	15,558	0.519	A
	6th Street to 3rd Street	SB / H	30,000	12,525	1,068	13,593	0.453	A
6th Street	Tippecanoe Avenue to Del Rosa Drive	SB / H	10,000	5,359	1,242	6,601	0.660	B
	Del Rosa Drive to Sterling Avenue	H	10,000	7,501	2,960	10,461	1.046	F
	Sterling Avenue to Victoria Avenue	SB / H	10,000	8,278	6,532	14,810	1.481	F
	Victoria Avenue to Central Avenue	H	10,000	5,844	6,871	12,715	1.271	F
5th Street	I-215 NB Ramps to E Street	SB	40,000	37,481	12,396	49,877	1.247	F
	E Street to Waterman Avenue	SB	40,000	22,657	12,396	35,053	0.876	D
	Waterman Avenue to Tippecanoe Avenue	SB	15,000	13,621	13,162	26,783	1.786	F
	Tippecanoe Avenue to Del Rosa Drive	H	15,000	14,297	15,133	29,430	1.962	F
	Del Rosa Drive to Sterling Avenue	SB / H	40,000	10,664	20,527	31,191	0.780	C
	Sterling Avenue to Victoria Avenue	SB / H	15,000	8,476	21,993	30,469	2.031	F
	Victoria Avenue to Central Avenue	H	40,000	11,954	22,319	34,273	0.857	D
	Central Avenue to Palm Avenue	H	40,000	11,912	25,092	37,004	0.925	E
	Palm Avenue to SR-210 EB Ramps	H	40,000	33,870	25,999	59,869	1.497	F
3rd Street	Waterman Avenue to Tippecanoe Avenue	SB	40,000	13,621	1,226	14,847	0.371	A
	Tippecanoe Avenue to Del Rosa Drive	SB / H	40,000	19,594	11,499	31,093	0.777	C
	Del Rosa Drive to Sterling Avenue	SB / H	40,000	34,523	10,440	44,963	1.124	F
	Sterling Avenue to Victoria Avenue	SB	40,000	21,178	6,205	27,383	0.685	B
	Victoria Avenue to Palm Avenue	SB / H	40,000	18,390	6,409	24,799	0.620	B

Notes: [1] Source: City of San Bernardino General Plan Update (2005)

LOS = Level of Service ADT = Average Daily Traffic V/C = Volume-to-Capacity

[3]The estimated Project ADTs are conservative to account for potential variability in traffic generation and distribution for different types of industrial users, employee shift schedules etc.

Base Free-Flow Speed (BFFS) Arterial Analysis

The following deficient roadway segments are located wholly within the City of Highland:

- 6th Street:
  - Del Rosa Drive to Sterling Avenue
  - Victoria Avenue to Central Avenue
- 5th Street:
  - Tippecanoe Avenue to Del Rosa Drive
  - Victoria Avenue to Central Avenue
  - Central Avenue to Palm Avenue
  - Palm Avenue to SR-210 EB Ramps

A base free-flow speed (BFFS) arterial analysis was conducted for these segments based on the Highway Capacity Manual 6th Edition. A BFFS arterial analysis evaluates the travel speed of a particular roadway segment compared to its base free-flow speed in each direction of travel during the morning and evening peak hour. The analysis was conducted using the Highway Capacity Software (HCS7) for Future Build-Out 2040 peak hour conditions. The results of the analysis are presented on Table 10. HCS7 outputs for the BFFS arterial analysis can be found in *Appendix G*. Review of the table shows that all deficient roadways noted above operate at an acceptable BFFS Level of Service during the AM and PM peak hours, except for following roadway segment:

- 5th Street: Central Avenue to Palm Avenue (Eastbound): PM – LOS F

Corridor Analysis

Per request from the City of Highland, a corridor analysis was conducted to evaluate the operations of the segment of 5th Street between the I-215 Southbound Ramps and SR-210 Westbound Ramps, which may be classified as a Class II Arterial. It should be noted that the City does not have any significance criteria for arterial level of service and the results are stated for informational purposes.

The results of the corridor analysis are shown in Table 11. Under Existing conditions, the corridor operates at LOS D or better during the AM peak hour and LOS D or better during the PM peak hour. Under the Existing Plus Project conditions, the corridor would operate at LOS E or better during the AM peak and LOS E or better during the PM peak hour.

For Future Build-Out 2040 conditions, signal timings were adjusted to account for the periodical signal re-timings Cities perform to account for change in traffic patterns and growth over the years. Under Future Build-Out 2040 conditions, the corridor would operate at LOS E or better during the AM peak hour and LOS E or better during the PM peak hour. Under Horizon Year Plus Project conditions, the corridor would operate at LOS F or better during the AM peak hour and LOS F or better during the PM peak hour. It should be noted that the roadway segment of 5th Street from Central Avenue to Palm Avenue in the eastbound direction operate at an acceptable LOS during the AM and PM peak hours. Therefore, it is recommended that this roadway segment widen to 3 lanes. Synchro outputs for the corridor analysis can be found in *Appendix H*.

TABLE 10
SUMMARY OF BASE FREE-FLOW SPEED ARTERIAL ANALYSIS
FUTURE BUILD-OUT 2040 PLUS PROJECT

Roadway	Segment	Jurisdiction	Speed Limit (mi/hr)	Direction	Future Build-Out 2040 Plus Project					
					AM Peak			PM Peak		
					Travel Speed (mi/h)	% of BFFS	LOS	Travel Speed (mi/h)	% of BFFS	LOS
6th Street	Del Rosa Drive to Sterling Avenue	H	40	Eastbound	32.3	73.2%	B	31.8	72.2%	B
				Westbound	32.7	74.3%	B	34.5	78.2%	B
	Victoria Avenue to Central Avenue	H	40	Eastbound	42.0	95.3%	A	41.7	94.7%	A
				Westbound	42.0	95.4%	A	42.2	95.7%	A
5th Street	Tippecanoe Avenue to Del Rosa Drive	H	40	Eastbound	35.3	80.0%	A	28.8	65.4%	C
				Westbound	35.4	80.4%	A	34.7	78.7%	B
	Victoria Avenue to Central Avenue	H	40	Eastbound	38.3	87.0%	A	33.3	75.5%	B
				Westbound	26.3	59.8%	C	28.4	64.3%	C
	Central Avenue to Palm Avenue	H	40	Eastbound	20.5	46.6%	D	3.7	8.4%	F
				Westbound	30.5	69.3%	B	28.5	64.8%	C
	Palm Avenue to SR-210 EB Ramps	H	40	Eastbound	34.5	78.4%	B	30.9	70.2%	B
				Westbound	28.0	63.6%	C	25.9	58.7%	C

Notes:

LOS = Level of Service BBFS = Base Free-Flow Speed

TABLE 11
SUMMARY OF CORRIDOR ANALYSIS
5TH STREET BETWEEN I-215 SB RAMPS AND SR-210 WB RAMPS

Eastbound				Existing		Existing With Project		Horizon Year		Horizon Year With Project	
Cross Street	Arterial Class	Flow Speed	Peak Period	Artertial Speed (mph)	Arterial LOS	Artertial Speed (mph)	Arterial LOS	Artertial Speed (mph)	Arterial LOS	Artertial Speed (mph)	Arterial LOS
I-215 SB Ramps	II	40	AM	10.9	E	11.5	F	11.6	F	11.4	F
			PM	11.5	F	11.4	F	11.6	F	11.6	F
I-215 NB Ramps	II	40	AM	6.0	F	6.6	F	8.6	F	8.3	F
			PM	11.1	F	11.7	F	13.1	E	16.6	E
E Street	II	40	AM	24.9	B	29.9	B	31.3	B	29.1	B
			PM	29.0	B	28.1	B	31.0	B	29.6	B
Arrowhead Avenue	II	40	AM	27.2	B	31.1	B	31.3	B	30.5	B
			PM	29.2	B	30.2	B	29.8	B	29.5	B
Waterman Avenue	II	40	AM	27.9	B	27.1	C	36.2	A	31.7	B
			PM	32.0	B	31.4	B	29.3	B	29.0	B
Tippecanoe Avenue	II	40	AM	24.0	C	28.9	B	31.0	B	31.8	B
			PM	32.3	B	28.6	B	14.8	E	12.2	F
Del Rosa Drive	II	40	AM	14.2	D	13.3	E	13.7	E	13.3	E
			PM	14.0	E	13.6	E	9.8	F	2.8	F
Sterling Avenue	II	40	AM	13.2	E	13.8	E	16.6	E	17.7	D
			PM	12.9	F	13.3	E	12.9	F	12.5	F
Victoria Avenue	II	40	AM	23.3	C	24.1	C	24.3	C	22.3	C
			PM	23.8	C	21.7	D	18.9	D	14.9	E
Central Avenue	II	40	AM	12.3	E	12.9	F	12.8	F	13.4	E
			PM	15.6	E	2.2	F	16.5	E	1.8	F
Palm Avenue	II	40	AM	15.7	D	16.4	E	16.9	E	16.3	E
			PM	15.0	E	10.8	F	14.4	E	8.4	F
Church Avenue	II	40	AM	9.0	F	14.4	E	12.9	F	16.1	E
			PM	4.1	F	13.1	E	7.7	F	6.3	F
SR-210 EB Ramps	II	40	AM	14.2	D	13.1	E	14.4	E	11.5	F
			PM	17.7	D	17.9	D	16.1	E	4.6	F
SR-210 WB Ramps	II	40	AM	16.0	D	21.5	D	18.3	D	24.6	C
			PM	15.7	E	17.1	D	17.2	D	23.2	C
Total	II		AM	18.4	C	19.8	D	21.4	D	20.7	D
			PM	20.3	D	14.1	E	16.9	E	8.4	F

Westbound				Existing		Existing + Project		Future Build-Out 2040		Future Build-Out 2040 + Project	
Cross Street	Arterial Class	Flow Speed	Peak Period	Artertial Speed (mph)	Arterial LOS	Artertial Speed (mph)	Arterial LOS	Artertial Speed (mph)	Arterial LOS	Artertial Speed (mph)	Arterial LOS
SR-210 WB Ramps	II	40	AM	19.0	C	22.9	C	24.7	C	24.7	C
			PM	19.0	D	22.8	C	20.1	D	18.0	D
SR-210 EB Ramps	II	40	AM	16.0	D	12.6	F	16.0	E	6.3	F
			PM	20.8	D	21.9	D	18.9	D	13.9	E
Church Avenue	II	40	AM	24.1	B	24.9	C	21.2	D	18.7	D
			PM	23.2	C	22.1	C	25.5	C	23.8	C
Palm Avenue	II	40	AM	10.1	E	9.5	F	10.5	F	9.1	F
			PM	10.7	F	10.8	F	10.1	F	10.2	F
Central Avenue	II	40	AM	4.0	F	1.9	F	2.9	F	1.6	F
			PM	19.6	D	12.2	F	20.7	D	6.5	F
Victoria Avenue	II	40	AM	23.2	C	23.6	C	22.8	C	19.9	D
			PM	27.5	C	25.1	C	23.8	C	21.8	D
Sterling Avenue	II	40	AM	13.5	E	14.9	E	15.6	E	15.8	E
			PM	18.1	D	17.6	D	16.4	E	15.0	E
Del Rosa Drive	II	40	AM	11.6	E	12.7	F	13.9	E	16.2	E
			PM	16.7	E	16.2	E	20.7	D	17.1	D
Tippecanoe Avenue	II	40	AM	15.2	D	17.3	D	15.9	E	16.3	E
			PM	17.7	D	19.5	D	20.8	D	19.3	D
Waterman Avenue	II	40	AM	26.4	B	33.8	B	36.3	A	36.1	A
			PM	32.5	B	33.4	B	34.0	B	33.5	B
Arrowhead Avenue	II	40	AM	28.7	B	36.9	A	35.2	A	36.6	A
			PM	32.5	B	33.7	B	35.5	A	33.9	B
E Street	II	40	AM	20.1	C	24.8	C	24.6	C	21.6	D
			PM	24.3	C	21.8	D	22.8	C	20.5	D
I-215 NB Ramps	II	40	AM	19.4	C	22.7	C	21.9	D	21.1	D
			PM	23.6	C	25.8	C	24.1	C	26.8	C
I-215 SB Ramps	II	40	AM	11.6	E	14.5	E	16.1	E	16.4	E
			PM	15.3	E	14.4	E	17.0	E	21.8	D
Total	II		AM	15.9	D	13.7	E	16.2	E	12.3	F
			PM	23.1	C	22.6	C	23.9	C	19.8	D

MITIGATION MEASURES

As noted above, the development of the Airport Gateway Specific Plan has a potential to cause a significant impact to 10 study intersections. There would be a total of 10 study intersections that would operate at an unacceptable Level of Service under Future Build-Out 2040 Plus Project conditions. Intersection improvements for these 10 deficient intersections, as shown on Table 12, have been identified to improve the intersections to operate at an acceptable Level of Service. Intersection worksheets for the mitigation measures are provided in *Appendix F*. The roadway improvements shown on Table 13 have been identified to mitigate the project impact on the deficient roadway segments. The project fair share proportion of the improvements are shown on Table 14, and the estimated costs of the proposed improvements, as derived from the Congestion Management Program (CMP) Appendix G, are shown on Table 15.

Most of the roadways within the Specific Plan area are not yet built to their master plan build-out configuration. It is recommended that each development within the Specific Plan be required to construct the roadway improvements along the project frontage to achieve the full roadway width, including curb, sidewalk, and gutter, as indicated on the applicable Circulation Element (either the City of San Bernardino or City of Highland).

In addition, it is recommended to incorporate truck parking lots within the Specific Plan or at nearby locations to allow trucks that may arrive early to their destination within the Specific Plan to wait if on-site queues block the truck from entering the truck yard.

SITE ACCESS AND CIRCULATION

The Specific Plan area presented on Figure 2 (previously referenced) provides a conceptual layout of the Specific Plan area, with potential layout and orientation of buildings within the plan area. The existing grid street system of north-south and east-west streets would remain, with improvements needed to accommodate the project traffic.

Site access provisions to individual developments will be determined through the site plan review process, as site-specific development proposals are brought to the City of San Bernardino or City of Highland for processing. The Specific Plan will specify that any project trucks for the warehouse developments must be assigned to use 3rd Street or 5th Street to enter and exit the warehouse properties. This will be accomplished by requiring that the warehouse building and site layout be designed to have all truck entrances on 3rd Street or 5th Street. No truck entrances will be located on 6th Street. In addition, to the extent possible, depending on the location and layout of a project parcel, site driveways for employee or customer traffic should be located on the north-south streets, to reduce the dependence on 6th Street for access to the area development. Those parcels with frontage on the north-south streets should be required to locate their passenger car driveways on the north-south streets.

TABLE 12
SUMMARY OF INTERSECTION OPERATION WITH MITIGATION
FUTURE BUILD-OUT 2040 PLUS PROJECT

Int. #	Intersection and Mitigation	AM Peak Hour						PM Peak Hour					
		With Project		With Mitigation			Project	With Project		With Mitigation			Project
		Delay	LOS	Delay	V/C	LOS	Impact	Delay	LOS	Delay	V/C	LOS	Impact
1	Del Rosa Drive at SR-210 WB Ramps												
	Add 2nd NB Left-Turn Lane	59.0	E	26.0	0.789	C	-30.3	42.3	D	25.4	0.669	C	-10.5
7	Victoria Avenue at Highland Avenue												
	Add 2nd SB Left-Turn Lane	31.4	C	30.4	0.645	C	0.1	56.3	E	49.2	0.925	D	-2.7
20	Sterling Avenue at 6th Street												
	Signalization	Ovflw	F	14.1	0.354	B	-134.1	Ovflw	F	14.2	0.418	B	-181.7
21	Del Rosa Drive at SR-210 WB Ramps												
	Signalization	85.5	F	15.7	0.315	B	-8.3	Ovflw	F	14.4	0.343	B	-31.1
33	Palm Avenue at 5th Street												
	Add NB Right-Turn Lane with Overlap	77.1	E	43.5	0.641	D	-9.8	74.5	F*	54.7	0.883	D	12.6
35	SR-210 EB Ramps at 5th Street												
	Add 2nd SB Left-Turn Lane	50.0	D	50.0	0.989	D	23.9	70.9	F*	33.3	0.923	C	-5.7
38	Del Rosa Drive at 3rd Street												
	Add 3rd EB Through Lane	30.7	C	32.3	0.543	C	1.1	59.6	E	36.7	0.610	D	-20.9
41	Central Avenue at 3rd Street												
	Signalization	31.7	D	18.2	0.215	B	-7.3	203.3	F	13.8	0.394	B	-101.6
42	Palm Avenue at 3rd Street												
	Add 2nd NB Left-Turn Lane	46.2	D	31.7	0.628	C	-11.2	76.8	E	39.7	0.685	D	-31.8
46	Tippecanoe Ave at Orange Show/San Bernardino Ave												
	Add NB RT Lane; Add WB RT Lane with Overlap	29.4	C	24.3	0.608	C	-4.1	72.7	E	48.2	0.898	D	-17.4

Notes:
- Bold and shaded values indicate intersections operating at an unacceptable Level of Service per City standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- Delay values are based on the methodology outlined in the 6th Edition Highway Capacity Manual.
- S = Signalized; U = Unsignalized

TABLE 13
SUMMARY OF ROADWAY SEGMENT ANALYSIS WITH MITIGATION
FUTURE BUILD-OUT 2040 PLUS PROJECT

Roadway	Segment	Jurisdiction	Mitigated Roadway Configuration	Mitigated LOS **E** Capacity[1]	Future Build-Out 2040 ADT	Project ADT	Future Build-Out 2040 Plus Project ADT	V/C	LOS
Tippecanoe Avenue	3rd Street to Mill Street	SB	6-Lane Divided Major	60,000	43,928	9762	53,690	0.895	D[2]
	Mill Street to Orange Show Road / San Bernardino Avenue	SB	6-Lane Divided Major	60,000	47,921	9,762	57,683	0.961	E[3]
Del Rosa Drive	Highland Avenue to Pacific Street	SB	4-Lane Divided Major	40,000	19,585	2,300	21,885	0.547	A
6th Street	Del Rosa Drive to Sterling Avenue	H	4 Lane Undivided Collector	30,000	7,501	2,960	10,461	0.349	A
	Sterling Avenue to Victoria Avenue	SB / H	4-Lane Undivided Collector	30,000	8,278	6,532	14,810	0.494	A
	Victoria Avenue to Central Avenue	H	4-Lane Undivided Collector	30,000	5,844	6,871	12,715	0.424	A
5th Street	I-215 NB Ramps to E Street	SB	6-Lane Divided Major	60,000	37,481	12,396	49,877	0.831	D[3]
	E Street to Waterman Avenue	SB	6-Lane Divided Major	60,000	22,657	12,396	35,053	0.584	A
	Waterman Avenue to Tippecanoe Avenue	SB	6-Lane Divided Major	60,000	13,621	13,162	26,783	0.446	A[4]
	Tippecanoe Avenue to Del Rosa Drive	H	6-Lane Divided Major	60,000	14,297	15,133	29,430	0.491	A[4]
	Sterling Avenue to Victoria Avenue	SB / H	6-Lane Divided Major	60,000	8,476	21,993	30,469	0.508	A[4]
	Victoria Avenue to Central Avenue	H	6-Lane Divided Major	60,000	11,954	22,319	34,273	0.571	A
	Central Avenue to Palm Avenue	H	6-Lane Divided Major	60,000	11,912	25,092	37,004	0.617	B
	Palm Avenue to SR-210 EB Ramps	H	6-Lane Divided Major	60,000	33,870	25,999	59,869	0.998	E[3]
3rd Street	Del Rosa Drive to Sterling Avenue	SB / H	6-Lane Divided Major	60,000	34,523	10,440	44,963	0.749	C

Notes: [1] Source: City of San Bernardino General Plan Update (2005)

[2] Roadway segment is currently built to ultimate configuration.

[3] Based on standard cross section for the roadway segment, based on the City's General Plan, does not provide enough roadway width for an 8-lane roadway.

[4] For consistency with adjacent roadway segments, a 6-lane divided roadway is recommended. However, a 4-lane divided roadway would yield an acceptable Level of Service.

LOS = Level of Service ADT = Average Daily Traffic V/C = Volume-to-Capacity

TABLE 14

SUMMARY OF PROJECT FAIR SHARE FOR MITIGATION MEASURES

Intersection	AM Peak Hour Volumes Existing	AM Peak Hour Volumes 2040	AM Peak Hour Total Growth	AM Peak Hour Project Trips	AM Peak Hour Fair Share %-age	PM Peak Hour Existing Volumes	PM Peak Hour 2040	PM Peak Hour Total Growth	PM Peak Hour Project Trips	PM Peak Hour Fair Share %-age
#1 - Del Rosa Drive at SR-210 WB Ramps	2,483	2,768	285	15	5.3%	2,420	2,773	353	68	19.3%
#7 - Victoria Avenue at Highland Avenue	2,513	3,744	1,231	122	9.9%	3,504	5,370	1,866	195	10.5%
#20 - Sterling Avenue at 6th Street	985	1,519	534	184	34.5%	1,071	1,706	635	218	34.3%
#21 - Del Rosa Drive at SR-210 WB Ramps	643	1,212	569	302	53.1%	772	1,514	742	367	49.5%
#33 - Palm Avenue at 5th Street	2,518	3,546	1,028	745	72.5%	3,043	4,161	1,118	814	72.8%
#35 - SR-210 EB Ramps at 5th Street	2,668	4,412	1,744	813	46.6%	2,617	4,643	2,026	952	47.0%
#38 - Del Rosa Drive at 3rd Street	1,907	3,353	1,446	331	22.9%	2,335	4,137	1,802	400	22.2%
#41 - Central Avenue at 3rd Street	637	1,395	758	230	30.3%	1,186	2,251	1,065	384	36.1%
#42 - Del Rosa Drive at SR-210 WB Ramps	1,684	2,325	641	-110	-17.2%	1,940	2,691	751	-207	-27.6%
#46 - Tippecanoe Avenue at Orange Show Road/ San Bernardino Ave	2,265	3,758	1,493	249	16.7%	3,661	5,650	1,989	304	15.3%

Roadway Segment	Daily Traffic Total Volume Existing	Total Volume 2040	Total Growth	Project Trips	Fair Share %-age
Tippecanoe Avenue (Mill Street to Orange Show Road/San Bernardino Avenue)	32,591	57,307	24,716	9,762	39.5%
Del Rosa Drive (Highland Avenue to Pacific Street)	17,645	21,885	4,240	2,300	54.3%
6th Street (Del Rosa Drive to Sterling Avenue)	4,714	10,461	5,747	2,960	51.5%
6th Street (Sterling Avenue to Victoria Avenue)	3,519	14,810	11,291	6,532	57.9%
6th Street (Victoria Avenue to Central Avenue)	4,047	12,715	8,668	6,871	79.3%
5th Street (I-215 NB Ramps to E Street)	30,975	49,281	18,306	12,396	67.7%
5th Street (E Street to Waterman Avenue)	20,083	34,457	14,374	12,396	86.2%
5th Street (Waterman Avenue to Tippecanoe Avenue)	9,167	26,187	17,020	13,162	77.3%
5th Street (Tippecanoe Avenue to Del Rosa Drive)	8,725	28,834	20,109	15,133	75.3%
5th Street (Sterling Avenue to Victoria Avenue)	3,911	30,469	26,558	21,993	82.8%
5th Street (Victoria Avenue to Central Avenue)	9,939	34,273	24,334	22,319	91.7%
5th Street (Central Avenue to Palm Avenue)	9,939	37,004	27,065	25,092	92.7%
5th Street (Palm Avenue to SR-210 SB Ramps)	26,098	58,516	32,418	25,999	80.2%
3rd Street (Del Rosa Drive to Sterling Avenue)	18,143	44,309	26,166	10,440	39.9%

TABLE 15
TRAFFIC IMPACT MITIGATION FAIR-SHARE COST

#1 - Del Rosa Drive at SR-210 WB Ramps	Unit Cost[2]	Quantity	Total
Add 2nd NB Left-Turn Lane	$ 50,000	1	$ 50,000
Project Fair Share percentage[1]			19.3%
Project Cost			$ 9,632
#7 - Victoria Avenue at Highland Avenue			
Add 2nd SB Left-Turn Lane	$ 50,000	1	$ 50,000
Project Fair Share percentage[1]			10.5%
Project Cost			$ 5,225
#20 - Sterling Avenue at 6th Street			
Signalization	$ 250,000	1	$ 250,000
Project Fair Share percentage[1]			34.5%
Project Cost			$ 86,142
#21 - Del Rosa Drive at SR-210 WB Ramps			
Signalization	$ 250,000	1	$ 250,000
Project Fair Share percentage[1]			53.1%
Project Cost			$ 132,689
#33 - Palm Avenue at 5th Street			
Add NB Right-turn Lane with Overlap	$ 125,000	1	$ 125,000
Project Fair Share percentage[1]			72.8%
Project Cost			$ 91,011
#35 - SR-210 EB Ramps at 5th Street			
Restripe SB Approach to Add 2nd Left-Turn Movement	$ 50,000	1	$ 50,000
Project Fair Share percentage[1]			47.0%
Project Cost			$ 23,495
#38 - Del Rosa Drive at 3rd Street			
Add 3rd EB Through Lane	$ 15,000 [3]	1	$ 15,000
Project Fair Share percentage[1]			22.9%
Project Cost			$ 3,434
#41 - Central Avenue at 3rd Street			
Signalization	$ 250,000	1	$ 250,000
Project Fair Share percentage[1]			36.1%
Project Cost			$ 90,141
#42 - Palm Avenue at 3rd Street			
Add 2nd NB Left-Turn Lane	$ 50,000	1	$ 50,000
Project Fair Share percentage[1]			-17.2%
Project Cost			$ (8,580)

TABLE 15
TRAFFIC IMPACT MITIGATION FAIR-SHARE COST

#46 - Tippecanoe at Orange Show Road/San Bernardino Avenue	Unit Cost[2]	Quantity	Total
Add NB Right-Turn Lane; Add WB Right-Turn Lane with Overlap	$ 175,000	1	$ 175,000
Project Fair Share percentage[1]			16.7%
Project Cost			$ 29,186
Tippecanoe Avenue (Mill Street to Orange Show Road/San Bernardino Avenue) [4]			
Add 1 Lane in Each Direction	$ 360,000	0.6	$ 216,000
Project Fair Share percentage			39.5%
Project Cost			$ 85,313
Del Rosa Drive (Highland Avenue to Pacific Street)			
Add 1 Lane in Each Direction	$ 360,000	0.5	$ 180,000
Project Fair Share percentage			54.3%
Project Cost			$ 97,653
6th Street (Del Rosa Drive to Sterling Avenue)			
Add 1 Lane in Each Direction	$ 360,000	0.5	$ 180,000
Project Fair Share percentage			51.5%
Project Cost			$ 92,715
6th Street (Sterling Avenue to Victoria Avenue)			
Add 1 Lane in Each Direction	$ 360,000	1	$ 360,000
Project Fair Share percentage			57.85%
Project Cost			$ 208,263
6th Street (Victoria Avenue to Central Avenue)			
Add 1 Lane in Each Direction	$ 360,000	0.5	$ 180,000
Project Fair Share percentage			79.3%
Project Cost			$ 142,683
5th Street (I-215 NB Ramps to E Street)			
Add 1 Lane in Each Direction	$ 360,000	0.4	$ 144,000
Project Fair Share percentage			67.7%
Project Cost			$ 97,509
5th Street (E Street to Waterman Avenue)			
Add 1 Lane in Each Direction	$ 360,000	0.9	$ 324,000
Project Fair Share percentage			86.2%
Project Cost			$ 279,414
5th Street (Waterman Avenue to Tippecanoe Avenue)[5]			
Add 2 Lanes in Each Direction	$ 720,000	1	$ 720,000
Project Fair Share percentage			77.3%
Project Cost			$ 556,786

TABLE 15
TRAFFIC IMPACT MITIGATION FAIR-SHARE COST

5th Street (Tippecanoe to Del Rosa Drive)[5]	Unit Cost[2]	Quantity	Total
Add 2 Lanes in Each Direction	$ 720,000	0.55	$ 396,000
Project Fair Share percentage			75.25%
Project Cost			$ 298,007
5th Street (Sterling Avenue to Victoria Avenue)[5]			
Add 2 Lanes in Each Direction	$ 720,000	1	$ 720,000
Project Fair Share percentage			82.8%
Project Cost			$ 596,252
5th Street (Victoria Avenue to Central Avenue)[5]			
Add 1 Lane in Each Direction	$ 360,000	0.5	$ 180,000
Project Fair Share percentage			91.7%
Project Cost			$ 165,093
5th Street (Central Avenue to Palm Avenue)			
Add 1 Lane in Each Direction	$ 360,000	0.5	$ 180,000
Project Fair Share percentage			92.7%
Project Cost			$ 166,877
5th Street (Palm Avenue to SR-210 EB Ramps)			
Add 1 Lane in Each Direction	$ 360,000	0.5	$ 180,000
Project Fair Share percentage			80.20%
Project Cost			$ 144,361
3rd Street (Del Rosa Drive to Sterling Avenue)			
Add 1 Lane in Each Direction	$ 360,000	0.5	$ 180,000
Project Fair Share percentage			39.9%
Project Cost			$ 71,818
	Total Project Cost		**$** 3,465,119

[1] Higher of AM or PM project fair share percentage

[2] Source: San Bernardino County CMP, 2003 Update; Preliminary Construction Cost Estimates for Congestion Management Plan

[3] Assumes minor re-striping for mitigation measure

[4] Tippecanoe Avenue is currently 6-lanes from Mill Street to Central Avenue

[5] Mitigation costs reflects widening to 6-lanes for consistency with adjacent roadway segments; however, the roadway segment as a 4-lane divided roadway would also yield an acceptable Level of Service.

Traffic Signal Warrants

The following unsignalized intersections would operate at an unacceptable Level of Services:

- #20 – Sterling Avenue at 6th Street
- #21 – Victoria Avenue at 6th Street
- #41 – Central Avenue at 3rd Street

Traffic signal warrant analyses were completed for these intersections. The California Manual on Uniform Traffic Control Devices (MUTCD, 2017), Warrant 3 for peak hour was used. Using the forecasted volumes from the Future Build-out 2040 Plus Project condition, Warrant 3 is met in both peak hours for intersections #20 and #21. Warrant 3 is met in the AM peak hour only for intersection #41. The traffic signal warrant worksheets are provided in *Appendix E*.

The California Manual on Uniform Traffic Control Devices (MUTCD) specifically states that, "The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." The reference document goes on to state a number of other factors to take into account when considering a signal for a specific location, including whether or not a signal would improve the overall safety of the intersection, whether it would benefit or disrupt progressive traffic flow, and consideration of characteristics such as queuing, signal spacing, and overall delay to the main street through movements.

The decision to install a traffic signal should be based on engineering judgment, and not solely upon satisfying a single peak hour warrant. It is recommended that the intersection be monitored once individual projects are completed within the Specific Plan to observe actual peak hour operation, and a decision about signalization should be made based on those observations as well as engineering judgment, based on the factors listed above.

SAN BERNARDINO COUNTY CONGESTION MANAGEMENT PROGRAM

The San Bernardino County Congestion Management Program (CMP) was established in 1991 to reduce traffic congestion and to provide a mechanism for coordinating land use and development decisions. Compliance with CMP requirements ensures a city's eligibility to compete for State gas tax funds for local transportation projects.

The San Bernardino County CMP determines the geographic area for a traffic study with the following criteria:

> "At a minimum, the study area must include all freeway links with 100 or more peak-hour project trips (two-way) and other CMP roadways with 50 or more peak-hour project trips (two-way). Within the defined study area, all "key intersections," as listed in the most current CMP, must be analyzed. Key intersections represent intersections of CMP roadways plus those additional intersections recognized by local jurisdictions and/or SANBAG to be important to mobility on CMP roadways".

The following intersections in the vicinity of the Specific Plan area are listed as a key CMP intersection:

- #4 – Del Rosa Drive at Highland Avenue
- #7 – Victoria Avenue at Highland Avenue
- #12 – Del Rosa Drive at Baseline Street
- #14 – Victoria Avenue at Baseline Street
- #25 – E Street at 5th Street
- #27 – Waterman Avenue at 5th Street
- #29 – Del Rosa Drive at 5th Street
- #31 – Victoria Avenue at 5th Street
- #33 – Palm Avenue at 5th Street
- #38 – Del Rosa Drive at 3rd Street
- #40 – Victoria Avenue at 3rd Street
- #42 – Palm Avenue at 3rd Street
- #46 – Tippecanoe Avenue at Orange Show Road/San Bernardino Avenue

These CMP key intersections were included as study intersections. The project's traffic contribution to these intersections was analyzed. The traffic analysis for the project is in compliance with the San Bernardino County CMP requirements.

FINDINGS AND CONCLUSIONS

- The Airport Gateway Specific Plan (AGSP) area covers approximately 680 acres, located immediately north of the San Bernardino International Airport (SBIA). The Specific Plan area includes parcels in both the City of Highland (485 acres) and the City of San Bernardino (195 acres).

- The existing uses within the Specific Plan area include single-family and multi-family residential, small-lot commercial, educational facilities, and industrial uses.

- The AGSP would replace the existing uses within the Specific Plan area with approximately 9.2 million square feet of Industrial Mixed Uses, consisting of industrial warehouse, high-cube logistics warehouse, tech business park, and a small amount of commercial/retail/hotel uses.

- Development of the Specific Plan area will be accomplished over time, as market conditions allow, and as developers are successful in assembling individual parcels into parcels large enough for the allowed uses.

- Intersection and roadway traffic volumes at the study locations were obtained from traffic studies for other projects in the vicinity, where available; and were collected at the study locations where counts were not available.

- Under Existing Conditions, all study intersections currently operate at an acceptable Level of Service in both peak hours, with the exception of the following intersections:

    - #20 – Sterling Avenue at 6th Street (unsignalized): AM – LOS F; PM – LOS E
    - #41 – Central Avenue at 3rd Street (unsignalized): PM – LOS E

- Under Existing Conditions, the following study roadway segments are currently operating at an unacceptable Level of Service:

    - Tippecanoe Avenue: Mill Street to Orange Show Road / San Bernardino Avenue
    - Del Rosa Drive: Highland Avenue to Pacific Street

- The AGSP project is estimated to generate 30,972 net PCE trips on a daily basis, with 1,772 net PCE trips in the morning peak hour, and 2,220 net PCE trips in the evening peak hour. The net project trips, including the existing land use credits, were divided proportionately into smaller zones within the Specific Plan.

- Under Existing Plus Project Conditions, the following intersections would operate at an unacceptable Level of Service:

    - #1 - Del Rosa Drive at SR-210 WB Ramps: AM – LOS E
    - #20 - Sterling Avenue at 6th Street: AM – LOS F; PM – LOS F
    - #21 - Victoria Avenue at 6th Street: PM – LOS F
    - #33 - Palm Avenue at 5th Street: AM – LOS E; PM – LOS F
    - #41 - Central Avenue at 3rd Street: PM – LOS E

- Under Existing Plus Project conditions, the following roadway segments would operate at an unacceptable Level of Service:

    - Tippecanoe Avenue: Mill Street to Orange Show Road / San Bernardino Avenue
    - Del Rosa Drive: Highland Avenue to Pacific Street
    - 6th Street:
        - Sterling Avenue to Victoria Avenue
        - Victoria Avenue to Central Avenue
    - 5th Street:
        - I-215 NB Ramps to E Street
        - E Street to Waterman Avenue
        - Waterman Avenue to Tippecanoe Avenue
        - Tippecanoe Avenue to Del Rosa Drive
        - Sterling Avenue to Victoria Avenue
        - Victoria Avenue to Central Avenue
        - Central Avenue to Palm Avenue
        - Palm Avenue to SR-210 EB Ramps

- To develop Future Build-Out 2040 intersection and roadway traffic forecasts, the San Bernardino Transportation Analysis Model (SBTAM) Base Year 2012 and Build-out Year 2040 model outputs were used. In addition, trips from the traffic studies for Cumulative Projects that were not included in the SBTAM model projections, were added to the future forecasts.

- Under Future Build-Out 2040 conditions, the following intersections would operate at an unacceptable Level of Service:

    - #1 – Del Rosa Drive at SR-210 WB Ramps: AM – LOS E
    - #20 – Sterling Avenue at 6th Street: AM LOS F; PM LOS F
    - #21 – Victoria Avenue at 6th Street: PM – LOS E
    - #38 – Del Rosa Drive at 3rd Street: PM – LOS E
    - #41 – Central Avenue at 3rd Street: PM – LOS F
    - #42 – Palm Avenue at 3rd Street: PM – LOS E
    - #46 – Tippecanoe Avenue at Orange Show Road/San Bernardino Avenue: PM – LOS E

- Under Future Build-Out 2040 conditions, following roadway segments would operate at an unacceptable Level of Service:

    - Tippecanoe Avenue: Mill Street to Orange Show Road / San Bernardino Avenue
    - Del Rosa Drive: Highland Avenue to Pacific Street
    - 6th Street: Sterling Avenue to Victoria Avenue
    - 5th Street:
        - I-215 NB Ramps to E Street
        - Waterman Avenue to Tippecanoe Ave
        - Tippecanoe Avenue to Del Rosa Drive
        - Palm Avenue to SR-210 EB Ramps
    - 3rd Street: Del Rosa Drive to Sterling Avenue

- Under Future Build-Out 2040 Plus Project conditions, the following intersections would operate at an unacceptable Level of Service:

    - #1 – Del Rosa Drive at SR-210 WB Ramps: AM – LOS E
    - #7 – Victoria Avenue at Highland Avenue: PM – LOS E
    - #20 – Sterling Avenue at 6th Street: AM LOS F; PM LOS F
    - #21 – Victoria Avenue at 6th Street: AM – LOS F; PM – LOS F
    - #29 – Del Rosa Drive at 5th Street: PM – LOS F
    - #33 – Palm Avenue at 5th Street: AM – LOS E; PM – LOS F
    - #35 – SR-210 EB Ramps at 5th Street: PM – LOS F
    - #38 – Del Rosa Drive at 3rd Street: PM – LOS E
    - #41 – Central Avenue at 3rd Street: PM – LOS F
    - #42 – Palm Avenue at 3rd Street: PM – LOS E
    - #46 – Tippecanoe Avenue at Orange Show Road /San Bernardino Avenue: PM – LOS E

- Under Future Build-Out 2040 Plus Project conditions, following roadway segments would operate at an unacceptable Level of Service:

    - Tippecanoe Avenue:
        - 3rd Street to Mill Street
        - Mill Street to Orange Show/San Bernardino Avenue
    - Del Rosa Drive: Highland Avenue to Pacific Street
    - 6th Street:
        - Del Rosa Drive to Sterling Avenue
        - Sterling Avenue to Victoria Avenue
        - Victoria Avenue to Central Avenue
    - 5th Street:
        - I-215 NB Ramps to E Street
        - E Street to Waterman Avenue
        - Waterman Avenue to Tippecanoe Avenue

        - Tippecanoe Avenue to Del Rosa Drive
        - Sterling Avenue to Victoria Avenue
        - Victoria Avenue to Central Avenue
        - Central Avenue to Palm Avenue
        - Palm Avenue to SR-210 EB Ramps
    - 3rd Street: Del Rosa Drive to Sterling Avenue

- The development of the AGSP would cause a significant impact to 10 study intersections and 15 study roadway segments. Intersection and roadway improvements have been identified to mitigate the project impact at deficient intersections and roadway segments.

- Site access provisions to individual developments will be determined through the site plan review process, as site-specific development proposals are brought to the City of San Bernardino or City of Highland for processing.

- The Specific Plan will specify that any project trucks for the warehouse developments must be assigned to use 3rd Street or 5th Street to enter and exit the warehouse properties.

- To the extent possible, depending on the location and layout of a project parcel, site driveways for employee or customer traffic should be located on the north-south streets, to reduce the dependence on 6th Street for access to the area development.

- Traffic signal warrant analyses were completed for the following unsignalized intersections:

    - #20 – Sterling Avenue at 6th Street
    - #21 – Victoria Avenue at 6th Street
    - #41 – Central Avenue at 3rd Street

- Using the forecasted volumes from the Future Build-out 2040 Plus Project condition, Warrant 3, of the California MUTCD, is met in both peak hours for intersections #20 and #21. Warrant 3 is met in the AM peak hour only for intersection #41.

- A base free-flow speed (BFFS) arterial analysis was conducted for 6 deficient roadway segments based on the Highway Capacity Manual 6th Edition. Review of the HCS7 analysis table shows that all deficient roadways operate at an acceptable BFFS Level of Service during the AM and PM peak hours, except for following roadway segment:

    - 5th Street: Central Avenue to Palm Avenue (Eastbound): PM – LOS F

- The traffic impact analysis for this project is in compliance with the San Bernardino Congestion Monitoring Program (CMP).

APPENDIX A

APPROVED
SCOPE OF STUDY
FORM

APPENDIX A-1

APPROVED
SCOPE OF STUDY FORM -
CITY OF SAN BERNARDINO

Scope of Study Form

To be completed by applicant and approved by Development Services prior to start of study

Project Name: Airport Gateway Specific Plan
Project Address: See Attachment A for Specific Plan Boundary and Project Information
Project Description: 7,663 KSF Indust/Warehouse; 1,302 KSF R/D; 65 KSF Comm'l; 150-Room Hotel
Developer's Name: Inland Valley Development Agency (IVDA)
Address: 1601 East Third Street, Suite 100, San Bernardino, CA 92408
Telephone No. (909) 382-4100 Fax Number: (909) 382-4106
Email Address:

Trip Generation Rates From: ITE 10th Ed. Other:

Trip Generation For:

	Land Use (1)	Land Use (2)
	See Attachment B for Existing,	
ITE Land Use Code	Project, and Net New Trips	
Daily Trips	22,331	
AM Peak Hour Trips		
Inbound	1,226	
Outbound	121	
Total	1,347	
PM Peak Hour Trips		
Inbound	66	
Outbound	1,260	
Total	1,326	

*Minus trips for existing, active uses *(Use Additional Sheet(s), if necessary)*

Pass-by Trips (%), if applicable: ____ %

	Land Use (1)	Land Use (2)
ITE Land Use Code		
Daily Trips		
AM Peak Hour Trips		
Inbound		
Outbound		
Total		
PM Peak Hour Trips:		
Inbound		
Outbound		
Total		

Project Opening Year: 2024 **Build-out Year:** 2040

Study Intersections:
1 See Attachment C for
2 study intersections and roadway
3 segments and trip distribution
4
5
6
7
8
9
10

(Use Additional Sheet(s) and Map, if necessary)

Ambient Growth Rate: 3 %

Trip Distribution: See Attachment C

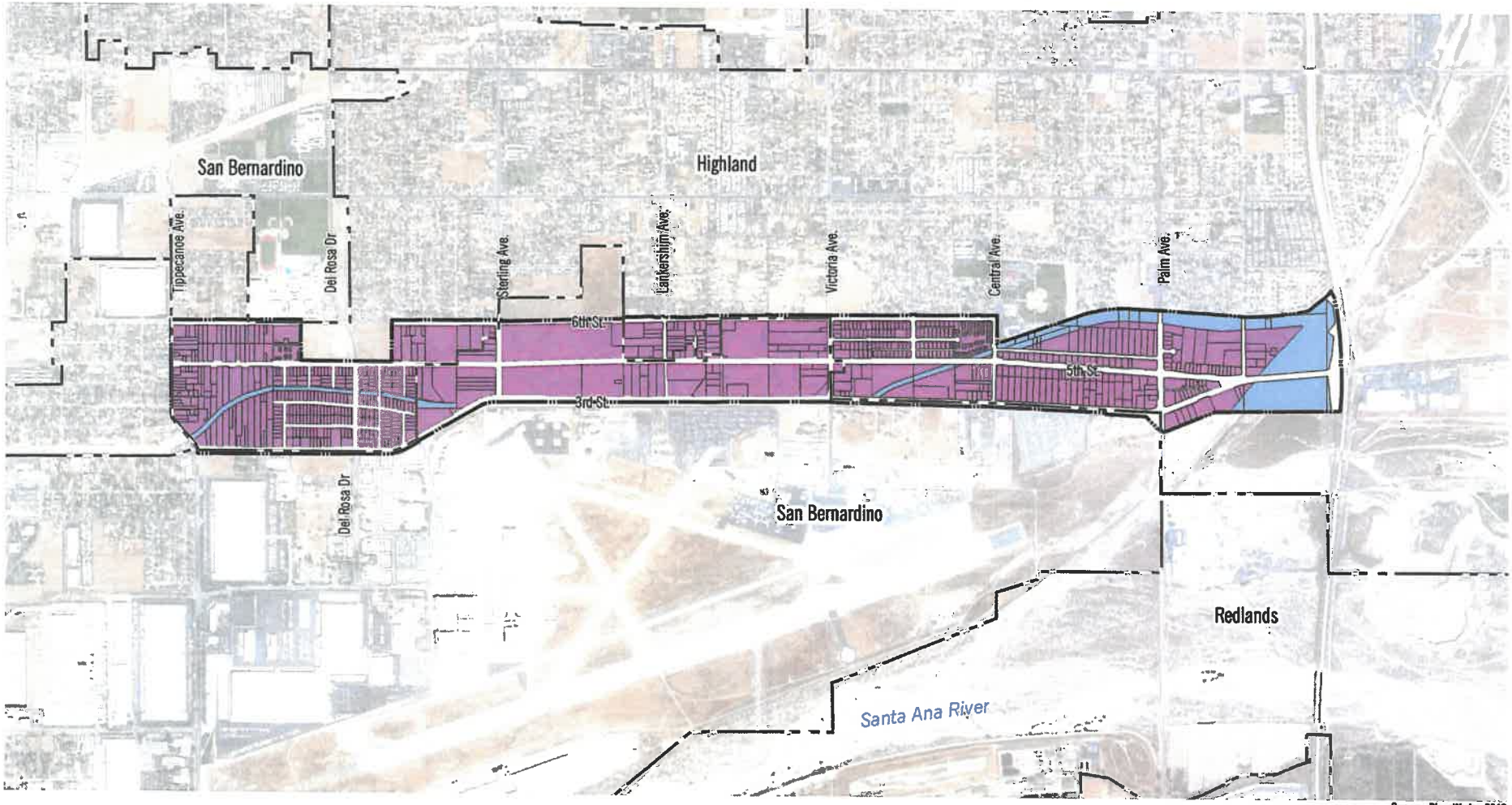
Preparer's Name: Kimley-Horn and Associates Inc.
Address: 765 The City Drive Suite 200, Orange, CA 92868
Telephone No. (714) 939-1030 Fax Number:
Email Address: trevor.briggs@kimley-horn.com
Signature: Date:

Approved By (Development Services Department):

Signature: MKhdr Date: 2/5/19
Name: Mahmoud Khodr Title: Traffic Engineer

Comments
- See Table B-1
- See Attachment C
-

ATTACHMENT A



Industrial Mixed-Use | Floodway | ROW
Project Boundary | City Boundaries

Source: PlaceWorks, 2018

0 200 800 1,000 1,600 2,000 2,600 Feet

N

Airport Gateway Specific Plan: Proposed Land Use

PLACEWORKS

Date: 12/18/2018
Document Path: Y:\IVD-02.0\GIS\PW_GIS\MXDs\Revised_ProposeLU_181106_KH.mxd

A-1

A-1

Airport Gateway Specific Plan

Proposed Land Use					
	Total				
Land Use Designation	Acres	Non-Res. square feet	Hotel Sq Ft[6]	Hotel Rooms[6]	Employment[7]
Industrial Mixed Use[1,2,3,4]	459.90	9,124,491	75,000	150	5,019
ROW[5]	141.04	0			0
Floodway	68.79	0			0
TOTAL	669.73	9,124,491			5,019
Revised 12/18/2018					

Notes

1. A mix of industrial (and supporting) uses are permitted in the specific plan; the size and type of activity may vary substantially from one facility to another and may include manufacturing or warehousing, and may include office, research or associated functions. See Chapter X for a detailed list of permitted, conditionally permitted, and prohibited uses.

For purposes of the analyses prepared as part of this specific plan, the following mix of uses were assumed in the Industrial Mixed-use designation: 15% industrial distribution/logistics (large scale), 70% general/light industrial and logistics (small scale), 13% Tech business park, and 2% commercial/retail/service uses. This mix was assumed based upon current market demand (see memorandum dated August 13, 2017) but is not intended to serve as a limiting factor for the type and mix of development allowed. The cumulative total square footage of all projects in the AGSP should not exceed the maximum square footage allowed in Table X-X above and the associated roadway capacities planned for in Chapter X.

2. Industrial and distribution uses were assumed at a 0.45 FAR. The City of Highland General Plan assumes a maximum 0.45 FAR for industrial and business park and a maximum of 0.50 FAR for office uses. The San Bernardino General Plan assumes a maximum 0.75 FAR for heavy and light industrial uses, and a FAR of 1.0 for office parks. Based on the conceptual design concepts envisioned for the plan, the building footprints are anticipated to be closer to 0.45 FAR, which was applied to this Proposed Land Use buildout table as an average (the SP may allow a higher maximum per building so long as the total square footage assumed in this table is not exceeded).

3. Assumes a 0.50 FAR for Tech Business Park. Typically, Tech Business Park uses range in intensity from about 0.35-0.75 FAR.

4. Assumes 0.35 FAR for Commercial use. The intensity could range between 0.30-0.50 FAR.

5. Right-of-way acreages reflects the existing alignment of 5th street.

6. Hotel estimated at about 500 gross sq. ft. per room (which includes walls, elevators, stairways, corridors, storage, and mechanical areas, etc.) Source: Planning and Programming a Hotel, Jan A. deRoos, Cornell University (2011) http://scholarship.sha.cornell.edu/cgi/viewcontent.cgi?article=1293&context=articles Hotel employees: https://www.quora.com/How-many-employees-do-I-need-to-manage-a-150-room-hotel

7. Employment generation rates of 3,000 sq. ft./job for industrial (warehousing/distribution), 600 sq. ft./job for tech businesses/light industrial and 500 sq. ft./job for Commercial uses were used. If industrial land uses were employee intensive than employment rate would be closer to 2,000 sq. ft/job. If warehouses/distribution are highly automated, the employment rate would be closer to 4,000 sq. ft./job. 3,000 sq.ft./job has been applied as an average. Assumes 100 hotel employees, see #6 above.

Information in the gray highlighted columns - Hotel - are provided to supplement the tech studies, the sq ft for the assumed hotel (Total Non-Res Sq Ft) should be subtracted from the total if analysis uses rooms instead of sq ft.

AIRPORT GATEWAY SPECIFIC PLAN - 12/18/18

ALTERNATIVE 1

Land Use	Percentage Breakdown	Acres	Total Area Developable Sq Ft	FAR	Building Sq. Footage	Check	12/21/18 Plan:	Difference
Industrial Mixed-Use:		459.90	20,033,244				9,124,491	19,382
Industrial Distribution / Logistics (Large)	0.15	68.99	3,004,987	0.45	1,352,244	1,352,244		
General / Light Industrial (Small)	0.70	321.93	14,023,271	0.45	6,310,472	6,310,472		
Tech Business Park	0.13	59.79	2,604,322	0.50	1,302,161	1,302,161	Hotel	75,000
Commercial / Retail / Services (Includes hotel)	0.02	9.20	400,665	0.35	140,233	140,233	Commercial	65,233
ROW		141.04						
Floodway		68.79						
Total	1.00	**669.73**	**20,033,244**		**9,105,109**	**9,105,109**		

A-3

ATTACHMENT B

TABLE B-1

SUMMARY OF PROJECT TRIP GENERATION

AIRPORT GATEWAY SPECIFIC PLAN - ALTERNATIVE 1

Based on Project Summary Dated: 12/18/2018

TRIP GENERATION RATES [1]

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	150	KSF	1.740	0.131	0.039	0.170	0.051	0.139	0.190
High-Cube Transload and Short-Term Storage	154	KSF	1.40	0.06	0.02	0.08	0.03	0.07	0.10
Research and Development Center	760	KSF	11.26	0.32	0.11	0.42	0.07	0.42	0.49
Shopping Center	820	KSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81
Hotel	310	Room	8.36	0.28	0.19	0.47	0.31	0.29	0.60

PROJECT TRIP GENERATION

Project Land Use	Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	6,310.472	KSF	10,980	827	246	1,073	322	877	1,199
High-Cube Transload and Short-Term Storage	1,352.244	KSF	1,893	84	24	108	38	97	135
Research and Development Center	1,302.161	KSF	14,662	410	137	547	96	543	639
Shopping Center	65.233	KSF	2,463	38	23	61	119	129	248
Pass-by Trips	25%		-616	-10	-6	-16	-30	-32	-62
Total Shopping Center Trips			1,847	28	17	45	89	97	186
Hotel	150	Room	1,254	42	29	71	46	44	90
Total Project Trips			30,636	1,391	453	1,844	591	1,658	2,249

PASSENGER CAR EQUIVALENT (PCE) ADJUSTMENTS FOR WAREHOUSING AND INDUSTRIAL USES

Vehicle Type	Vehicle Mix [2]	Daily Vehicles	PCE Factor [3]	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing										
Passenger Vehicles	79.57%	8,737	1.0	8,737	658	196	854	256	698	954
2-Axle Trucks	3.46%	380	2.0	760	57	17	74	22	61	83
3-Axle Trucks	4.64%	509	2.5	1,273	96	29	125	37	102	139
4+ Axle Trucks	12.33%	1,354	3.0	4,062	306	91	397	119	324	443
Total Truck PCE Trips				6,095	459	137	596	178	487	665
Total Warehousing PCE Trips				**14,832**	**1,117**	**333**	**1,450**	**434**	**1,185**	**1,619**
High-Cube Transload and Short-Term Storage										
Passenger Vehicles	51.0%	965	1.0	965	43	12	55	19	49	68
2-Axle Trucks	0.0%	0	2.0	0	0	0	0	0	0	0
3-Axle Trucks	0.0%	0	2.5	0	0	0	0	0	0	0
4+ Axle Trucks	49.0%	928	3.0	2,784	123	36	159	57	144	201
Total Truck PCE Trips				2,784	123	36	159	57	144	201
Total High-Cube Transload and Short-Term Storage PCE Trips				**3,749**	**166**	**48**	**214**	**76**	**193**	**269**

TOTAL SPECIFIC PLAN TRIPS

Total Specific Plan Passenger Car Trips	**27,465**	**1,181**	**391**	**1,572**	**506**	**1,431**	**1,937**
Total Specific Plan Truck (PCE) Trips	**8,879**	**582**	**173**	**755**	**235**	**631**	**866**
Total Specific Plan Trips	**36,344**	**1,763**	**564**	**2,327**	**741**	**2,062**	**2,803**

TRIP GENERATION FOR EXISTING USES IN SPECIFIC PLAN AREA

Existing Uses Trip Generation [4]	14,013	537	443	980	675	802	1,477
Specific Plan Net New Trips	22,331	1,226	121	1,347	66	1,260	1,326

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

[2] Source: Truck Trip Generation Study - City of Fontana, August 2003.

[3] Source: City of San Bernardino Traffic Impact Study Guidelines, June 2015.

[4] Source: PlaceWorks - **See Table B-1**

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

Document the Source of These #'s

*

ATTACHMENT B
TABLE B-2
SUMMARY OF PROJECT TRIP GENERATION
AIRPORT GATEWAY SPECIFIC PLAN AREA - EXISTING USES

Land Use	ITE Code	Unit	Trip Generation Rates [1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
General Light Industrial	110	KSF	4.960	0.616	0.084	0.70	0.082	0.548	0.63
Single-Family Detached Housing	210	DU	9.440	0.185	0.555	0.74	0.624	0.366	0.99
Multifamily Housing (Low-Rise)	220	DU	7.320	0.106	0.354	0.46	0.353	0.207	0.56
Mobile Home Park	240	Occ. DU	6.490	0.082	0.328	0.41	0.366	0.224	0.59
Day Care Center	565	Student	4.090	0.413	0.367	0.78	0.371	0.419	0.79
Retail	820	KSF	37.750	0.583	0.357	0.94	1.829	1.981	3.81

Land Use [2]	Quantity [2]	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
General Light Industrial	565.759	KSF	2,806	349	48	397	46	310	356
Passenger Vehicles	*78.6%*		*2,206*	*274*	*38*	*312*	*36*	*244*	*280*
Trucks (PCE)	*21.4%*		*1,355*	*168*	*24*	*192*	*23*	*149*	*172*
Single-Family Detached Housing	515	DU	4,862	95	286	381	321	188	509
Multifamily Housing (Low-Rise)	240	DU	1,757	25	85	110	85	50	135
Mobile Home Park	194	Occ. DU	1,259	16	64	80	71	43	114
Day Care Center	75	Student	307	31	28	59	28	31	59
Retail	245.029	KSF	9,250	143	87	230	448	485	933
Retail Pass-by - 25%	-25%		-2,313	-36	-22	-58	-112	-121	-233
Total Retail Trips			6,938	107	65	173	336	364	700
Total Trips - Existing Uses			18,684	716	590	1,307	900	1,069	1,969
Total Trips - Existing Uses with 25% Reduction [3]			**14,013**	**537**	**443**	**980**	**675**	**802**	**1,477**

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

[2] Source: PlaceWorks

[3] Trips for Existing Uses were reduced by 25% to reflect the under-performing characteristics of this area of the community.

Airport Gateway Specific Plan

Existing Land Use Estimates					
	Total				
Land Use Classification[1]	Acres	Res. Units[2]	Population[3]	Non-Res. square feet[2]	Employment[4]
Apartment/Condo	15.23	212	690		
Commercial[5]	27.24		0	245,029	490
Duplex/Triplex	0.93	28	91		
Educational Facilities[6]	0.57		0	3,000	6
Improved Flood Waterways	67.11		0		
Industrial	88.81		0	565,759	189
Mobile Home	1.30	194	631		
ROW	138.99		0		
Single Family Detached	117.18	515	1,674		
Transportation Facilities[7]	2.92		0	2,683	4
Utility Facilities[8]	0.37		0		
Vacant	209.07		0		
TOTAL	669.73	949	3,086	816,471	689
Updated 05/23/18					

Notes

1. Classifications from SANBAG (2012) which were derived from SCAG's original classifications.
2. The number of units and non-residential square feet are from the San Bernardino County Assessor's Office (Aug. 2017).
3. Existing population numbers are estimates calculated using 3.52 persons per household for both cities and a vacancy rate of 7.6 % for Highland and 9.0% for San Bernardino (DOF, Jan 2017)
4. Employment generation rates of 3,000 sq.ft./job for industrial, 600 sq.ft./job for transportation facilities and 500 sq.ft./job for Commercial and Educational Facilities were used. If industrial land uses were employee intensive than employment rate would be closer to 2,000 sq. ft/job. If warehouses/distribution are highly automated, the employment rate would be closer to 4,000 sq. ft./job. 3,000 sq.ft./job has been applied as an average.
5. Commercial properties generally consist of strip center commercial, gas station, offices, and hotel uses.
6. Highland Head Start
7. Transportation facilities are a parcel that includes commercial RV storage, and auto repair and autobody shops.
8. The utility facilities are developed with tanks/gas storage.

ATTACHMENT C

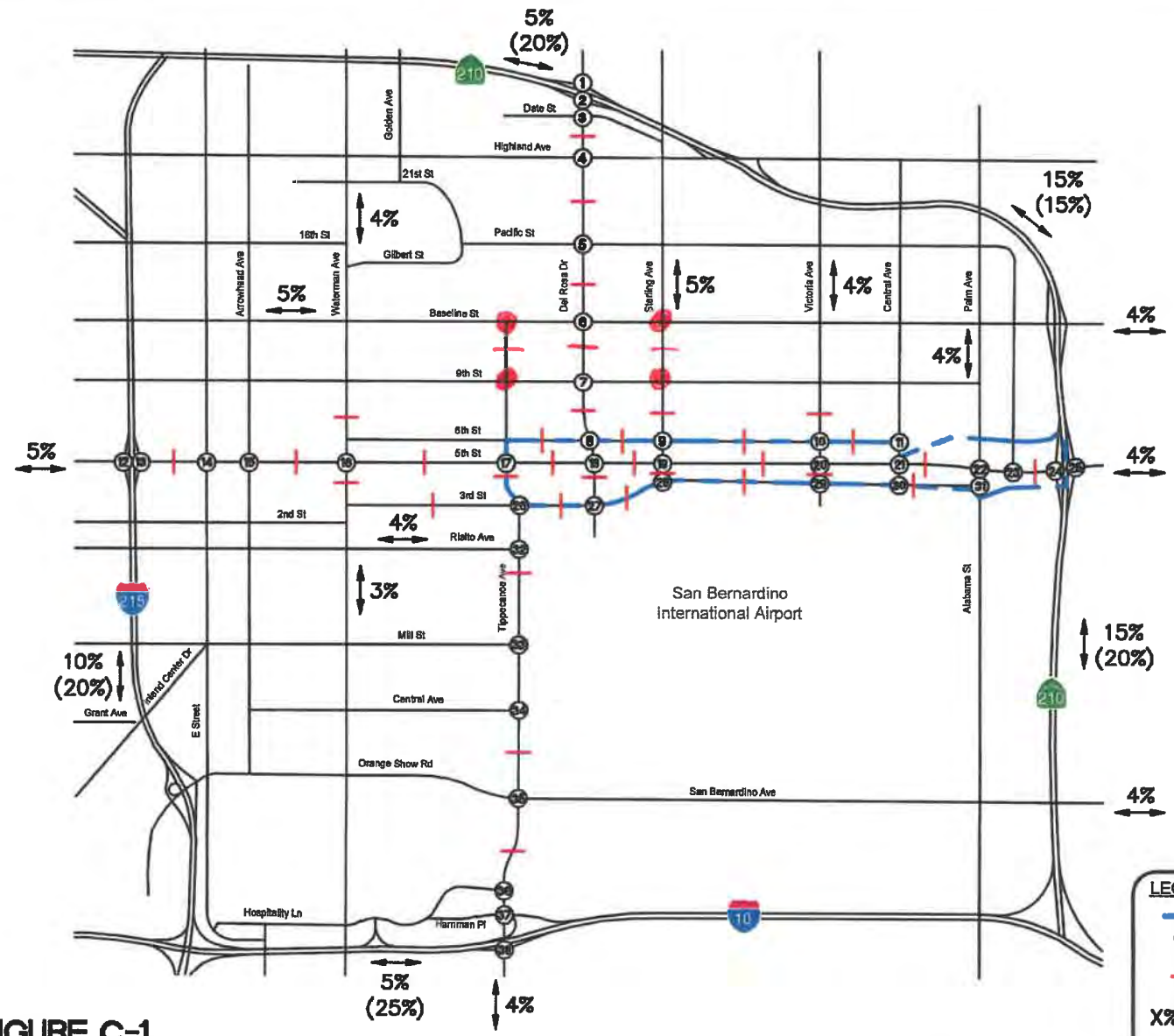


FIGURE C-1
SUGGESTED STUDY AREA

Kimley»Horn

ATTACHMENT C
TABLE C-1
SUGGESTED STUDY INTERSECTIONS

Int. #	Study Intersections		
	E/W	N/S	City
1	I-210 WB Ramp	Del Rosa Avenue	SB
2	I-210 EB Ramp	Del Rosa Avenue	SB
3	Date Street	Del Rosa Avenue	SB
4	Highland Avenue	Del Rosa Avenue	SB
5	Pacific Street	Del Rosa Drive	H
6	Baseline	Del Rosa Drive	H / SB
7	9th Street	Del Rosa Drive	H / SB
8	6th Street	Del Rosa Drive	H / SB
9	6th Street	Sterling Avenue	H / SB
10	6th Street	Victoria Avenue	H / SB
11	6th Street	Central Avenue	SB
12	5th Street	I-215 SB Ramps	SB
13	5th Street	I-215 NB Ramps	SB
14	5th Street	E Street	SB
15	5th Street	Arrowhead Avenue	SB
16	5th Street	Waterman Avenue	SB
17	5th Street	Tippecanoe Avenue	H / SB
18	5th Street	Del Rosa Avenue	H
19	5th Street	Sterling Avenue	SB
20	5th Street	Victoria Avenue	H / SB
21	5th Street	Central Avenue	H
22	5th Street	Palm Avenue	H
23	5th Street	Church Avenue	H
24	5th Street	SR-210 EB Ramp	H
25	5th St / Greenspot Road	SR-210 WB Ramp	H
26	3rd Street	Tippecanoe Avenue	H / SB
27	3rd Street	Del Rosa Drive	H / SB
28	3rd Street	Sterling Avenue	SB
29	3rd Street	Victoria Avenue	H / SB
30	3rd Street	Central Avenue	H / SB
31	3rd Street	Alabama Street	H / SB
32	Rialto Avenue	Tippecanoe Avenue	SB
33	Mill Street	Tippecanoe Avenue	SB
34	Central Avenue	Tippecanoe Avenue	SB
35	San Bernardino Avenue	Tippecanoe Avenue	SB
36	Hospitality Lane	Tippecanoe Avenue	SB
37	I-10 WB Ramp / Harriman Pl	Tippecanoe Avenue	SB
38	I-10 EB Ramp	Tippecanoe Avenue	SB

ATTACHMENT C
TABLE C-2
SUGGESTED STUDY ROADWAY SEGMENTS

1	Del Rosa Drive	SR-210 EB Ramps	Highland Avenue
2		Highland Avenue	Pacific Street
3		Pacific Street	Baseline Street
4		Baseline Street	6th Street
5		6th Street	3rd Street
6	Sterling Avenue	Baseline Street	6th Street
7		6th Street	3rd Street
8	Victoria Avenue	Baseline Street	6th Street
9		6th Street	3rd Street
10	Waterman	Baseline Street	6th Street
11		6th Street	3rd Street
12	Tippecanoe Avenue	6th Street	3rd Street
13		3rd Street	Mill Street
14		Mill Street	Orange Show/San Bernardino
15		Orange Show/San Bernardino	Harriman / I-10 WB Ramps
16	6th Street	Tippecanoe Avenue	Del Rosa Drive
17		Del Rosa Drive	Sterling Avenue
18		Sterling Avenue	Victoria Avenue
19		Victoria Avenue	Central Avenue
20	5th Street	I-215 NB Ramps	E Street
21		E Street	Waterman Avenue
22		Waterman Avenue	Tippecanoe Avenue
23		Tippecanoe Avenue	Del Rosa Drive
24		Del Rosa Drive	Sterling Avenue
25		Sterling Avenue	Victoria Avenue
26		Victoria Avenue	Palm Avenue
27		Palm Avenue	SR-210 EB Ramps
28	3rd Street	Waterman	Tippecanoe Avenue
29		Tippecanoe Avenue	Del Rosa Drive
30		Del Rosa Drive	Sterling Avenue
31		Sterling Avenue	Victoria Avenue
32		Victoria Avenue	Palm Avenue

APPENDIX A-2

APPROVED
SCOPE OF STUDY FORM -
CITY OF HIGHLAND

REVISED Scope of Study Form

To be completed by applicant and approved by City of San Bernardino and City of Highland staff prior to start of study

Project Name: Airport Gateway Specific Plan
Project Address: See Attachment A for Specific Plan Boundary and Project Information
Project Description: 7,663 KSF Indust/Warehouse; 1,302 KSF R/D; 65 KSF Comm'l; 150-Room Hotel
Developer's Name: Inland Valley Development Agency (IVDA)
Address: 1601 East Third Street, Suite 100, San Bernardino, CA 92408
Telephone No. (909) 382-4100 Fax Number: (909) 382-4106
Email Address:

Trip Generation Rates From: ITE 10th Ed. Other:

Trip Generation For:

	Land Use (1)	Land Use (2)
	See Attachment B for Existing,	
ITE Land Use Code	Project, and Net New Trips	
Daily Trips	22,331	
AM Peak Hour Trips		
Inbound	1,226	
Outbound	121	
Total	1,347	
PM Peak Hour Trips		
Inbound	66	
Outbound	1,260	
Total	1,326	

*Minus trips for existing, active uses *(Use Additional Sheet(s), if necessary)*

Pass-by Trips (%), if applicable: ____ %

	Land Use (1)	Land Use (2)
ITE Land Use Code		
Daily Trips		
AM Peak Hour Trips		
Inbound		
Outbound		
Total		
PM Peak Hour Trips:		
Inbound		
Outbound		
Total		

Project Opening Year: 2024 **Build-out Year:** 2040

Study Intersections:
1 See Attachment C for
2 study intersections and roadway
3 segments and trip distribution
4
5
6
7
8
9
10

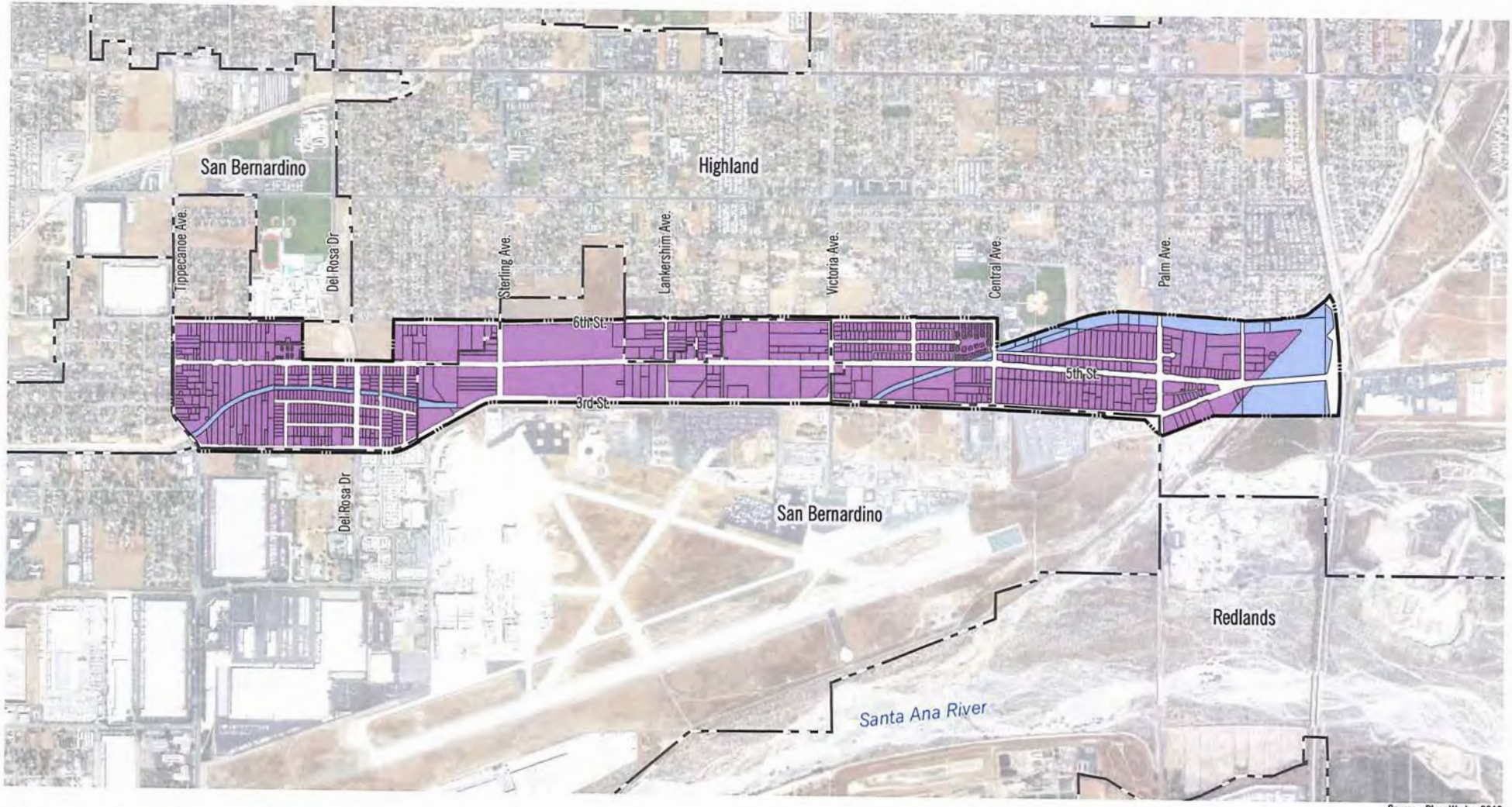
(Use Additional Sheet(s) and Map, if necessary)

Ambient Growth Rate: 3 %
Trip Distribution: See Attachment C

Preparer's Name: Kimley-Horn and Associates Inc.
Address: 765 The City Drive Suite 200, Orange, CA 92868
Telephone No. (714) 939-1030 Fax Number:
Email Address: trevor.briggs@kimley-horn.com
Signature: Date:

Approved By (Development Services Department):
Signature: Date: 2/28/19
Name: Annem Hernander Title: Principal Hernandez Kroore & Associates.

ATTACHMENT A



Airport Gateway Specific Plan: Proposed Land Use

PLACEWORKS

Date: 12/18/2018

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A-1

Airport Gateway Specific Plan

Proposed Land Use

Land Use Designation	Total Acres	Non-Res. square feet	Hotel Sq Ft[6]	Hotel Rooms[6]	Employment[7]
Industrial Mixed Use[1,2,3,4]	459.90	9,124,491	75,000	150	5,019
ROW [5]	141.04	0			0
Floodway	68.79	0			0
TOTAL	**669.73**	**9,124,491**			**5,019**

Revised 12/18/2018

Notes

1. A mix of industrial (and supporting) uses are permitted in the specific plan; the size and type of activity may vary substantially from one facility to another and may include manufacturing or warehousing, and may include office, research or associated functions. See Chapter X for a detailed list of permitted, conditionally permitted, and prohibited uses.

For purposes of the analyses prepared as part of this specific plan, the following mix of uses were assumed in the Industrial Mixed-use designation: 15% industrial distribution/logistics (large scale), 70% general/light industrial and logistics (small scale), 13% Tech business park, and 2% commercial/retail/service uses. This mix was assumed based upon current market demand (see memorandum dated August 13, 2017) but is not intended to serve as a limiting factor for the type and mix of development allowed. The cumulative total square footage of all projects in the AGSP should not exceed the maximum square footage allowed in Table X-X above and the associated roadway capacities planned for in Chapter X.

2. Industrial and distribution uses were assumed at a 0.45 FAR. The City of Highland General Plan assumes a maximum 0.45 FAR for industrial and business park and a maximum of 0.50 FAR for office uses. The San Bernardino General Plan assumes a maximum 0.75 FAR for heavy and light industrial uses, and a FAR of 1.0 for office parks. Based on the conceptual design concepts envisioned for the plan, the building footprints are anticipated to be closer to 0.45 FAR, which was applied to this Proposed Land Use buildout table as an average (the SP may allow a higher maximum per building so long as the total square footage assumed in this table is not exceeded).

3. Assumes a 0.50 FAR for Tech Business Park. Typically, Tech Business Park uses range in intensity from about 0.35-0.75 FAR.

4. Assumes 0.35 FAR for Commercial use. The intensity could range between 0.30-0.50 FAR.

5. Right-of-way acreages reflects the existing alignment of 5th street.

6. Hotel estimated at about 500 gross sq. ft. per room (which includes walls, elevators, stairways, corridors, storage, and mechanical areas, etc.) Source: Planning and Programming a Hotel, Jan A. deRoos, Cornell University (2011) http://scholarship.sha.cornell.edu/cgi/viewcontent.cgi?article=1293&context=articles Hotel employees: https://www.quora.com/How-many-employees-do-I-need-to-manage-a-150-room-hotel

7. Employment generation rates of 3,000 sq. ft./job for industrial (warehousing/distribution), 600 sq. ft./job for tech businesses/light industrial and 500 sq. ft./job for Commercial uses were used. If industrial land uses were employee intensive than employment rate would be closer to 2,000 sq. ft/job. If warehouses/distribution are highly automated, the employment rate would be closer to 4,000 sq. ft./job. 3,000 sq.ft./job has been applied as an average. Assumes 100 hotel employees, see #6 above.

Information in the gray highlighted columns - Hotel - are provided to supplement the tech studies, the sq ft for the assumed hotel (Total Non-Res Sq Ft) should be subtracted from the total if analysis uses rooms instead of sq ft.

PLACEWORKS

AIRPORT GATEWAY SPECIFIC PLAN - 12/18/18

ALTERNATIVE 1

Land Use	Percentage Breakdown	Acres	Total Area Developable Sq Ft	FAR	Building Sq. Footage	Check	12/21/18 Plan:	Difference
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ROW		141.04						
Floodway		68.79						
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A-3

ATTACHMENT B

TABLE B-1

SUMMARY OF PROJECT TRIP GENERATION

AIRPORT GATEWAY SPECIFIC PLAN - ALTERNATIVE 1

Based on Project Summary Dated: 12/18/2018

TRIP GENERATION RATES [1]

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
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Hotel	310	Room	8.36	0.28	0.19	0.47	0.31	0.29	0.60

PROJECT TRIP GENERATION

Project Land Use	Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
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Research and Development Center	1,302.161	KSF	14,662	410	137	547	96	543	639
Shopping Center	65.233	KSF	2,463	38	23	61	119	129	248
Pass-by Trips	25%		-616	-10	-6	-16	-30	-32	-62
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Vehicle Type	Vehicle Mix [2]	Daily Vehicles	PCE Factor [3]	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing										
Passenger Vehicles	79.57%	8,737	1.0	8,737	658	196	854	256	698	954
2-Axle Trucks	3.46%	380	2.0	760	57	17	74	22	61	83
3-Axle Trucks	4.64%	509	2.5	1,273	96	29	125	37	102	139
4+ Axle Trucks	12.33%	1,354	3.0	4,062	306	91	397	119	324	443
Total Truck PCE Trips				6,095	459	137	596	178	487	665
Total Warehousing PCE Trips				**14,832**	**1,117**	**333**	**1,450**	**434**	**1,185**	**1,619**
High-Cube Transload and Short-Term Storage										
Passenger Vehicles	51.0%	965	1.0	965	43	12	55	19	49	68
2-Axle Trucks	0.0%	0	2.0	0	0	0	0	0	0	0
3-Axle Trucks	0.0%	0	2.5	0	0	0	0	0	0	0
4+ Axle Trucks	49.0%	928	3.0	2,784	123	36	159	57	144	201
Total Truck PCE Trips				2,784	123	36	159	57	144	201
Total High-Cube Transload and Short-Term Storage PCE Trips				**3,749**	**166**	**48**	**214**	**76**	**193**	**269**

TOTAL SPECIFIC PLAN TRIPS

Total Specific Plan Passenger Car Trips	**27,465**	**1,181**	**391**	**1,572**	**506**	**1,431**	**1,937**
Total Specific Plan Truck (PCE) Trips	**8,879**	**582**	**173**	**755**	**235**	**631**	**866**
Total Specific Plan Trips	**36,344**	**1,763**	**564**	**2,327**	**741**	**2,062**	**2,803**

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Existing Uses Trip Generation [4]	14,013	537	443	980	675	802	1,477
Specific Plan Net New Trips	22,331	1,226	121	1,347	66	1,260	1,326

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[2] Source: Truck Trip Generation Study - City of Fontana, August 2003.

[3] Source: City of San Bernardino Traffic Impact Study Guidelines, June 2015.

[4] Source: PlaceWorks - **See Table B-1**

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

ATTACHMENT B
TABLE B-2
SUMMARY OF PROJECT TRIP GENERATION
AIRPORT GATEWAY SPECIFIC PLAN AREA - EXISTING USES

Land Use	ITE Code	Unit	Trip Generation Rates [1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
General Light Industrial	110	KSF	4.960	0.616	0.084	0.70	0.082	0.548	0.63
Single-Family Detached Housing	210	DU	9.440	0.185	0.555	0.74	0.624	0.366	0.99
Multifamily Housing (Low-Rise)	220	DU	7.320	0.106	0.354	0.46	0.353	0.207	0.56
Mobile Home Park	240	Occ. DU	6.490	0.082	0.328	0.41	0.366	0.224	0.59
Day Care Center	565	Student	4.090	0.413	0.367	0.78	0.371	0.419	0.79
Retail	820	KSF	37.750	0.583	0.357	0.94	1.829	1.981	3.81

Land Use [2]	Quantity [2]	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
General Light Industrial	565.759	KSF	2,806	349	48	397	46	310	356
Passenger Vehicles	*78.6%*		*2,206*	*274*	*38*	*312*	*36*	*244*	*280*
Trucks (PCE)	*21.4%*		*1,355*	*168*	*24*	*192*	*23*	*149*	*172*
Single-Family Detached Housing	515	DU	4,862	95	286	381	321	188	509
Multifamily Housing (Low-Rise)	240	DU	1,757	25	85	110	85	50	135
Mobile Home Park	194	Occ. DU	1,259	16	64	80	71	43	114
Day Care Center	75	Student	307	31	28	59	28	31	59
Retail	245.029	KSF	9,250	143	87	230	448	485	933
Retail Pass-by - 25%	-25%		-2,313	-36	-22	-58	-112	-121	-233
Total Retail Trips			6,938	107	65	173	336	364	700
Total Trips - Existing Uses			18,684	716	590	1,307	900	1,069	1,969
Total Trips - Existing Uses with 25% Reduction [3]			**14,013**	**537**	**443**	**980**	**675**	**802**	**1,477**

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

[2] Source: PlaceWorks

[3] Trips for Existing Uses were reduced by 25% to reflect the under-performing characteristics of this area of the community.

Airport Gateway Specific Plan

Existing Land Use Estimates

	Total				
Land Use Classification[1]	Acres	Res. Units[2]	Population[3]	Non-Res. square feet[2]	Employment[4]
Apartment/Condo	15.23	212	690		
Commercial[5]	27.24		0	245,029	490
Duplex/Triplex	0.93	28	91		
Educational Facilities[6]	0.57		0	3,000	6
Improved Flood Waterways	67.11		0		
Industrial	88.81		0	565,759	189
Mobile Home	1.30	194	631		
ROW	138.99		0		
Single Family Detached	117.18	515	1,674		
Transportation Facilities[7]	2.92		0	2,683	4
Utility Facilities[8]	0.37		0		
Vacant	209.07		0		
TOTAL	**669.73**	**949**	**3,086**	**816,471**	**689**

Updated 05/23/18

Notes

1. Classifications from SANBAG (2012) which were derived from SCAG's original classifications.
2. The number of units and non-residential square feet are from the San Bernardino County Assessor's Office (Aug. 2017).
3. Existing population numbers are estimates calculated using 3.52 persons per household for both cities and a vacancy rate of 7.6 % for Highland and 9.0% for San Bernardino (DOF, Jan 2017)
4. Employment generation rates of 3,000 sq.ft./job for industrial, 600 sq.ft./job for transportation facilities and 500 sq.ft./job for Commercial and Educational Facilities were used. If industrial land uses were employee intensive than employment rate would be closer to 2,000 sq. ft/job. If warehouses/distribution are highly automated, the employment rate would be closer to 4,000 sq. ft./job. 3,000 sq.ft./job has been applied as an average.
5. Commercial properties generally consist of strip center commercial, gas station, offices, and hotel uses.
6. Highland Head Start
7. Transportation facilities are a parcel that includes commercial RV storage, and auto repair and autobody shops.
8. The utility facilities are developed with tanks/gas storage.

ATTACHMENT C

FIGURE C-1
SUGGESTED STUDY AREA

Kimley»Horn

ATTACHMENT C
TABLE C-1
LIST OF STUDY INTERSECTIONS
(WITH CITY OF SAN BERNARDINO AND CITY OF HIGHLAND FEEDBACK)

Int. #	Study Intersections		
	E/W	N/S	City
1	I-210 WB Ramp	Del Rosa Avenue	SB
2	I-210 EB Ramp	Del Rosa Avenue	SB
3	Date Street	Del Rosa Avenue	SB
4	Highland Avenue	Del Rosa Avenue	SB
5	Pacific Street	Del Rosa Drive	H
6	Baseline	Del Rosa Drive	H / SB
7	9th Street	Del Rosa Drive	H / SB
8	6th Street	Del Rosa Drive	H / SB
9	6th Street	Sterling Avenue	H / SB
10	6th Street	Victoria Avenue	H / SB
11	6th Street	Central Avenue	SB
12	5th Street	I-215 SB Ramps	C
13	5th Street	I-215 NB Ramps	C
14	5th Street	E Street	SB
15	5th Street	Arrowhead Avenue	SB
16	5th Street	Waterman Avenue	SB
17	5th Street	Tippecanoe Avenue	H / SB
18	5th Street	Del Rosa Avenue	H
19	5th Street	Sterling Avenue	SB
20	5th Street	Victoria Avenue	H / SB
21	5th Street	Central Avenue	H
22	5th Street	Palm Avenue	H
23	5th Street	Church Avenue	H
24	5th Street	SR-210 EB Ramp	H
25	5th St / Greenspot Road	SR-210 WB Ramp	H
26	3rd Street	Tippecanoe Avenue	H / SB
27	3rd Street	Del Rosa Drive	H / SB
28	3rd Street	Sterling Avenue	SB
29	3rd Street	Victoria Avenue	H / SB
30	3rd Street	Central Avenue	H / SB
31	3rd Street	Alabama Street	H / SB
32	Rialto Avenue	Tippecanoe Avenue	SB
33	Mill Street	Tippecanoe Avenue	SB
34	Central Avenue	Tippecanoe Avenue	SB
35	San Bernardino / Orange Show	Tippecanoe Avenue	SB
36	Hospitality Lane	Tippecanoe Avenue	SB
37	I-10 WB Ramp / Harriman Pl	Tippecanoe Avenue	C
38	I-10 EB Ramp	Tippecanoe Avenue	C

ATTACHMENT C
TABLE C-1
LIST OF STUDY INTERSECTIONS
(WITH CITY OF SAN BERNARDINO AND CITY OF HIGHLAND FEEDBACK)

Int. #	Study Intersections		
	E/W	N/S	City
Added by City of San Bernardino			
39	Baseline	Tippecanoe Avenue	H
40	9th Street	Tippecanoe Avenue	H
41	Baseline	Sterling Avenue	H
42	9th Street	Sterling Avenue	H
Added by City of Highland			
43	Highland Avenue	Victoria Avenue	H
44	Highland Avenue	I-210 EB Off-Ramp	C
45	Highland Avenue	I-210 WB Off-Ramp	C
46	Pacific Street	Victoria Avenue	H
47	14th Street	Victoria Avenue	H
48	Baseline	Victoria Avenue	H
49	9th Street	Victoria Avenue	H

ATTACHMENT C
TABLE C-2
LIST OF STUDY ROADWAY SEGMENTS
(WITH CITY OF SAN BERNARDINO AND CITY OF HIGHLAND FEEDBACK)

1	Del Rosa Drive	SR-210 EB Ramps	Highland Avenue
2		Highland Avenue	Pacific Street
3		Pacific Street	Baseline Street
4		Baseline Street	6th Street
5		6th Street	3rd Street
6	Sterling Avenue	Baseline Street	6th Street
7		6th Street	3rd Street
8	Victoria Avenue	Baseline Street	6th Street
9		6th Street	3rd Street
10	Waterman	Baseline Street	6th Street
11		6th Street	3rd Street
12	Tippecanoe Avenue	6th Street	3rd Street
13		3rd Street	Mill Street
14		Mill Street	Orange Show/San Bernardino
15		Orange Show/San Bernardino	Harriman / I-10 WB Ramps
16	6th Street	Tippecanoe Avenue	Del Rosa Drive
17		Del Rosa Drive	Sterling Avenue
18		Sterling Avenue	Victoria Avenue
19		Victoria Avenue	Central Avenue
20	5th Street	I-215 NB Ramps	E Street
21		E Street	Waterman Avenue
22		Waterman Avenue	Tippecanoe Avenue
23		Tippecanoe Avenue	Del Rosa Drive
24		Del Rosa Drive	Sterling Avenue
25		Sterling Avenue	Victoria Avenue
26		Victoria Avenue	Palm Avenue
27		Palm Avenue	SR-210 EB Ramps
28	3rd Street	Waterman	Tippecanoe Avenue
29		Tippecanoe Avenue	Del Rosa Drive
30		Del Rosa Drive	Sterling Avenue
31		Sterling Avenue	Victoria Avenue
32		Victoria Avenue	Palm Avenue
Added by City of San Bernardino			
33	Tippecanoe Avenue	Baseline to 9th Street	
34	Del Rosa Drive	Baseline to 9th Street	
35	Sterling Avenue	Baseline to 9th Street	
Added by City of Highland			
36	Victoria Avenue	Highland Avenue	Pacific Street
37		Pacific Street	Baseline Street
38		Baseline Street	9th Street
39	5th Street	Victoria Avenue	Central Avenue

MEMORANDUM

To: Ms. Anne Hernandez

From: Serine Ciandella

Date: February 20, 2019

Subject: *IVDA Airport Gateway Specific Plan Traffic Study Scoping Agreement*

Thank you for your comments on the Traffic Study Scoping Agreement for the Inland Valley Development Agency (IVDA) Airport Gateway Specific Plan (AGSP) project. The revised Scoping Agreement form is attached.

A copy of your review comments is attached for ease of reference, and the following are in response to your comments:

A. The intersections listed in Comment A have been added to the study intersection list (in Attachment C).

B. All intersection counts will include truck classification data.

C. The roadway segments listed in Comment C have been added to the study roadway list, and we will provide information regarding existing and forecasted truck traffic in the traffic study.

D. The assignment of truck traffic will include use of the truck routes serving the area, including Del Rosa, Tippecanoe, Victoria, 3rd, and 5th.

E. The Traffic Study will acknowledge that the study locations are located in more than one jurisdiction, and the traffic analysis will follow the study guidelines of the jurisdiction in which the intersection or roadway is located.

Please feel free to contact me if you have any questions, or if you need additional information. If the revised Scoping Agreement is acceptable, please sign on the bottom of the first page and return. Thank you.

Kimley-Horn Scoping Agreement Attachment D

A. The project development area covers a large region and it is not reasonable to assume that all project traffic will travel on one northbound route in order to reach the I-210 freeway. Please add the following additional intersections to the analysis:

1. Victoria Avenue / Highland Avenue
2. Highland Avenue / I-210 EB Off Ramp
3. Highland Avenue / I-210 WB On Ramp
4. Victoria Avenue / Pacific Street
5. Victoria Avenue / 14th Street
6. Victoria Avenue / Base Line
7. Victoria Avenue / 9th Street

B. At the locations where traffic count data will be recorded within the City of Highland, please add classification counts at all locations to identify the existing truck traffic by axle.

C. The City of Highland reserves the right to request a pavement analysis on roadways segments. Please provide a comparison of existing truck traffic and proposed truck traffic on a daily basis and by number of axles for the following locations:

1. Victoria Street from 5th Street to Highland Avenue
2. 5th Street from Victoria Street to I-210
3. 3rd Street from Victoria Street to 5th Street (proposed new intersection)
4. Portions of Del Rosa and Tippecanoe Avenue within the City of Highland boundary

D. Attachment C does not show truck distribution percentages to the local streets; it only shows truck percentages to the freeways. The City of Highland expects truck traffic on the major arterials of Del Rosa, Tippecanoe, Victoria, 5th Street and 3rd Street and for these streets and intersections to be analyzed as such.

E. The scoping agreement refers to the City of San Bernardino traffic impact guidelines. Please note that the City of Highland has their own guidelines which may be slightly different from the City of San Bernardino.

APPENDIX B

TRAFFIC COUNT DATA SHEETS

Del Rosa Ave & SR-210 WB Ramps

Peak Hour Turning Movement Count

ID: 19-06006-001
City: San Bernardino

Day: Tuesday
Date: 01/08/2019

PEAK HOURS

AM: 07:00 AM - 08:00 AM
NOON: NONE
PM: 04:15 PM - 05:15 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Del Rosa Ave

SOUTHBOUND

AM	664	426	0	0	643	AM
NOON	0	0	0	0	0	NOON
PM	373	344	0	0	922	PM
	0.5	1.5	0	0		

SR-210 WB Ramps — EASTBOUND

AM	NOON	PM	
1251	0	1000	⇦
0	0	0	↰ 0
0	0	0	↑ 0
0	0	0	→ 0
0	0	0	↱ 0
AM	NOON	PM	

CONTROL

Signalized

TEV	2445 AM	0 NOON	2394 PM
PHF	0.92		0.96

WESTBOUND — SR-210 WB Ramps

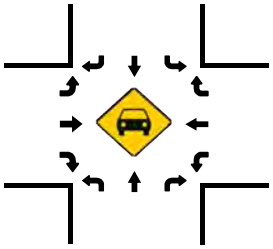
PM	NOON	AM	
226	0	121	1 ↰
0	0	0	0 ←
128	0	125	1 ↰
0	0	0	0 ↱
0	0	0	⇨
PM	NOON	AM	

PM	472	0	627	696	0	PM
NOON	0	0	0	0	0	NOON
AM	551	0	587	522	0	AM
		0	1	2	0	

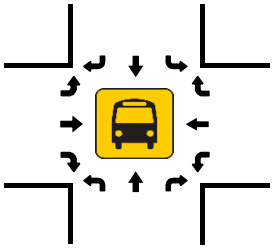
NORTHBOUND

Del Rosa Ave

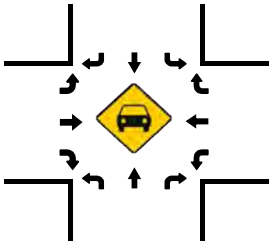
Total Vehicles (AM)



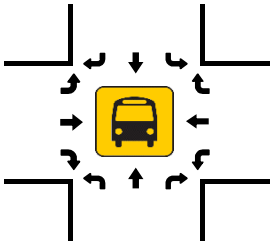
Total Vehicles (AM)



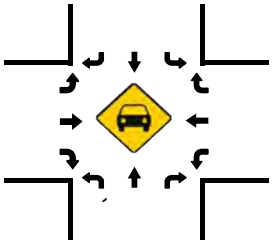
Total Vehicles (NOON)



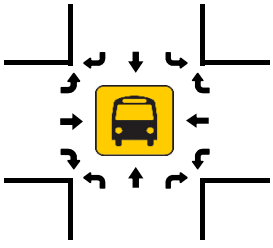
Total Vehicles (NOON)



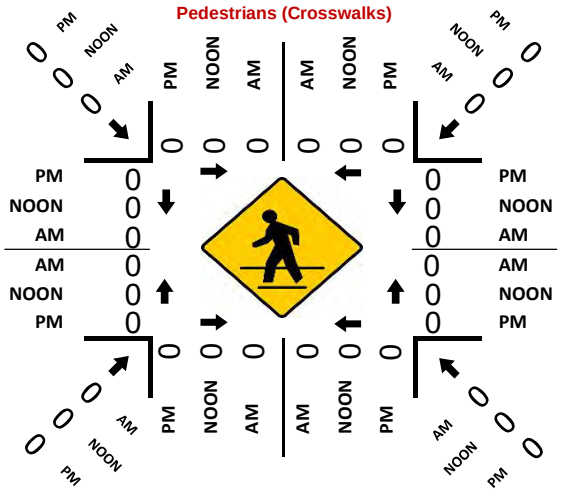
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Ave & SR-210 WB Ramps
City: San Bernardino
Control: Signalized

Project ID: 19-06006-001
Date: 1/8/2019

Total

NS/EW Streets:	Del Rosa Ave				Del Rosa Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	1.5	0.5	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	145	103	0	0	0	104	156	0	0	0	0	0	19	0	31	0	558
7:15 AM	161	149	0	0	0	100	176	0	0	0	0	0	31	0	38	0	655
7:30 AM	145	154	0	0	0	111	187	0	0	0	0	0	39	0	25	0	661
7:45 AM	136	116	0	0	0	111	145	0	0	0	0	0	36	0	27	0	571
8:00 AM	124	154	0	0	0	84	104	0	0	0	0	0	34	0	32	0	532
8:15 AM	123	117	0	0	0	74	96	0	0	0	0	0	40	0	38	0	488
8:30 AM	135	95	0	0	0	72	110	0	0	0	0	0	30	0	36	0	478
8:45 AM	107	101	0	0	0	96	97	0	0	0	0	0	29	0	35	0	465
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1076	989	0	0	0	752	1071	0	0	0	0	0	258	0	262	0	4408
APPROACH %'s :	52.11%	47.89%	0.00%	0.00%	0.00%	41.25%	58.75%	0.00%					49.62%	0.00%	50.38%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	587	522	0	0	0	426	664	0	0	0	0	0	125	0	121	0	2445
PEAK HR FACTOR :	0.911	0.847	0.000	0.000	0.000	0.959	0.888	0.000	0.000	0.000	0.000	0.000	0.801	0.000	0.796	0.000	0.925
	0.894				0.914								0.891				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	1.5	0.5	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	137	176	0	0	0	82	99	0	0	0	0	0	27	2	39	0	562
4:15 PM	179	176	0	0	0	80	108	0	0	0	0	0	30	0	53	0	626
4:30 PM	138	179	0	0	0	93	89	0	0	0	0	0	30	0	57	0	586
4:45 PM	156	172	0	0	0	86	88	0	0	0	0	0	35	0	74	0	611
5:00 PM	154	169	0	0	0	85	88	0	0	0	0	0	33	0	42	0	571
5:15 PM	146	181	0	0	0	94	112	0	0	0	0	0	31	0	50	0	614
5:30 PM	141	194	0	0	0	87	64	0	0	0	0	0	31	0	59	0	576
5:45 PM	117	187	0	0	0	104	91	0	0	0	0	0	43	0	46	0	588
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1168	1434	0	0	0	711	739	0	0	0	0	0	260	2	420	0	4734
APPROACH %'s :	44.89%	55.11%	0.00%	0.00%	0.00%	49.03%	50.97%	0.00%					38.12%	0.29%	61.58%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	627	696	0	0	0	344	373	0	0	0	0	0	128	0	226	0	2394
PEAK HR FACTOR :	0.876	0.972	0.000	0.000	0.000	0.925	0.863	0.000	0.000	0.000	0.000	0.000	0.914	0.000	0.764	0.000	0.956
	0.932				0.953								0.812				

Prepared by National Data & Surveying Services

Del Rosa Ave & SR-210 EB Ramps

Peak Hour Turning Movement Count

ID: 19-06006-002
City: San Bernardino

Day: Tuesday
Date: 01/08/2019

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

Del Rosa Ave — SOUTHBOUND

	U-Turn	Right	Thru	Left	Departing
AM	0	386	170	0	1146
NOON	0	0	0	0	0
PM	0	352	119	2	1314
%	0	2	1	0	

SR-210 EB Ramps — EASTBOUND

Movement	AM	NOON	PM	%
Departing	0	0	0	
U-Turn	0	0	0	0
Left	360	0	387	0.5
Thru	1	0	1	0.5
Right	695	0	715	1

SR-210 EB Ramps — WESTBOUND

Movement	%	PM	NOON	AM
Right	0	0	0	0
Thru	0	0	0	0
Left	0	0	0	0
U-Turn	0	0	0	0
Departing		240	0	255

Del Rosa Ave — NORTHBOUND

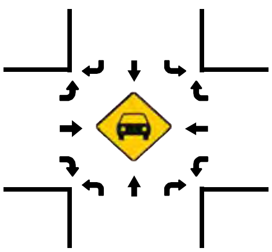
	Departing	U-Turn	Left	Thru	Right
%		0	0	2.5	0.5
PM	1067	0	0	925	120
NOON	0	0	0	0	0
AM	1081	0	0	786	84

CONTROL

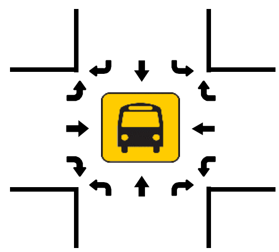
Signalized

	AM	NOON	PM
TEV	2482	0	2621
PHF	0.99		0.97

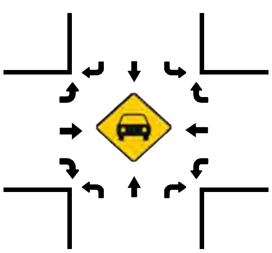
Total Vehicles (AM)



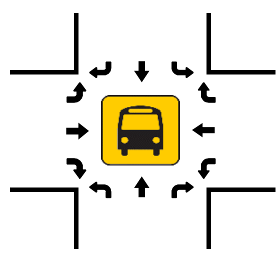
Total Vehicles (AM)



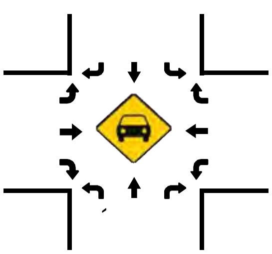
Total Vehicles (NOON)



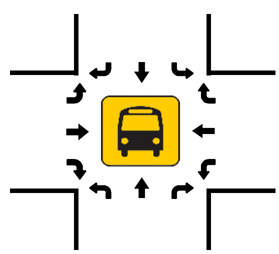
Total Vehicles (NOON)



Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)

Crosswalk / direction	AM	NOON	PM
North leg, eastbound	0	0	0
North leg, westbound	0	0	0
West leg, southbound	0	0	0
West leg, northbound	0	0	0
East leg, southbound	0	0	0
East leg, northbound	0	0	0
South leg, eastbound	0	0	0
South leg, westbound	0	0	0
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Ave & SR-210 EB Ramps
City: San Bernardino
Control: Signalized

Project ID: 19-06006-002
Date: 1/8/2019

Total

NS/EW Streets:	Del Rosa Ave				Del Rosa Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2.5	0.5	0	1	2	0	0	0.5	0.5	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	173	18	0	29	79	0	1	69	0	122	0	0	0	0	0	491
7:15 AM	0	222	31	0	47	96	0	0	91	1	139	0	0	0	0	0	627
7:30 AM	0	203	25	0	42	101	0	0	94	0	152	0	0	0	0	0	617
7:45 AM	0	176	13	0	52	97	0	0	81	0	206	0	0	0	0	0	625
8:00 AM	0	185	15	0	29	92	0	0	94	0	198	0	0	0	0	0	613
8:15 AM	0	152	19	0	31	85	0	0	88	0	154	0	0	0	0	0	529
8:30 AM	0	166	22	0	25	81	0	0	60	0	123	0	0	0	0	0	477
8:45 AM	0	146	20	0	37	85	0	0	59	2	134	0	0	0	0	0	483
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1423	163	0	292	716	0	1	636	3	1228	0	0	0	0	0	4462
APPROACH %'s :	0.00%	89.72%	10.28%	0.00%	28.94%	70.96%	0.00%	0.10%	34.07%	0.16%	65.77%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	786	84	0	170	386	0	0	360	1	695	0	0	0	0	0	2482
PEAK HR FACTOR :	0.000	0.885	0.677	0.000	0.817	0.955	0.000	0.000	0.957	0.250	0.843	0.000	0.000	0.000	0.000	0.000	0.990
		0.860				0.933				0.904							

NS/EW Streets:	Del Rosa Ave				Del Rosa Ave				SR-210 EB Ramps				SR-210 EB Ramps				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2.5	0.5	0	1	2	0	0	0.5	0.5	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	222	35	0	23	92	0	2	106	1	190	0	0	0	0	0	671
4:15 PM	0	248	33	0	32	76	0	0	91	0	198	0	0	0	0	0	678
4:30 PM	0	232	32	0	33	85	0	0	96	0	173	0	0	0	0	0	651
4:45 PM	0	223	20	0	31	99	0	0	94	0	154	0	0	0	0	0	621
5:00 PM	0	234	28	0	30	88	0	0	90	1	158	0	0	0	0	0	629
5:15 PM	0	234	26	0	22	92	0	1	97	1	165	0	0	0	0	0	638
5:30 PM	0	231	29	0	31	94	0	0	98	1	170	0	0	0	0	0	654
5:45 PM	0	205	26	0	36	103	0	0	98	0	149	0	0	0	0	0	617
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1829	229	0	238	729	0	3	770	4	1357	0	0	0	0	0	5159
APPROACH %'s :	0.00%	88.87%	11.13%	0.00%	24.54%	75.15%	0.00%	0.31%	36.13%	0.19%	63.68%	0.00%					
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	925	120	0	119	352	0	2	387	1	715	0	0	0	0	0	2621
PEAK HR FACTOR :	0.000	0.932	0.857	0.000	0.902	0.889	0.000	0.250	0.913	0.250	0.903	0.000	0.000	0.000	0.000	0.000	0.966
		0.930				0.910				0.928							

Prepared by National Data & Surveying Services

Del Rosa Ave & Date Pl

Peak Hour Turning Movement Count

ID: 19-06006-003
City: San Bernardino

Day: Tuesday
Date: 01/08/2019

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	NONE
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

SOUTHBOUND — Del Rosa Ave

AM	69	815	179	0	870	AM
NOON	0	0	0	0	0	NOON
PM	113	708	239	1	1050	PM

EASTBOUND — Date Pl

AM	NOON	PM		
125	0	240	⇦	
0	0	0	↶	0
112	0	126	↱	1
29	0	55	→	1
39	0	51	↳	0
AM	NOON	PM		

WESTBOUND — Date Pl

PM	NOON	AM		
206	0	153	↰	0
69	0	26	←	1
46	0	15	↰	1
0	0	0	↶	0
342	0	229	⇨	
PM	NOON	AM		

NORTHBOUND — Del Rosa Ave

PM	805	0	58	717	48	PM
NOON	0	0	0	0	0	NOON
AM	869	0	30	605	21	AM

	0	1	2	0
	↰	←	↑	↱

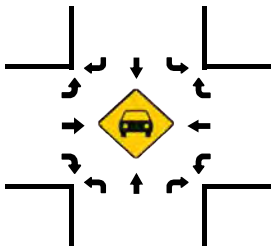
	0	2	1	0
	↳	↓	↱	↶

CONTROL

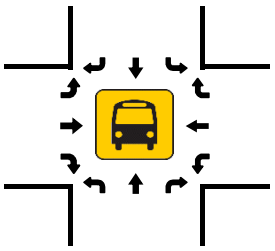
Signalized

TEV	2093 AM	0 NOON	2437 PM
PHF	0.98		0.96

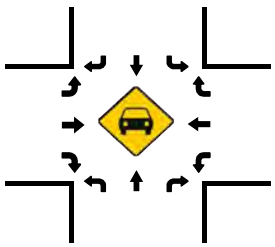
Total Vehicles (AM)



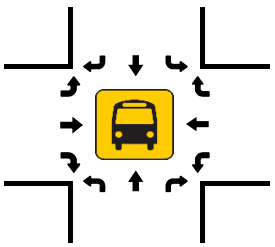
Total Vehicles (AM)



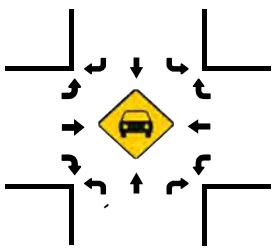
Total Vehicles (NOON)



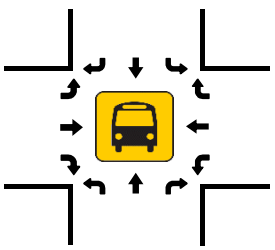
Total Vehicles (NOON)



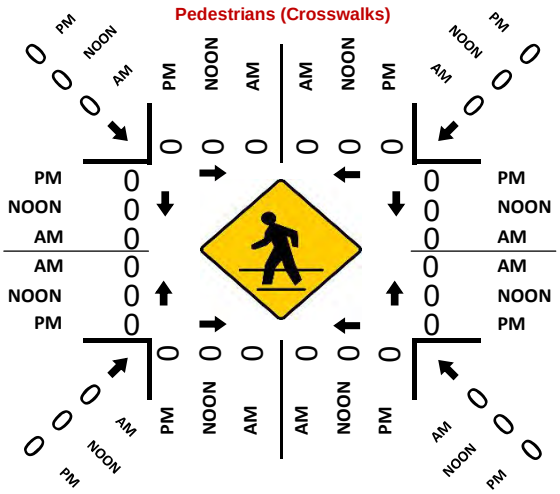
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Ave & Date Pl
City: San Bernardino
Control: Signalized

Project ID: 19-06006-003
Date: 1/8/2019

Total

NS/EW Streets:	Del Rosa Ave				Del Rosa Ave				Date Pl				Date Pl				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	137	1	0	21	163	13	0	29	1	6	0	2	1	30	0	405
7:15 AM	4	175	3	0	40	181	14	0	38	5	13	0	2	1	45	0	521
7:30 AM	6	157	5	0	40	183	22	0	31	9	3	0	2	13	35	0	506
7:45 AM	12	126	6	0	62	227	16	0	20	9	4	0	4	4	42	0	532
8:00 AM	8	147	7	0	37	224	17	0	23	6	19	0	7	8	31	0	534
8:15 AM	7	117	8	0	36	181	23	0	24	12	10	0	4	5	33	0	460
8:30 AM	9	123	7	0	45	136	25	0	21	9	9	0	9	9	43	0	445
8:45 AM	12	112	6	0	41	164	15	0	20	12	9	0	10	9	26	0	436
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	59	1094	43	0	322	1459	145	0	206	63	73	0	40	50	285	0	3839
APPROACH %'s :	4.93%	91.47%	3.60%	0.00%	16.72%	75.75%	7.53%	0.00%	60.23%	18.42%	21.35%	0.00%	10.67%	13.33%	76.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	30	605	21	0	179	815	69	0	112	29	39	0	15	26	153	0	2093
PEAK HR FACTOR :	0.625	0.864	0.750	0.000	0.722	0.898	0.784	0.000	0.737	0.806	0.513	0.000	0.536	0.500	0.850	0.000	0.980
	0.901				0.871				0.804				0.970				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	18	168	13	0	61	192	26	1	45	17	9	0	13	22	50	0	635
4:15 PM	12	192	9	0	63	172	37	0	27	10	10	0	10	13	60	0	615
4:30 PM	9	182	12	0	60	169	30	0	31	18	19	0	10	17	46	0	603
4:45 PM	19	175	14	0	55	175	20	0	23	10	13	0	13	17	50	0	584
5:00 PM	17	179	8	0	37	189	27	0	23	13	17	0	13	13	51	0	587
5:15 PM	17	203	10	0	43	182	35	0	24	14	16	0	5	12	38	0	599
5:30 PM	14	197	5	0	52	169	29	2	15	11	8	0	3	11	46	0	562
5:45 PM	17	160	4	0	63	173	27	0	32	9	11	0	4	14	36	0	550
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	123	1456	75	0	434	1421	231	3	220	102	103	0	71	119	377	0	4735
APPROACH %'s :	7.44%	88.03%	4.53%	0.00%	20.78%	68.02%	11.06%	0.14%	51.76%	24.00%	24.24%	0.00%	12.52%	20.99%	66.49%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	58	717	48	0	239	708	113	1	126	55	51	0	46	69	206	0	2437
PEAK HR FACTOR :	0.763	0.934	0.857	0.000	0.948	0.922	0.764	0.250	0.700	0.764	0.671	0.000	0.885	0.784	0.858	0.000	0.959
	0.966				0.947				0.817				0.944				

Prepared by National Data & Surveying Services

Del Rosa Ave & Highland Ave

Peak Hour Turning Movement Count

ID: 19-06006-004
City: San Bernardino

Day: Tuesday
Date: 01/08/2019

PEAK HOURS		COUNT PERIODS
AM	07:15 AM - 08:15 AM	AM
NOON	NONE	NOON
PM	04:30 PM - 05:30 PM	PM

AM	07:00 AM - 09:00 AM	AM
NOON	NONE	NOON
PM	04:00 PM - 06:00 PM	PM

Del Rosa Ave — SOUTHBOUND

AM	123	547	122	0	582	AM
NOON	0	0	0	0	0	NOON
PM	113	396	165	0	832	PM

Highland Ave — EASTBOUND

AM	NOON	PM		
478	0	696	⇦	
0	0	0	↶	0
51	0	174	↱	1
245	0	608	→	2
119	0	160	↳	0
AM	NOON	PM		

CONTROL

Signalized

TEV	2176 AM	0 NOON	2994 PM
PHF	0.99		0.96

Highland Ave — WESTBOUND

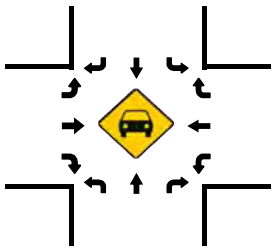
PM	NOON	AM		
160	0	135	↰	1
409	0	251	←	2
72	0	47	↰	1
0	0	0	↶	0
838	0	403	⇨	
PM	NOON	AM		

Del Rosa Ave — NORTHBOUND

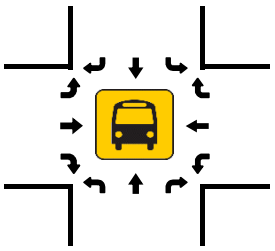
PM	628	0	174	498	65	PM
NOON	0	0	0	0	0	NOON
AM	713	0	104	396	36	AM

1 2 1 0 — 0 1 2 0

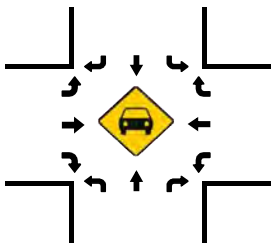
Total Vehicles (AM)



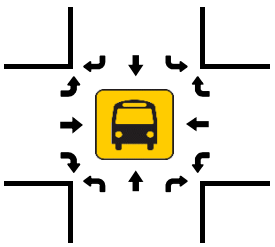
Total Vehicles (AM)



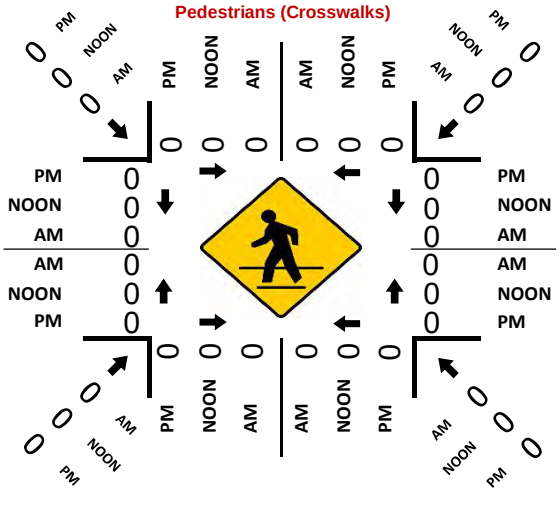
Total Vehicles (NOON)



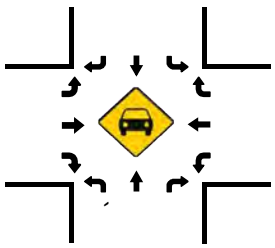
Total Vehicles (NOON)



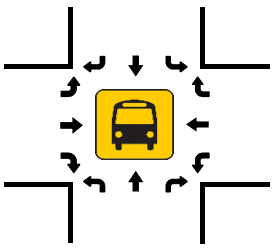
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Ave & Highland Ave
City: San Bernardino
Control: Signalized

Project ID: 19-06006-004
Date: 1/8/2019

Total

NS/EW Streets:	Del Rosa Ave				Del Rosa Ave				Highland Ave				Highland Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	16	83	6	0	16	130	12	0	7	33	22	0	8	38	35	0	406
7:15 AM	30	92	7	0	26	155	20	0	7	75	41	0	9	54	36	0	552
7:30 AM	28	112	11	0	23	127	25	0	14	62	30	0	16	65	36	0	549
7:45 AM	20	93	7	0	42	127	39	0	14	50	29	0	11	66	35	0	533
8:00 AM	26	99	11	0	31	138	39	0	16	58	19	0	11	66	28	0	542
8:15 AM	23	87	10	0	25	104	40	0	24	66	27	0	10	59	36	0	511
8:30 AM	32	80	14	0	19	84	34	0	13	66	20	0	13	64	29	0	468
8:45 AM	32	85	9	0	25	88	38	0	16	72	27	0	19	97	20	0	528
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	207	731	75	0	207	953	247	0	111	482	215	0	97	509	255	0	4089
APPROACH %'s :	20.43%	72.16%	7.40%	0.00%	14.71%	67.73%	17.56%	0.00%	13.74%	59.65%	26.61%	0.00%	11.27%	59.12%	29.62%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	104	396	36	0	122	547	123	0	51	245	119	0	47	251	135	0	2176
PEAK HR FACTOR :	0.867	0.884	0.818	0.000	0.726	0.882	0.788	0.000	0.797	0.817	0.726	0.000	0.734	0.951	0.938	0.000	0.986
	0.887				0.952				0.843				0.925				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	47	127	14	0	41	94	28	0	46	141	38	0	25	101	29	0	731
4:15 PM	50	113	12	0	46	109	20	0	34	129	43	0	20	112	27	0	715
4:30 PM	45	140	21	0	43	102	23	0	38	128	41	0	14	109	40	0	744
4:45 PM	35	106	19	0	38	100	30	0	42	170	30	0	23	94	47	0	734
5:00 PM	51	110	13	0	44	87	29	0	50	158	50	0	20	88	35	0	735
5:15 PM	43	142	12	0	40	107	31	0	44	152	39	0	15	118	38	0	781
5:30 PM	56	117	17	0	34	94	30	0	39	143	39	0	21	92	33	0	715
5:45 PM	43	111	15	0	40	110	28	0	27	121	41	0	14	81	43	0	674
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	370	966	123	0	326	803	219	0	320	1142	321	0	152	795	292	0	5829
APPROACH %'s :	25.36%	66.21%	8.43%	0.00%	24.18%	59.57%	16.25%	0.00%	17.95%	64.05%	18.00%	0.00%	12.27%	64.16%	23.57%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	174	498	65	0	165	396	113	0	174	608	160	0	72	409	160	0	2994
PEAK HR FACTOR :	0.853	0.877	0.774	0.000	0.938	0.925	0.911	0.000	0.870	0.894	0.800	0.000	0.783	0.867	0.851	0.000	0.958
	0.894				0.947				0.913				0.937				

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

City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	137	16	153	25	0	25	0	32	32	210
06:15 AM	163	15	178	22	0	22	0	29	29	229
06:30 AM	126	13	139	34	0	34	0	37	37	210
06:45 AM	171	34	205	45	0	45	0	25	25	275
Total	597	78	675	126	0	126	0	123	123	924
07:00 AM	164	31	195	51	0	51	0	38	38	284
07:15 AM	206	45	251	92	0	92	0	58	58	401
07:30 AM	226	52	278	79	0	79	0	70	70	427
07:45 AM	229	38	267	72	0	72	0	54	54	393
Total	825	166	991	294	0	294	0	220	220	1505
08:00 AM	211	34	245	68	0	68	0	48	48	361
08:15 AM	217	33	250	54	0	54	0	58	58	362
08:30 AM	208	35	243	82	0	82	0	75	75	400
08:45 AM	249	54	303	90	0	90	0	96	96	489
Total	885	156	1041	294	0	294	0	277	277	1612
Grand Total	2307	400	2707	714	0	714	0	620	620	4041
Apprch %	85.2	14.8		100	0		0	100		
Total %	57.1	9.9	67	17.7	0	17.7	0	15.3	15.3	
Passenger Vehicles	2237	385	2622	642	0	642	0	589	589	3853
% Passenger Vehicles	97	96.2	96.9	89.9	0	89.9	0	95	95	95.3
Large 2 Axle Vehicles	61	14	75	66	0	66	0	27	27	168
% Large 2 Axle Vehicles	2.6	3.5	2.8	9.2	0	9.2	0	4.4	4.4	4.2
3 Axle Vehicles	5	0	5	2	0	2	0	3	3	10
% 3 Axle Vehicles	0.2	0	0.2	0.3	0	0.3	0	0.5	0.5	0.2
4+ Axle Trucks	4	1	5	4	0	4	0	1	1	10
% 4+ Axle Trucks	0.2	0.2	0.2	0.6	0	0.6	0	0.2	0.2	0.2

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	211	34	245	68	0	68	0	48	48	361
08:15 AM	217	33	250	54	0	54	0	58	58	362
08:30 AM	208	35	243	82	0	82	0	75	75	400
08:45 AM	**249**	**54**	**303**	**90**	0	**90**	0	**96**	**96**	**489**
Total Volume	885	156	1041	294	0	294	0	277	277	1612
% App. Total	85	15		100	0		0	100		
PHF	.889	.722	.859	.817	.000	.817	.000	.721	.721	.824

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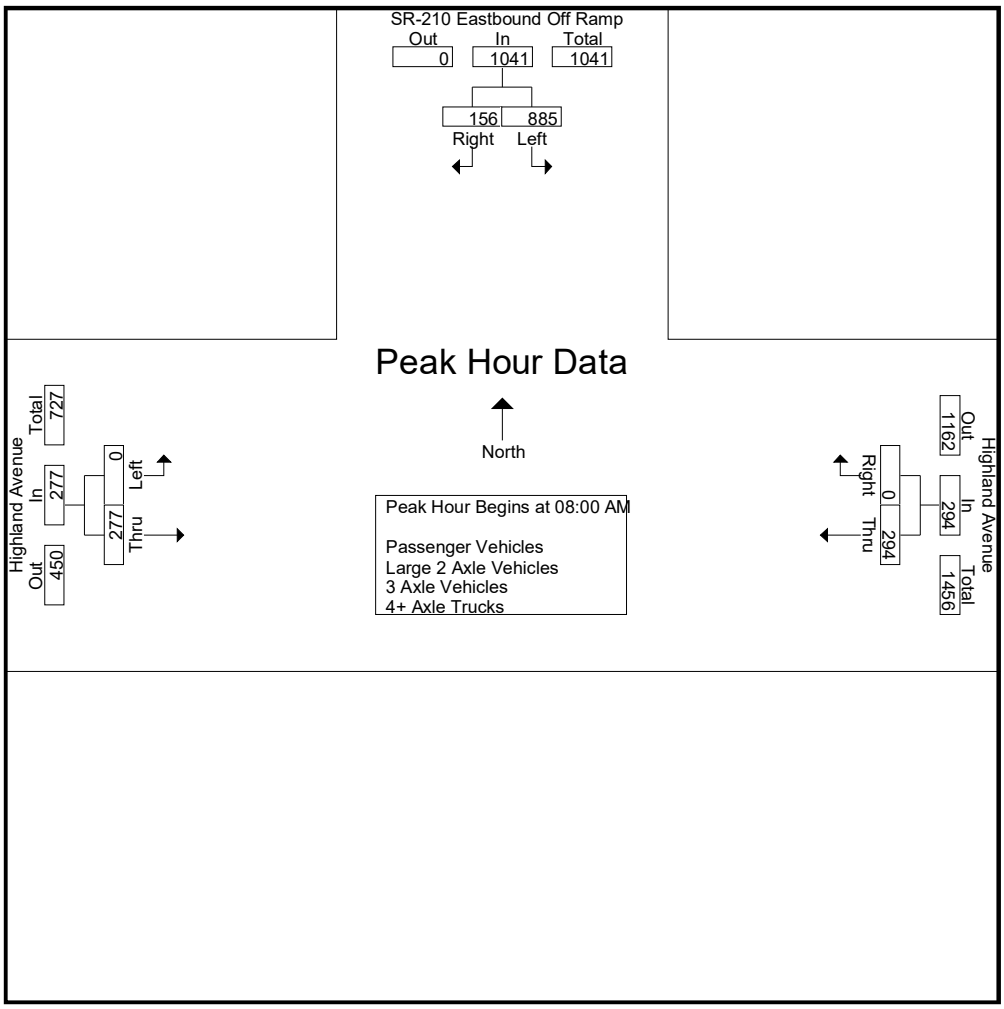
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			08:00 AM		
+0 mins.	206	45	251	**92**	0	**92**	0	48	48
+15 mins.	226	**52**	**278**	79	0	79	0	58	58
+30 mins.	**229**	38	267	72	0	72	0	75	75
+45 mins.	211	34	245	68	0	68	0	**96**	**96**
Total Volume	872	169	1041	311	0	311	0	277	277
% App. Total	83.8	16.2		100	0		0	100	
PHF	.952	.813	.936	.845	.000	.845	.000	.721	.721

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City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	132	14	146	22	0	22	0	32	32	200
06:15 AM	158	12	170	20	0	20	0	27	27	217
06:30 AM	118	13	131	29	0	29	0	34	34	194
06:45 AM	166	34	200	40	0	40	0	24	24	264
Total	574	73	647	111	0	111	0	117	117	875
07:00 AM	159	29	188	48	0	48	0	36	36	272
07:15 AM	197	43	240	85	0	85	0	54	54	379
07:30 AM	219	51	270	71	0	71	0	65	65	406
07:45 AM	228	37	265	67	0	67	0	54	54	386
Total	803	160	963	271	0	271	0	209	209	1443
08:00 AM	205	32	237	60	0	60	0	44	44	341
08:15 AM	204	32	236	46	0	46	0	53	53	335
08:30 AM	206	35	241	73	0	73	0	73	73	387
08:45 AM	245	53	298	81	0	81	0	93	93	472
Total	860	152	1012	260	0	260	0	263	263	1535
Grand Total	2237	385	2622	642	0	642	0	589	589	3853
Apprch %	85.3	14.7		100	0		0	100		
Total %	58.1	10	68.1	16.7	0	16.7	0	15.3	15.3	

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	205	32	237	60	0	60	0	44	44	341
08:15 AM	204	32	236	46	0	46	0	53	53	335
08:30 AM	206	35	241	73	0	73	0	73	73	387
08:45 AM	**245**	**53**	**298**	**81**	0	**81**	0	**93**	**93**	**472**
Total Volume	860	152	1012	260	0	260	0	263	263	1535
% App. Total	85	15		100	0		0	100		
PHF	.878	.717	.849	.802	.000	.802	.000	.707	.707	.813

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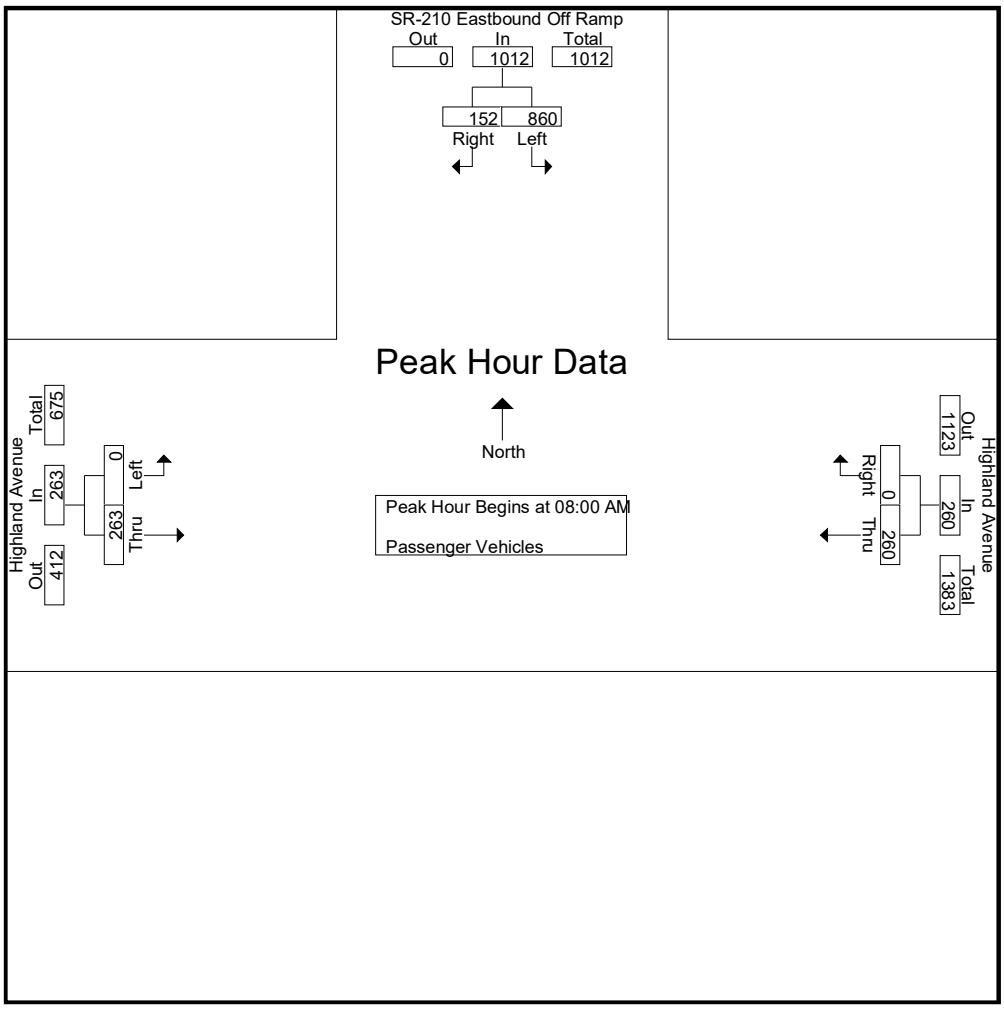
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	205	32	237	60	0	60	0	44	44
+15 mins.	204	32	236	46	0	46	0	53	53
+30 mins.	206	35	241	73	0	73	0	73	73
+45 mins.	**245**	**53**	**298**	**81**	0	**81**	0	**93**	**93**
Total Volume	860	152	1012	260	0	260	0	263	263
% App. Total	85	15		100	0		0	100	
PHF	.878	.717	.849	.802	.000	.802	.000	.707	.707

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City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	3	2	5	3	0	3	0	0	0	8
06:15 AM	5	2	7	2	0	2	0	2	2	11
06:30 AM	8	0	8	3	0	3	0	3	3	14
06:45 AM	3	0	3	5	0	5	0	0	0	8
Total	19	4	23	13	0	13	0	5	5	41
07:00 AM	5	2	7	3	0	3	0	2	2	12
07:15 AM	9	2	11	5	0	5	0	4	4	20
07:30 AM	4	1	5	7	0	7	0	5	5	17
07:45 AM	1	1	2	5	0	5	0	0	0	7
Total	19	6	25	20	0	20	0	11	11	56
08:00 AM	4	2	6	8	0	8	0	3	3	17
08:15 AM	13	1	14	8	0	8	0	5	5	27
08:30 AM	2	0	2	9	0	9	0	2	2	13
08:45 AM	4	1	5	8	0	8	0	1	1	14
Total	23	4	27	33	0	33	0	11	11	71
Grand Total	61	14	75	66	0	66	0	27	27	168
Apprch %	81.3	18.7		100	0		0	100		
Total %	36.3	8.3	44.6	39.3	0	39.3	0	16.1	16.1	

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	4	**2**	6	8	0	8	0	3	3	17
08:15 AM	**13**	1	**14**	8	0	8	0	**5**	**5**	**27**
08:30 AM	2	0	2	**9**	0	**9**	0	2	2	13
08:45 AM	4	1	5	8	0	8	0	1	1	14
Total Volume	23	4	27	33	0	33	0	11	11	71
% App. Total	85.2	14.8		100	0		0	100		
PHF	.442	.500	.482	.917	.000	.917	.000	.550	.550	.657

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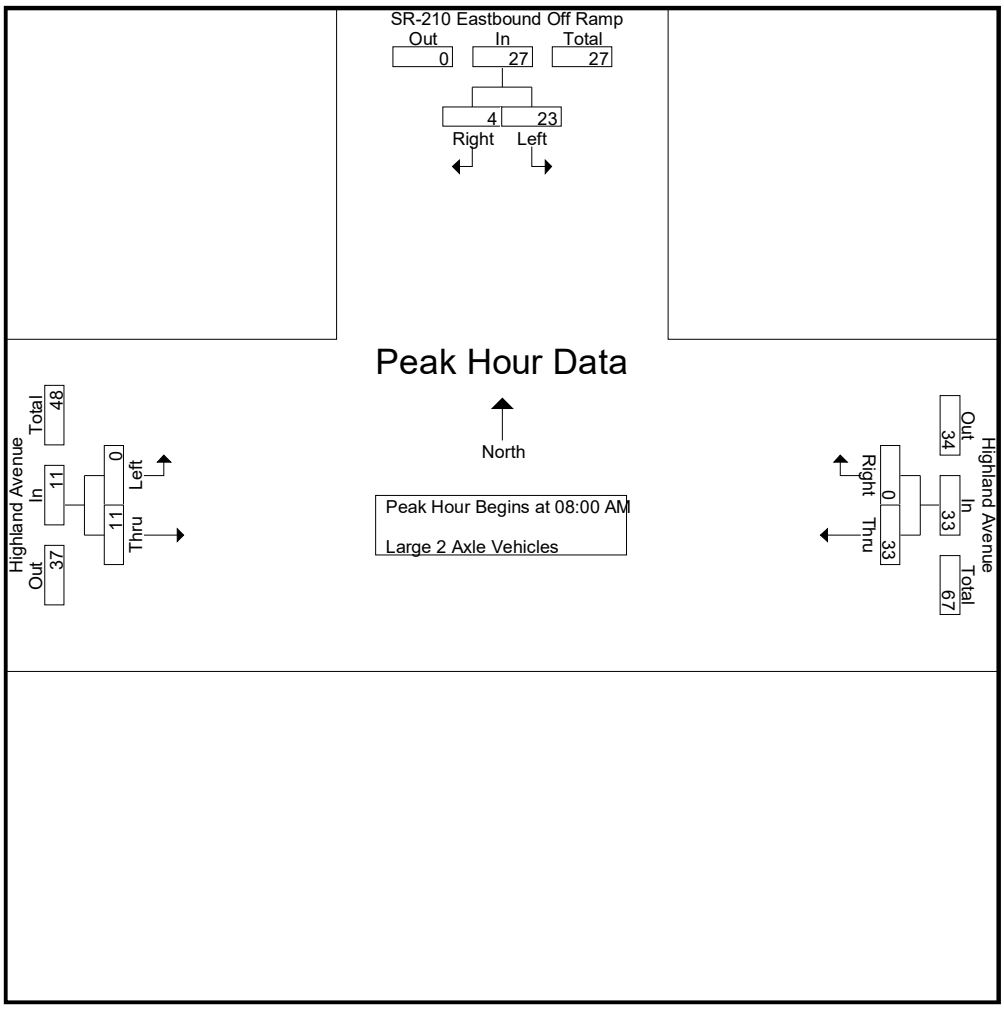
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	4	**2**	6	8	0	8	0	3	3
+15 mins.	**13**	1	**14**	8	0	8	0	**5**	**5**
+30 mins.	2	0	2	**9**	0	**9**	0	2	2
+45 mins.	4	1	5	8	0	8	0	1	1
Total Volume	23	4	27	33	0	33	0	11	11
% App. Total	85.2	14.8		100	0		0	100	
PHF	.442	.500	.482	.917	.000	.917	.000	.550	.550

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City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- 3 Axle Vehicles

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	1	0	1	0	0	0	1
06:45 AM	1	0	1	0	0	0	0	0	0	1
Total	1	0	1	1	0	1	0	0	0	2
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	2	0	2	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	2	0	2	0	0	0	0	0	0	2
08:00 AM	2	0	2	0	0	0	0	1	1	3
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	1	0	1	0	2	2	3
Total	2	0	2	1	0	1	0	3	3	6
Grand Total	5	0	5	2	0	2	0	3	3	10
Apprch %	100	0		100	0		0	100		
Total %	50	0	50	20	0	20	0	30	30	

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	**2**	0	**2**	0	0	0	0	1	1	**3**
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	**1**	0	**1**	0	**2**	**2**	3
Total Volume	2	0	2	1	0	1	0	3	3	6
% App. Total	100	0		100	0		0	100		
PHF	.250	.000	.250	.250	.000	.250	.000	.375	.375	.500

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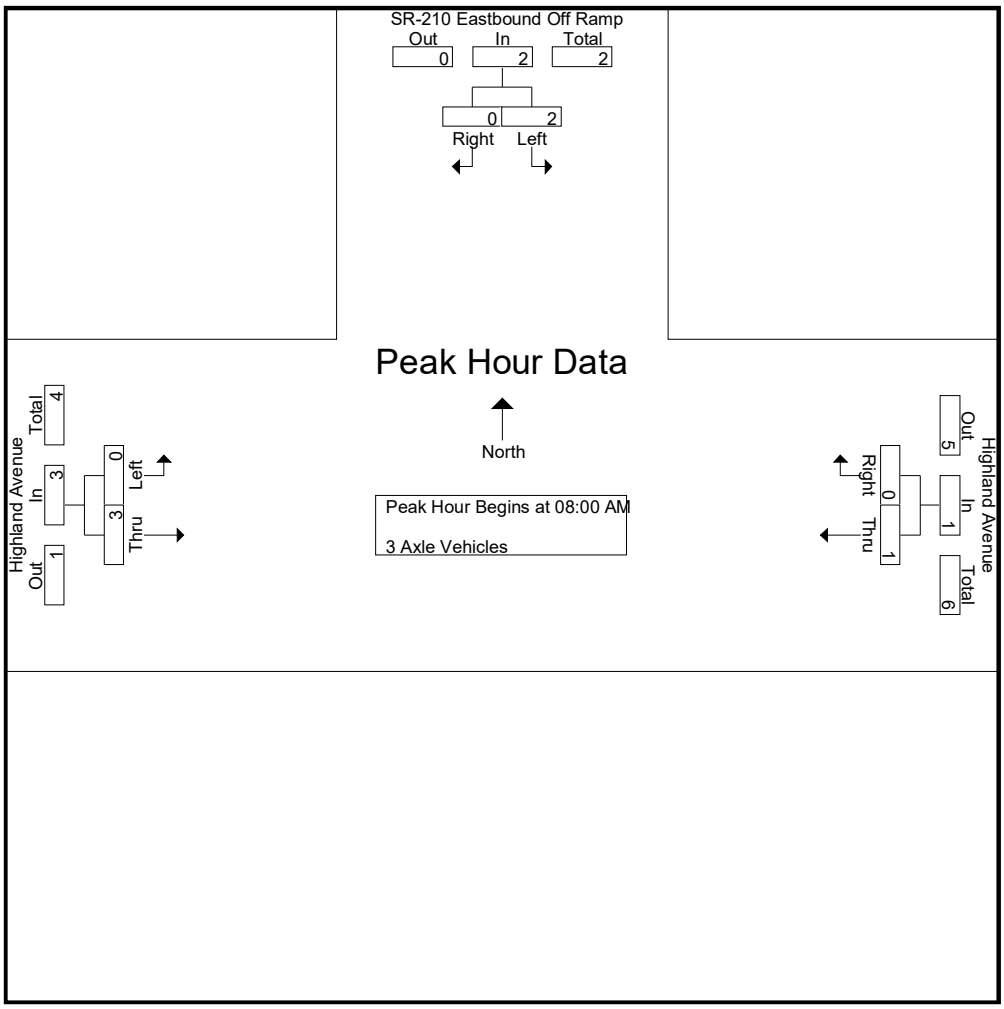
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	**2**	0	**2**	0	0	0	0	1	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	**1**	0	**1**	0	**2**	**2**
Total Volume	2	0	2	1	0	1	0	3	3
% App. Total	100	0		100	0		0	100	
PHF	.250	.000	.250	.250	.000	.250	.000	.375	.375

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City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- 4+ Axle Trucks

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	2	0	2	0	0	0	0	0	0	2
06:15 AM	0	1	1	0	0	0	0	0	0	1
06:30 AM	0	0	0	1	0	1	0	0	0	1
06:45 AM	1	0	1	0	0	0	0	1	1	2
Total	3	1	4	1	0	1	0	1	1	6
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	2	0	2	0	0	0	2
07:30 AM	1	0	1	1	0	1	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	3	0	3	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	4	1	5	4	0	4	0	1	1	10
Apprch %	80	20		100	0		0	100		
Total %	40	10	50	40	0	40	0	10	10	

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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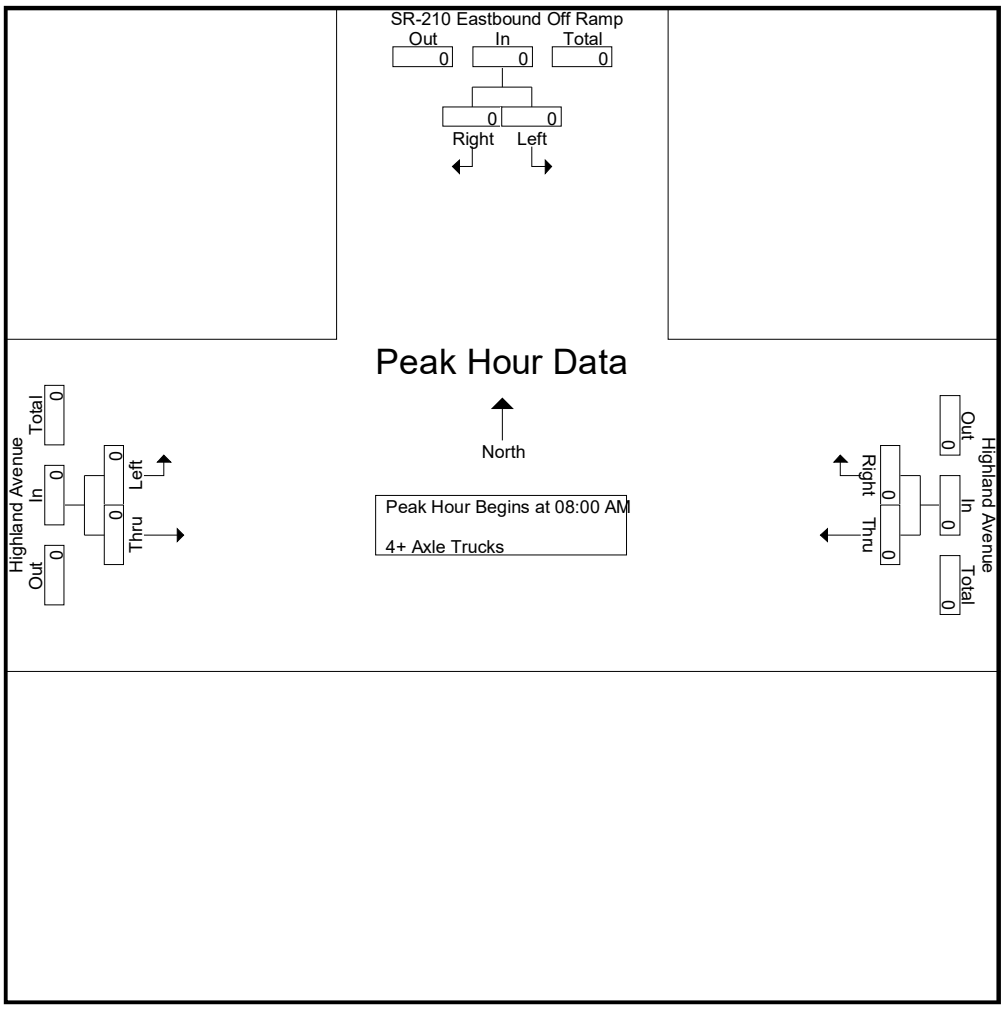
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018



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

	08:00 AM			08:00 AM			08:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	238	58	296	124	0	124	0	142	142	562
03:15 PM	227	46	273	129	0	129	0	144	144	546
03:30 PM	266	58	324	122	0	122	0	123	123	569
03:45 PM	223	36	259	136	0	136	0	136	136	531
Total	954	198	1152	511	0	511	0	545	545	2208
04:00 PM	160	32	192	129	0	129	0	150	150	471
04:15 PM	239	27	266	135	0	135	0	182	182	583
04:30 PM	234	39	273	131	0	131	0	172	172	576
04:45 PM	254	38	292	133	0	133	0	175	175	600
Total	887	136	1023	528	0	528	0	679	679	2230
05:00 PM	268	40	308	129	0	129	0	175	175	612
05:15 PM	263	37	300	153	0	153	0	172	172	625
05:30 PM	260	38	298	108	0	108	0	166	166	572
05:45 PM	267	44	311	115	0	115	0	167	167	593
Total	1058	159	1217	505	0	505	0	680	680	2402
Grand Total	2899	493	3392	1544	0	1544	0	1904	1904	6840
Apprch %	85.5	14.5		100	0		0	100		
Total %	42.4	7.2	49.6	22.6	0	22.6	0	27.8	27.8	
Passenger Vehicles	2865	481	3346	1469	0	1469	0	1875	1875	6690
% Passenger Vehicles	98.8	97.6	98.6	95.1	0	95.1	0	98.5	98.5	97.8
Large 2 Axle Vehicles	26	12	38	68	0	68	0	26	26	132
% Large 2 Axle Vehicles	0.9	2.4	1.1	4.4	0	4.4	0	1.4	1.4	1.9
3 Axle Vehicles	4	0	4	1	0	1	0	2	2	7
% 3 Axle Vehicles	0.1	0	0.1	0.1	0	0.1	0	0.1	0.1	0.1
4+ Axle Trucks	4	0	4	6	0	6	0	1	1	11
% 4+ Axle Trucks	0.1	0	0.1	0.4	0	0.4	0	0.1	0.1	0.2

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	234	39	273	131	0	131	0	172	172	576
04:45 PM	254	38	292	133	0	133	0	**175**	**175**	600
05:00 PM	**268**	**40**	**308**	129	0	129	0	175	175	612
05:15 PM	263	37	300	**153**	0	**153**	0	172	172	**625**
Total Volume	1019	154	1173	546	0	546	0	694	694	2413
% App. Total	86.9	13.1		100	0		0	100		
PHF	.951	.963	.952	.892	.000	.892	.000	.991	.991	.965

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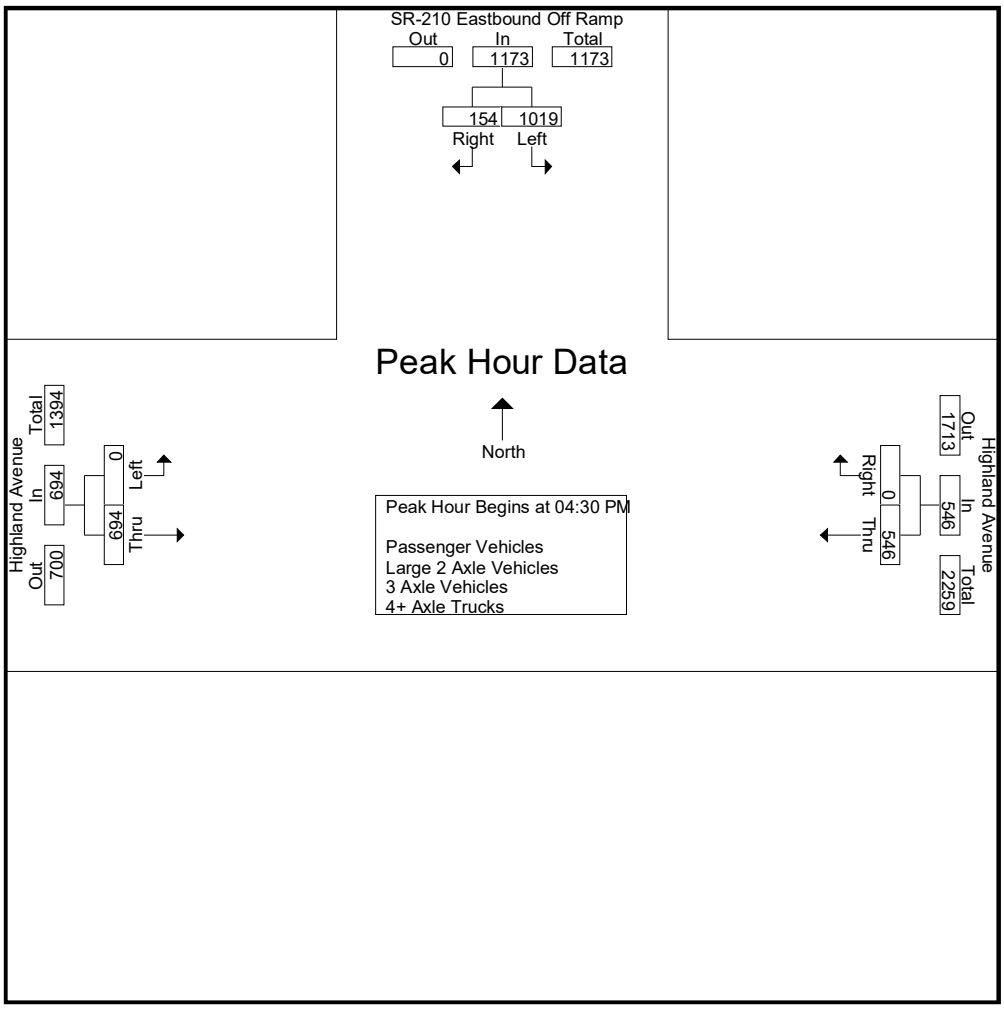
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:30 PM			04:15 PM		
+0 mins.	**268**	40	308	131	0	131	0	**182**	**182**
+15 mins.	263	37	300	133	0	133	0	172	172
+30 mins.	260	38	298	129	0	129	0	175	175
+45 mins.	267	**44**	**311**	**153**	0	**153**	0	175	175
Total Volume	1058	159	1217	546	0	546	0	704	704
% App. Total	86.9	13.1		100	0		0	100	
PHF	.987	.903	.978	.892	.000	.892	.000	.967	.967

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City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	236	57	293	122	0	122	0	139	139	554
03:15 PM	220	46	266	128	0	128	0	142	142	536
03:30 PM	262	57	319	119	0	119	0	122	122	560
03:45 PM	221	30	251	130	0	130	0	134	134	515
Total	939	190	1129	499	0	499	0	537	537	2165
04:00 PM	154	30	184	120	0	120	0	146	146	450
04:15 PM	235	27	262	126	0	126	0	177	177	565
04:30 PM	232	39	271	123	0	123	0	170	170	564
04:45 PM	253	37	290	124	0	124	0	171	171	585
Total	874	133	1007	493	0	493	0	664	664	2164
05:00 PM	265	40	305	124	0	124	0	174	174	603
05:15 PM	263	37	300	145	0	145	0	172	172	617
05:30 PM	257	38	295	102	0	102	0	162	162	559
05:45 PM	267	43	310	106	0	106	0	166	166	582
Total	1052	158	1210	477	0	477	0	674	674	2361
Grand Total	2865	481	3346	1469	0	1469	0	1875	1875	6690
Apprch %	85.6	14.4		100	0		0	100		
Total %	42.8	7.2	50	22	0	22	0	28	28	

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	232	39	271	123	0	123	0	170	170	564
04:45 PM	253	37	290	124	0	124	0	171	171	585
05:00 PM	**265**	**40**	**305**	124	0	124	0	**174**	**174**	603
05:15 PM	263	37	300	**145**	0	**145**	0	172	172	**617**
Total Volume	1013	153	1166	516	0	516	0	687	687	2369
% App. Total	86.9	13.1		100	0		0	100		
PHF	.956	.956	.956	.890	.000	.890	.000	.987	.987	.960

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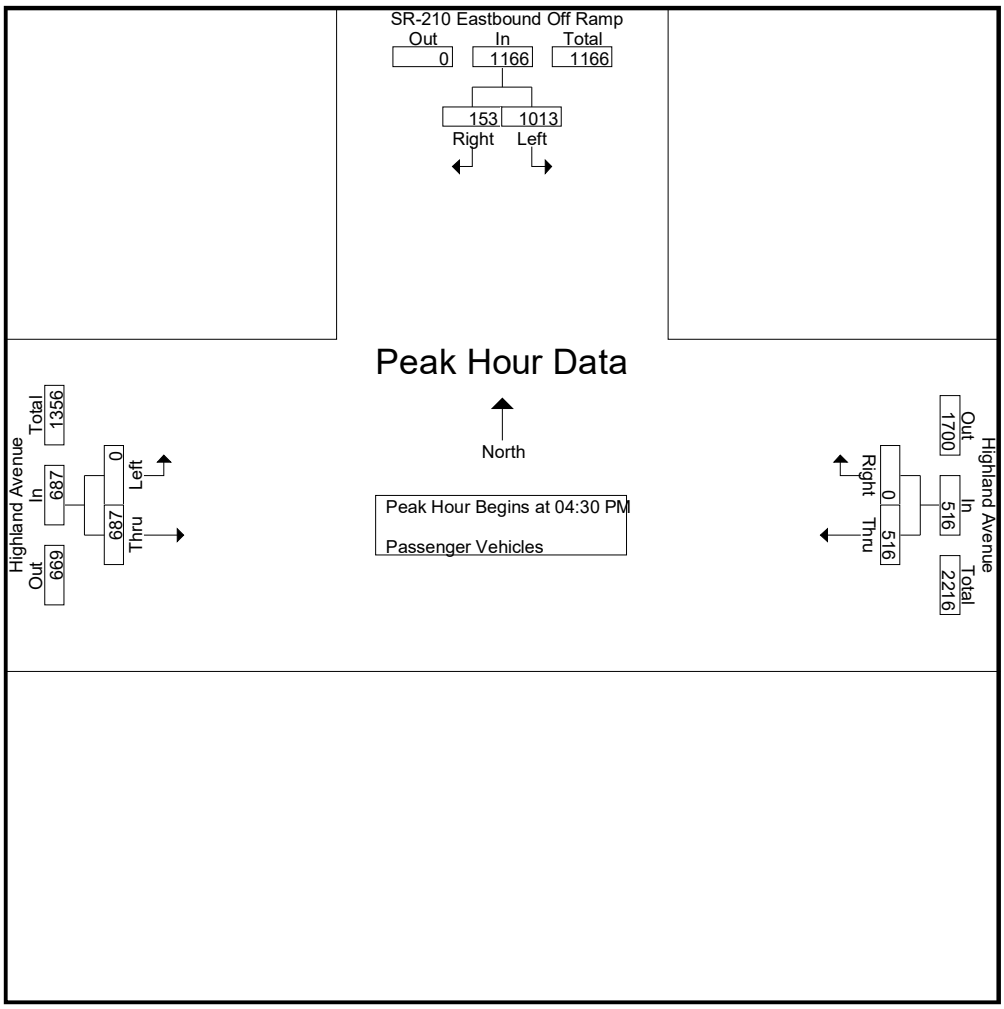
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018



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

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	232	39	271	123	0	123	0	170	170
+15 mins.	253	37	290	124	0	124	0	171	171
+30 mins.	**265**	**40**	**305**	124	0	124	0	**174**	**174**
+45 mins.	263	37	300	**145**	0	**145**	0	172	172
Total Volume	1013	153	1166	516	0	516	0	687	687
% App. Total	86.9	13.1		100	0		0	100	
PHF	.956	.956	.956	.890	.000	.890	.000	.987	.987

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City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	2	1	3	2	0	2	0	2	2	7
03:15 PM	6	0	6	1	0	1	0	2	2	9
03:30 PM	4	1	5	3	0	3	0	1	1	9
03:45 PM	1	6	7	6	0	6	0	2	2	15
Total	13	8	21	12	0	12	0	7	7	40
04:00 PM	4	2	6	9	0	9	0	4	4	19
04:15 PM	2	0	2	5	0	5	0	5	5	12
04:30 PM	2	0	2	8	0	8	0	2	2	12
04:45 PM	1	1	2	9	0	9	0	3	3	14
Total	9	3	12	31	0	31	0	14	14	57
05:00 PM	3	0	3	5	0	5	0	1	1	9
05:15 PM	0	0	0	7	0	7	0	0	0	7
05:30 PM	1	0	1	5	0	5	0	3	3	9
05:45 PM	0	1	1	8	0	8	0	1	1	10
Total	4	1	5	25	0	25	0	5	5	35
Grand Total	26	12	38	68	0	68	0	26	26	132
Apprch %	68.4	31.6		100	0		0	100		
Total %	19.7	9.1	28.8	51.5	0	51.5	0	19.7	19.7	

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	2	0	2	8	0	8	0	2	2	12
04:45 PM	1	**1**	2	**9**	0	**9**	0	**3**	**3**	**14**
05:00 PM	**3**	0	**3**	5	0	5	0	1	1	9
05:15 PM	0	0	0	7	0	7	0	0	0	7
Total Volume	6	1	7	29	0	29	0	6	6	42
% App. Total	85.7	14.3		100	0		0	100		
PHF	.500	.250	.583	.806	.000	.806	.000	.500	.500	.750

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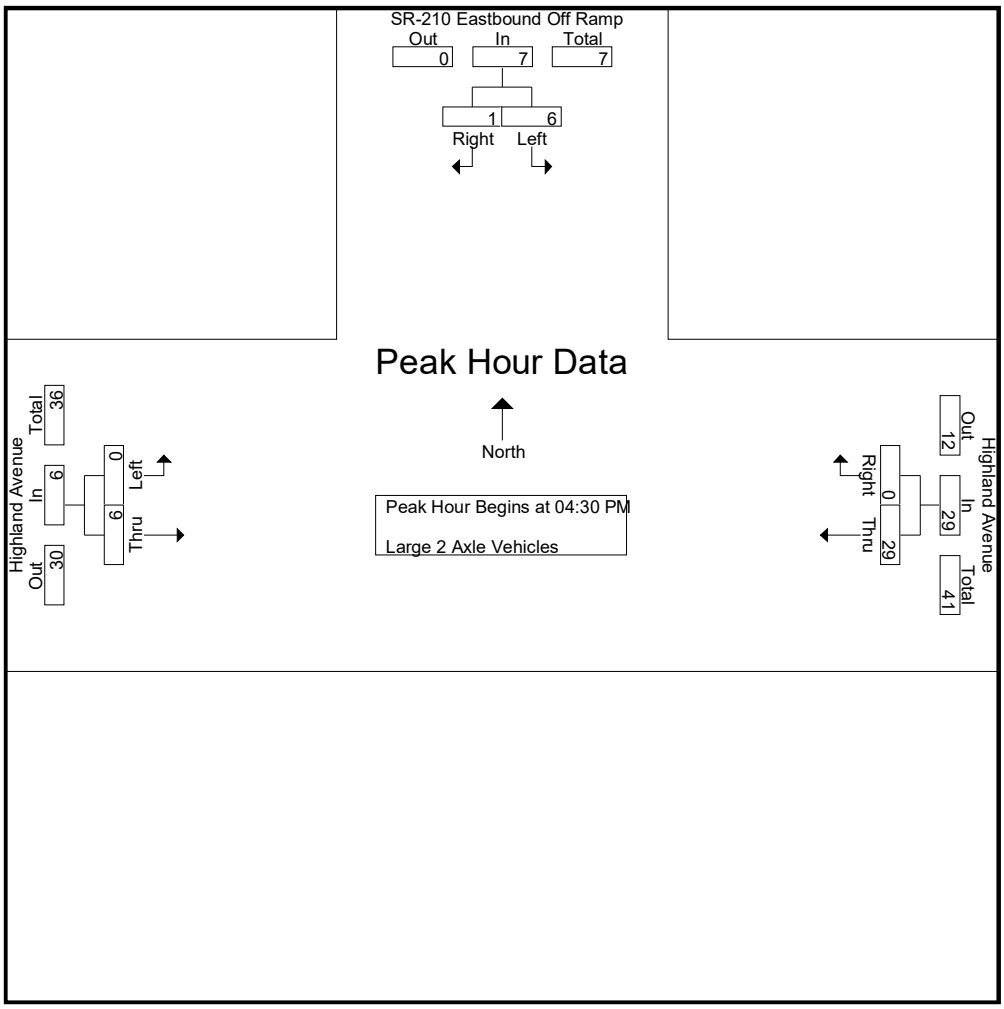
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018



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

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	2	0	2	8	0	8	0	2	2
+15 mins.	1	**1**	2	**9**	0	**9**	0	**3**	**3**
+30 mins.	**3**	0	**3**	5	0	5	0	1	1
+45 mins.	0	0	0	7	0	7	0	0	0
Total Volume	6	1	7	29	0	29	0	6	6
% App. Total	85.7	14.3		100	0		0	100	
PHF	.500	.250	.583	.806	.000	.806	.000	.500	.500

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City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- 3 Axle Vehicles

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
04:00 PM	2	0	2	0	0	0	0	0	0	2
04:15 PM	1	0	1	1	0	1	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	1	1	1
Total	3	0	3	1	0	1	0	1	1	5
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	0	1	0	0	0	0	1	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	0	0	0	1	1	2
Grand Total	4	0	4	1	0	1	0	2	2	7
Apprch %	100	0		100	0		0	100		
Total %	57.1	0	57.1	14.3	0	14.3	0	28.6	28.6	

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	**1**	**1**	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	1	1	1
% App. Total	0	0		0	0		0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250

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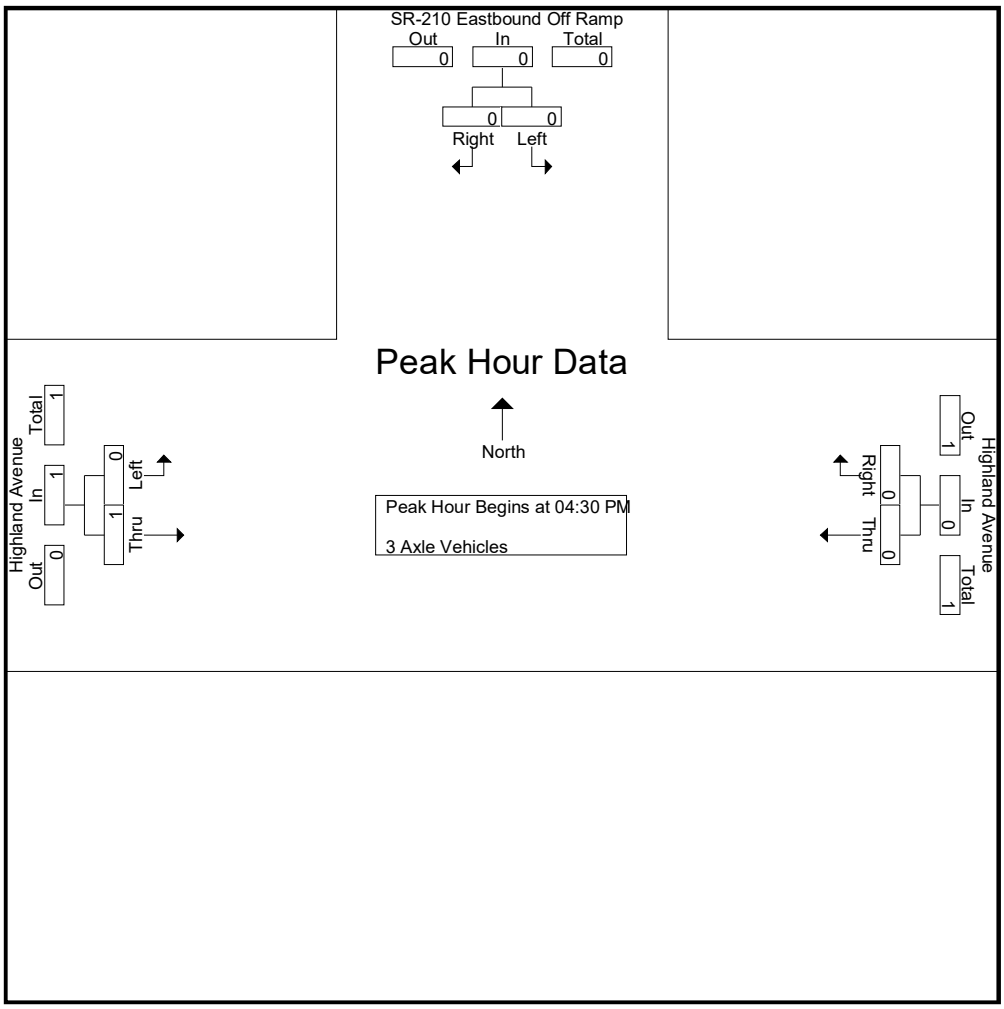
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018



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

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

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City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- 4+ Axle Trucks

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	1	1	1
03:15 PM	1	0	1	0	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	0	0	0	0	0
03:45 PM	1	0	1	0	0	0	0	0	0	1
Total	2	0	2	0	0	0	0	1	1	3
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	1	3	0	3	0	0	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	3	0	3	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	1	0	1	0	0	0	1
05:30 PM	1	0	1	1	0	1	0	0	0	2
05:45 PM	0	0	0	1	0	1	0	0	0	1
Total	1	0	1	3	0	3	0	0	0	4
Grand Total	4	0	4	6	0	6	0	1	1	11
Apprch %	100	0		100	0		0	100		
Total %	36.4	0	36.4	54.5	0	54.5	0	9.1	9.1	

	SR-210 Eastbound Off Ramp Southbound			Highland Avenue Westbound			Highland Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	**1**	0	**1**	0	0	0	**1**
Total Volume	0	0	0	1	0	1	0	0	0	1
% App. Total	0	0		100	0		0	0		
PHF	.000	.000	.000	.250	.000	.250	.000	.000	.000	.250

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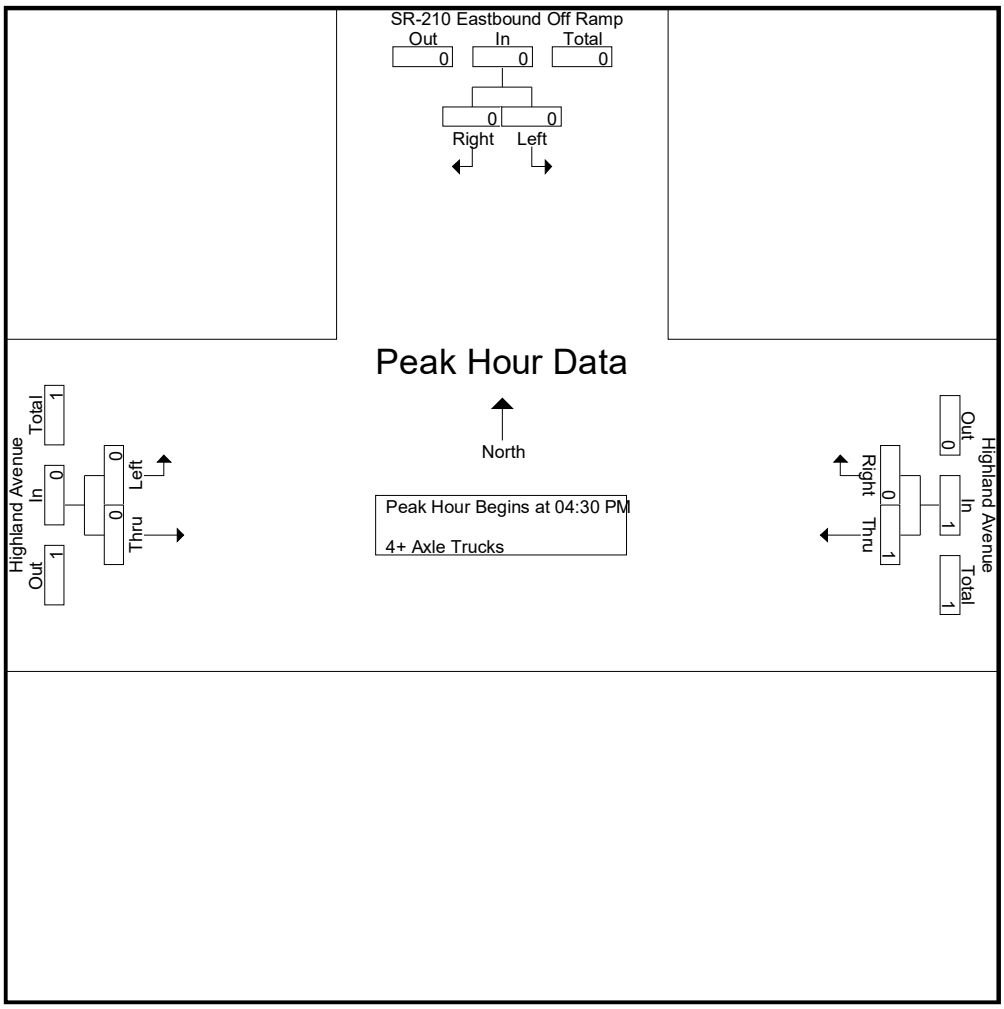
City of San Bernardino
N/S: SR-210 Eastbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 106_SBC_210E Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018



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

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

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City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

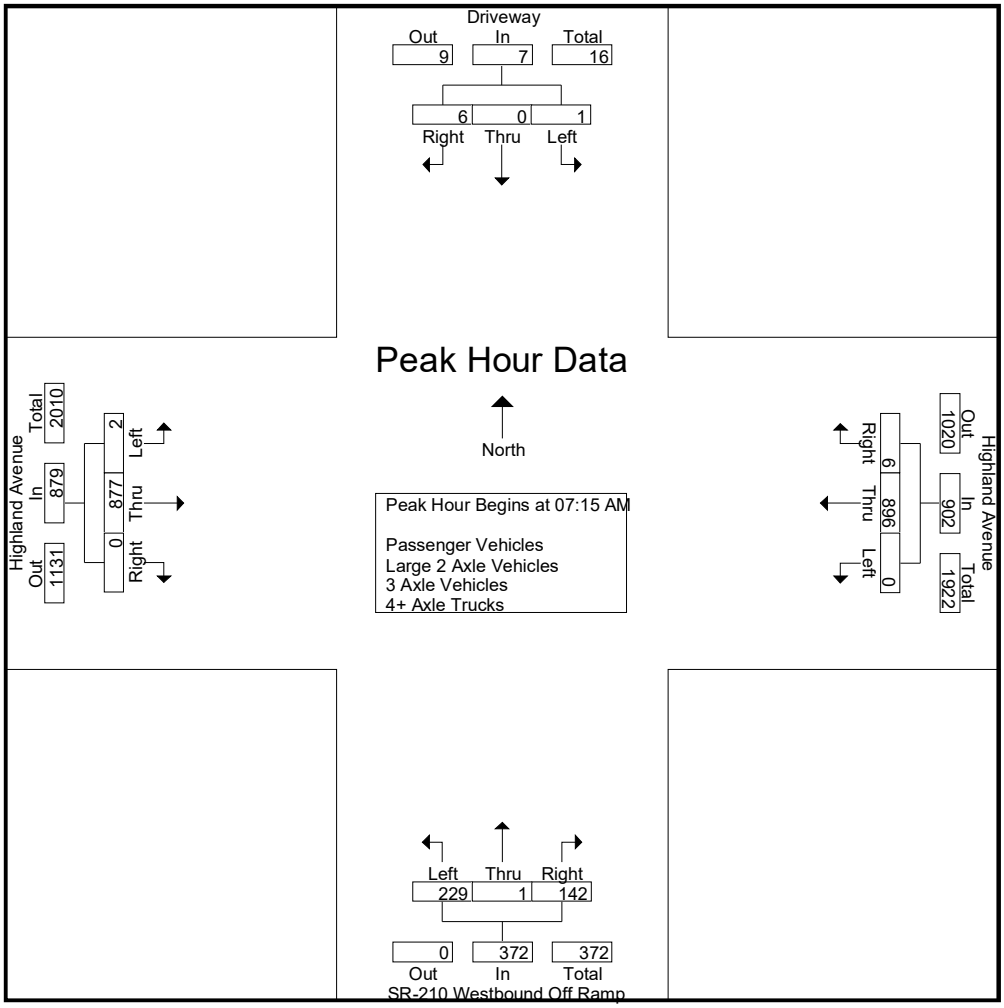
	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	1	1	0	84	0	84	35	0	11	46	0	122	0	122	253
06:15 AM	1	0	1	2	0	99	1	100	40	1	18	59	1	136	0	137	298
06:30 AM	1	0	0	1	0	141	3	144	43	0	15	58	1	123	0	124	327
06:45 AM	0	0	2	2	0	157	1	158	55	0	20	75	0	141	0	141	376
Total	2	0	4	6	0	481	5	486	173	1	64	238	2	522	0	524	1254
07:00 AM	0	0	2	2	0	229	1	230	63	0	19	82	2	158	0	160	474
07:15 AM	1	0	1	2	0	271	2	273	82	0	22	104	0	221	0	221	600
07:30 AM	0	0	2	2	0	222	2	224	60	1	33	94	0	236	0	236	556
07:45 AM	0	0	0	0	0	199	1	200	50	0	48	98	1	206	0	207	505
Total	1	0	5	6	0	921	6	927	255	1	122	378	3	821	0	824	2135
08:00 AM	0	0	3	3	0	204	1	205	37	0	39	76	1	214	0	215	499
08:15 AM	0	0	1	1	0	180	2	182	59	0	28	87	1	211	0	212	482
08:30 AM	1	0	2	3	0	195	4	199	47	0	43	90	5	239	0	244	536
08:45 AM	2	0	1	3	0	172	3	175	32	1	36	69	9	287	0	296	543
Total	3	0	7	10	0	751	10	761	175	1	146	322	16	951	0	967	2060
Grand Total	6	0	16	22	0	2153	21	2174	603	3	332	938	21	2294	0	2315	5449
Apprch %	27.3	0	72.7		0	99	1		64.3	0.3	35.4		0.9	99.1	0		
Total %	0.1	0	0.3	0.4	0	39.5	0.4	39.9	11.1	0.1	6.1	17.2	0.4	42.1	0	42.5	
Passenger Vehicles	6	0	16	22	0	2078	21	2099	598	3	328	929	21	2219	0	2240	5290
% Passenger Vehicles	100	0	100	100	0	96.5	100	96.6	99.2	100	98.8	99	100	96.7	0	96.8	97.1
Large 2 Axle Vehicles	0	0	0	0	0	61	0	61	5	0	4	9	0	64	0	64	134
% Large 2 Axle Vehicles	0	0	0	0	0	2.8	0	2.8	0.8	0	1.2	1	0	2.8	0	2.8	2.5
3 Axle Vehicles	0	0	0	0	0	4	0	4	0	0	0	0	0	7	0	7	11
% 3 Axle Vehicles	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0	0.3	0	0.3	0.2
4+ Axle Trucks	0	0	0	0	0	10	0	10	0	0	0	0	0	4	0	4	14
% 4+ Axle Trucks	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0.2	0	0.2	0.3

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	0	1	2	0	**271**	**2**	**273**	**82**	0	22	**104**	0	221	0	221	**600**
07:30 AM	0	0	2	2	0	222	2	224	60	**1**	33	94	0	**236**	0	**236**	556
07:45 AM	0	0	0	0	0	199	1	200	50	0	**48**	98	**1**	206	0	207	505
08:00 AM	0	0	**3**	**3**	0	204	1	205	37	0	39	76	1	214	0	215	499
Total Volume	1	0	6	7	0	896	6	902	229	1	142	372	2	877	0	879	2160
% App. Total	14.3	0	85.7		0	99.3	0.7		61.6	0.3	38.2		0.2	99.8	0		
PHF	.250	.000	.500	.583	.000	.827	.750	.826	.698	.250	.740	.894	.500	.929	.000	.931	.900

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

City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:00 AM				08:00 AM			
+0 mins.	0	0	**3**	**3**	0	229	1	230	63	0	19	82	1	214	0	215
+15 mins.	0	0	1	1	0	**271**	**2**	**273**	**82**	0	22	**104**	1	211	0	212
+30 mins.	1	0	2	3	0	222	2	224	60	**1**	33	94	5	239	0	244
+45 mins.	**2**	0	1	3	0	199	1	200	50	0	**48**	98	**9**	**287**	0	**296**
Total Volume	3	0	7	10	0	921	6	927	255	1	122	378	16	951	0	967
% App. Total	30	0	70		0	99.4	0.6		67.5	0.3	32.3		1.7	98.3	0	
PHF	.375	.000	.583	.833	.000	.850	.750	.849	.777	.250	.635	.909	.444	.828	.000	.817

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

City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	1	1	0	81	0	81	35	0	11	46	0	119	0	119	247
06:15 AM	1	0	1	2	0	92	1	93	40	1	17	58	1	131	0	132	285
06:30 AM	1	0	0	1	0	140	3	143	42	0	15	57	1	122	0	123	324
06:45 AM	0	0	2	2	0	153	1	154	55	0	20	75	0	135	0	135	366
Total	2	0	4	6	0	466	5	471	172	1	63	236	2	507	0	509	1222
07:00 AM	0	0	2	2	0	221	1	222	62	0	18	80	2	152	0	154	458
07:15 AM	1	0	1	2	0	260	2	262	82	0	21	103	0	211	0	211	578
07:30 AM	0	0	2	2	0	216	2	218	60	1	33	94	0	224	0	224	538
07:45 AM	0	0	0	0	0	190	1	191	49	0	47	96	1	204	0	205	492
Total	1	0	5	6	0	887	6	893	253	1	119	373	3	791	0	794	2066
08:00 AM	0	0	3	3	0	198	1	199	37	0	39	76	1	202	0	203	481
08:15 AM	0	0	1	1	0	171	2	173	58	0	28	86	1	200	0	201	461
08:30 AM	1	0	2	3	0	190	4	194	46	0	43	89	5	237	0	242	528
08:45 AM	2	0	1	3	0	166	3	169	32	1	36	69	9	282	0	291	532
Total	3	0	7	10	0	725	10	735	173	1	146	320	16	921	0	937	2002
Grand Total	6	0	16	22	0	2078	21	2099	598	3	328	929	21	2219	0	2240	5290
Apprch %	27.3	0	72.7		0	99	1		64.4	0.3	35.3		0.9	99.1	0		
Total %	0.1	0	0.3	0.4	0	39.3	0.4	39.7	11.3	0.1	6.2	17.6	0.4	41.9	0	42.3	

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	0	1	2	0	**260**	**2**	**262**	**82**	0	21	**103**	0	211	0	211	**578**
07:30 AM	0	0	2	2	0	216	2	218	60	**1**	33	94	0	**224**	0	**224**	538
07:45 AM	0	0	0	0	0	190	1	191	49	0	**47**	96	**1**	204	0	205	492
08:00 AM	0	0	**3**	**3**	0	198	1	199	37	0	39	76	1	202	0	203	481
Total Volume	1	0	6	7	0	864	6	870	228	1	140	369	2	841	0	843	2089
% App. Total	14.3	0	85.7		0	99.3	0.7		61.8	0.3	37.9		0.2	99.8	0		
PHF	.250	.000	.500	.583	.000	.831	.750	.830	.695	.250	.745	.896	.500	.939	.000	.941	.904

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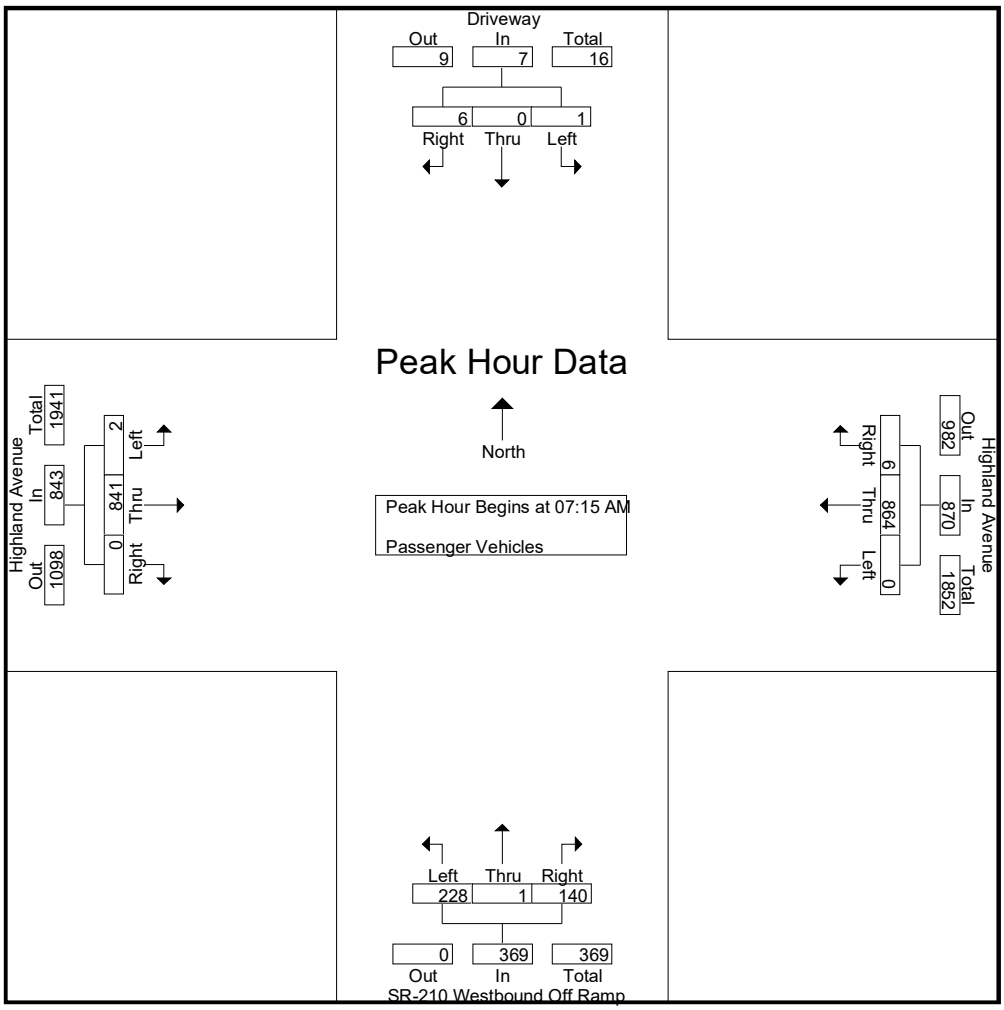
(951) 268-6268

City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**1**	0	1	2	0	**260**	**2**	**262**	**82**	0	21	**103**	0	211	0	211
+15 mins.	0	0	2	2	0	216	2	218	60	**1**	33	94	0	**224**	0	**224**
+30 mins.	0	0	0	0	0	190	1	191	49	0	**47**	96	**1**	204	0	205
+45 mins.	0	0	**3**	**3**	0	198	1	199	37	0	39	76	1	202	0	203
Total Volume	1	0	6	7	0	864	6	870	228	1	140	369	2	841	0	843
% App. Total	14.3	0	85.7		0	99.3	0.7		61.8	0.3	37.9		0.2	99.8	0	
PHF	.250	.000	.500	.583	.000	.831	.750	.830	.695	.250	.745	.896	.500	.939	.000	.941

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City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

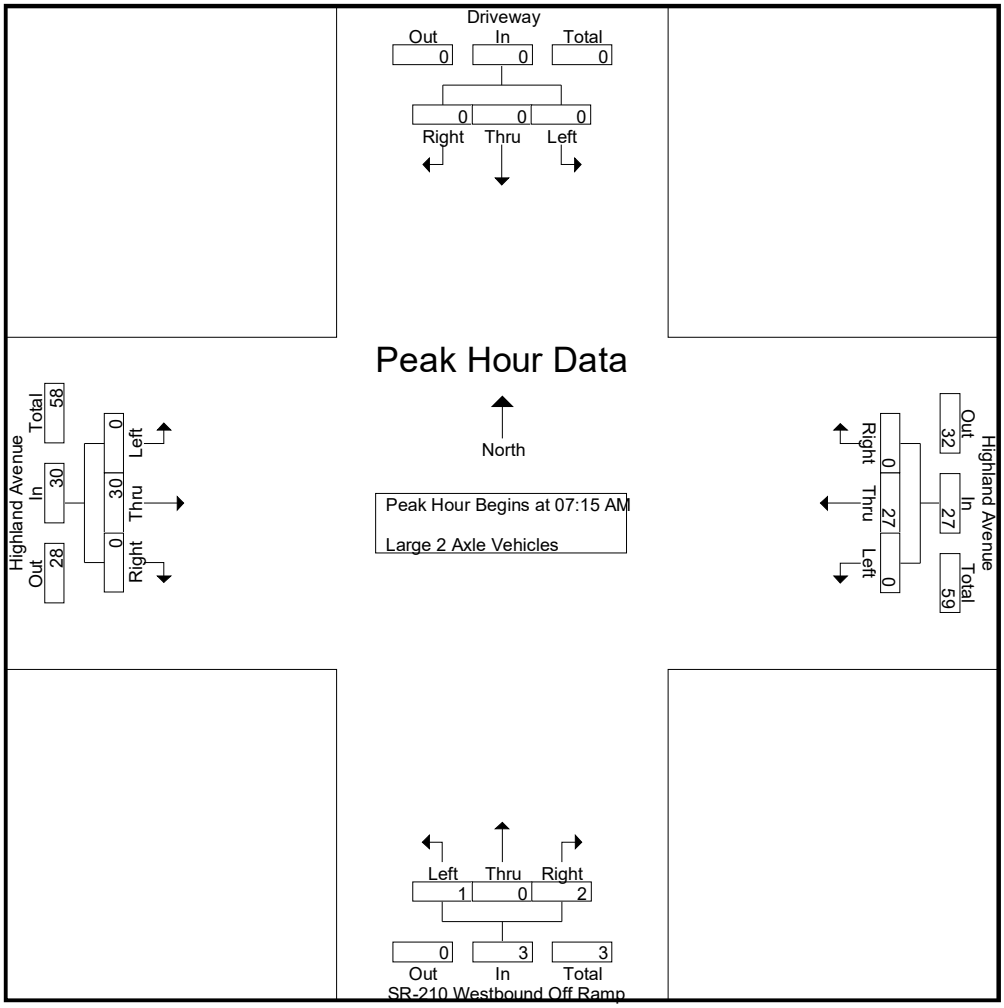
	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
06:15 AM	0	0	0	0	0	5	0	5	0	0	1	1	0	3	0	3	9
06:30 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
06:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5	8
Total	0	0	0	0	0	11	0	11	1	0	1	2	0	12	0	12	25
07:00 AM	0	0	0	0	0	7	0	7	1	0	1	2	0	6	0	6	15
07:15 AM	0	0	0	0	0	8	0	8	0	0	1	1	0	10	0	10	19
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	9	0	9	14
07:45 AM	0	0	0	0	0	9	0	9	1	0	1	2	0	1	0	1	12
Total	0	0	0	0	0	29	0	29	2	0	3	5	0	26	0	26	60
08:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	10	0	10	15
08:15 AM	0	0	0	0	0	7	0	7	1	0	0	1	0	11	0	11	19
08:30 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2	6
08:45 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	9
Total	0	0	0	0	0	21	0	21	2	0	0	2	0	26	0	26	49
Grand Total	0	0	0	0	0	61	0	61	5	0	4	9	0	64	0	64	134
Apprch %	0	0	0		0	100	0		55.6	0	44.4		0	100	0		
Total %	0	0	0	0	0	45.5	0	45.5	3.7	0	3	6.7	0	47.8	0	47.8	

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	8	0	8	0	0	**1**	1	0	**10**	0	**10**	**19**
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	9	0	9	14
07:45 AM	0	0	0	0	0	**9**	0	**9**	**1**	0	1	**2**	0	1	0	1	12
08:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	10	0	10	15
Total Volume	0	0	0	0	0	27	0	27	1	0	2	3	0	30	0	30	60
% App. Total	0	0	0		0	100	0		33.3	0	66.7		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.250	.000	.500	.375	.000	.750	.000	.750	.789

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

City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	8	0	8	0	0	**1**	1	0	**10**	0	**10**
+15 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	9	0	9
+30 mins.	0	0	0	0	0	**9**	0	**9**	**1**	0	1	**2**	0	1	0	1
+45 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	10	0	10
Total Volume	0	0	0	0	0	27	0	27	1	0	2	3	0	30	0	30
% App. Total	0	0	0		0	100	0		33.3	0	66.7		0	100	0	
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.250	.000	.500	.375	.000	.750	.000	.750

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City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
Grand Total	0	0	0	0	0	4	0	4	0	0	0	0	0	7	0	7	11
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	36.4	0	36.4	0	0	0	0	0	63.6	0	63.6	

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**2**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.625	.000	.625	.625

Counts Unlimited, Inc.
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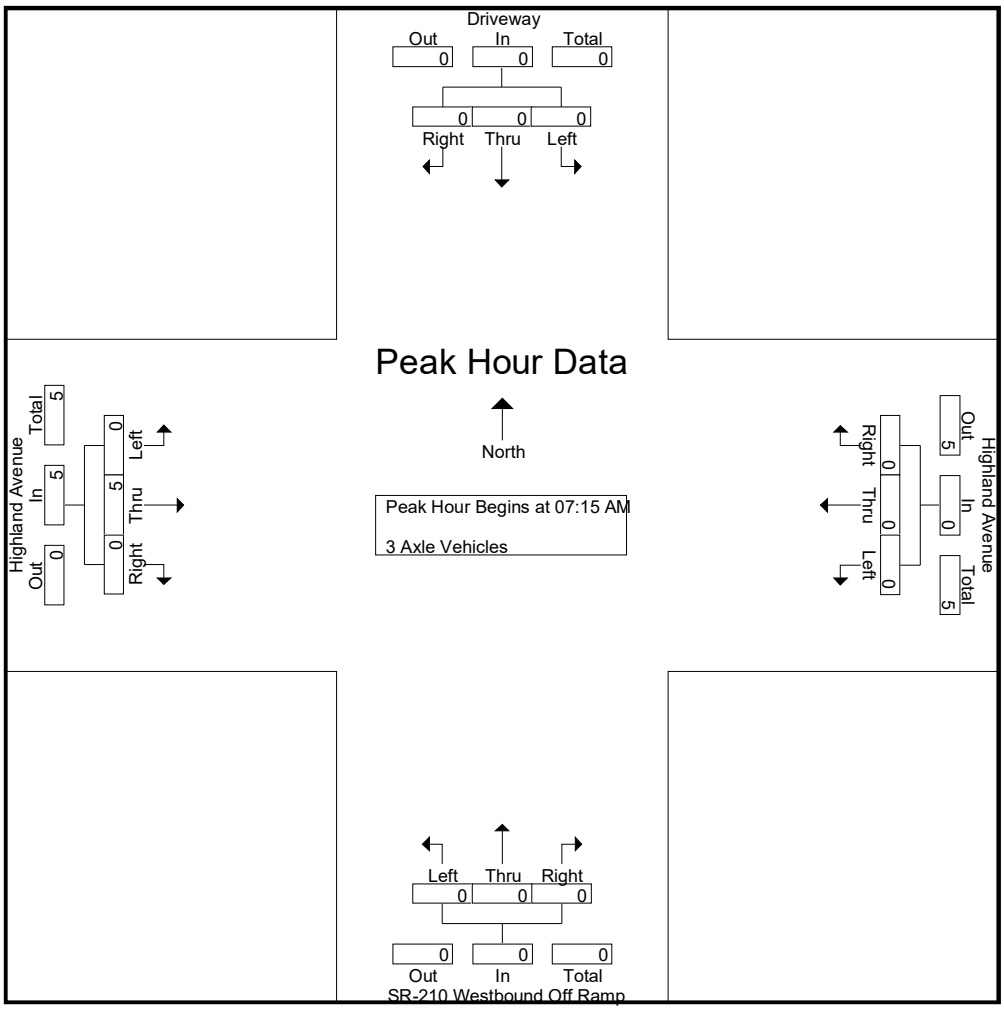
City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.625	.000	.625

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City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1	6
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Grand Total	0	0	0	0	0	10	0	10	0	0	0	0	0	4	0	4	14
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	71.4	0	71.4	0	0	0	0	0	28.6	0	28.6	

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0	**3**
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1	6
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.417	.000	.417	.000	.000	.000	.000	.000	.250	.000	.250	.500

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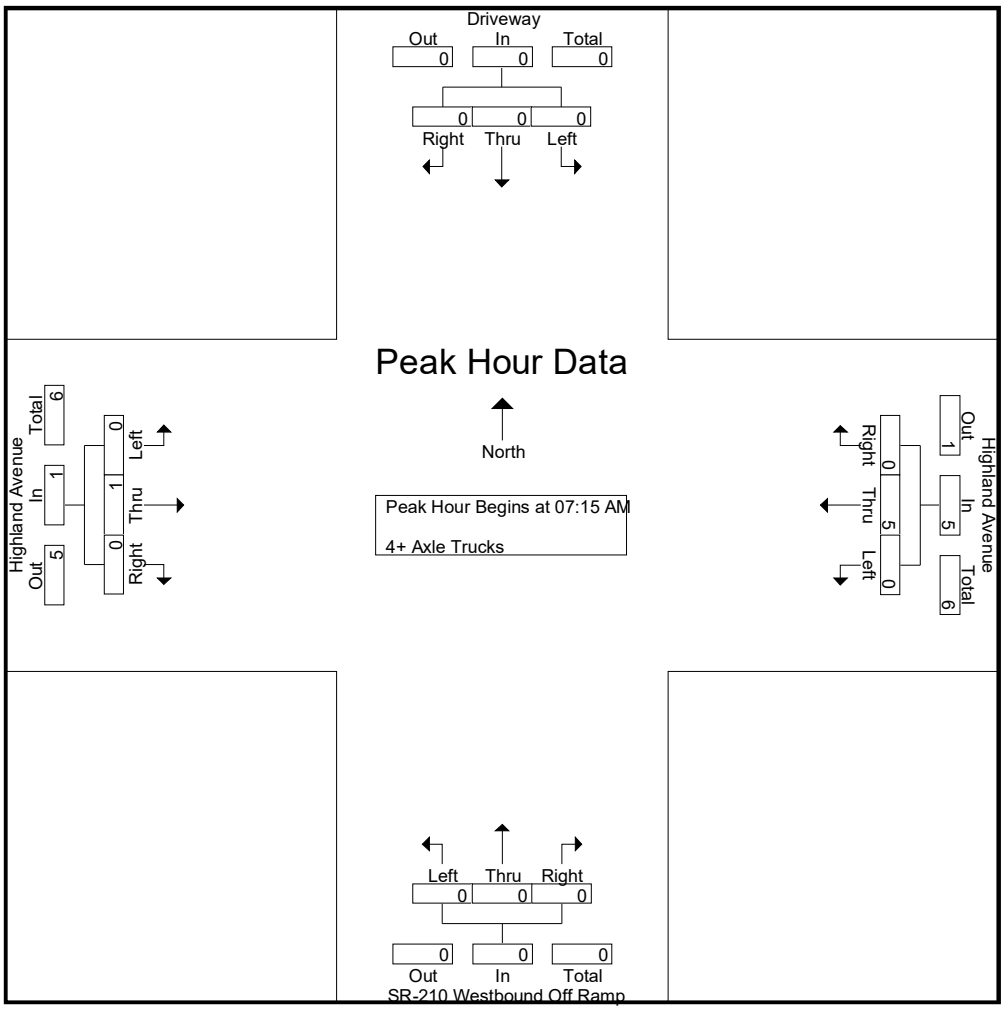
City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.417	.000	.417	.000	.000	.000	.000	.000	.250	.000	.250

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

City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	0	2	3	0	309	2	311	48	0	29	77	3	310	0	313	704
03:15 PM	1	0	3	4	1	332	1	334	53	1	33	87	5	295	1	301	726
03:30 PM	0	0	1	1	0	334	3	337	55	0	21	76	2	297	0	299	713
03:45 PM	0	0	4	4	0	348	1	349	59	1	24	84	3	294	1	298	735
Total	2	0	10	12	1	1323	7	1331	215	2	107	324	13	1196	2	1211	2878
04:00 PM	0	0	3	3	0	381	1	382	57	1	25	83	0	274	0	274	742
04:15 PM	0	0	1	1	0	397	1	398	62	0	29	91	6	319	0	325	815
04:30 PM	0	0	2	2	1	383	3	387	60	1	29	90	2	332	0	334	813
04:45 PM	2	0	5	7	0	333	1	334	93	0	33	126	3	356	0	359	826
Total	2	0	11	13	1	1494	6	1501	272	2	116	390	11	1281	0	1292	3196
05:00 PM	1	0	1	2	0	340	3	343	48	0	36	84	3	332	0	335	764
05:15 PM	0	0	5	5	0	364	1	365	57	0	26	83	3	331	0	334	787
05:30 PM	0	0	4	4	0	329	0	329	54	0	28	82	0	341	0	341	756
05:45 PM	0	0	3	3	0	283	1	284	72	1	36	109	1	293	1	295	691
Total	1	0	13	14	0	1316	5	1321	231	1	126	358	7	1297	1	1305	2998
Grand Total	5	0	34	39	2	4133	18	4153	718	5	349	1072	31	3774	3	3808	9072
Apprch %	12.8	0	87.2		0	99.5	0.4		67	0.5	32.6		0.8	99.1	0.1		
Total %	0.1	0	0.4	0.4	0	45.6	0.2	45.8	7.9	0.1	3.8	11.8	0.3	41.6	0	42	
Passenger Vehicles	5	0	34	39	2	4062	18	4082	716	5	348	1069	30	3725	2	3757	8947
% Passenger Vehicles	100	0	100	100	100	98.3	100	98.3	99.7	100	99.7	99.7	96.8	98.7	66.7	98.7	98.6
Large 2 Axle Vehicles	0	0	0	0	0	52	0	52	2	0	0	2	1	41	1	43	97
% Large 2 Axle Vehicles	0	0	0	0	0	1.3	0	1.3	0.3	0	0	0.2	3.2	1.1	33.3	1.1	1.1
3 Axle Vehicles	0	0	0	0	0	10	0	10	0	0	0	0	0	6	0	6	16
% 3 Axle Vehicles	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.2	0.2
4+ Axle Trucks	0	0	0	0	0	9	0	9	0	0	1	1	0	2	0	2	12
% 4+ Axle Trucks	0	0	0	0	0	0.2	0	0.2	0	0	0.3	0.1	0	0.1	0	0.1	0.1

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	1	1	0	**397**	1	**398**	62	0	29	91	**6**	319	0	325	815
04:30 PM	0	0	2	2	**1**	383	**3**	387	60	**1**	29	90	2	332	0	334	813
04:45 PM	**2**	0	**5**	**7**	0	333	1	334	**93**	0	33	**126**	3	**356**	0	**359**	**826**
05:00 PM	1	0	1	2	0	340	3	343	48	0	**36**	84	3	332	0	335	764
Total Volume	3	0	9	12	1	1453	8	1462	263	1	127	391	14	1339	0	1353	3218
% App. Total	25	0	75		0.1	99.4	0.5		67.3	0.3	32.5		1	99	0		
PHF	.375	.000	.450	.429	.250	.915	.667	.918	.707	.250	.882	.776	.583	.940	.000	.942	.974

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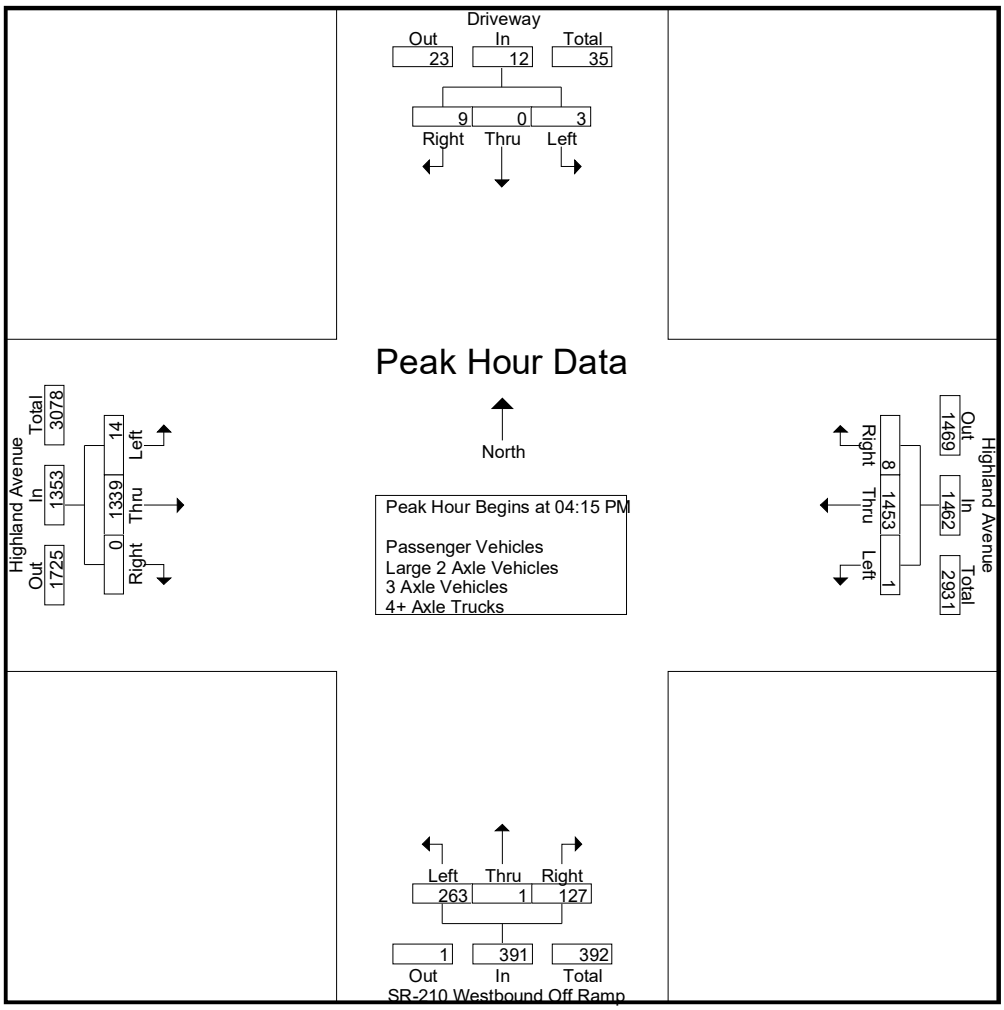
City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				03:45 PM				04:15 PM				04:45 PM			
+0 mins.	**2**	0	**5**	**7**	0	348	1	349	62	0	29	91	**3**	**356**	0	**359**
+15 mins.	1	0	1	2	0	381	1	382	60	**1**	29	90	3	332	0	335
+30 mins.	0	0	5	5	0	**397**	1	**398**	**93**	0	33	**126**	3	331	0	334
+45 mins.	0	0	4	4	**1**	383	**3**	387	48	0	**36**	84	0	341	0	341
Total Volume	3	0	15	18	1	1509	6	1516	263	1	127	391	9	1360	0	1369
% App. Total	16.7	0	83.3		0.1	99.5	0.4		67.3	0.3	32.5		0.7	99.3	0	
PHF	.375	.000	.750	.643	.250	.950	.500	.952	.707	.250	.882	.776	.750	.955	.000	.953

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City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
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File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	0	2	3	0	307	2	309	48	0	29	77	3	307	0	310	699
03:15 PM	1	0	3	4	1	329	1	331	53	1	33	87	5	288	1	294	716
03:30 PM	0	0	1	1	0	331	3	334	55	0	21	76	1	294	0	295	706
03:45 PM	0	0	4	4	0	345	1	346	59	1	24	84	3	291	0	294	728
Total	2	0	10	12	1	1312	7	1320	215	2	107	324	12	1180	1	1193	2849
04:00 PM	0	0	3	3	0	370	1	371	57	1	25	83	0	264	0	264	721
04:15 PM	0	0	1	1	0	385	1	386	62	0	29	91	6	312	0	318	796
04:30 PM	0	0	2	2	1	375	3	379	60	1	28	89	2	328	0	330	800
04:45 PM	2	0	5	7	0	327	1	328	93	0	33	126	3	352	0	355	816
Total	2	0	11	13	1	1457	6	1464	272	2	115	389	11	1256	0	1267	3133
05:00 PM	1	0	1	2	0	335	3	338	48	0	36	84	3	330	0	333	757
05:15 PM	0	0	5	5	0	358	1	359	55	0	26	81	3	330	0	333	778
05:30 PM	0	0	4	4	0	321	0	321	54	0	28	82	0	337	0	337	744
05:45 PM	0	0	3	3	0	279	1	280	72	1	36	109	1	292	1	294	686
Total	1	0	13	14	0	1293	5	1298	229	1	126	356	7	1289	1	1297	2965
Grand Total	5	0	34	39	2	4062	18	4082	716	5	348	1069	30	3725	2	3757	8947
Apprch %	12.8	0	87.2		0	99.5	0.4		67	0.5	32.6		0.8	99.1	0.1		
Total %	0.1	0	0.4	0.4	0	45.4	0.2	45.6	8	0.1	3.9	11.9	0.3	41.6	0	42	

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	1	1	0	**385**	1	**386**	62	0	29	91	**6**	312	0	318	796
04:30 PM	0	0	2	2	**1**	375	**3**	379	60	**1**	28	89	2	328	0	330	800
04:45 PM	**2**	0	**5**	**7**	0	327	1	328	**93**	0	33	**126**	3	**352**	0	**355**	**816**
05:00 PM	1	0	1	2	0	335	3	338	48	0	**36**	84	3	330	0	333	757
Total Volume	3	0	9	12	1	1422	8	1431	263	1	126	390	14	1322	0	1336	3169
% App. Total	25	0	75		0.1	99.4	0.6		67.4	0.3	32.3		1	99	0		
PHF	.375	.000	.450	.429	.250	.923	.667	.927	.707	.250	.875	.774	.583	.939	.000	.941	.971

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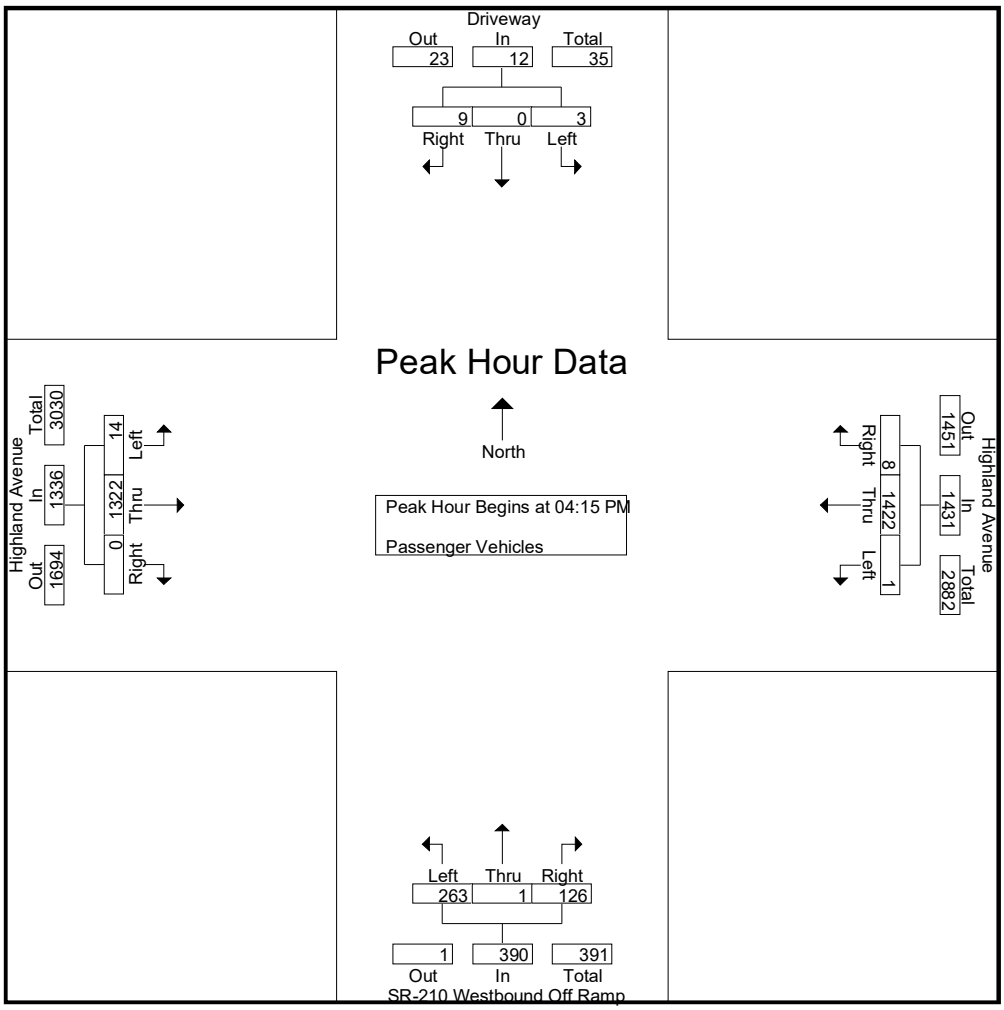
City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	1	1	0	**385**	1	**386**	62	0	29	91	**6**	312	0	318
+15 mins.	0	0	2	2	**1**	375	**3**	379	60	**1**	28	89	2	328	0	330
+30 mins.	**2**	0	**5**	**7**	0	327	1	328	**93**	0	33	**126**	3	**352**	0	**355**
+45 mins.	1	0	1	2	0	335	3	338	48	0	**36**	84	3	330	0	333
Total Volume	3	0	9	12	1	1422	8	1431	263	1	126	390	14	1322	0	1336
% App. Total	25	0	75		0.1	99.4	0.6		67.4	0.3	32.3		1	99	0	
PHF	.375	.000	.450	.429	.250	.923	.667	.927	.707	.250	.875	.774	.583	.939	.000	.941

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City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
03:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	6	0	6	7
03:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	3	0	4	5
03:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	1	4	7
Total	0	0	0	0	0	7	0	7	0	0	0	0	1	14	1	16	23
04:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	8	0	8	15
04:15 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	5	0	5	12
04:30 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	4	0	4	11
04:45 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
Total	0	0	0	0	0	26	0	26	0	0	0	0	0	20	0	20	46
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
05:15 PM	0	0	0	0	0	6	0	6	2	0	0	2	0	1	0	1	9
05:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
Total	0	0	0	0	0	19	0	19	2	0	0	2	0	7	0	7	28
Grand Total	0	0	0	0	0	52	0	52	2	0	0	2	1	41	1	43	97
Apprch %	0	0	0		0	100	0		100	0	0		2.3	95.3	2.3		
Total %	0	0	0	0	0	53.6	0	53.6	2.1	0	0	2.1	1	42.3	1	44.3	

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	**7**	0	**7**	0	0	0	0	0	**5**	0	**5**	**12**
04:30 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	4	0	4	11
04:45 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
05:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
Total Volume	0	0	0	0	0	24	0	24	0	0	0	0	0	14	0	14	38
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.857	.000	.857	.000	.000	.000	.000	.000	.700	.000	.700	.792

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City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018

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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	**7**	0	**7**	0	0	0	0	0	**5**	0	**5**
+15 mins.	0	0	0	0	0	7	0	7	0	0	0	0	0	4	0	4
+30 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3
+45 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	0	24	0	24	0	0	0	0	0	14	0	14
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.857	.000	.857	.000	.000	.000	.000	.000	.700	.000	.700

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City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
03:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	7	0	7	0	0	0	0	0	4	0	4	11
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	0	0	0	0	0	10	0	10	0	0	0	0	0	6	0	6	16
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	62.5	0	62.5	0	0	0	0	0	37.5	0	37.5	

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	**1**	0	**1**	**5**
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2	8
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.500	.000	.500	.400

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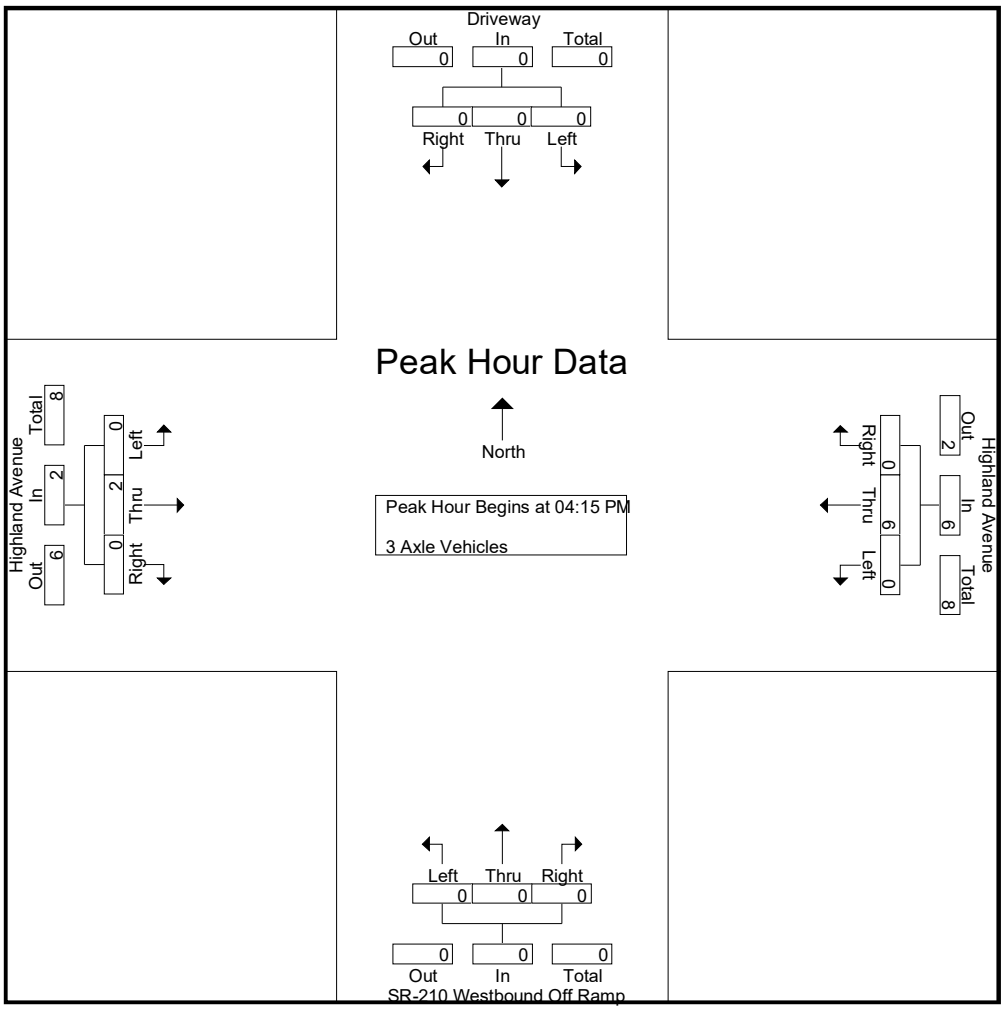
City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.500	.000	.500

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

City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- 4+ Axle Trucks

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
03:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
04:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	4	0	4	0	0	1	1	0	1	0	1	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Grand Total	0	0	0	0	0	9	0	9	0	0	1	1	0	2	0	2	12
Apprch %	0	0	0		0	100	0		0	0	100		0	100	0		
Total %	0	0	0	0	0	75	0	75	0	0	8.3	8.3	0	16.7	0	16.7	

	Driveway Southbound				Highland Avenue Westbound				SR-210 Westbound Off Ramp Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	**2**
04:30 PM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	1	1	0	1	0	1	3
% App. Total	0	0	0		0	100	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.250	.250	.000	.250	.000	.250	.375

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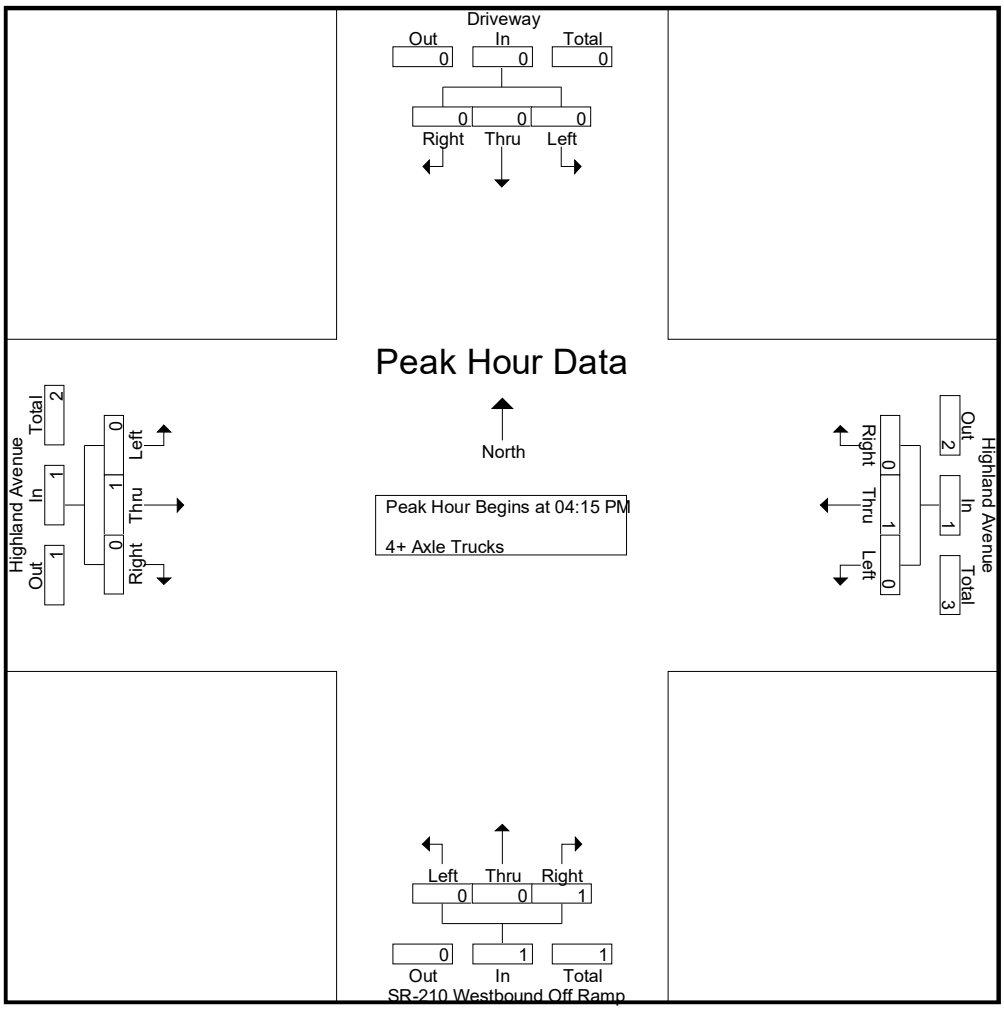
City of San Bernardino
N/S: SR-210 Westbound Off Ramp
E/W: Highland Avenue
Weather: Clear

File Name : 108_SBC_210W Off Ramp_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

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

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City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland AM
Site Code : 99918352
Start Date : 5/17/2018

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

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	11	35	34	80	5	42	11	58	20	31	9	60	55	72	21	148	346
06:15 AM	13	31	42	86	5	43	9	57	29	25	4	58	63	78	19	160	361
06:30 AM	9	29	35	73	7	60	12	79	32	37	7	76	43	64	25	132	360
06:45 AM	13	23	28	64	6	57	8	71	41	22	5	68	69	83	17	169	372
Total	46	118	139	303	23	202	40	265	122	115	25	262	230	297	82	609	1439
07:00 AM	10	14	53	77	6	71	10	87	54	25	6	85	76	87	16	179	428
07:15 AM	18	27	52	97	8	94	11	113	59	40	5	104	72	86	15	173	487
07:30 AM	20	64	71	155	7	110	21	138	63	70	5	138	93	75	33	201	632
07:45 AM	9	78	58	145	17	69	19	105	68	99	10	177	128	88	28	244	671
Total	57	183	234	474	38	344	61	443	244	234	26	504	369	336	92	797	2218
08:00 AM	22	47	66	135	10	84	24	118	55	36	11	102	117	109	26	252	607
08:15 AM	14	25	75	114	7	72	17	96	47	22	12	81	98	84	23	205	496
08:30 AM	31	21	62	114	11	55	20	86	46	25	10	81	110	89	28	227	508
08:45 AM	23	23	42	88	10	82	30	122	57	29	8	94	128	91	17	236	540
Total	90	116	245	451	38	293	91	422	205	112	41	358	453	373	94	920	2151
Grand Total	193	417	618	1228	99	839	192	1130	571	461	92	1124	1052	1006	268	2326	5808
Apprch %	15.7	34	50.3		8.8	74.2	17		50.8	41	8.2		45.2	43.3	11.5		
Total %	3.3	7.2	10.6	21.1	1.7	14.4	3.3	19.5	9.8	7.9	1.6	19.4	18.1	17.3	4.6	40	
Passenger Vehicles	185	415	593	1193	94	813	181	1088	548	443	88	1079	1036	964	254	2254	5614
% Passenger Vehicles	95.9	99.5	96	97.1	94.9	96.9	94.3	96.3	96	96.1	95.7	96	98.5	95.8	94.8	96.9	96.7
Large 2 Axle Vehicles	8	1	18	27	5	26	11	42	19	18	2	39	11	40	13	64	172
% Large 2 Axle Vehicles	4.1	0.2	2.9	2.2	5.1	3.1	5.7	3.7	3.3	3.9	2.2	3.5	1	4	4.9	2.8	3
3 Axle Vehicles	0	0	4	4	0	0	0	0	0	0	0	0	5	0	0	5	9
% 3 Axle Vehicles	0	0	0.6	0.3	0	0	0	0	0	0	0	0	0.5	0	0	0.2	0.2
4+ Axle Trucks	0	1	3	4	0	0	0	0	4	0	2	6	0	2	1	3	13
% 4+ Axle Trucks	0	0.2	0.5	0.3	0	0	0	0	0.7	0	2.2	0.5	0	0.2	0.4	0.1	0.2

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	20	64	71	**155**	7	**110**	21	**138**	63	70	5	138	93	75	**33**	201	632
07:45 AM	9	**78**	58	145	**17**	69	19	105	**68**	**99**	10	**177**	**128**	88	28	244	**671**
08:00 AM	**22**	47	66	135	10	84	**24**	118	55	36	11	102	117	**109**	26	**252**	607
08:15 AM	14	25	**75**	114	7	72	17	96	47	22	**12**	81	98	84	23	205	496
Total Volume	65	214	270	549	41	335	81	457	233	227	38	498	436	356	110	902	2406
% App. Total	11.8	39	49.2		9	73.3	17.7		46.8	45.6	7.6		48.3	39.5	12.2		
PHF	.739	.686	.900	.885	.603	.761	.844	.828	.857	.573	.792	.703	.852	.817	.833	.895	.896

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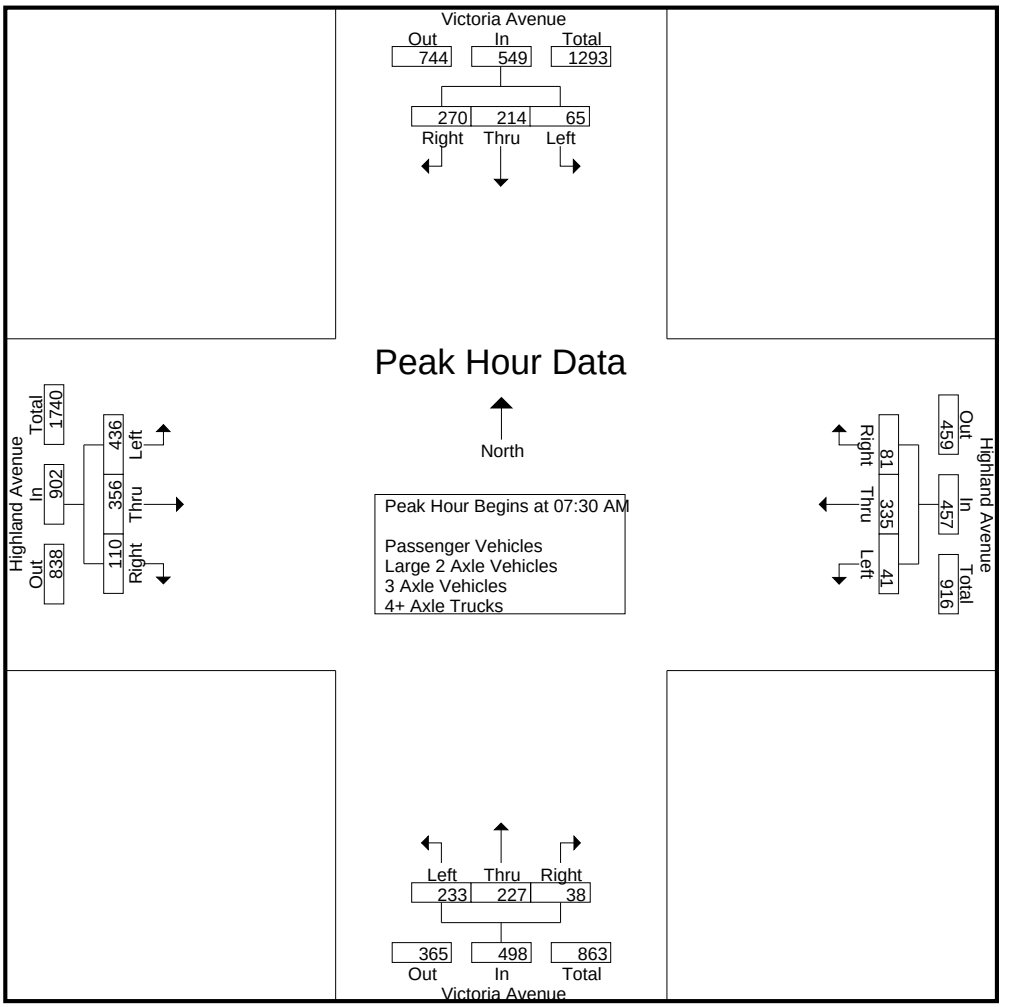
City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:15 AM				07:45 AM			
+0 mins.	20	64	71	**155**	8	94	11	113	59	40	5	104	**128**	88	**28**	244
+15 mins.	9	**78**	58	145	7	**110**	21	**138**	63	70	5	138	117	**109**	26	**252**
+30 mins.	**22**	47	66	135	**17**	69	19	105	**68**	**99**	10	**177**	98	84	23	205
+45 mins.	14	25	**75**	114	10	84	**24**	118	55	36	**11**	102	110	89	28	227
Total Volume	65	214	270	549	42	357	75	474	245	245	31	521	453	370	105	928
% App. Total	11.8	39	49.2		8.9	75.3	15.8		47	47	6		48.8	39.9	11.3	
PHF	.739	.686	.900	.885	.618	.811	.781	.859	.901	.619	.705	.736	.885	.849	.938	.921

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City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	11	35	33	79	5	41	11	57	18	31	9	58	55	69	21	145	339
06:15 AM	12	31	41	84	5	42	9	56	25	25	4	54	62	75	19	156	350
06:30 AM	9	29	35	73	7	59	12	78	31	36	7	74	43	63	25	131	356
06:45 AM	13	23	28	64	6	57	8	71	39	22	5	66	68	80	17	165	366
Total	45	118	137	300	23	199	40	262	113	114	25	252	228	287	82	597	1411
07:00 AM	9	14	50	73	6	67	9	82	52	25	6	83	74	82	14	170	408
07:15 AM	17	26	49	92	7	91	11	109	58	39	5	102	71	84	12	167	470
07:30 AM	19	64	66	149	6	109	19	134	61	63	5	129	91	71	29	191	603
07:45 AM	9	77	55	141	15	66	18	99	66	99	9	174	125	83	26	234	648
Total	54	181	220	455	34	333	57	424	237	226	25	488	361	320	81	762	2129
08:00 AM	21	47	64	132	9	81	22	112	55	34	10	99	117	105	25	247	590
08:15 AM	13	25	74	112	7	66	15	88	45	15	11	71	93	81	22	196	467
08:30 AM	30	21	60	111	11	53	19	83	43	25	10	78	109	85	28	222	494
08:45 AM	22	23	38	83	10	81	28	119	55	29	7	91	128	86	16	230	523
Total	86	116	236	438	37	281	84	402	198	103	38	339	447	357	91	895	2074
Grand Total	185	415	593	1193	94	813	181	1088	548	443	88	1079	1036	964	254	2254	5614
Apprch %	15.5	34.8	49.7		8.6	74.7	16.6		50.8	41.1	8.2		46	42.8	11.3		
Total %	3.3	7.4	10.6	21.3	1.7	14.5	3.2	19.4	9.8	7.9	1.6	19.2	18.5	17.2	4.5	40.1	

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	19	64	66	**149**	6	**109**	19	**134**	61	63	5	129	91	71	**29**	191	603
07:45 AM	9	**77**	55	141	**15**	66	18	99	**66**	**99**	9	**174**	**125**	83	26	234	**648**
08:00 AM	**21**	47	64	132	9	81	**22**	112	55	34	10	99	117	**105**	25	**247**	590
08:15 AM	13	25	**74**	112	7	66	15	88	45	15	**11**	71	93	81	22	196	467
Total Volume	62	213	259	534	37	322	74	433	227	211	35	473	426	340	102	868	2308
% App. Total	11.6	39.9	48.5		8.5	74.4	17.1		48	44.6	7.4		49.1	39.2	11.8		
PHF	.738	.692	.875	.896	.617	.739	.841	.808	.860	.533	.795	.680	.852	.810	.879	.879	.890

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City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
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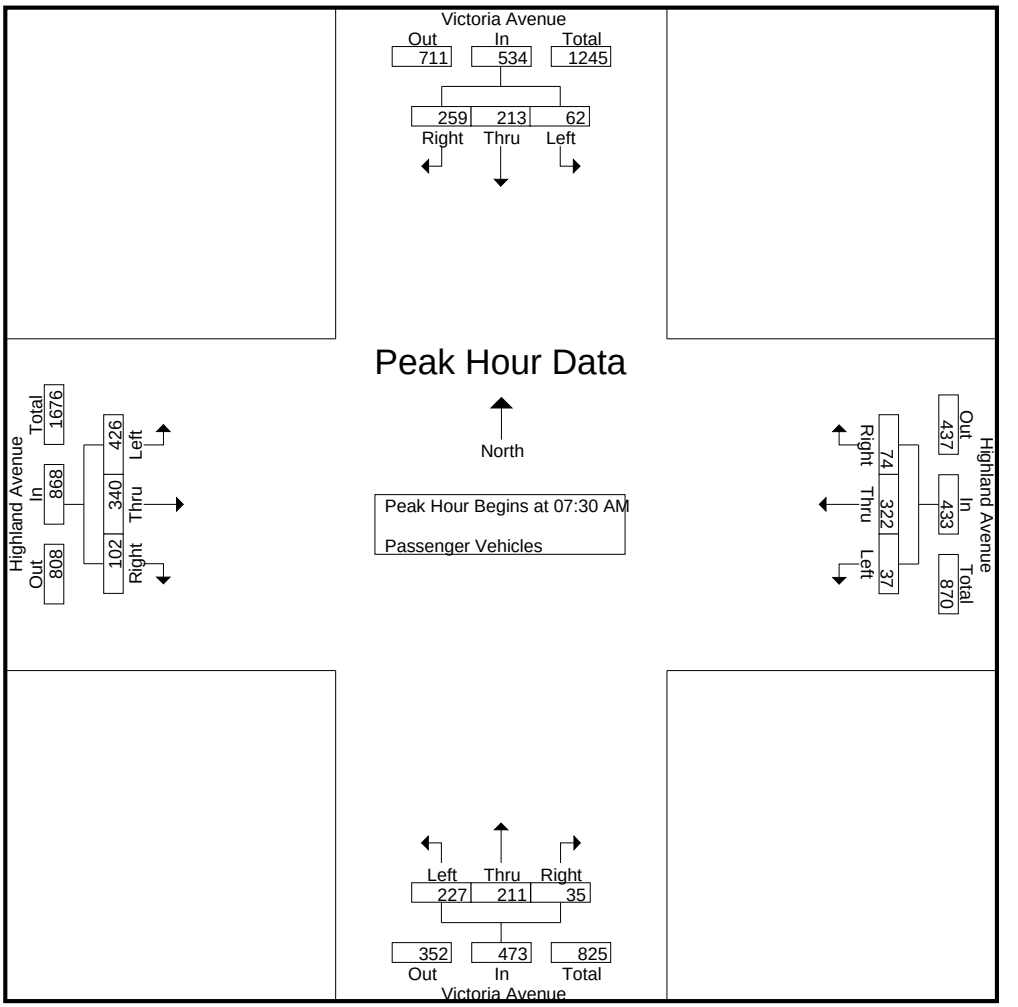
File Name : 43_SBC_Victoria_Highland AM
Site Code : 99918352
Start Date : 5/17/2018



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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	19	64	66	**149**	6	**109**	19	**134**	61	63	5	129	91	71	**29**	191
+15 mins.	9	**77**	55	141	**15**	66	18	99	**66**	**99**	9	**174**	**125**	83	26	234
+30 mins.	**21**	47	64	132	9	81	**22**	112	55	34	10	99	117	**105**	25	**247**
+45 mins.	13	25	**74**	112	7	66	15	88	45	15	**11**	71	93	81	22	196
Total Volume	62	213	259	534	37	322	74	433	227	211	35	473	426	340	102	868
% App. Total	11.6	39.9	48.5		8.5	74.4	17.1		48	44.6	7.4		49.1	39.2	11.8	
PHF	.738	.692	.875	.896	.617	.739	.841	.808	.860	.533	.795	.680	.852	.810	.879	.879

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City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	1	1	0	1	0	1	2	0	0	2	0	3	0	3	7
06:15 AM	1	0	1	2	0	1	0	1	4	0	0	4	1	3	0	4	11
06:30 AM	0	0	0	0	0	1	0	1	1	1	0	2	0	1	0	1	4
06:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	1	3	0	4	6
Total	1	0	2	3	0	3	0	3	9	1	0	10	2	10	0	12	28
07:00 AM	1	0	1	2	0	4	1	5	2	0	0	2	2	3	2	7	16
07:15 AM	1	0	3	4	1	3	0	4	1	1	0	2	1	2	3	6	16
07:30 AM	1	0	3	4	1	1	2	4	1	7	0	8	2	4	4	10	26
07:45 AM	0	1	2	3	2	3	1	6	2	0	1	3	1	5	1	7	19
Total	3	1	9	13	4	11	4	19	6	8	1	15	6	14	10	30	77
08:00 AM	1	0	2	3	1	3	2	6	0	2	0	2	0	4	1	5	16
08:15 AM	1	0	1	2	0	6	2	8	1	7	1	9	3	3	1	7	26
08:30 AM	1	0	1	2	0	2	1	3	1	0	0	1	0	4	0	4	10
08:45 AM	1	0	3	4	0	1	2	3	2	0	0	2	0	5	1	6	15
Total	4	0	7	11	1	12	7	20	4	9	1	14	3	16	3	22	67
Grand Total	8	1	18	27	5	26	11	42	19	18	2	39	11	40	13	64	172
Apprch %	29.6	3.7	66.7		11.9	61.9	26.2		48.7	46.2	5.1		17.2	62.5	20.3		
Total %	4.7	0.6	10.5	15.7	2.9	15.1	6.4	24.4	11	10.5	1.2	22.7	6.4	23.3	7.6	37.2	

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**1**	0	**3**	**4**	1	1	**2**	4	1	**7**	0	8	2	4	**4**	**10**	**26**
07:45 AM	0	**1**	2	3	**2**	3	1	6	**2**	0	**1**	3	1	**5**	1	7	19
08:00 AM	1	0	2	3	1	3	2	6	0	2	0	2	0	4	1	5	16
08:15 AM	1	0	1	2	0	**6**	2	**8**	1	7	1	**9**	**3**	3	1	7	26
Total Volume	3	1	8	12	4	13	7	24	4	16	2	22	6	16	7	29	87
% App. Total	25	8.3	66.7		16.7	54.2	29.2		18.2	72.7	9.1		20.7	55.2	24.1		
PHF	.750	.250	.667	.750	.500	.542	.875	.750	.500	.571	.500	.611	.500	.800	.438	.725	.837

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City of San Bernardino
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E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland AM
Site Code : 99918352
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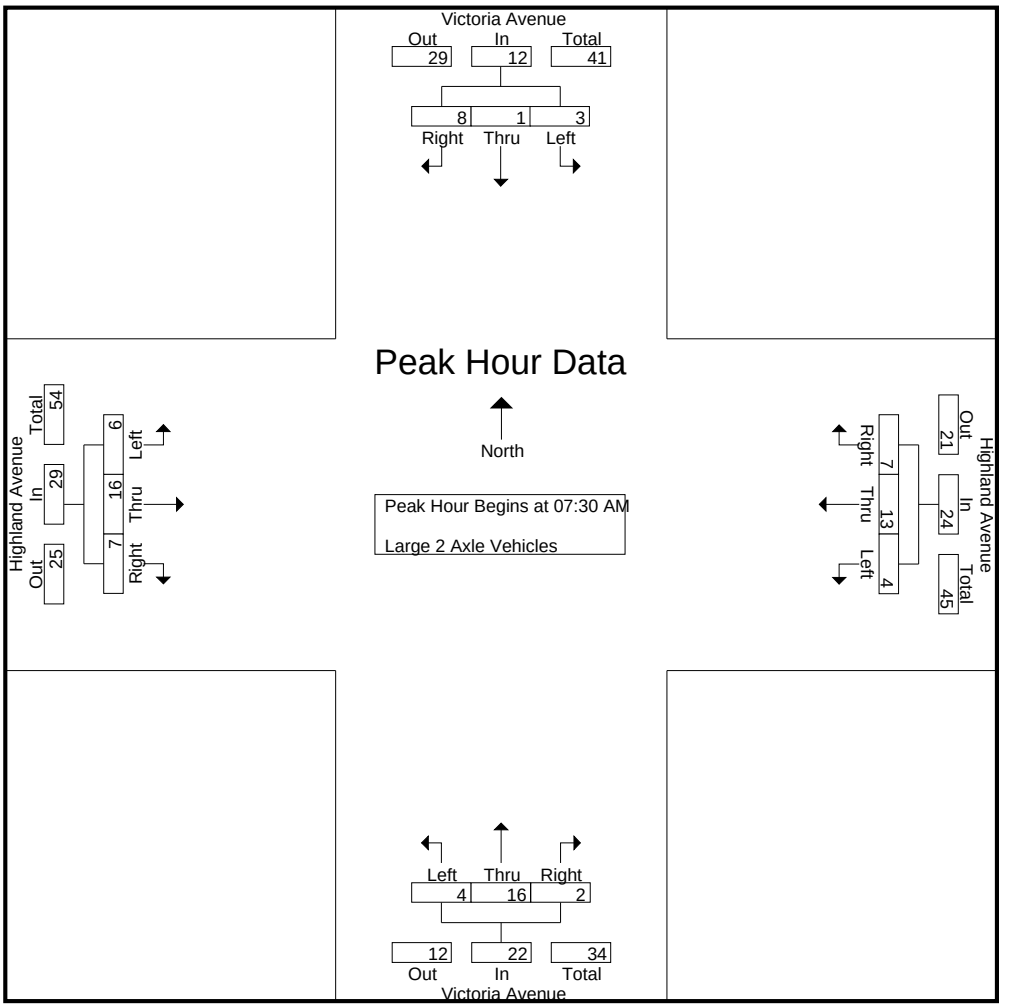

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**1**	0	**3**	**4**	1	1	**2**	4	1	**7**	0	8	2	4	**4**	**10**
+15 mins.	0	**1**	2	3	**2**	3	1	6	**2**	0	**1**	3	1	**5**	1	7
+30 mins.	1	0	2	3	1	3	2	6	0	2	0	2	0	4	1	5
+45 mins.	1	0	1	2	0	**6**	2	**8**	1	7	1	**9**	**3**	3	1	7
Total Volume	3	1	8	12	4	13	7	24	4	16	2	22	6	16	7	29
% App. Total	25	8.3	66.7		16.7	54.2	29.2		18.2	72.7	9.1		20.7	55.2	24.1	
PHF	.750	.250	.667	.750	.500	.542	.875	.750	.500	.571	.500	.611	.500	.800	.438	.725

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Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	0	2	2	0	0	0	0	0	0	0	0	2	0	0	2	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
08:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
08:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	2	2	0	0	0	0	0	0	0	0	3	0	0	3	5
Grand Total	0	0	4	4	0	0	0	0	0	0	0	0	5	0	0	5	9
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	44.4	44.4	0	0	0	0	0	0	0	0	55.6	0	0	55.6	

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	**2**	**2**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
% App. Total	0	0	0		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.500

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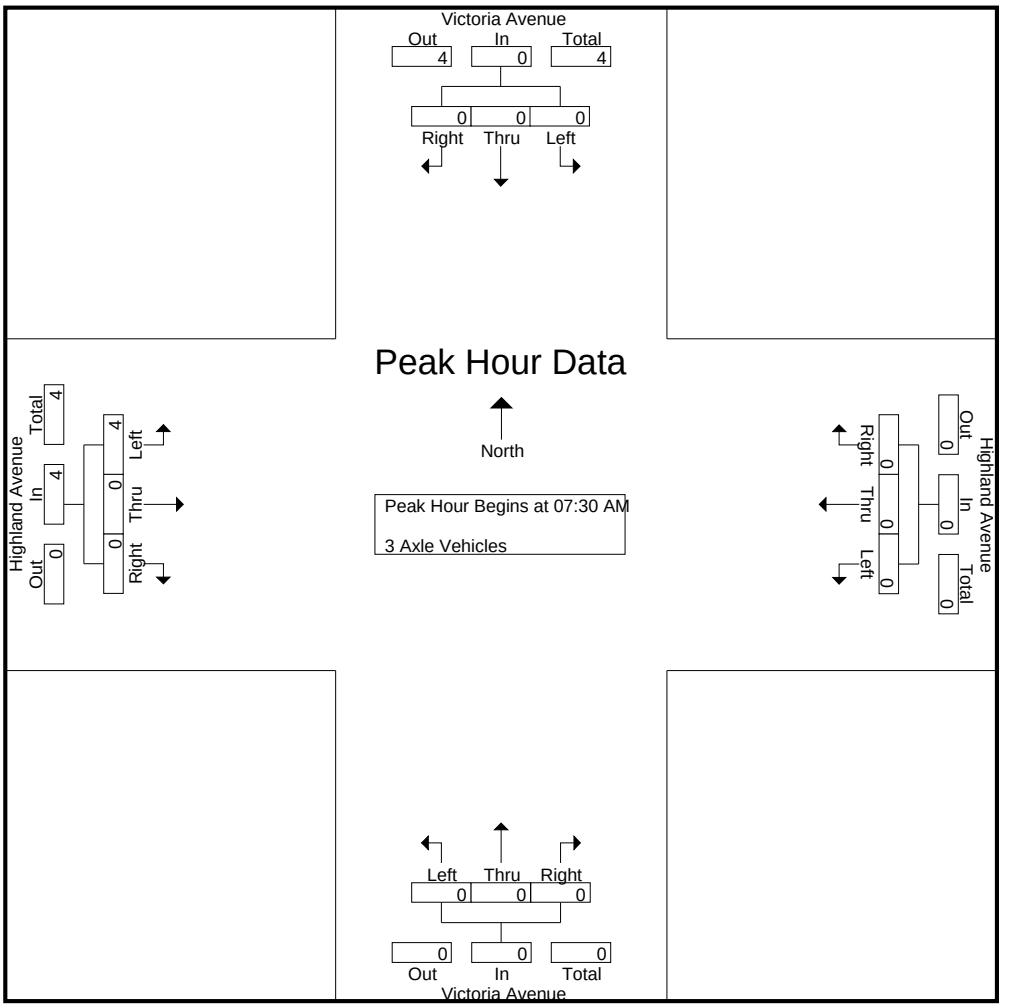

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
% App. Total	0	0	0		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500

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File Name : 43_SBC_Victoria_Highland AM
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Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	2	2	0	0	0	0	1	0	0	1	0	0	0	0	3
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	0	1	3	4	0	0	0	0	1	0	0	1	0	2	1	3	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	3	0	2	5	0	0	0	0	5
Grand Total	0	1	3	4	0	0	0	0	4	0	2	6	0	2	1	3	13
Apprch %	0	25	75		0	0	0		66.7	0	33.3		0	66.7	33.3		
Total %	0	7.7	23.1	30.8	0	0	0	0	30.8	0	15.4	46.2	0	15.4	7.7	23.1	

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	**2**	**2**	0	0	0	0	**1**	0	0	**1**	0	0	0	0	**3**
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	**1**	**1**	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	0	0	3	3	0	0	0	0	2	0	1	3	0	0	1	1	7
% App. Total	0	0	100		0	0	0		66.7	0	33.3		0	0	100		
PHF	.000	.000	.375	.375	.000	.000	.000	.000	.500	.000	.250	.750	.000	.000	.250	.250	.583

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City of San Bernardino
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Site Code : 99918352
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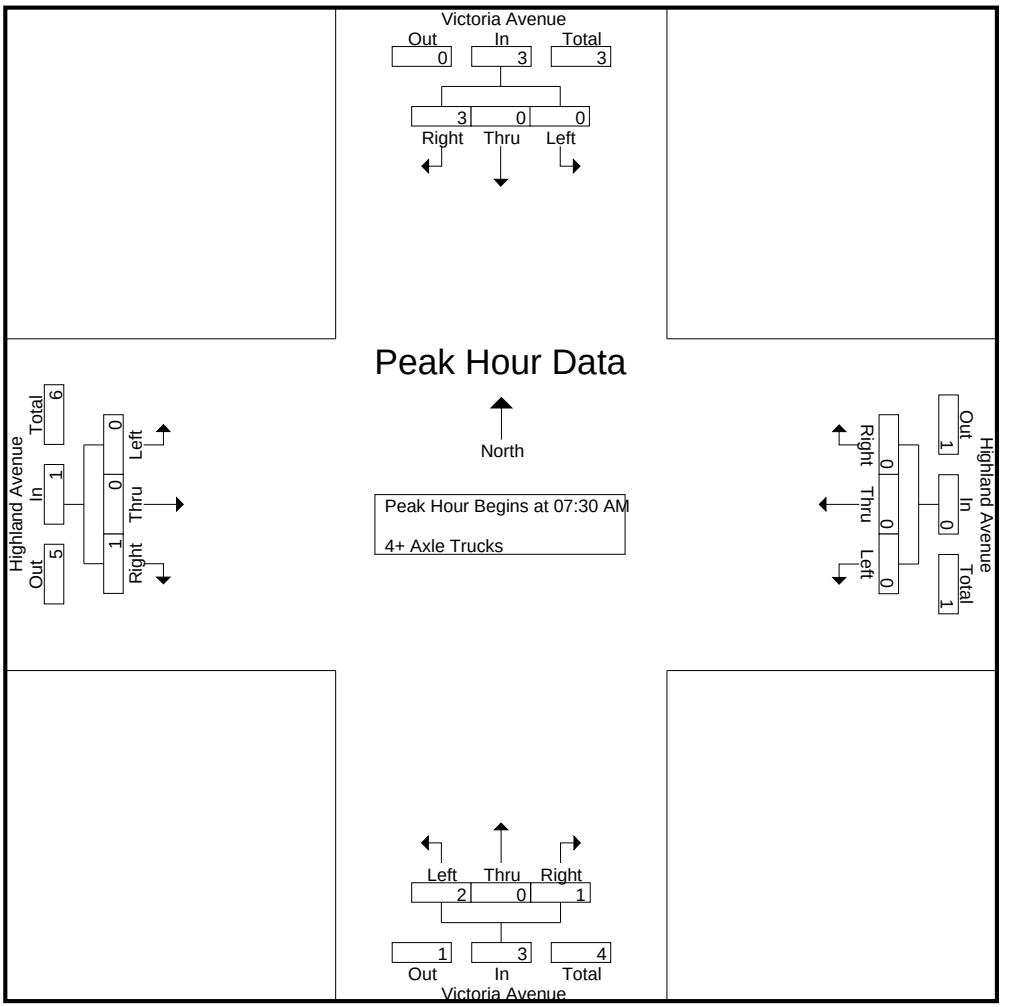

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	**2**	**2**	0	0	0	0	**1**	0	0	**1**	0	0	0	0
+15 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	**1**	**1**
+30 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Total Volume	0	0	3	3	0	0	0	0	2	0	1	3	0	0	1	1
% App. Total	0	0	100		0	0	0		66.7	0	33.3		0	0	100	
PHF	.000	.000	.375	.375	.000	.000	.000	.000	.500	.000	.250	.750	.000	.000	.250	.250

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City of San Bernardino
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File Name : 43_SBC_Victoria_Highland PM
Site Code : 99918352
Start Date : 5/17/2018

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

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	45	29	117	191	11	129	27	167	48	31	13	92	128	121	32	281	731
03:15 PM	53	32	126	211	15	135	31	181	43	38	18	99	135	109	28	272	763
03:30 PM	39	39	133	211	12	126	25	163	52	46	14	112	130	118	32	280	766
03:45 PM	42	35	129	206	19	140	29	188	49	36	12	97	140	112	40	292	783
Total	179	135	505	819	57	530	112	699	192	151	57	400	533	460	132	1125	3043
04:00 PM	55	41	131	227	18	156	37	211	60	42	19	121	134	99	41	274	833
04:15 PM	57	54	156	267	15	143	28	186	53	44	13	110	132	86	44	262	825
04:30 PM	39	40	132	211	20	139	32	191	71	41	8	120	131	114	46	291	813
04:45 PM	33	45	172	250	22	136	28	186	51	46	16	113	150	126	36	312	861
Total	184	180	591	955	75	574	125	774	235	173	56	464	547	425	167	1139	3332
05:00 PM	47	31	137	215	11	149	27	187	50	47	12	109	188	130	38	356	867
05:15 PM	45	32	132	209	14	129	29	172	58	54	20	132	162	103	50	315	828
05:30 PM	53	37	142	232	15	144	37	196	67	43	8	118	169	139	37	345	891
05:45 PM	51	31	118	200	8	139	40	187	53	51	9	113	169	124	46	339	839
Total	196	131	529	856	48	561	133	742	228	195	49	472	688	496	171	1355	3425
Grand Total	559	446	1625	2630	180	1665	370	2215	655	519	162	1336	1768	1381	470	3619	9800
Apprch %	21.3	17	61.8		8.1	75.2	16.7		49	38.8	12.1		48.9	38.2	13		
Total %	5.7	4.6	16.6	26.8	1.8	17	3.8	22.6	6.7	5.3	1.7	13.6	18	14.1	4.8	36.9	
Passenger Vehicles	540	443	1600	2583	178	1641	357	2176	627	515	159	1301	1756	1351	461	3568	9628
% Passenger Vehicles	96.6	99.3	98.5	98.2	98.9	98.6	96.5	98.2	95.7	99.2	98.1	97.4	99.3	97.8	98.1	98.6	98.2
Large 2 Axle Vehicles	19	3	16	38	2	21	13	36	21	4	3	28	8	30	7	45	147
% Large 2 Axle Vehicles	3.4	0.7	1	1.4	1.1	1.3	3.5	1.6	3.2	0.8	1.9	2.1	0.5	2.2	1.5	1.2	1.5
3 Axle Vehicles	0	0	9	9	0	2	0	2	1	0	0	1	4	0	0	4	16
% 3 Axle Vehicles	0	0	0.6	0.3	0	0.1	0	0.1	0.2	0	0	0.1	0.2	0	0	0.1	0.2
4+ Axle Trucks	0	0	0	0	0	1	0	1	6	0	0	6	0	0	2	2	9
% 4+ Axle Trucks	0	0	0	0	0	0.1	0	0	0.9	0	0	0.4	0	0	0.4	0.1	0.1

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	33	**45**	**172**	**250**	**22**	136	28	186	51	46	16	113	150	126	36	312	861
05:00 PM	47	31	137	215	11	**149**	27	187	50	47	12	109	**188**	130	38	**356**	867
05:15 PM	45	32	132	209	14	129	29	172	58	**54**	**20**	**132**	162	103	**50**	315	828
05:30 PM	**53**	37	142	232	15	144	**37**	**196**	**67**	43	8	118	169	**139**	37	345	**891**
Total Volume	178	145	583	906	62	558	121	741	226	190	56	472	669	498	161	1328	3447
% App. Total	19.6	16	64.3		8.4	75.3	16.3		47.9	40.3	11.9		50.4	37.5	12.1		
PHF	.840	.806	.847	.906	.705	.936	.818	.945	.843	.880	.700	.894	.890	.896	.805	.933	.967

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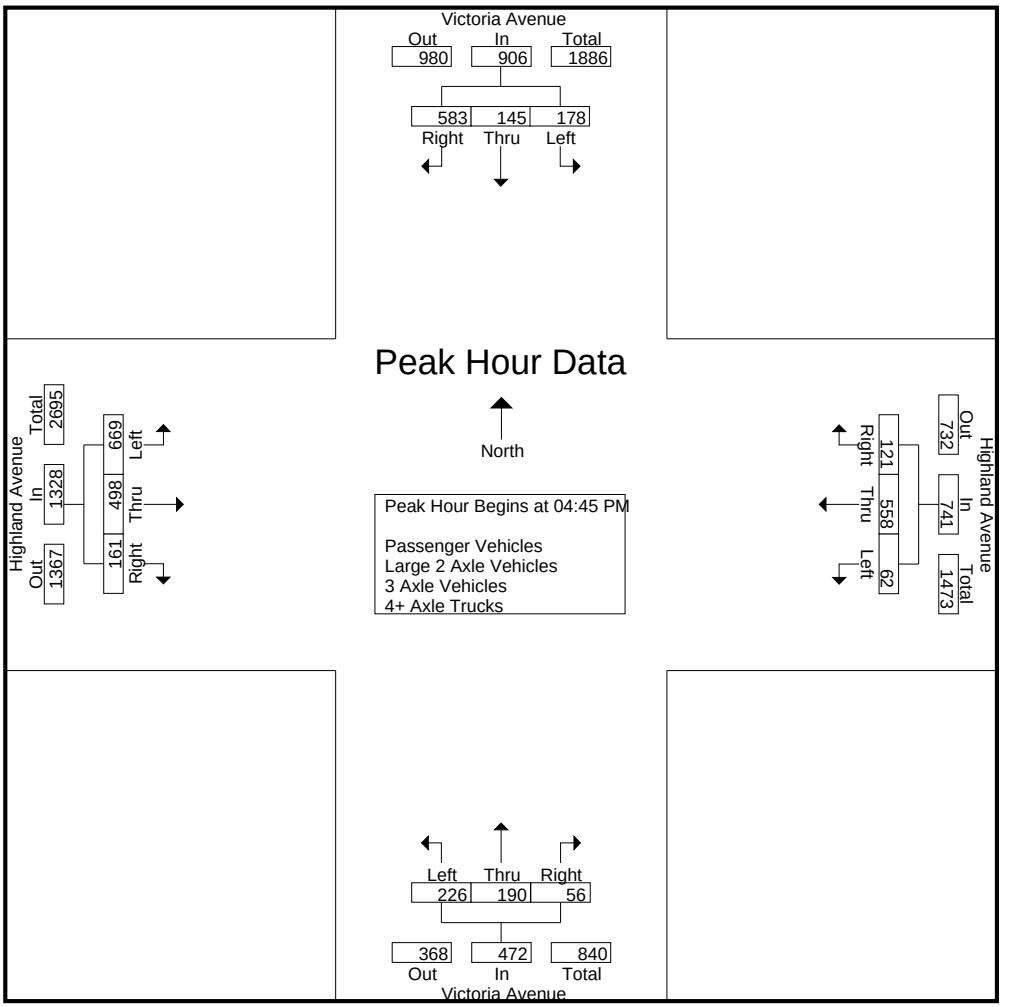

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				03:45 PM				04:30 PM				05:00 PM			
+0 mins.	55	41	131	227	19	140	29	188	**71**	41	8	120	**188**	130	38	**356**
+15 mins.	**57**	**54**	156	**267**	18	**156**	**37**	**211**	51	46	16	113	162	103	**50**	315
+30 mins.	39	40	132	211	15	143	28	186	50	47	12	109	169	**139**	37	345
+45 mins.	33	45	**172**	250	**20**	139	32	191	58	**54**	**20**	**132**	169	124	46	339
Total Volume	184	180	591	955	72	578	126	776	230	188	56	474	688	496	171	1355
% App. Total	19.3	18.8	61.9		9.3	74.5	16.2		48.5	39.7	11.8		50.8	36.6	12.6	
PHF	.807	.833	.859	.894	.900	.926	.851	.919	.810	.870	.700	.898	.915	.892	.855	.952

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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	44	29	117	190	11	129	27	167	48	31	13	92	127	121	32	280	729
03:15 PM	51	32	124	207	15	135	31	181	42	38	18	98	134	104	28	266	752
03:30 PM	37	38	131	206	12	126	25	163	51	46	14	111	129	117	31	277	757
03:45 PM	42	35	126	203	19	140	29	188	49	35	12	96	140	109	39	288	775
Total	174	134	498	806	57	530	112	699	190	150	57	397	530	451	130	1111	3013
04:00 PM	53	41	129	223	18	153	32	203	57	42	18	117	132	95	40	267	810
04:15 PM	51	53	154	258	15	134	28	177	50	43	12	105	129	83	42	254	794
04:30 PM	38	40	128	206	18	137	31	186	64	41	8	113	130	111	44	285	790
04:45 PM	32	45	169	246	22	133	26	181	48	46	16	110	149	123	35	307	844
Total	174	179	580	933	73	557	117	747	219	172	54	445	540	412	161	1113	3238
05:00 PM	46	31	136	213	11	148	25	184	46	46	12	104	187	127	38	352	853
05:15 PM	43	31	130	204	14	126	28	168	57	54	19	130	162	102	49	313	815
05:30 PM	52	37	141	230	15	142	36	193	65	43	8	116	169	137	37	343	882
05:45 PM	51	31	115	197	8	138	39	185	50	50	9	109	168	122	46	336	827
Total	192	130	522	844	48	554	128	730	218	193	48	459	686	488	170	1344	3377
Grand Total	540	443	1600	2583	178	1641	357	2176	627	515	159	1301	1756	1351	461	3568	9628
Apprch %	20.9	17.2	61.9		8.2	75.4	16.4		48.2	39.6	12.2		49.2	37.9	12.9		
Total %	5.6	4.6	16.6	26.8	1.8	17	3.7	22.6	6.5	5.3	1.7	13.5	18.2	14	4.8	37.1	

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	32	**45**	**169**	**246**	**22**	133	26	181	48	46	16	110	149	123	35	307	844
05:00 PM	46	31	136	213	11	**148**	25	184	46	46	12	104	**187**	127	38	**352**	853
05:15 PM	43	31	130	204	14	126	28	168	57	**54**	**19**	**130**	162	102	**49**	313	815
05:30 PM	**52**	37	141	230	15	142	**36**	**193**	**65**	43	8	116	169	**137**	37	343	**882**
Total Volume	173	144	576	893	62	549	115	726	216	189	55	460	667	489	159	1315	3394
% App. Total	19.4	16.1	64.5		8.5	75.6	15.8		47	41.1	12		50.7	37.2	12.1		
PHF	.832	.800	.852	.908	.705	.927	.799	.940	.831	.875	.724	.885	.892	.892	.811	.934	.962

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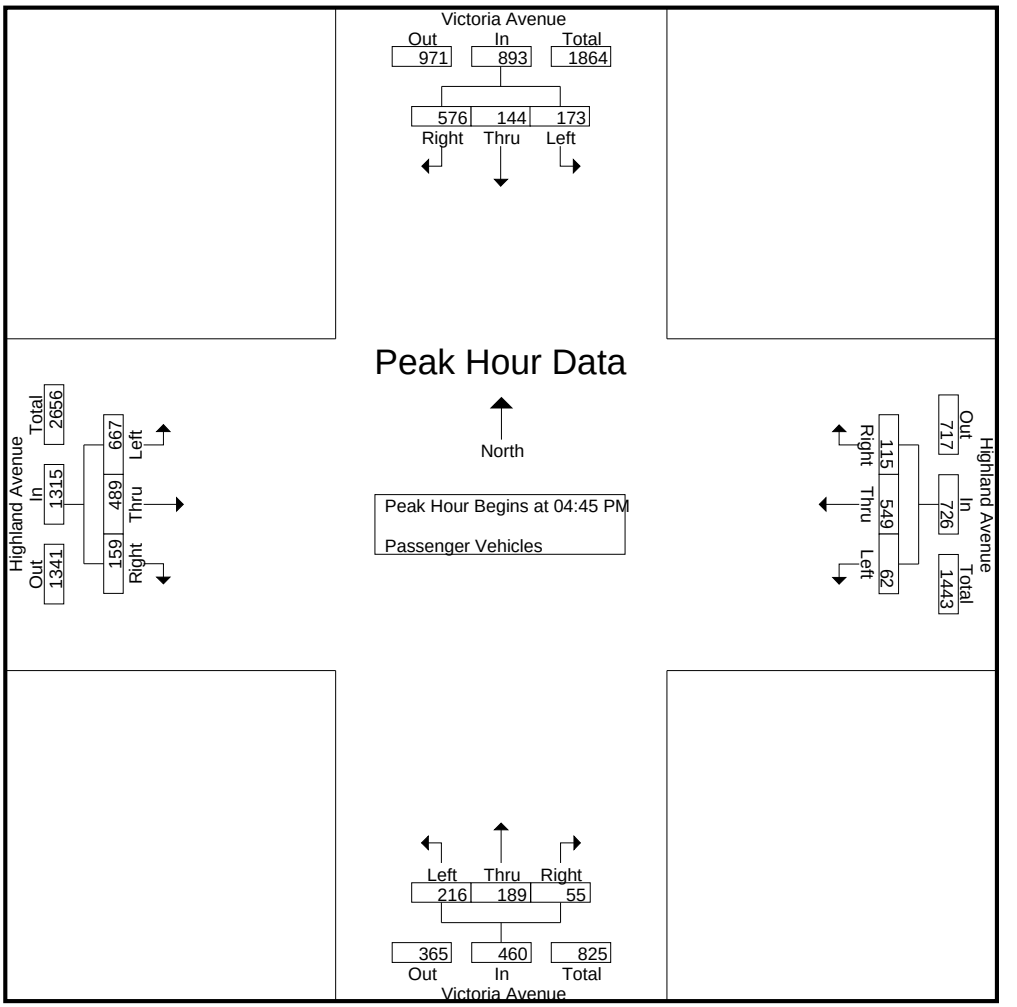
City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland PM
Site Code : 99918352
Start Date : 5/17/2018



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	32	**45**	**169**	**246**	**22**	133	26	181	48	46	16	110	149	123	35	307
+15 mins.	46	31	136	213	11	**148**	25	184	46	46	12	104	**187**	127	38	**352**
+30 mins.	43	31	130	204	14	126	28	168	57	**54**	**19**	**130**	162	102	**49**	313
+45 mins.	**52**	37	141	230	15	142	**36**	**193**	**65**	43	8	116	169	**137**	37	343
Total Volume	173	144	576	893	62	549	115	726	216	189	55	460	667	489	159	1315
% App. Total	19.4	16.1	64.5		8.5	75.6	15.8		47	41.1	12		50.7	37.2	12.1	
PHF	.832	.800	.852	.908	.705	.927	.799	.940	.831	.875	.724	.885	.892	.892	.811	.934

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City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland PM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
03:15 PM	2	0	1	3	0	0	0	0	1	0	0	1	1	5	0	6	10
03:30 PM	2	1	1	4	0	0	0	0	1	0	0	1	1	1	1	3	8
03:45 PM	0	0	3	3	0	0	0	0	0	1	0	1	0	3	1	4	8
Total	5	1	5	11	0	0	0	0	2	1	0	3	3	9	2	14	28
04:00 PM	2	0	1	3	0	3	5	8	3	0	1	4	2	4	1	7	22
04:15 PM	6	1	1	8	0	7	0	7	0	1	1	2	1	3	2	6	23
04:30 PM	1	0	2	3	2	2	1	5	5	0	0	5	0	3	1	4	17
04:45 PM	1	0	1	2	0	3	2	5	3	0	0	3	1	3	0	4	14
Total	10	1	5	16	2	15	8	25	11	1	2	14	4	13	4	21	76
05:00 PM	1	0	1	2	0	1	2	3	3	1	0	4	0	3	0	3	12
05:15 PM	2	1	2	5	0	3	1	4	1	0	1	2	0	1	1	2	13
05:30 PM	1	0	1	2	0	2	1	3	2	0	0	2	0	2	0	2	9
05:45 PM	0	0	2	2	0	0	1	1	2	1	0	3	1	2	0	3	9
Total	4	1	6	11	0	6	5	11	8	2	1	11	1	8	1	10	43
Grand Total	19	3	16	38	2	21	13	36	21	4	3	28	8	30	7	45	147
Apprch %	50	7.9	42.1		5.6	58.3	36.1		75	14.3	10.7		17.8	66.7	15.6		
Total %	12.9	2	10.9	25.9	1.4	14.3	8.8	24.5	14.3	2.7	2	19	5.4	20.4	4.8	30.6	

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	0	1	2	0	**3**	**2**	**5**	**3**	0	0	3	**1**	**3**	0	**4**	**14**
05:00 PM	1	0	1	2	0	1	2	3	3	**1**	0	**4**	0	3	0	3	12
05:15 PM	**2**	**1**	**2**	**5**	0	3	1	4	1	0	**1**	2	0	1	**1**	2	13
05:30 PM	1	0	1	2	0	2	1	3	2	0	0	2	0	2	0	2	9
Total Volume	5	1	5	11	0	9	6	15	9	1	1	11	1	9	1	11	48
% App. Total	45.5	9.1	45.5		0	60	40		81.8	9.1	9.1		9.1	81.8	9.1		
PHF	.625	.250	.625	.550	.000	.750	.750	.750	.750	.250	.250	.688	.250	.750	.250	.688	.857

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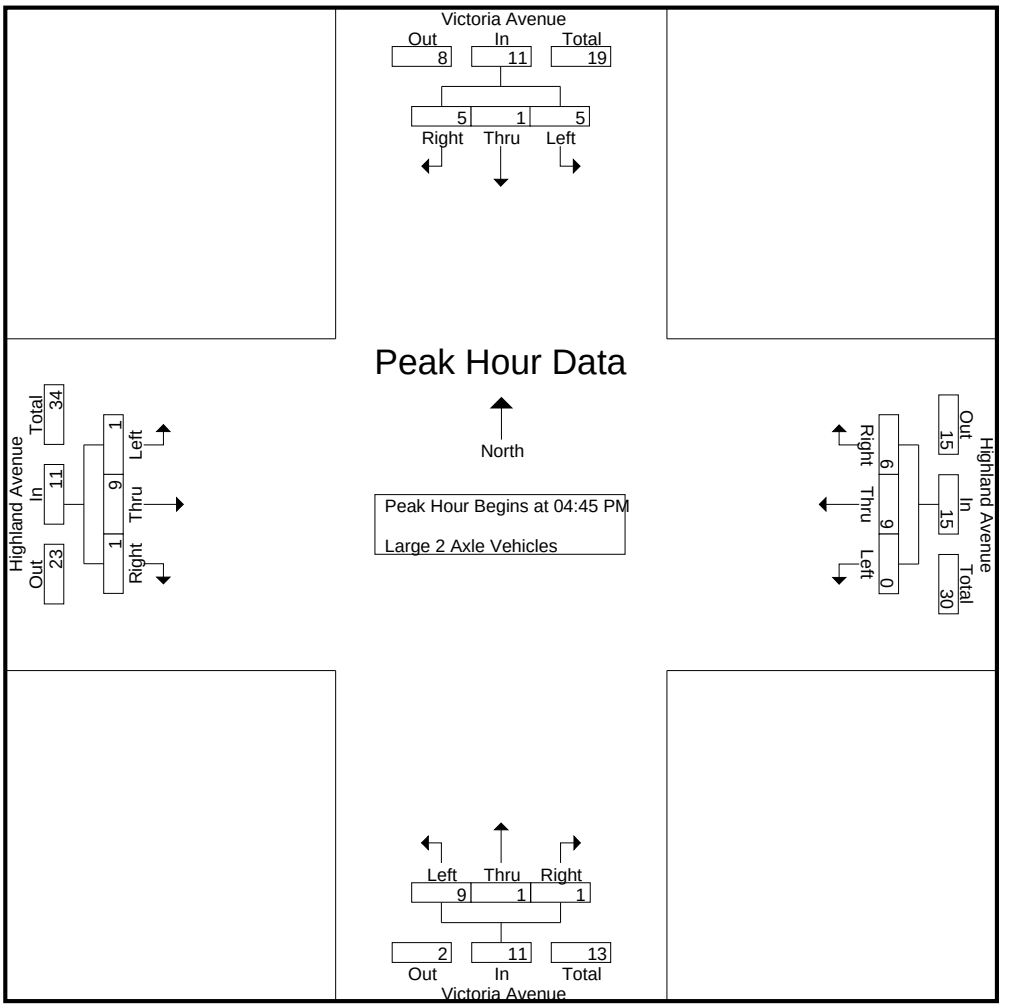
City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	1	0	1	2	0	**3**	**2**	**5**	**3**	0	0	3	**1**	**3**	0	**4**
+15 mins.	1	0	1	2	0	1	2	3	3	**1**	0	**4**	0	3	0	3
+30 mins.	**2**	**1**	**2**	**5**	0	3	1	4	1	0	**1**	2	0	1	**1**	2
+45 mins.	1	0	1	2	0	2	1	3	2	0	0	2	0	2	0	2
Total Volume	5	1	5	11	0	9	6	15	9	1	1	11	1	9	1	11
% App. Total	45.5	9.1	45.5		0	60	40		81.8	9.1	9.1		9.1	81.8	9.1	
PHF	.625	.250	.625	.550	.000	.750	.750	.750	.750	.250	.250	.688	.250	.750	.250	.688

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City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	1	1	0	2	0	2	0	0	0	0	2	0	0	2	5
04:30 PM	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1	3
04:45 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	6	6	0	2	0	2	0	0	0	0	3	0	0	3	11
05:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	1	0	0	0	0	1	0	0	1	1	0	0	1	3
Grand Total	0	0	9	9	0	2	0	2	1	0	0	1	4	0	0	4	16
Apprch %	0	0	100		0	100	0		100	0	0		100	0	0		
Total %	0	0	56.2	56.2	0	12.5	0	12.5	6.2	0	0	6.2	25	0	0	25	

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	**2**	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
05:00 PM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	**1**	0	0	**1**	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	2	2	0	0	0	0	1	0	0	1	1	0	0	1	4
% App. Total	0	0	100		0	0	0		100	0	0		100	0	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.000	.250	.500

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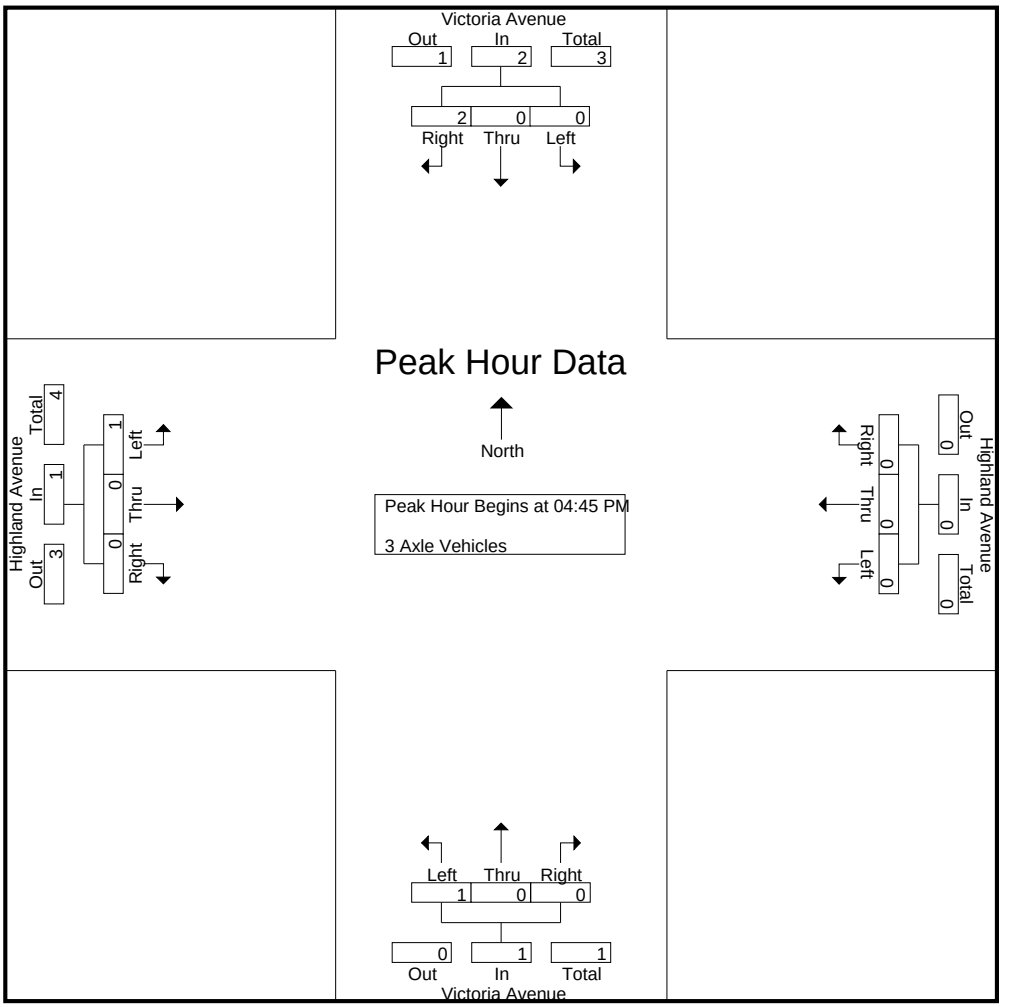
City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

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

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City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	1	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	5	0	0	5	0	0	2	2	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
Total	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
Grand Total	0	0	0	0	0	1	0	1	6	0	0	6	0	0	2	2	9
Apprch %	0	0	0		0	100	0		100	0	0		0	0	100		
Total %	0	0	0	0	0	11.1	0	11.1	66.7	0	0	66.7	0	0	22.2	22.2	

	Victoria Avenue Southbound				Highland Avenue Westbound				Victoria Avenue Northbound				Highland Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% App. Total	0	0	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250

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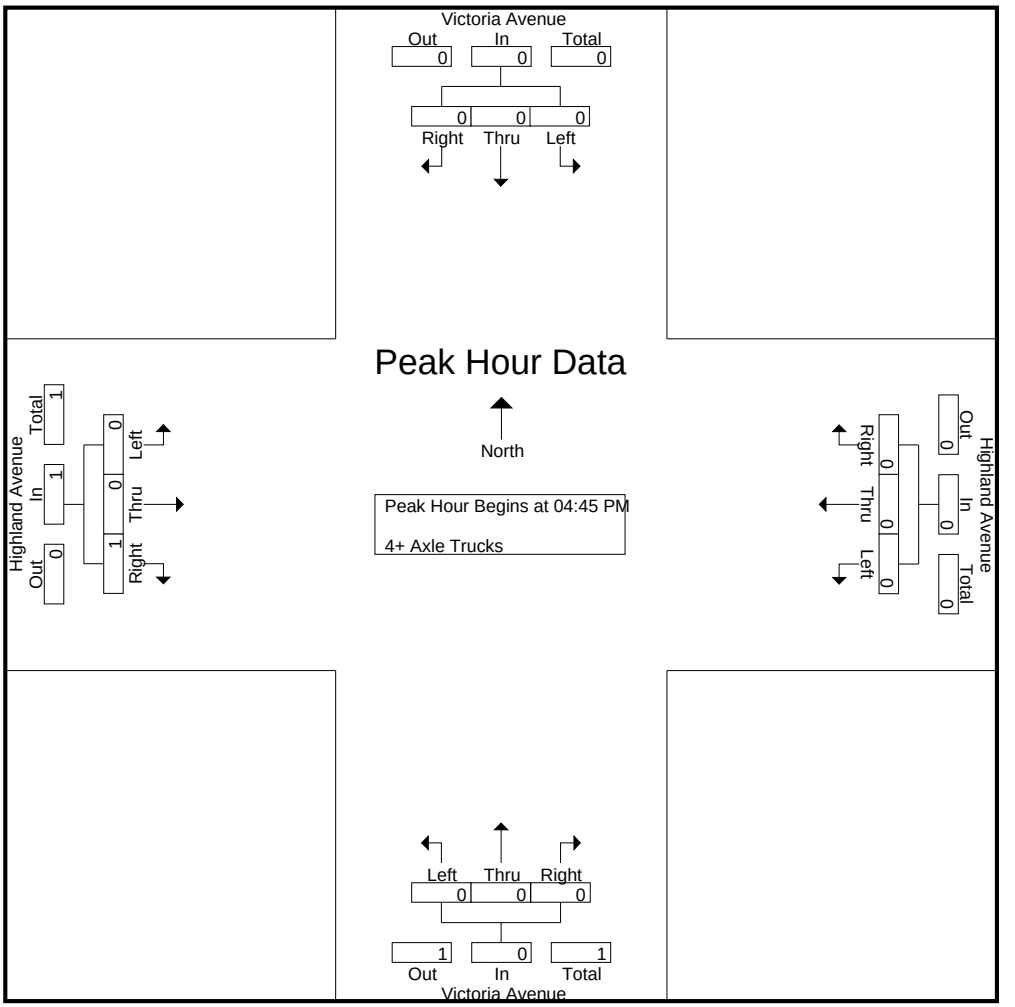
City of San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue
Weather: Clear

File Name : 43_SBC_Victoria_Highland PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

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

Location: San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue

Date: 5/17/2018
Day: Thursday

PEDESTRIANS

	North Leg Victoria Avenue Pedestrians	East Leg Highland Avenue Pedestrians	South Leg Victoria Avenue Pedestrians	West Leg Highland Avenue Pedestrians	
6:00 AM	0	0	0	0	0
6:15 AM	0	0	0	0	0
6:30 AM	0	0	0	0	0
6:45 AM	0	0	0	0	0
7:00 AM	1	0	3	5	9
7:15 AM	0	1	2	2	5
7:30 AM	0	2	0	2	4
7:45 AM	0	1	0	1	2
8:00 AM	0	0	2	1	3
8:15 AM	0	0	0	0	0
8:30 AM	0	3	0	0	3
8:45 AM	2	1	4	2	9
TOTAL VOLUMES:	3	8	11	13	35

	North Leg Victoria Avenue Pedestrians	East Leg Highland Avenue Pedestrians	South Leg Victoria Avenue Pedestrians	West Leg Highland Avenue Pedestrians	
3:00 PM	0	0	0	1	1
3:15 PM	0	0	2	1	3
3:30 PM	0	0	1	0	1
3:45 PM	0	1	0	0	1
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	3	2	5	10
5:15 PM	1	1	3	0	5
5:30 PM	1	1	7	0	9
5:45 PM	0	0	1	1	2
TOTAL VOLUMES:	2	6	17	8	33

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951-268-6268

Location: San Bernardino
N/S: Victoria Avenue
E/W: Highland Avenue

Date: 5/17/2018
Day: Thursday

BICYCLES

	Southbound Victoria Avenue			Westbound Highland Avenue			Northbound Victoria Avenue			Eastbound Highland Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1	0	0	2	0	0	0	0	4

	Southbound Victoria Avenue			Westbound Highland Avenue			Northbound Victoria Avenue			Eastbound Highland Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	1	0	0	0	1	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	1	0	0	0	1	0	0	0	0	0	3

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

Prepared by National Data & Surveying Services

Del Rosa Dr & Pacific St

Peak Hour Turning Movement Count

ID: 19-06039-008
City: San Bernardino

Day: Thursday
Date: 03/14/2019

PEAK HOURS

AM	07:00 AM - 08:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

SOUTHBOUND — Del Rosa Dr

AM	195	335	38	0	396	AM
NOON	0	0	0	0	0	NOON
PM	141	315	65	0	575	PM
	0	2	1	0		

EASTBOUND — Pacific St

AM	NOON	PM	
506	0	352	
0	0	0	0
151	0	143	1
232	0	336	2
27	0	25	0
AM	NOON	PM	

CONTROL

Signalized

TEV	1631 AM	0 NOON	1764 PM
PHF	0.89		0.95

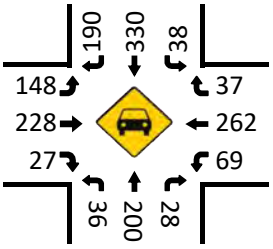
WESTBOUND — Pacific St

	PM	NOON	AM
0	35	0	39
2	191	0	271
1	27	0	69
0	0	0	0
	470	0	298
	PM	NOON	AM

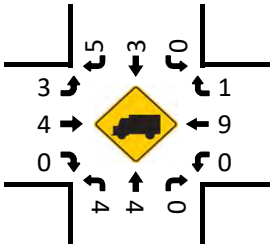
NORTHBOUND — Del Rosa Dr

	0	1	1	1		
PM	367	0	20	397	69	PM
NOON	0	0	0	0	0	NOON
AM	431	0	40	206	28	AM

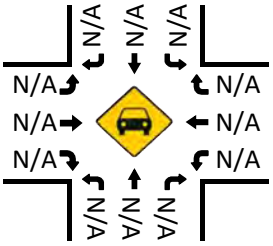
Cars (AM)



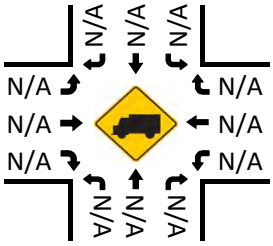
2axle (AM)



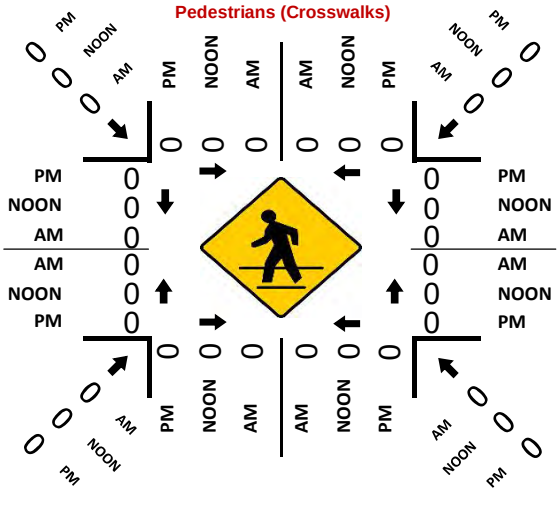
Cars (NOON)



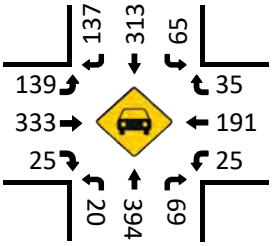
2axle (NOON)



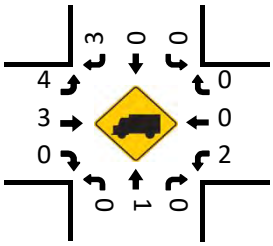
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Pacific St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-008
Date: 3/14/2019

Total

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Pacific St				Pacific St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	14	38	1	0	8	82	37	0	30	49	8	0	10	49	9	0	335
7:15 AM	9	48	10	0	11	85	66	0	37	89	6	0	21	64	10	0	456
7:30 AM	12	56	10	0	8	78	51	0	51	61	8	0	21	89	7	0	452
7:45 AM	5	64	7	0	11	90	41	0	33	33	5	0	17	69	13	0	388
8:00 AM	8	44	6	0	6	66	35	0	22	32	6	0	11	52	14	0	302
8:15 AM	10	55	7	0	8	62	35	0	24	51	5	0	10	53	9	0	329
8:30 AM	3	44	4	0	8	70	28	0	40	54	6	0	16	51	5	0	329
8:45 AM	7	55	2	0	10	69	43	0	31	64	1	0	6	52	8	0	348
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	68	404	47	0	70	602	336	0	268	433	45	0	112	479	75	0	2939
APPROACH %'s :	13.10%	77.84%	9.06%	0.00%	6.94%	59.72%	33.33%	0.00%	35.92%	58.04%	6.03%	0.00%	16.82%	71.92%	11.26%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	40	206	28	0	38	335	195	0	151	232	27	0	69	271	39	0	1631
PEAK HR FACTOR :	0.714	0.805	0.700	0.000	0.864	0.931	0.739	0.000	0.740	0.652	0.844	0.000	0.821	0.761	0.750	0.000	0.894
	0.878				0.877				0.777				0.810				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	10	85	16	0	18	79	43	0	30	72	10	0	2	53	11	0	429
4:15 PM	10	89	12	0	21	77	39	0	33	75	9	0	9	54	9	0	437
4:30 PM	7	74	12	0	22	88	37	0	36	93	8	0	14	44	6	0	441
4:45 PM	2	91	20	0	20	85	28	0	37	87	6	0	9	43	5	0	433
5:00 PM	3	100	15	0	9	79	32	0	32	83	7	0	4	49	8	0	421
5:15 PM	6	109	20	0	25	79	37	0	34	90	6	0	8	37	11	0	462
5:30 PM	7	89	17	0	13	65	32	0	40	92	7	0	9	48	8	0	427
5:45 PM	4	99	17	0	18	92	40	0	37	71	5	0	6	57	8	0	454
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	49	736	129	0	146	644	288	0	279	663	58	0	61	385	66	0	3504
APPROACH %'s :	5.36%	80.53%	14.11%	0.00%	13.54%	59.74%	26.72%	0.00%	27.90%	66.30%	5.80%	0.00%	11.91%	75.20%	12.89%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	20	397	69	0	65	315	141	0	143	336	25	0	27	191	35	0	1764
PEAK HR FACTOR :	0.714	0.911	0.863	0.000	0.650	0.856	0.881	0.000	0.894	0.913	0.893	0.000	0.750	0.838	0.795	0.000	0.955
	0.900				0.868				0.906				0.891				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Pacific St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-008
Date: 3/14/2019

Cars

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Pacific St				Pacific St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	11	37	1	0	8	81	34	0	29	48	8	0	10	46	9	0	322
7:15 AM	9	46	10	0	11	83	65	0	37	88	6	0	21	64	9	0	449
7:30 AM	12	54	10	0	8	78	50	0	49	60	8	0	21	85	6	0	441
7:45 AM	4	63	7	0	11	88	41	0	33	32	5	0	17	67	13	0	381
8:00 AM	7	42	6	0	6	60	35	0	21	32	6	0	11	52	14	0	292
8:15 AM	9	51	7	0	7	58	33	0	23	49	4	0	10	52	9	0	312
8:30 AM	3	44	4	0	7	67	28	0	40	53	6	0	16	51	5	0	324
8:45 AM	7	54	2	0	10	68	41	0	28	63	1	0	5	52	8	0	339
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	62	391	47	0	68	583	327	0	260	425	44	0	111	469	73	0	2860
APPROACH %'s :	12.40%	78.20%	9.40%	0.00%	6.95%	59.61%	33.44%	0.00%	35.67%	58.30%	6.04%	0.00%	17.00%	71.82%	11.18%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	36	200	28	0	38	330	190	0	148	228	27	0	69	262	37	0	1593
PEAK HR FACTOR :	0.75	0.794	0.700	0.000	0.864	0.938	0.731	0.000	0.755	0.648	0.844	0.000	0.821	0.771	0.712	0.000	0.887
	0.868				0.877				0.769				0.821				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	82	16	0	17	75	41	0	30	72	10	0	2	51	11	0	416
4:15 PM	10	88	12	0	20	76	37	0	31	75	9	0	9	53	9	0	429
4:30 PM	7	72	12	0	22	87	37	0	36	92	8	0	12	43	6	0	434
4:45 PM	2	90	20	0	20	84	27	0	36	87	6	0	8	42	5	0	427
5:00 PM	3	98	15	0	9	79	32	0	31	82	7	0	4	49	8	0	417
5:15 PM	6	109	20	0	25	78	34	0	33	88	6	0	6	37	11	0	453
5:30 PM	7	89	17	0	13	65	32	0	39	92	7	0	9	48	8	0	426
5:45 PM	4	98	17	0	18	91	39	0	36	71	5	0	6	57	8	0	450
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	48	726	129	0	144	635	279	0	272	659	58	0	56	380	66	0	3452
APPROACH %'s :	5.32%	80.40%	14.29%	0.00%	13.61%	60.02%	26.37%	0.00%	27.50%	66.63%	5.86%	0.00%	11.16%	75.70%	13.15%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	20	394	69	0	65	313	137	0	139	333	25	0	25	191	35	0	1746
PEAK HR FACTOR :	0.71	0.904	0.863	0.000	0.650	0.860	0.878	0.000	0.891	0.905	0.893	0.000	0.694	0.838	0.795	0.000	0.964
	0.894				0.870				0.900				0.884				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Pacific St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-008
Date: 3/14/2019

2axle

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Pacific St				Pacific St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	1	0	0	0	1	3	0	1	1	0	0	0	3	0	0	13
7:15 AM	0	2	0	0	0	0	1	0	0	1	0	0	0	0	1	0	5
7:30 AM	0	1	0	0	0	0	1	0	2	1	0	0	0	4	0	0	9
7:45 AM	1	0	0	0	0	2	0	0	0	1	0	0	0	2	0	0	6
8:00 AM	1	2	0	0	0	5	0	0	1	0	0	0	0	0	0	0	9
8:15 AM	1	3	0	0	1	2	2	0	1	1	1	0	0	1	0	0	13
8:30 AM	0	0	0	0	1	3	0	0	0	1	0	0	0	0	0	0	5
8:45 AM	0	1	0	0	0	1	1	0	2	0	0	0	1	0	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	6	10	0	0	2	14	8	0	7	6	1	0	1	10	1	0	66
APPROACH %'s :	37.50%	62.50%	0.00%	0.00%	8.33%	58.33%	33.33%	0.00%	50.00%	42.86%	7.14%	0.00%	8.33%	83.33%	8.33%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	4	4	0	0	0	3	5	0	3	4	0	0	0	9	1	0	33
PEAK HR FACTOR :	0.333	0.500	0.000	0.000	0.000	0.375	0.417	0.000	0.375	1.000	0.000	0.000	0.000	0.563	0.250	0.000	0.635
	0.500				0.500				0.583				0.625				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	3	0	0	1	3	2	0	0	0	0	0	0	2	0	0	12
4:15 PM	0	1	0	0	1	1	2	0	2	0	0	0	0	1	0	0	8
4:30 PM	0	2	0	0	0	0	0	0	0	1	0	0	2	1	0	0	6
4:45 PM	0	1	0	0	0	1	1	0	1	0	0	0	1	1	0	0	6
5:00 PM	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	2	0	1	2	0	0	2	0	0	0	7
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	8	0	0	2	5	8	0	7	4	0	0	5	5	0	0	45
APPROACH %'s :	11.11%	88.89%	0.00%	0.00%	13.33%	33.33%	53.33%	0.00%	63.64%	36.36%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	3	0	4	3	0	0	2	0	0	0	13
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.000	0.375	0.000	1.000	0.375	0.000	0.000	0.250	0.000	0.000	0.000	0.464
	0.250				0.375				0.583				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Pacific St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-008
Date: 3/14/2019

3axle

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Pacific St				Pacific St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	3	1	0	1	1	0	0	0	0	1	0	8
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	75.00%	25.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500
						0.250									0.250		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
		0.250															

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Pacific St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-008
Date: 3/14/2019

4axle

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Pacific St				Pacific St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	5
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
	0.500				0.250												

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	5
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	75.00%	25.00%	0.00%									
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	4
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.250				0.375												

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City of San Bernardino
N/S: Victoria Avenue
E/W: Pacific Street
Weather: Clear

File Name : 34_SBC_Victoria_Pacific AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	8	16	8	32	5	38	13	56	17	26	3	46	15	25	11	51	185
06:15 AM	11	19	5	35	6	33	17	56	23	32	3	58	9	28	20	57	206
06:30 AM	9	23	11	43	5	43	14	62	22	38	5	65	12	33	19	64	234
06:45 AM	9	25	10	44	8	57	22	87	29	38	7	74	18	48	29	95	300
Total	37	83	34	154	24	171	66	261	91	134	18	243	54	134	79	267	925
07:00 AM	8	36	20	64	11	68	20	99	43	64	4	111	24	30	35	89	363
07:15 AM	12	81	41	134	14	135	23	172	57	115	9	181	40	79	76	195	682
07:30 AM	21	91	28	140	13	75	20	108	41	73	8	122	38	83	61	182	552
07:45 AM	15	66	13	94	11	51	20	82	19	49	6	74	10	56	33	99	349
Total	56	274	102	432	49	329	83	461	160	301	27	488	112	248	205	565	1946
08:00 AM	18	43	10	71	6	52	11	69	22	66	7	95	12	37	21	70	305
08:15 AM	15	46	9	70	9	49	17	75	28	58	5	91	10	37	36	83	319
08:30 AM	23	39	16	78	8	33	26	67	26	71	10	107	7	47	28	82	334
08:45 AM	13	57	12	82	4	40	24	68	19	59	6	84	7	36	33	76	310
Total	69	185	47	301	27	174	78	279	95	254	28	377	36	157	118	311	1268
Grand Total	162	542	183	887	100	674	227	1001	346	689	73	1108	202	539	402	1143	4139
Apprch %	18.3	61.1	20.6		10	67.3	22.7		31.2	62.2	6.6		17.7	47.2	35.2		
Total %	3.9	13.1	4.4	21.4	2.4	16.3	5.5	24.2	8.4	16.6	1.8	26.8	4.9	13	9.7	27.6	
Passenger Vehicles	159	523	182	864	98	670	216	984	338	652	69	1059	200	534	398	1132	4039
% Passenger Vehicles	98.1	96.5	99.5	97.4	98	99.4	95.2	98.3	97.7	94.6	94.5	95.6	99	99.1	99	99	97.6
Large 2 Axle Vehicles	3	16	1	20	2	4	11	17	8	28	3	39	2	5	4	11	87
% Large 2 Axle Vehicles	1.9	3	0.5	2.3	2	0.6	4.8	1.7	2.3	4.1	4.1	3.5	1	0.9	1	1	2.1
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0.1	1.4	0.2	0	0	0	0	0
4+ Axle Trucks	0	3	0	3	0	0	0	0	0	8	0	8	0	0	0	0	11
% 4+ Axle Trucks	0	0.6	0	0.3	0	0	0	0	0	1.2	0	0.7	0	0	0	0	0.3

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	8	36	20	64	11	68	20	99	43	64	4	111	24	30	35	89	363
07:15 AM	12	81	**41**	134	**14**	**135**	**23**	**172**	**57**	**115**	**9**	**181**	**40**	79	**76**	**195**	**682**
07:30 AM	**21**	**91**	28	**140**	13	75	20	108	41	73	8	122	38	**83**	61	182	552
07:45 AM	15	66	13	94	11	51	20	82	19	49	6	74	10	56	33	99	349
Total Volume	56	274	102	432	49	329	83	461	160	301	27	488	112	248	205	565	1946
% App. Total	13	63.4	23.6		10.6	71.4	18		32.8	61.7	5.5		19.8	43.9	36.3		
PHF	.667	.753	.622	.771	.875	.609	.902	.670	.702	.654	.750	.674	.700	.747	.674	.724	.713

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City of San Bernardino
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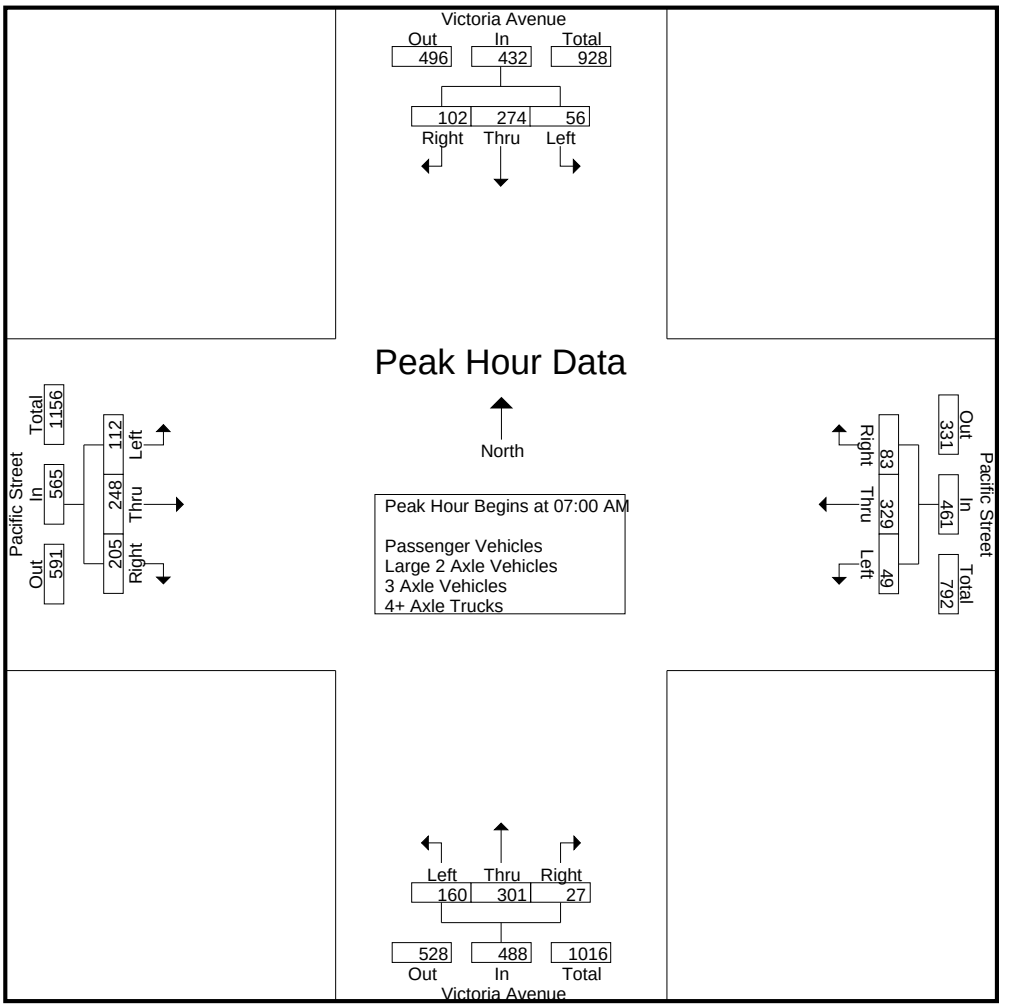
Weather: Clear

File Name : 34_SBC_Victoria_Pacific AM
Site Code : 99918352
Start Date : 5/17/2018



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				06:45 AM				06:45 AM				07:00 AM			
+0 mins.	12	81	**41**	134	8	57	22	87	29	38	7	74	24	30	35	89
+15 mins.	**21**	**91**	28	**140**	11	68	20	99	43	64	4	111	**40**	79	**76**	**195**
+30 mins.	15	66	13	94	**14**	**135**	**23**	**172**	**57**	**115**	**9**	**181**	38	**83**	61	182
+45 mins.	18	43	10	71	13	75	20	108	41	73	8	122	10	56	33	99
Total Volume	66	281	92	439	46	335	85	466	170	290	28	488	112	248	205	565
% App. Total	15	64	21		9.9	71.9	18.2		34.8	59.4	5.7		19.8	43.9	36.3	
PHF	.786	.772	.561	.784	.821	.620	.924	.677	.746	.630	.778	.674	.700	.747	.674	.724

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Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	8	15	8	31	5	38	13	56	17	23	3	43	15	25	11	51	181
06:15 AM	11	16	5	32	6	33	17	56	23	31	3	57	9	28	20	57	202
06:30 AM	9	23	11	43	5	43	14	62	22	38	5	65	12	33	19	64	234
06:45 AM	9	21	10	40	8	57	22	87	29	33	7	69	18	48	29	95	291
Total	37	75	34	146	24	171	66	261	91	125	18	234	54	134	79	267	908
07:00 AM	8	35	19	62	11	68	19	98	42	60	4	106	24	30	35	89	355
07:15 AM	11	79	41	131	13	135	23	171	56	107	6	169	40	78	75	193	664
07:30 AM	20	88	28	136	13	73	17	103	39	72	8	119	37	81	61	179	537
07:45 AM	15	65	13	93	11	51	18	80	18	44	6	68	10	55	33	98	339
Total	54	267	101	422	48	327	77	452	155	283	24	462	111	244	204	559	1895
08:00 AM	18	41	10	69	5	52	11	68	22	62	7	91	12	37	21	70	298
08:15 AM	14	46	9	69	9	49	15	73	26	55	5	86	10	36	35	81	309
08:30 AM	23	39	16	78	8	32	23	63	25	70	9	104	7	47	28	82	327
08:45 AM	13	55	12	80	4	39	24	67	19	57	6	82	6	36	31	73	302
Total	68	181	47	296	26	172	73	271	92	244	27	363	35	156	115	306	1236
Grand Total	159	523	182	864	98	670	216	984	338	652	69	1059	200	534	398	1132	4039
Apprch %	18.4	60.5	21.1		10	68.1	22		31.9	61.6	6.5		17.7	47.2	35.2		
Total %	3.9	12.9	4.5	21.4	2.4	16.6	5.3	24.4	8.4	16.1	1.7	26.2	5	13.2	9.9	28	

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	8	35	19	62	11	68	19	98	42	60	4	106	24	30	35	89	355
07:15 AM	11	79	**41**	131	**13**	**135**	**23**	**171**	**56**	**107**	6	**169**	**40**	78	**75**	**193**	**664**
07:30 AM	**20**	**88**	28	**136**	13	73	17	103	39	72	**8**	119	37	**81**	61	179	537
07:45 AM	15	65	13	93	11	51	18	80	18	44	6	68	10	55	33	98	339
Total Volume	54	267	101	422	48	327	77	452	155	283	24	462	111	244	204	559	1895
% App. Total	12.8	63.3	23.9		10.6	72.3	17		33.5	61.3	5.2		19.9	43.6	36.5		
PHF	.675	.759	.616	.776	.923	.606	.837	.661	.692	.661	.750	.683	.694	.753	.680	.724	.713

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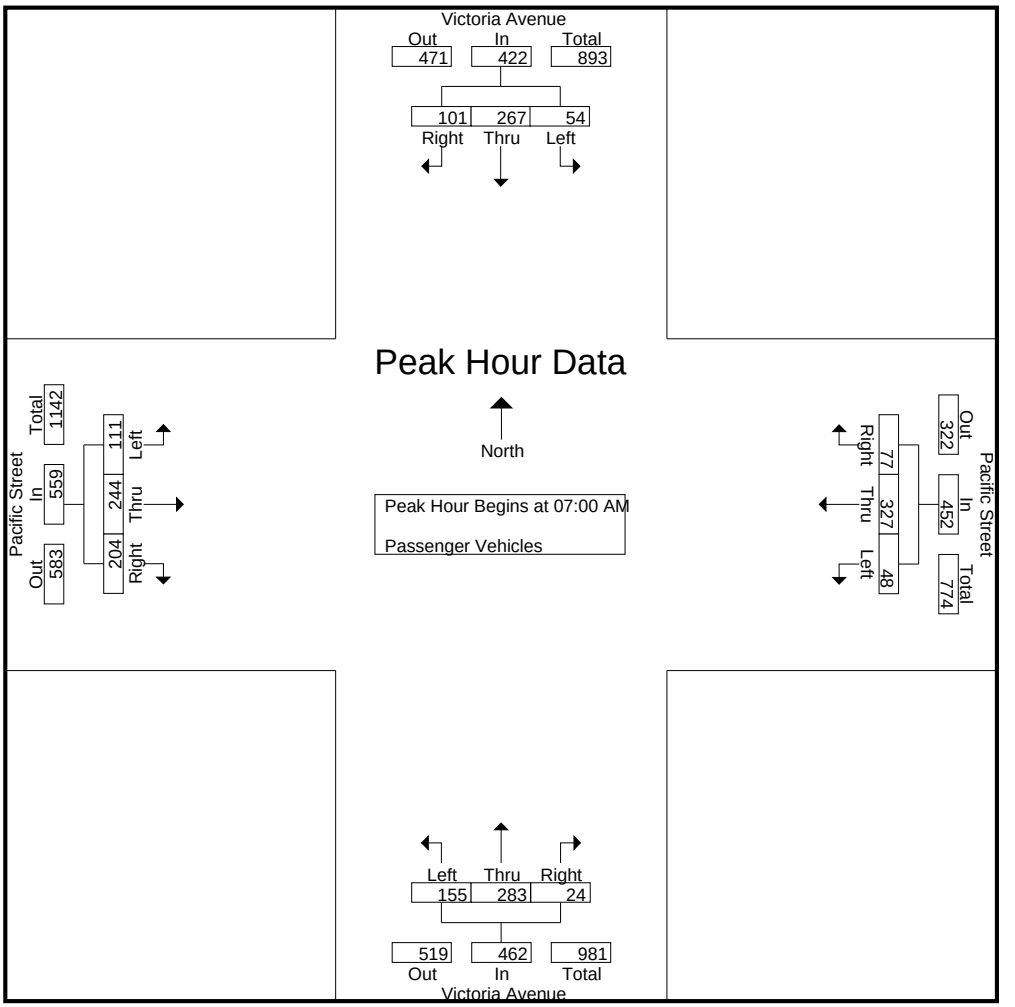
Site Code : 99918352
Start Date : 5/17/2018



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	8	35	19	62	11	68	19	98	42	60	4	106	24	30	35	89
+15 mins.	11	79	**41**	131	**13**	**135**	**23**	**171**	**56**	**107**	6	**169**	**40**	78	**75**	**193**
+30 mins.	**20**	**88**	28	**136**	13	73	17	103	39	72	**8**	119	37	**81**	61	179
+45 mins.	15	65	13	93	11	51	18	80	18	44	6	68	10	55	33	98
Total Volume	54	267	101	422	48	327	77	452	155	283	24	462	111	244	204	559
% App. Total	12.8	63.3	23.9		10.6	72.3	17		33.5	61.3	5.2		19.9	43.6	36.5	
PHF	.675	.759	.616	.776	.923	.606	.837	.661	.692	.661	.750	.683	.694	.753	.680	.724

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Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
06:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
Total	0	7	0	7	0	0	0	0	0	6	0	6	0	0	0	0	13
07:00 AM	0	0	1	1	0	0	1	1	1	4	0	5	0	0	0	0	7
07:15 AM	1	2	0	3	1	0	0	1	1	7	3	11	0	1	1	2	17
07:30 AM	1	3	0	4	0	2	3	5	2	0	0	2	1	2	0	3	14
07:45 AM	0	1	0	1	0	0	2	2	1	5	0	6	0	1	0	1	10
Total	2	6	1	9	1	2	6	9	5	16	3	24	1	4	1	6	48
08:00 AM	0	2	0	2	1	0	0	1	0	3	0	3	0	0	0	0	6
08:15 AM	1	0	0	1	0	0	2	2	2	1	0	3	0	1	1	2	8
08:30 AM	0	0	0	0	0	1	3	4	1	1	0	2	0	0	0	0	6
08:45 AM	0	1	0	1	0	1	0	1	0	1	0	1	1	0	2	3	6
Total	1	3	0	4	1	2	5	8	3	6	0	9	1	1	3	5	26
Grand Total	3	16	1	20	2	4	11	17	8	28	3	39	2	5	4	11	87
Apprch %	15	80	5		11.8	23.5	64.7		20.5	71.8	7.7		18.2	45.5	36.4		
Total %	3.4	18.4	1.1	23	2.3	4.6	12.6	19.5	9.2	32.2	3.4	44.8	2.3	5.7	4.6	12.6	

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**1**	1	0	0	1	1	1	4	0	5	0	0	0	0	7
07:15 AM	**1**	2	0	3	**1**	0	0	1	1	**7**	**3**	**11**	0	1	**1**	2	**17**
07:30 AM	1	**3**	0	**4**	0	**2**	**3**	**5**	**2**	0	0	2	**1**	**2**	0	**3**	14
07:45 AM	0	1	0	1	0	0	2	2	1	5	0	6	0	1	0	1	10
Total Volume	2	6	1	9	1	2	6	9	5	16	3	24	1	4	1	6	48
% App. Total	22.2	66.7	11.1		11.1	22.2	66.7		20.8	66.7	12.5		16.7	66.7	16.7		
PHF	.500	.500	.250	.563	.250	.250	.500	.450	.625	.571	.250	.545	.250	.500	.250	.500	.706

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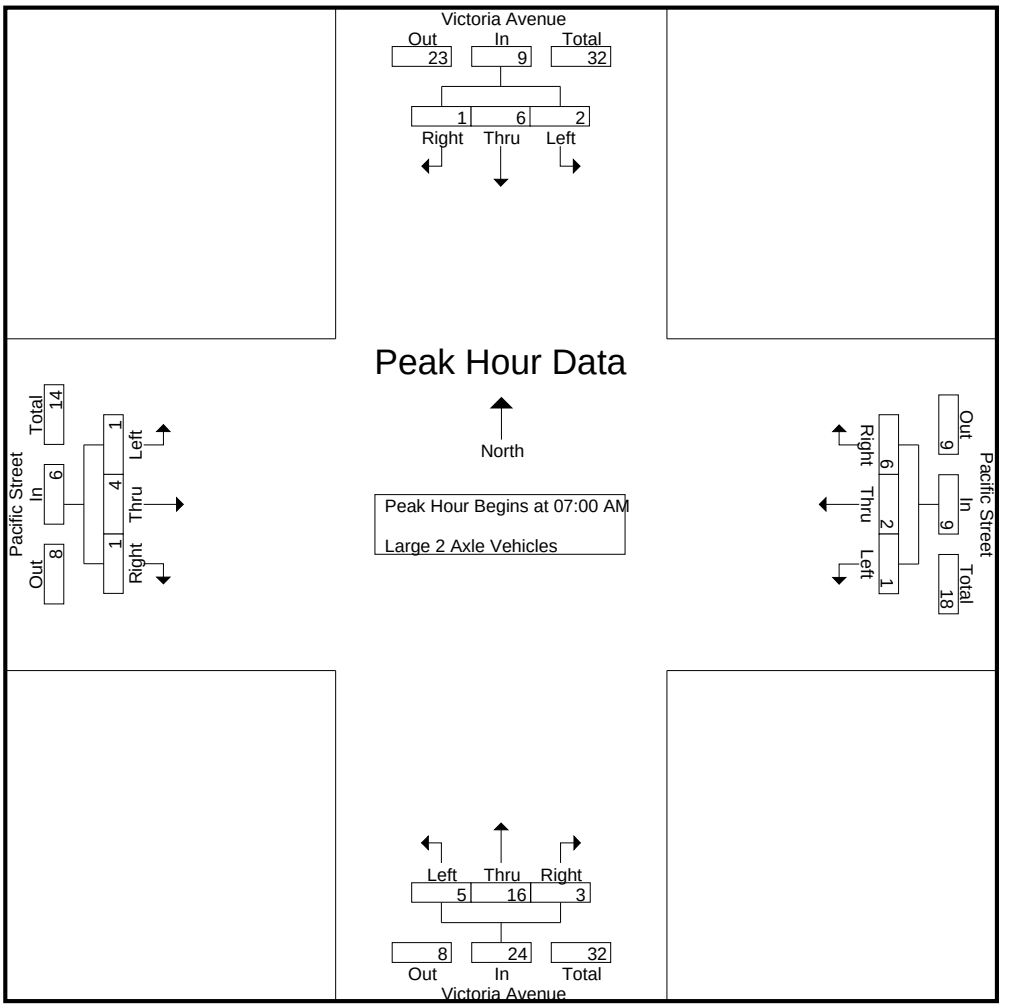
Site Code : 99918352
Start Date : 5/17/2018



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	**1**	1	0	0	1	1	1	4	0	5	0	0	0	0
+15 mins.	**1**	2	0	3	**1**	0	0	1	1	**7**	**3**	**11**	0	1	**1**	2
+30 mins.	1	**3**	0	**4**	0	**2**	**3**	**5**	**2**	0	0	2	**1**	**2**	0	**3**
+45 mins.	0	1	0	1	0	0	2	2	1	5	0	6	0	1	0	1
Total Volume	2	6	1	9	1	2	6	9	5	16	3	24	1	4	1	6
% App. Total	22.2	66.7	11.1		11.1	22.2	66.7		20.8	66.7	12.5		16.7	66.7	16.7	
PHF	.500	.500	.250	.563	.250	.250	.500	.450	.625	.571	.250	.545	.250	.500	.250	.500

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City of San Bernardino
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Weather: Clear

File Name : 34_SBC_Victoria_Pacific AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Apprch %	0	0	0		0	0	0		0	50	50		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	50	50	100	0	0	0	0	

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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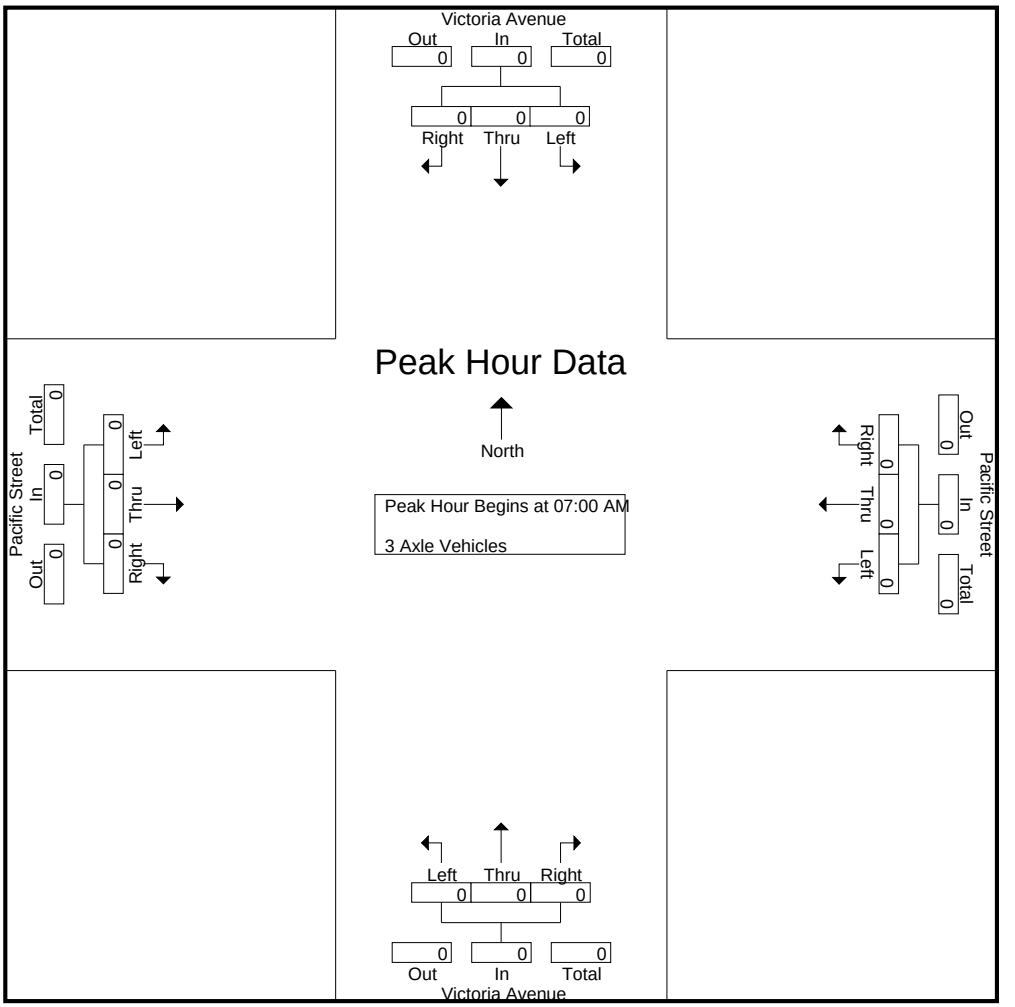
Site Code : 99918352
Start Date : 5/17/2018



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

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

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Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
06:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Grand Total	0	3	0	3	0	0	0	0	0	8	0	8	0	0	0	0	11
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	27.3	0	27.3	0	0	0	0	0	72.7	0	72.7	0	0	0	0	

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
07:15 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.750

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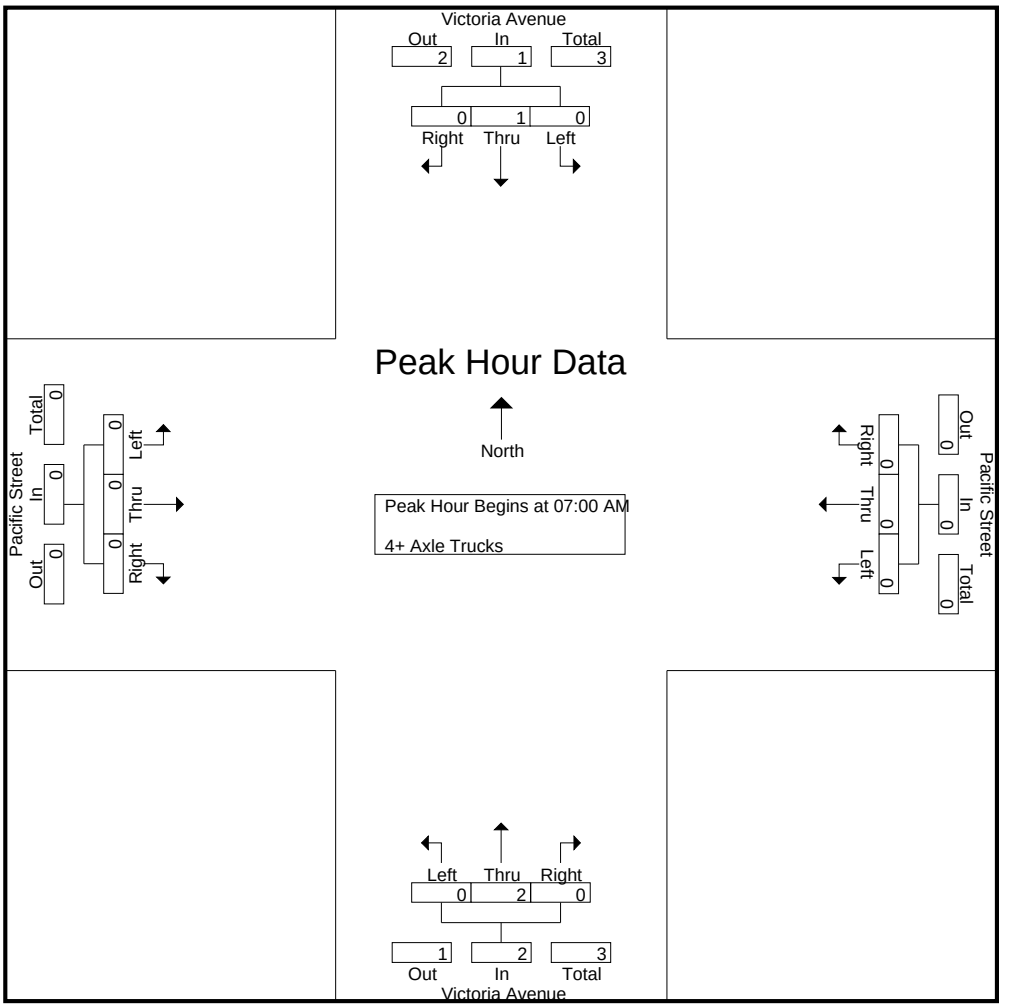
Weather: Clear

File Name : 34_SBC_Victoria_Pacific AM
Site Code : 99918352
Start Date : 5/17/2018



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

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

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File Name : 34_SBC_Victoria_Pacific PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	9	65	13	87	13	36	6	55	13	85	6	104	10	37	32	79	325
03:15 PM	5	66	19	90	8	50	11	69	18	65	10	93	8	41	31	80	332
03:30 PM	11	76	12	99	4	52	8	64	21	75	13	109	12	47	39	98	370
03:45 PM	12	86	15	113	9	45	6	60	24	68	8	100	15	54	38	107	380
Total	37	293	59	389	34	183	31	248	76	293	37	406	45	179	140	364	1407
04:00 PM	12	84	18	114	5	54	7	66	30	97	8	135	14	48	42	104	419
04:15 PM	15	67	11	93	9	53	10	72	35	72	20	127	14	64	45	123	415
04:30 PM	11	76	19	106	11	72	18	101	31	82	11	124	20	84	44	148	479
04:45 PM	14	59	15	88	7	59	15	81	36	103	12	151	16	86	47	149	469
Total	52	286	63	401	32	238	50	320	132	354	51	537	64	282	178	524	1782
05:00 PM	16	60	14	90	9	52	7	68	40	84	11	135	16	100	54	170	463
05:15 PM	10	82	16	108	14	59	15	88	37	103	21	161	18	87	45	150	507
05:30 PM	7	72	13	92	5	47	9	61	28	91	11	130	13	71	40	124	407
05:45 PM	13	78	21	112	9	52	13	74	36	69	14	119	12	60	42	114	419
Total	46	292	64	402	37	210	44	291	141	347	57	545	59	318	181	558	1796
Grand Total	135	871	186	1192	103	631	125	859	349	994	145	1488	168	779	499	1446	4985
Apprch %	11.3	73.1	15.6		12	73.5	14.6		23.5	66.8	9.7		11.6	53.9	34.5		
Total %	2.7	17.5	3.7	23.9	2.1	12.7	2.5	17.2	7	19.9	2.9	29.8	3.4	15.6	10	29	
Passenger Vehicles	132	860	181	1173	98	624	120	842	346	975	143	1464	164	776	495	1435	4914
% Passenger Vehicles	97.8	98.7	97.3	98.4	95.1	98.9	96	98	99.1	98.1	98.6	98.4	97.6	99.6	99.2	99.2	98.6
Large 2 Axle Vehicles	3	8	3	14	5	7	5	17	3	14	2	19	3	3	4	10	60
% Large 2 Axle Vehicles	2.2	0.9	1.6	1.2	4.9	1.1	4	2	0.9	1.4	1.4	1.3	1.8	0.4	0.8	0.7	1.2
3 Axle Vehicles	0	3	1	4	0	0	0	0	0	1	0	1	0	0	0	0	5
% 3 Axle Vehicles	0	0.3	0.5	0.3	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.1
4+ Axle Trucks	0	0	1	1	0	0	0	0	0	4	0	4	1	0	0	1	6
% 4+ Axle Trucks	0	0	0.5	0.1	0	0	0	0	0	0.4	0	0.3	0.6	0	0	0.1	0.1

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	11	76	**19**	106	11	**72**	**18**	**101**	31	82	11	124	**20**	84	44	148	479
04:45 PM	14	59	15	88	7	59	15	81	36	**103**	12	151	16	86	47	149	469
05:00 PM	**16**	60	14	90	9	52	7	68	**40**	84	11	135	16	**100**	**54**	**170**	463
05:15 PM	10	**82**	16	**108**	**14**	59	15	88	37	103	**21**	**161**	18	87	45	150	**507**
Total Volume	51	277	64	392	41	242	55	338	144	372	55	571	70	357	190	617	1918
% App. Total	13	70.7	16.3		12.1	71.6	16.3		25.2	65.1	9.6		11.3	57.9	30.8		
PHF	.797	.845	.842	.907	.732	.840	.764	.837	.900	.903	.655	.887	.875	.893	.880	.907	.946

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Site Code : 99918352
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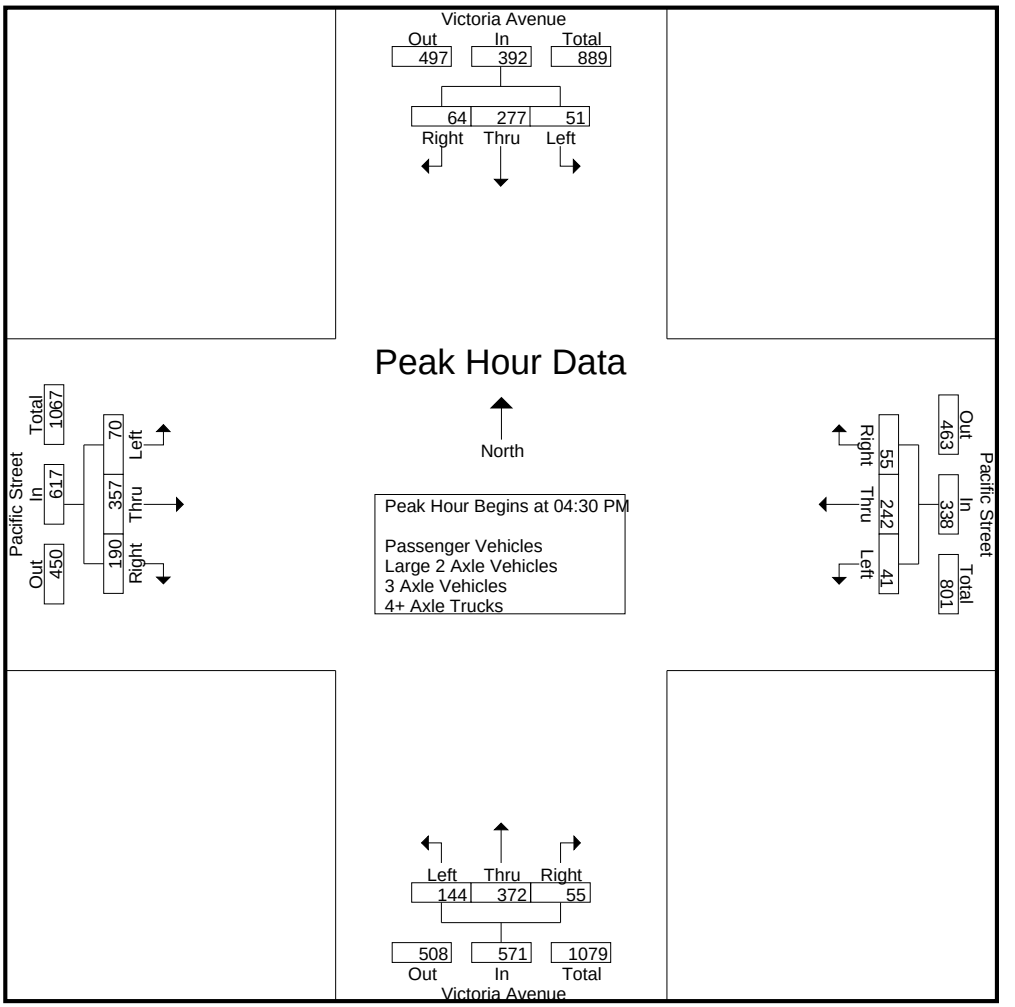

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				04:30 PM				04:45 PM				04:30 PM			
+0 mins.	12	**86**	15	113	11	**72**	**18**	**101**	36	**103**	12	151	**20**	84	44	148
+15 mins.	12	84	18	**114**	7	59	15	81	**40**	84	11	135	16	86	47	149
+30 mins.	**15**	67	11	93	9	52	7	68	37	103	**21**	**161**	16	**100**	**54**	**170**
+45 mins.	11	76	**19**	106	**14**	59	15	88	28	91	11	130	18	87	45	150
Total Volume	50	313	63	426	41	242	55	338	141	381	55	577	70	357	190	617
% App. Total	11.7	73.5	14.8		12.1	71.6	16.3		24.4	66	9.5		11.3	57.9	30.8	
PHF	.833	.910	.829	.934	.732	.840	.764	.837	.881	.925	.655	.896	.875	.893	.880	.907

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Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	9	62	13	84	13	36	6	55	13	85	6	104	10	37	32	79	322
03:15 PM	5	65	19	89	8	50	11	69	18	64	10	92	8	41	31	80	330
03:30 PM	11	74	11	96	4	52	8	64	21	73	13	107	12	47	39	98	365
03:45 PM	12	85	15	112	7	45	6	58	24	68	8	100	15	54	38	107	377
Total	37	286	58	381	32	183	31	246	76	290	37	403	45	179	140	364	1394
04:00 PM	12	83	18	113	5	53	7	65	29	92	6	127	13	48	42	103	408
04:15 PM	15	66	9	90	7	52	10	69	34	70	20	124	13	64	42	119	402
04:30 PM	9	75	19	103	11	72	15	98	31	82	11	124	20	83	44	147	472
04:45 PM	14	59	15	88	7	56	14	77	36	101	12	149	16	86	47	149	463
Total	50	283	61	394	30	233	46	309	130	345	49	524	62	281	175	518	1745
05:00 PM	15	60	13	88	9	52	6	67	40	83	11	134	15	100	54	169	458
05:15 PM	10	81	16	107	13	57	15	85	36	100	21	157	18	87	45	150	499
05:30 PM	7	72	13	92	5	47	9	61	28	89	11	128	12	69	40	121	402
05:45 PM	13	78	20	111	9	52	13	74	36	68	14	118	12	60	41	113	416
Total	45	291	62	398	36	208	43	287	140	340	57	537	57	316	180	553	1775
Grand Total	132	860	181	1173	98	624	120	842	346	975	143	1464	164	776	495	1435	4914
Apprch %	11.3	73.3	15.4		11.6	74.1	14.3		23.6	66.6	9.8		11.4	54.1	34.5		
Total %	2.7	17.5	3.7	23.9	2	12.7	2.4	17.1	7	19.8	2.9	29.8	3.3	15.8	10.1	29.2	

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	9	75	**19**	103	11	**72**	**15**	**98**	31	82	11	124	**20**	83	44	147	472
04:45 PM	14	59	15	88	7	56	14	77	36	**101**	12	149	16	86	47	149	463
05:00 PM	**15**	60	13	88	9	52	6	67	**40**	83	11	134	15	**100**	**54**	**169**	458
05:15 PM	10	**81**	16	**107**	**13**	57	15	85	36	100	**21**	**157**	18	87	45	150	**499**
Total Volume	48	275	63	386	40	237	50	327	143	366	55	564	69	356	190	615	1892
% App. Total	12.4	71.2	16.3		12.2	72.5	15.3		25.4	64.9	9.8		11.2	57.9	30.9		
PHF	.800	.849	.829	.902	.769	.823	.833	.834	.894	.906	.655	.898	.863	.890	.880	.910	.948

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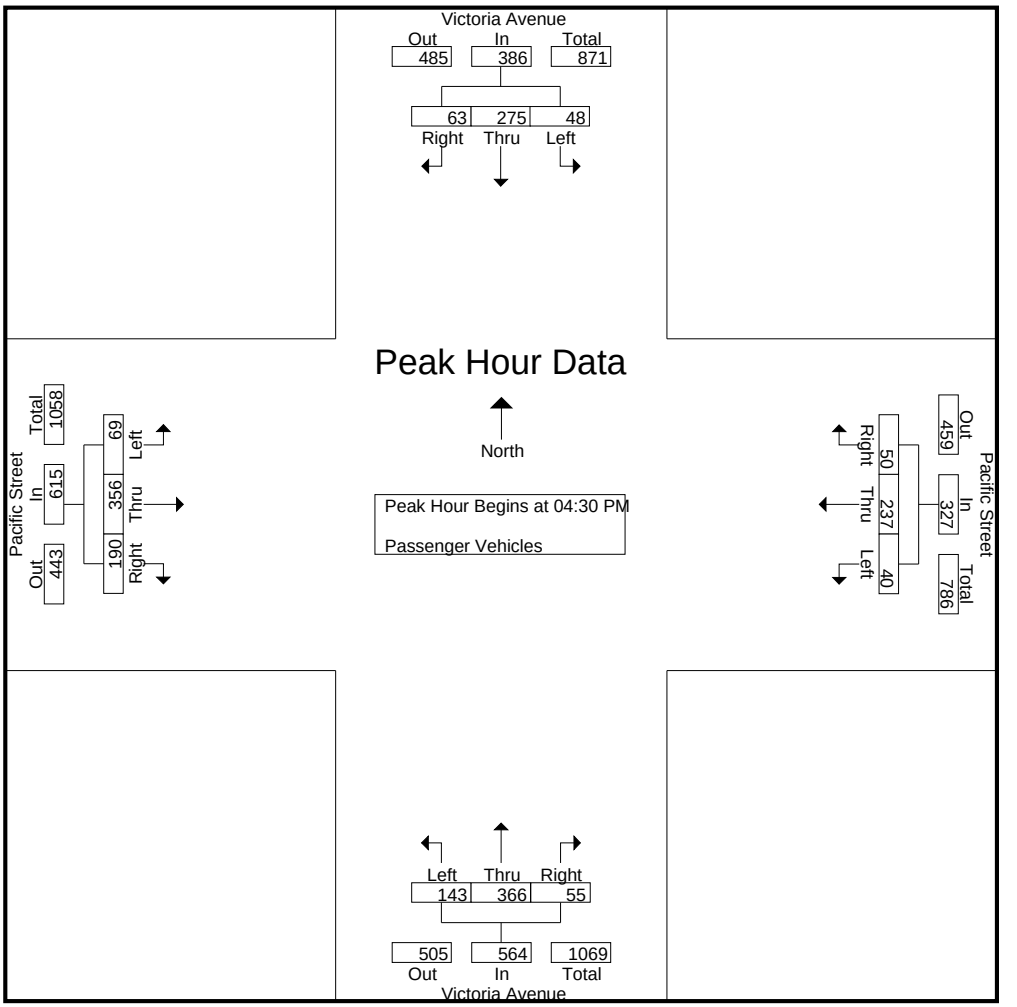

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	9	75	**19**	103	11	**72**	**15**	**98**	31	82	11	124	**20**	83	44	147
+15 mins.	14	59	15	88	7	56	14	77	36	**101**	12	149	16	86	47	149
+30 mins.	**15**	60	13	88	9	52	6	67	**40**	83	11	134	15	**100**	**54**	**169**
+45 mins.	10	**81**	16	**107**	**13**	57	15	85	36	100	**21**	**157**	18	87	45	150
Total Volume	48	275	63	386	40	237	50	327	143	366	55	564	69	356	190	615
% App. Total	12.4	71.2	16.3		12.2	72.5	15.3		25.4	64.9	9.8		11.2	57.9	30.9	
PHF	.800	.849	.829	.902	.769	.823	.833	.834	.894	.906	.655	.898	.863	.890	.880	.910

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PO Box 1178
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(951) 268-6268

City of San Bernardino
N/S: Victoria Avenue
E/W: Pacific Street
Weather: Clear

File Name : 34_SBC_Victoria_Pacific PM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
03:30 PM	0	1	1	2	0	0	0	0	0	2	0	2	0	0	0	0	4
03:45 PM	0	1	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3
Total	0	4	1	5	2	0	0	2	0	3	0	3	0	0	0	0	10
04:00 PM	0	1	0	1	0	1	0	1	1	1	2	4	1	0	0	1	7
04:15 PM	0	1	2	3	2	1	0	3	1	2	0	3	1	0	3	4	13
04:30 PM	2	1	0	3	0	0	3	3	0	0	0	0	0	1	0	1	7
04:45 PM	0	0	0	0	0	3	1	4	0	1	0	1	0	0	0	0	5
Total	2	3	2	7	2	5	4	11	2	4	2	8	2	1	3	6	32
05:00 PM	1	0	0	1	0	0	1	1	0	1	0	1	1	0	0	1	4
05:15 PM	0	1	0	1	1	2	0	3	1	3	0	4	0	0	0	0	8
05:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Total	1	1	0	2	1	2	1	4	1	7	0	8	1	2	1	4	18
Grand Total	3	8	3	14	5	7	5	17	3	14	2	19	3	3	4	10	60
Apprch %	21.4	57.1	21.4		29.4	41.2	29.4		15.8	73.7	10.5		30	30	40		
Total %	5	13.3	5	23.3	8.3	11.7	8.3	28.3	5	23.3	3.3	31.7	5	5	6.7	16.7	

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**2**	**1**	0	**3**	0	0	**3**	3	0	0	0	0	0	**1**	0	**1**	7
04:45 PM	0	0	0	0	0	**3**	1	**4**	0	1	0	1	0	0	0	0	5
05:00 PM	1	0	0	1	0	0	1	1	0	1	0	1	**1**	0	0	1	4
05:15 PM	0	1	0	1	**1**	2	0	3	**1**	**3**	0	**4**	0	0	0	0	**8**
Total Volume	3	2	0	5	1	5	5	11	1	5	0	6	1	1	0	2	24
% App. Total	60	40	0		9.1	45.5	45.5		16.7	83.3	0		50	50	0		
PHF	.375	.500	.000	.417	.250	.417	.417	.688	.250	.417	.000	.375	.250	.250	.000	.500	.750

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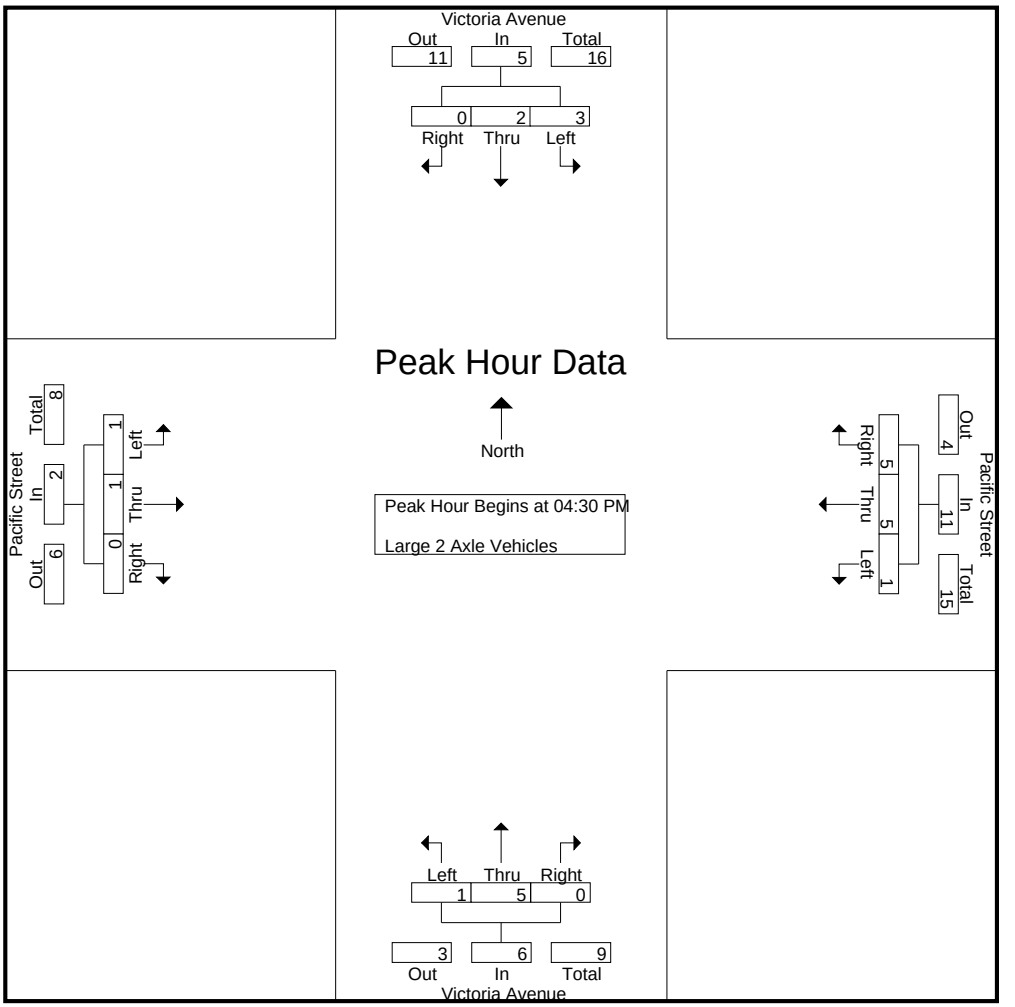
City of San Bernardino
N/S: Victoria Avenue
E/W: Pacific Street
Weather: Clear

File Name : 34_SBC_Victoria_Pacific PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**2**	**1**	0	**3**	0	0	**3**	3	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	**3**	1	**4**	0	1	0	1	0	0	0	0
+30 mins.	1	0	0	1	0	0	1	1	0	1	0	1	**1**	0	0	1
+45 mins.	0	1	0	1	**1**	2	0	3	**1**	**3**	0	**4**	0	0	0	0
Total Volume	3	2	0	5	1	5	5	11	1	5	0	6	1	1	0	2
% App. Total	60	40	0		9.1	45.5	45.5		16.7	83.3	0		50	50	0	
PHF	.375	.500	.000	.417	.250	.417	.417	.688	.250	.417	.000	.375	.250	.250	.000	.500

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City of San Bernardino
N/S: Victoria Avenue
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Weather: Clear

File Name : 34_SBC_Victoria_Pacific PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	3	1	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Apprch %	0	75	25		0	0	0		0	100	0		0	0	0		
Total %	0	60	20	80	0	0	0	0	0	20	0	20	0	0	0	0	

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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City of San Bernardino
N/S: Victoria Avenue
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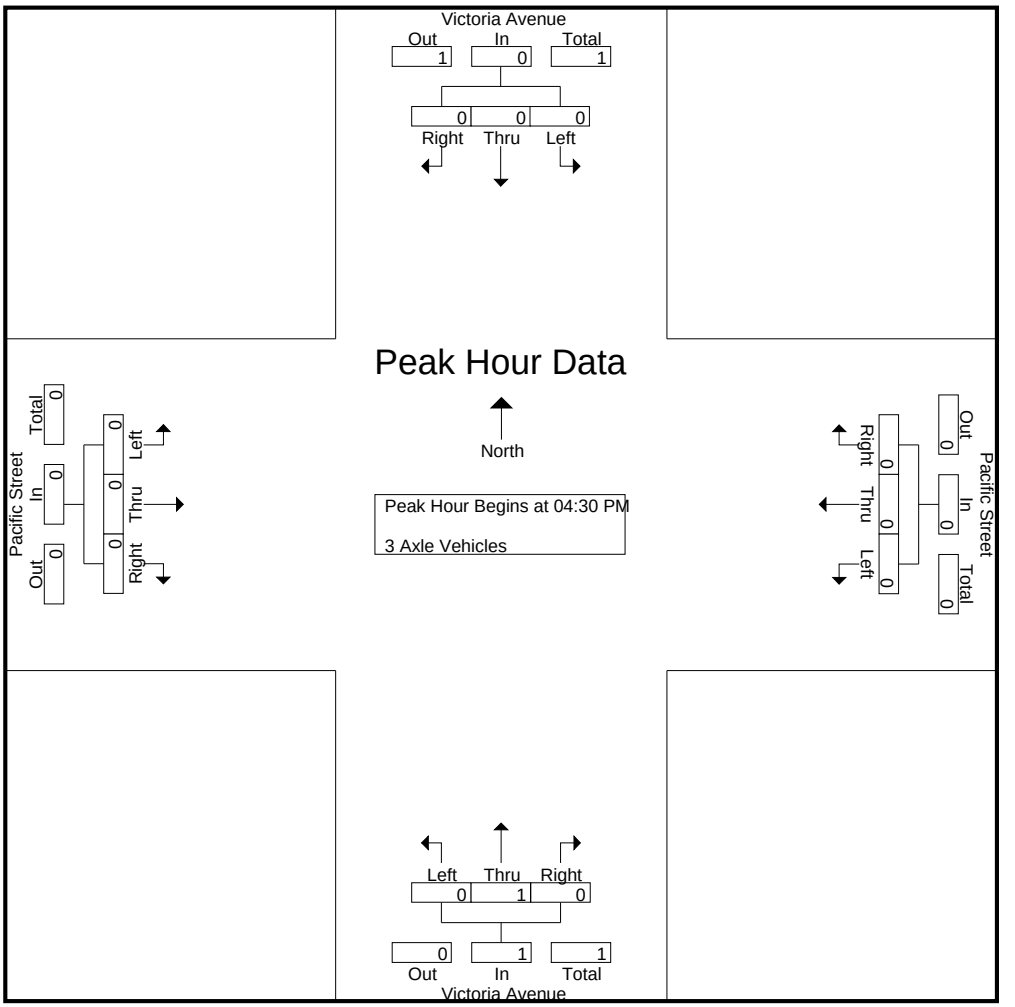
Weather: Clear

File Name : 34_SBC_Victoria_Pacific PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

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

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City of San Bernardino
N/S: Victoria Avenue
E/W: Pacific Street
Weather: Clear

File Name : 34_SBC_Victoria_Pacific PM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Grand Total	0	0	1	1	0	0	0	0	0	4	0	4	1	0	0	1	6
Apprch %	0	0	100		0	0	0		0	100	0		100	0	0		
Total %	0	0	16.7	16.7	0	0	0	0	0	66.7	0	66.7	16.7	0	0	16.7	

	Victoria Avenue Southbound				Pacific Street Westbound				Victoria Avenue Northbound				Pacific Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	0	100		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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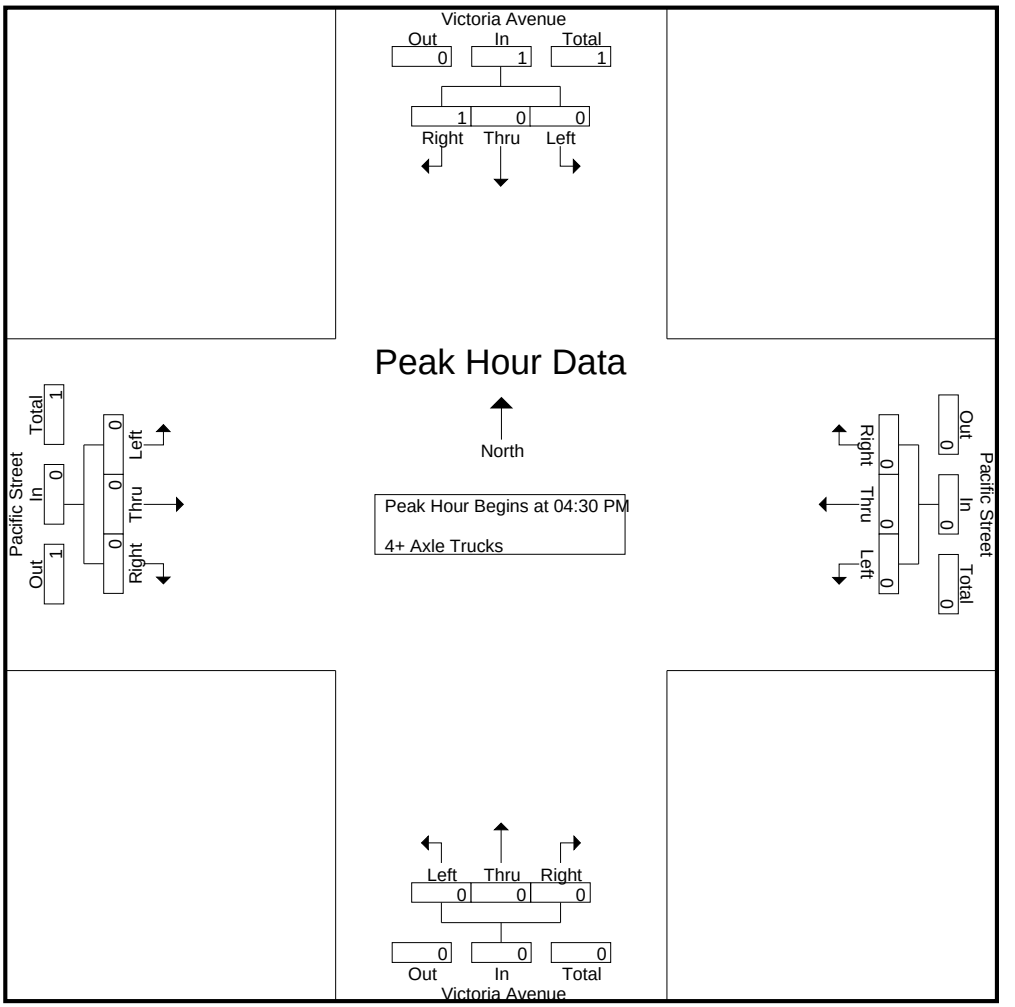
City of San Bernardino
N/S: Victoria Avenue
E/W: Pacific Street
Weather: Clear

File Name : 34_SBC_Victoria_Pacific PM
Site Code : 99918352
Start Date : 5/17/2018



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

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

Location: San Bernardino
N/S: Victoria Avenue
E/W: Pacific Street

Date: 5/17/2018
Day: Thursday

PEDESTRIANS

	North Leg Victoria Avenue	East Leg Pacific Street	South Leg Victoria Avenue	West Leg Pacific Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
6:00 AM	0	0	0	0	0
6:15 AM	0	0	0	0	0
6:30 AM	0	0	0	0	0
6:45 AM	0	0	0	0	0
7:00 AM	0	0	6	2	8
7:15 AM	0	0	5	0	5
7:30 AM	0	0	1	2	3
7:45 AM	0	1	0	0	1
8:00 AM	1	0	0	0	1
8:15 AM	0	3	0	0	3
8:30 AM	1	1	2	0	4
8:45 AM	0	0	1	1	2
TOTAL VOLUMES:	2	5	15	5	27

	North Leg Victoria Avenue	East Leg Pacific Street	South Leg Victoria Avenue	West Leg Pacific Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	1	1	1	4	7
4:15 PM	0	0	0	4	4
4:30 PM	3	1	5	0	9
4:45 PM	0	1	2	0	3
5:00 PM	0	0	0	1	1
5:15 PM	0	1	2	1	4
5:30 PM	0	0	1	0	1
5:45 PM	1	0	0	1	2
TOTAL VOLUMES:	5	4	11	11	31

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Location: San Bernardino
N/S: Victoria Avenue
E/W: Pacific Street

Date: 5/17/2018
Day: Thursday

BICYCLES

	Southbound Victoria Avenue			Westbound Pacific Street			Northbound Victoria Avenue			Eastbound Pacific Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	2
7:15 AM	0	1	0	0	1	0	0	0	0	1	0	0	3
7:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	2	0	0	2	0	0	2	0	2	0	0	8

	Southbound Victoria Avenue			Westbound Pacific Street			Northbound Victoria Avenue			Eastbound Pacific Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:45 PM	0	1	0	0	0	0	0	0	0	0	1	1	3
5:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	1	0	0	0	2	0	0	1	1	7

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City of San Bernardino
N/S: Victoria Avenue
E/W: 14th Street
Weather: Clear

File Name : 33_SBC_Victoria_14th AM
Site Code : 99918352
Start Date : 5/17/2018

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

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	23	0	24	2	0	1	3	0	38	0	38	0	0	0	0	65
06:15 AM	1	34	1	36	2	0	4	6	0	50	1	51	0	0	0	0	93
06:30 AM	4	39	0	43	5	0	3	8	0	60	2	62	0	0	0	0	113
06:45 AM	3	66	1	70	6	0	11	17	0	61	3	64	0	0	1	1	152
Total	9	162	2	173	15	0	19	34	0	209	6	215	0	0	1	1	423
07:00 AM	4	86	0	90	6	0	19	25	0	88	1	89	1	0	0	1	205
07:15 AM	5	166	0	171	4	0	15	19	0	160	2	162	0	0	0	0	352
07:30 AM	13	153	1	167	2	2	8	12	0	110	4	114	0	0	0	0	293
07:45 AM	5	108	1	114	6	1	8	15	0	58	3	61	1	0	0	1	191
Total	27	513	2	542	18	3	50	71	0	416	10	426	2	0	0	2	1041
08:00 AM	8	60	0	68	10	0	12	22	0	74	5	79	1	0	1	2	171
08:15 AM	10	86	1	97	9	0	9	18	0	80	6	86	1	1	0	2	203
08:30 AM	10	71	0	81	6	1	21	28	0	86	7	93	1	1	0	2	204
08:45 AM	11	83	1	95	12	0	12	24	0	75	4	79	1	0	0	1	199
Total	39	300	2	341	37	1	54	92	0	315	22	337	4	2	1	7	777
Grand Total	75	975	6	1056	70	4	123	197	0	940	38	978	6	2	2	10	2241
Apprch %	7.1	92.3	0.6		35.5	2	62.4		0	96.1	3.9		60	20	20		
Total %	3.3	43.5	0.3	47.1	3.1	0.2	5.5	8.8	0	41.9	1.7	43.6	0.3	0.1	0.1	0.4	
Passenger Vehicles	72	953	6	1031	65	4	119	188	0	895	35	930	6	2	2	10	2159
% Passenger Vehicles	96	97.7	100	97.6	92.9	100	96.7	95.4	0	95.2	92.1	95.1	100	100	100	100	96.3
Large 2 Axle Vehicles	3	20	0	23	5	0	4	9	0	35	3	38	0	0	0	0	70
% Large 2 Axle Vehicles	4	2.1	0	2.2	7.1	0	3.3	4.6	0	3.7	7.9	3.9	0	0	0	0	3.1
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0.1
4+ Axle Trucks	0	2	0	2	0	0	0	0	0	8	0	8	0	0	0	0	10
% 4+ Axle Trucks	0	0.2	0	0.2	0	0	0	0	0	0.9	0	0.8	0	0	0	0	0.4

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	4	86	0	90	**6**	0	**19**	**25**	0	88	1	89	**1**	0	0	**1**	205
07:15 AM	5	**166**	0	**171**	4	0	15	19	0	**160**	2	**162**	0	0	0	0	**352**
07:30 AM	**13**	153	**1**	167	2	**2**	8	12	0	110	**4**	114	0	0	0	0	293
07:45 AM	5	108	1	114	6	1	8	15	0	58	3	61	1	0	0	1	191
Total Volume	27	513	2	542	18	3	50	71	0	416	10	426	2	0	0	2	1041
% App. Total	5	94.6	0.4		25.4	4.2	70.4		0	97.7	2.3		100	0	0		
PHF	.519	.773	.500	.792	.750	.375	.658	.710	.000	.650	.625	.657	.500	.000	.000	.500	.739

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Site Code : 99918352
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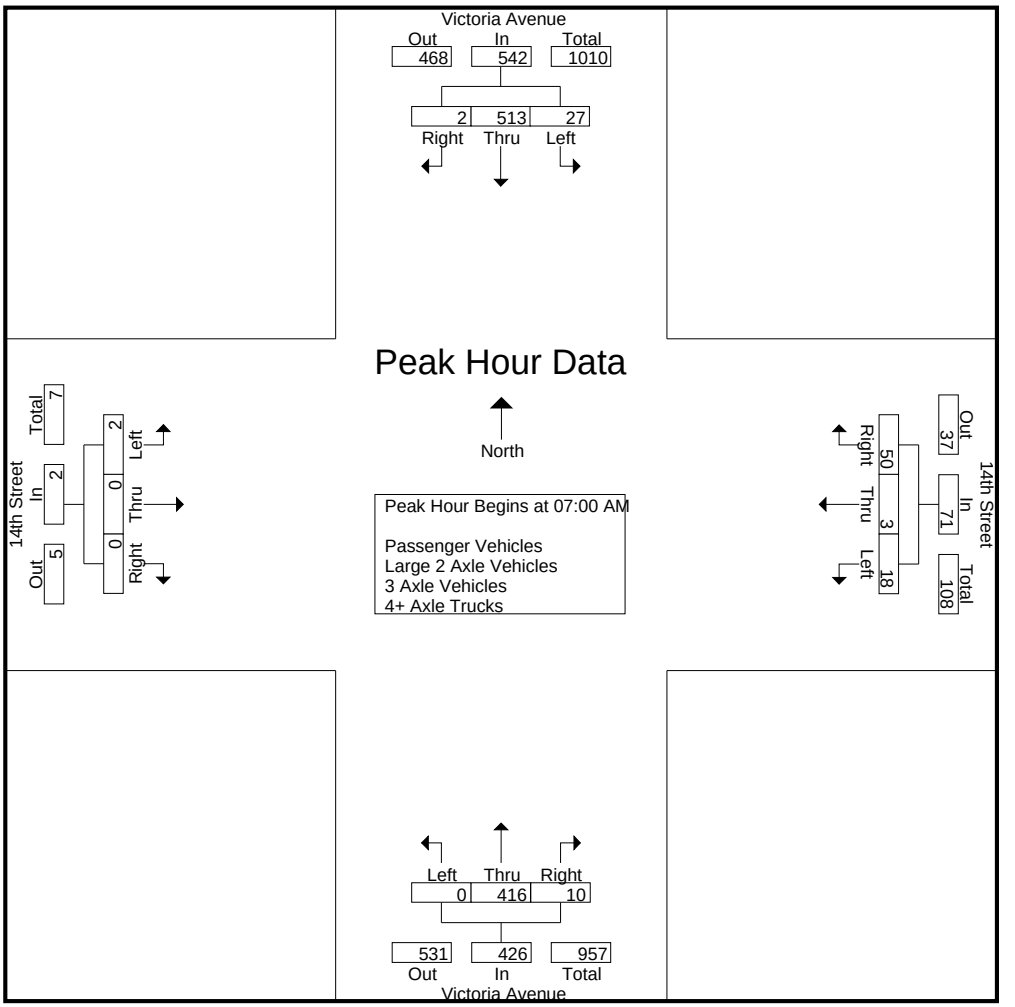
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				06:45 AM				07:45 AM			
+0 mins.	4	86	0	90	10	0	12	22	0	61	3	64	**1**	0	0	1
+15 mins.	5	**166**	0	**171**	9	0	9	18	0	88	1	89	1	0	**1**	**2**
+30 mins.	**13**	153	**1**	167	6	**1**	**21**	**28**	0	**160**	2	**162**	1	**1**	0	2
+45 mins.	5	108	1	114	**12**	0	12	24	0	110	**4**	114	1	1	0	2
Total Volume	27	513	2	542	37	1	54	92	0	419	10	429	4	2	1	7
% App. Total	5	94.6	0.4		40.2	1.1	58.7		0	97.7	2.3		57.1	28.6	14.3	
PHF	.519	.773	.500	.792	.771	.250	.643	.821	.000	.655	.625	.662	1.000	.500	.250	.875

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City of San Bernardino
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Site Code : 99918352
Start Date : 5/17/2018
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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	21	0	22	1	0	1	2	0	35	0	35	0	0	0	0	59
06:15 AM	1	32	1	34	2	0	4	6	0	49	1	50	0	0	0	0	90
06:30 AM	4	39	0	43	5	0	3	8	0	60	2	62	0	0	0	0	113
06:45 AM	1	64	1	66	5	0	10	15	0	57	3	60	0	0	1	1	142
Total	7	156	2	165	13	0	18	31	0	201	6	207	0	0	1	1	404
07:00 AM	4	85	0	89	5	0	18	23	0	84	1	85	1	0	0	1	198
07:15 AM	5	162	0	167	4	0	15	19	0	148	2	150	0	0	0	0	336
07:30 AM	13	150	1	164	2	2	8	12	0	107	4	111	0	0	0	0	287
07:45 AM	5	107	1	113	6	1	7	14	0	53	2	55	1	0	0	1	183
Total	27	504	2	533	17	3	48	68	0	392	9	401	2	0	0	2	1004
08:00 AM	7	57	0	64	9	0	11	20	0	71	4	75	1	0	1	2	161
08:15 AM	10	85	1	96	8	0	9	17	0	75	5	80	1	1	0	2	195
08:30 AM	10	71	0	81	6	1	21	28	0	83	7	90	1	1	0	2	201
08:45 AM	11	80	1	92	12	0	12	24	0	73	4	77	1	0	0	1	194
Total	38	293	2	333	35	1	53	89	0	302	20	322	4	2	1	7	751
Grand Total	72	953	6	1031	65	4	119	188	0	895	35	930	6	2	2	10	2159
Apprch %	7	92.4	0.6		34.6	2.1	63.3		0	96.2	3.8		60	20	20		
Total %	3.3	44.1	0.3	47.8	3	0.2	5.5	8.7	0	41.5	1.6	43.1	0.3	0.1	0.1	0.5	

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	4	85	0	89	5	0	**18**	**23**	0	84	1	85	**1**	0	0	**1**	198
07:15 AM	5	**162**	0	**167**	4	0	15	19	0	**148**	2	**150**	0	0	0	0	**336**
07:30 AM	**13**	150	**1**	164	2	**2**	8	12	0	107	**4**	111	0	0	0	0	287
07:45 AM	5	107	1	113	**6**	1	7	14	0	53	2	55	1	0	0	1	183
Total Volume	27	504	2	533	17	3	48	68	0	392	9	401	2	0	0	2	1004
% App. Total	5.1	94.6	0.4		25	4.4	70.6		0	97.8	2.2		100	0	0		
PHF	.519	.778	.500	.798	.708	.375	.667	.739	.000	.662	.563	.668	.500	.000	.000	.500	.747

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Weather: Clear

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Site Code : 99918352
Start Date : 5/17/2018
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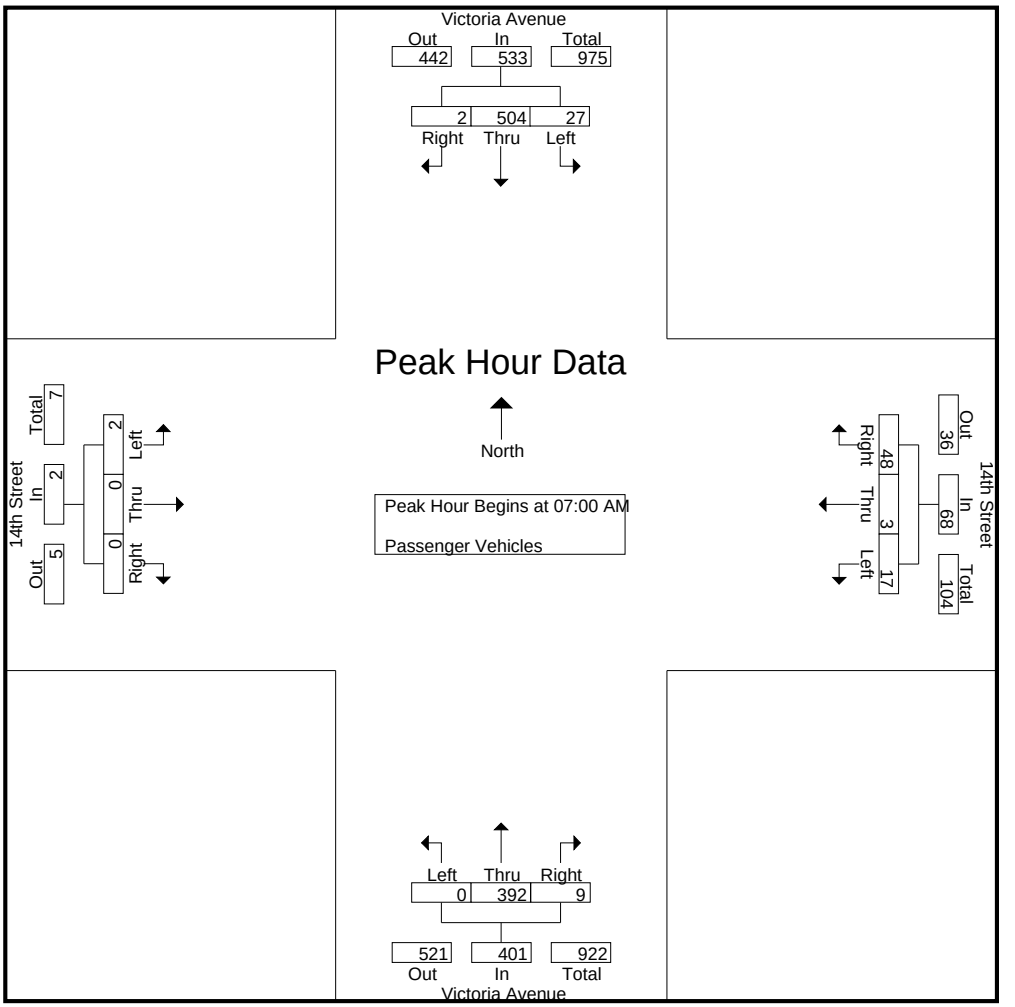

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	4	85	0	89	5	0	**18**	**23**	0	84	1	85	**1**	0	0	**1**
+15 mins.	5	**162**	0	**167**	4	0	15	19	0	**148**	2	**150**	0	0	0	0
+30 mins.	**13**	150	**1**	164	2	**2**	8	12	0	107	**4**	111	0	0	0	0
+45 mins.	5	107	1	113	**6**	1	7	14	0	53	2	55	1	0	0	1
Total Volume	27	504	2	533	17	3	48	68	0	392	9	401	2	0	0	2
% App. Total	5.1	94.6	0.4		25	4.4	70.6		0	97.8	2.2		100	0	0	
PHF	.519	.778	.500	.798	.708	.375	.667	.739	.000	.662	.563	.668	.500	.000	.000	.500

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N/S: Victoria Avenue
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Weather: Clear

File Name : 33_SBC_Victoria_14th AM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	2	0	2	1	0	0	1	0	1	0	1	0	0	0	0	4
06:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	2	2	0	4	1	0	1	2	0	4	0	4	0	0	0	0	10
Total	2	5	0	7	2	0	1	3	0	5	0	5	0	0	0	0	15
07:00 AM	0	0	0	0	1	0	1	2	0	4	0	4	0	0	0	0	6
07:15 AM	0	4	0	4	0	0	0	0	0	11	0	11	0	0	0	0	15
07:30 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:45 AM	0	1	0	1	0	0	1	1	0	5	1	6	0	0	0	0	8
Total	0	8	0	8	1	0	2	3	0	22	1	23	0	0	0	0	34
08:00 AM	1	3	0	4	1	0	1	2	0	2	1	3	0	0	0	0	9
08:15 AM	0	1	0	1	1	0	0	1	0	3	1	4	0	0	0	0	6
08:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:45 AM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
Total	1	7	0	8	2	0	1	3	0	8	2	10	0	0	0	0	21
Grand Total	3	20	0	23	5	0	4	9	0	35	3	38	0	0	0	0	70
Apprch %	13	87	0		55.6	0	44.4		0	92.1	7.9		0	0	0		
Total %	4.3	28.6	0	32.9	7.1	0	5.7	12.9	0	50	4.3	54.3	0	0	0	0	

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	**1**	0	**1**	**2**	0	4	0	4	0	0	0	0	6
07:15 AM	0	**4**	0	**4**	0	0	0	0	0	**11**	0	**11**	0	0	0	0	**15**
07:30 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:45 AM	0	1	0	1	0	0	1	1	0	5	**1**	6	0	0	0	0	8
Total Volume	0	8	0	8	1	0	2	3	0	22	1	23	0	0	0	0	34
% App. Total	0	100	0		33.3	0	66.7		0	95.7	4.3		0	0	0		
PHF	.000	.500	.000	.500	.250	.000	.500	.375	.000	.500	.250	.523	.000	.000	.000	.000	.567

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City of San Bernardino
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Weather: Clear

File Name : 33_SBC_Victoria_14th AM
Site Code : 99918352
Start Date : 5/17/2018
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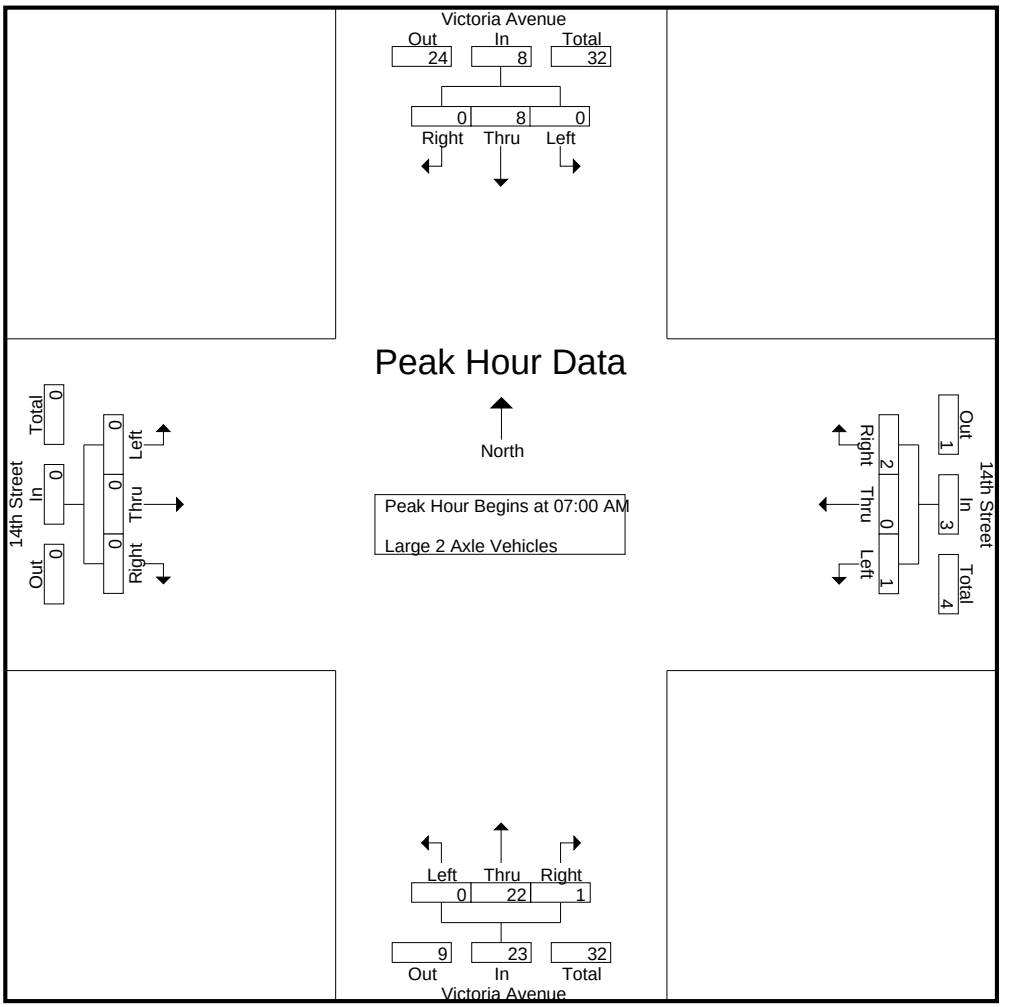

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	**1**	0	**1**	**2**	0	4	0	4	0	0	0	0
+15 mins.	0	**4**	0	**4**	0	0	0	0	0	**11**	0	**11**	0	0	0	0
+30 mins.	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	1	0	1	0	0	1	1	0	5	**1**	6	0	0	0	0
Total Volume	0	8	0	8	1	0	2	3	0	22	1	23	0	0	0	0
% App. Total	0	100	0		33.3	0	66.7		0	95.7	4.3		0	0	0	
PHF	.000	.500	.000	.500	.250	.000	.500	.375	.000	.500	.250	.523	.000	.000	.000	.000

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Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of San Bernardino
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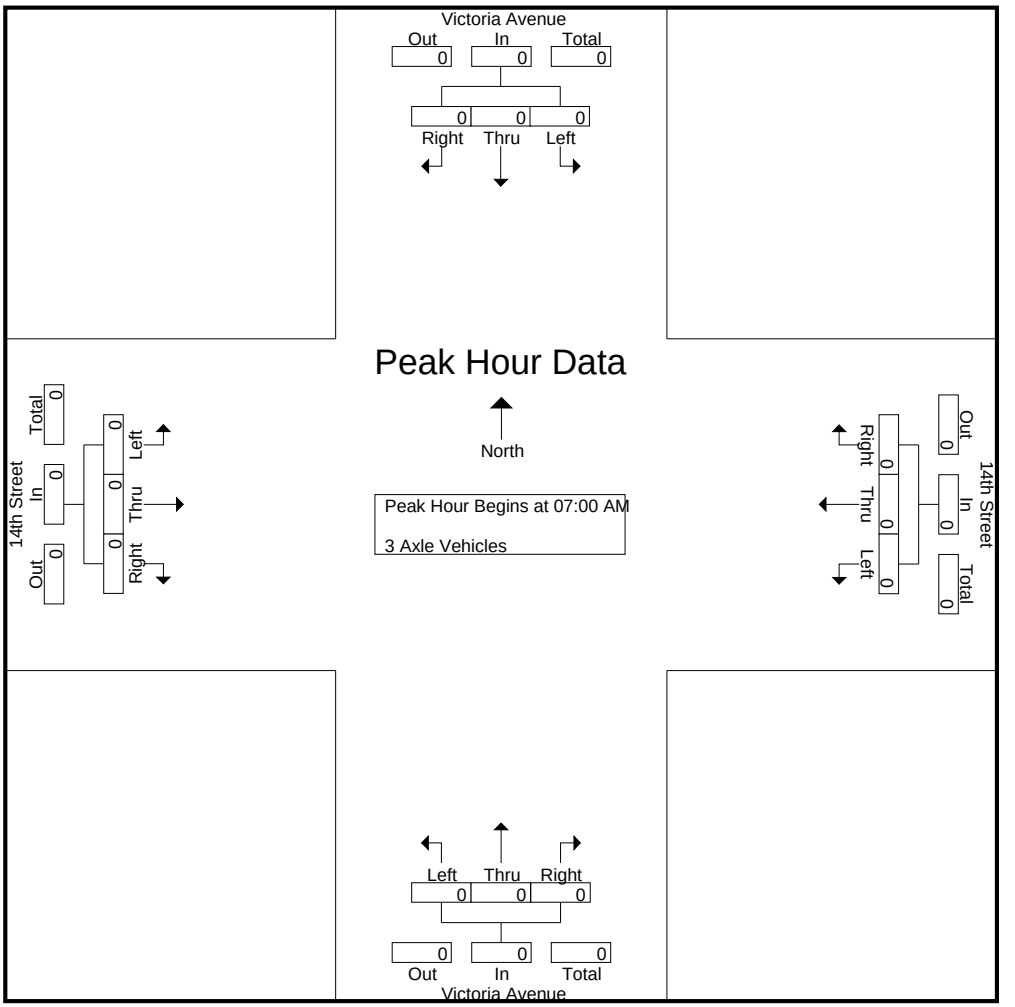

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
06:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
Grand Total	0	2	0	2	0	0	0	0	0	8	0	8	0	0	0	0	10
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	20	0	20	0	0	0	0	0	80	0	80	0	0	0	0	

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
07:15 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.750

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Weather: Clear

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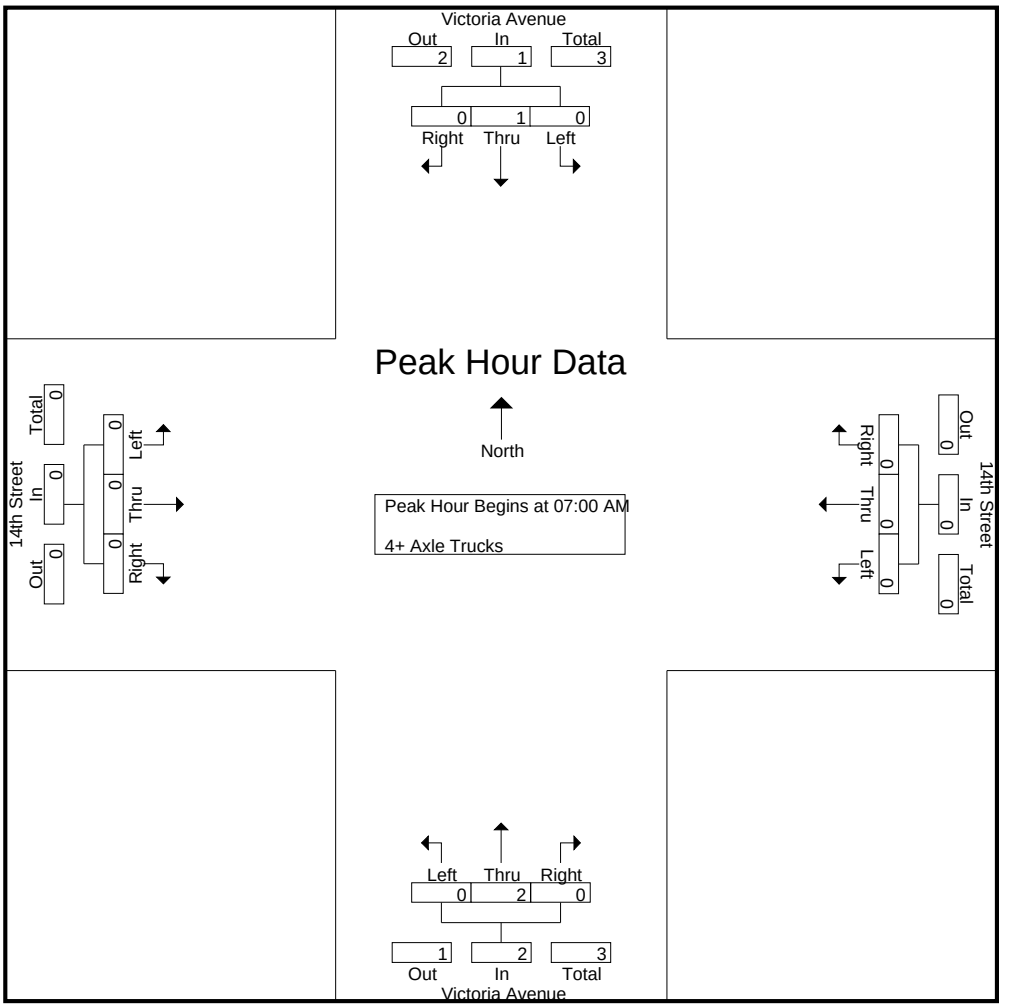

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Site Code : 99918352
Start Date : 5/17/2018

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

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	8	111	0	119	7	0	12	19	0	106	7	113	0	0	0	0	251
03:15 PM	10	101	2	113	4	1	13	18	0	90	9	99	2	2	1	5	235
03:30 PM	12	102	8	122	9	1	19	29	0	118	9	127	2	2	1	5	283
03:45 PM	14	120	3	137	15	1	14	30	0	127	8	135	3	3	1	7	309
Total	44	434	13	491	35	3	58	96	0	441	33	474	7	7	3	17	1078
04:00 PM	6	129	0	135	5	1	8	14	0	121	6	127	1	0	0	1	277
04:15 PM	14	102	4	120	3	0	15	18	0	112	10	122	5	1	0	6	266
04:30 PM	5	132	2	139	7	2	11	20	2	113	10	125	1	2	1	4	288
04:45 PM	5	100	2	107	4	1	11	16	0	133	9	142	2	2	1	5	270
Total	30	463	8	501	19	4	45	68	2	479	35	516	9	5	2	16	1101
05:00 PM	8	109	5	122	10	1	15	26	0	121	9	130	6	4	0	10	288
05:15 PM	13	127	2	142	6	0	14	20	0	140	10	150	4	2	0	6	318
05:30 PM	13	109	3	125	4	1	14	19	0	118	11	129	3	2	0	5	278
05:45 PM	9	117	2	128	6	0	4	10	0	123	7	130	2	2	0	4	272
Total	43	462	12	517	26	2	47	75	0	502	37	539	15	10	0	25	1156
Grand Total	117	1359	33	1509	80	9	150	239	2	1422	105	1529	31	22	5	58	3335
Apprch %	7.8	90.1	2.2		33.5	3.8	62.8		0.1	93	6.9		53.4	37.9	8.6		
Total %	3.5	40.7	1	45.2	2.4	0.3	4.5	7.2	0.1	42.6	3.1	45.8	0.9	0.7	0.1	1.7	
Passenger Vehicles	116	1340	32	1488	78	9	143	230	2	1403	103	1508	31	22	4	57	3283
% Passenger Vehicles	99.1	98.6	97	98.6	97.5	100	95.3	96.2	100	98.7	98.1	98.6	100	100	80	98.3	98.4
Large 2 Axle Vehicles	1	16	1	18	2	0	7	9	0	14	2	16	0	0	1	1	44
% Large 2 Axle Vehicles	0.9	1.2	3	1.2	2.5	0	4.7	3.8	0	1	1.9	1	0	0	20	1.7	1.3
3 Axle Vehicles	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
% 3 Axle Vehicles	0	0.2	0	0.2	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0.1

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	**132**	2	139	7	**2**	11	20	**2**	113	**10**	125	1	2	**1**	4	288
04:45 PM	5	100	2	107	4	1	11	16	0	133	9	142	2	2	1	5	270
05:00 PM	8	109	**5**	122	**10**	1	**15**	**26**	0	121	9	130	**6**	**4**	0	**10**	288
05:15 PM	**13**	127	2	**142**	6	0	14	20	0	**140**	10	**150**	4	2	0	6	**318**
Total Volume	31	468	11	510	27	4	51	82	2	507	38	547	13	10	2	25	1164
% App. Total	6.1	91.8	2.2		32.9	4.9	62.2		0.4	92.7	6.9		52	40	8		
PHF	.596	.886	.550	.898	.675	.500	.850	.788	.250	.905	.950	.912	.542	.625	.500	.625	.915

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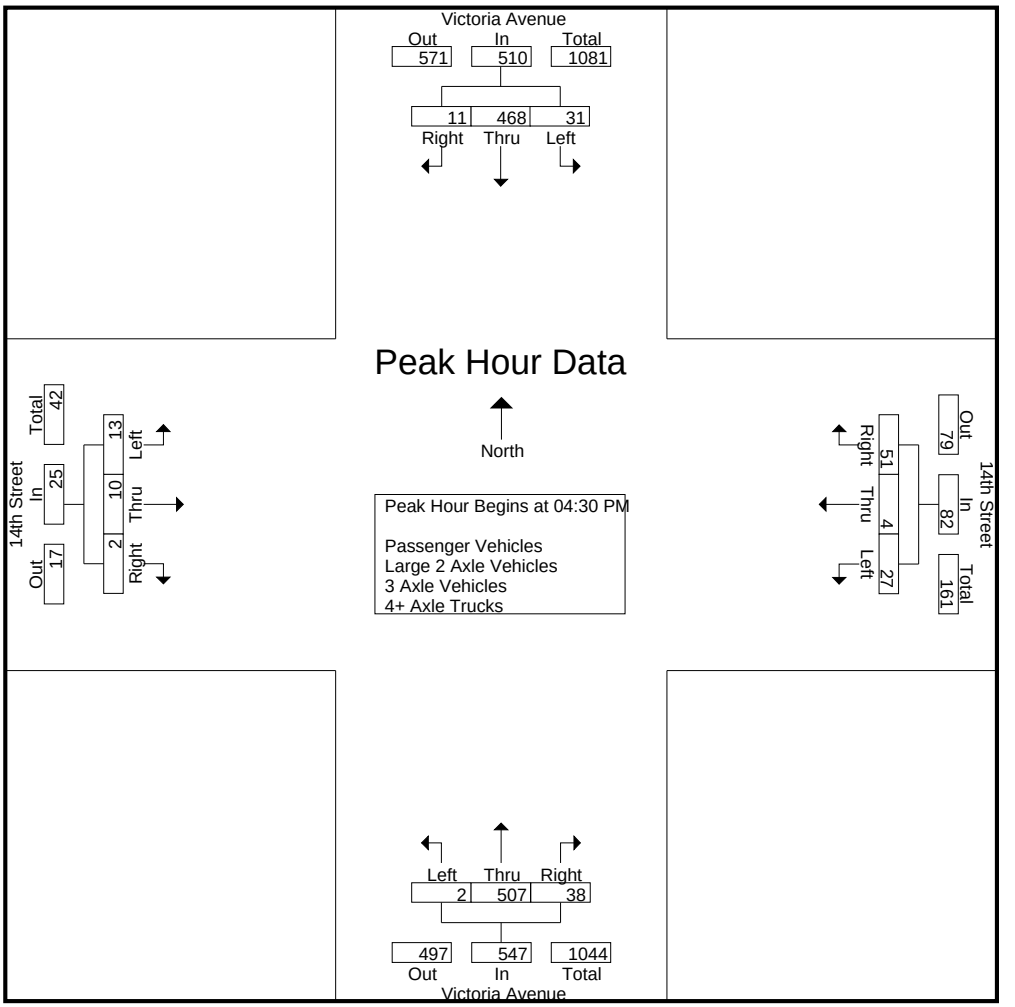

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:00 PM				04:45 PM				04:45 PM			
+0 mins.	**14**	120	3	137	7	0	12	19	0	133	9	142	2	2	**1**	5
+15 mins.	6	129	0	135	4	**1**	13	18	0	121	9	130	**6**	**4**	0	**10**
+30 mins.	14	102	**4**	120	9	1	**19**	29	0	**140**	10	**150**	4	2	0	6
+45 mins.	5	**132**	2	**139**	**15**	1	14	**30**	0	118	**11**	129	3	2	0	5
Total Volume	39	483	9	531	35	3	58	96	0	512	39	551	15	10	1	26
% App. Total	7.3	91	1.7		36.5	3.1	60.4		0	92.9	7.1		57.7	38.5	3.8	
PHF	.696	.915	.563	.955	.583	.750	.763	.800	.000	.914	.886	.918	.625	.625	.250	.650

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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	8	108	0	116	6	0	11	17	0	103	7	110	0	0	0	0	243
03:15 PM	10	100	2	112	4	1	11	16	0	90	9	99	2	2	1	5	232
03:30 PM	12	100	8	120	9	1	18	28	0	118	9	127	2	2	1	5	280
03:45 PM	14	116	3	133	14	1	13	28	0	126	8	134	3	3	1	7	302
Total	44	424	13	481	33	3	53	89	0	437	33	470	7	7	3	17	1057
04:00 PM	6	127	0	133	5	1	7	13	0	116	6	122	1	0	0	1	269
04:15 PM	13	99	4	116	3	0	15	18	0	111	10	121	5	1	0	6	261
04:30 PM	5	130	1	136	7	2	11	20	2	112	10	124	1	2	0	3	283
04:45 PM	5	100	2	107	4	1	11	16	0	132	9	141	2	2	1	5	269
Total	29	456	7	492	19	4	44	67	2	471	35	508	9	5	1	15	1082
05:00 PM	8	109	5	122	10	1	14	25	0	121	8	129	6	4	0	10	286
05:15 PM	13	126	2	141	6	0	14	20	0	136	9	145	4	2	0	6	312
05:30 PM	13	109	3	125	4	1	14	19	0	116	11	127	3	2	0	5	276
05:45 PM	9	116	2	127	6	0	4	10	0	122	7	129	2	2	0	4	270
Total	43	460	12	515	26	2	46	74	0	495	35	530	15	10	0	25	1144
Grand Total	116	1340	32	1488	78	9	143	230	2	1403	103	1508	31	22	4	57	3283
Apprch %	7.8	90.1	2.2		33.9	3.9	62.2		0.1	93	6.8		54.4	38.6	7		
Total %	3.5	40.8	1	45.3	2.4	0.3	4.4	7	0.1	42.7	3.1	45.9	0.9	0.7	0.1	1.7	

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	**130**	1	136	7	**2**	11	20	**2**	112	**10**	124	1	2	0	3	283
04:45 PM	5	100	2	107	4	1	11	16	0	132	9	141	2	2	**1**	5	269
05:00 PM	8	109	**5**	122	**10**	1	**14**	**25**	0	121	8	129	**6**	**4**	0	**10**	286
05:15 PM	**13**	126	2	**141**	6	0	14	20	0	**136**	9	**145**	4	2	0	6	**312**
Total Volume	31	465	10	506	27	4	50	81	2	501	36	539	13	10	1	24	1150
% App. Total	6.1	91.9	2		33.3	4.9	61.7		0.4	92.9	6.7		54.2	41.7	4.2		
PHF	.596	.894	.500	.897	.675	.500	.893	.810	.250	.921	.900	.929	.542	.625	.250	.600	.921

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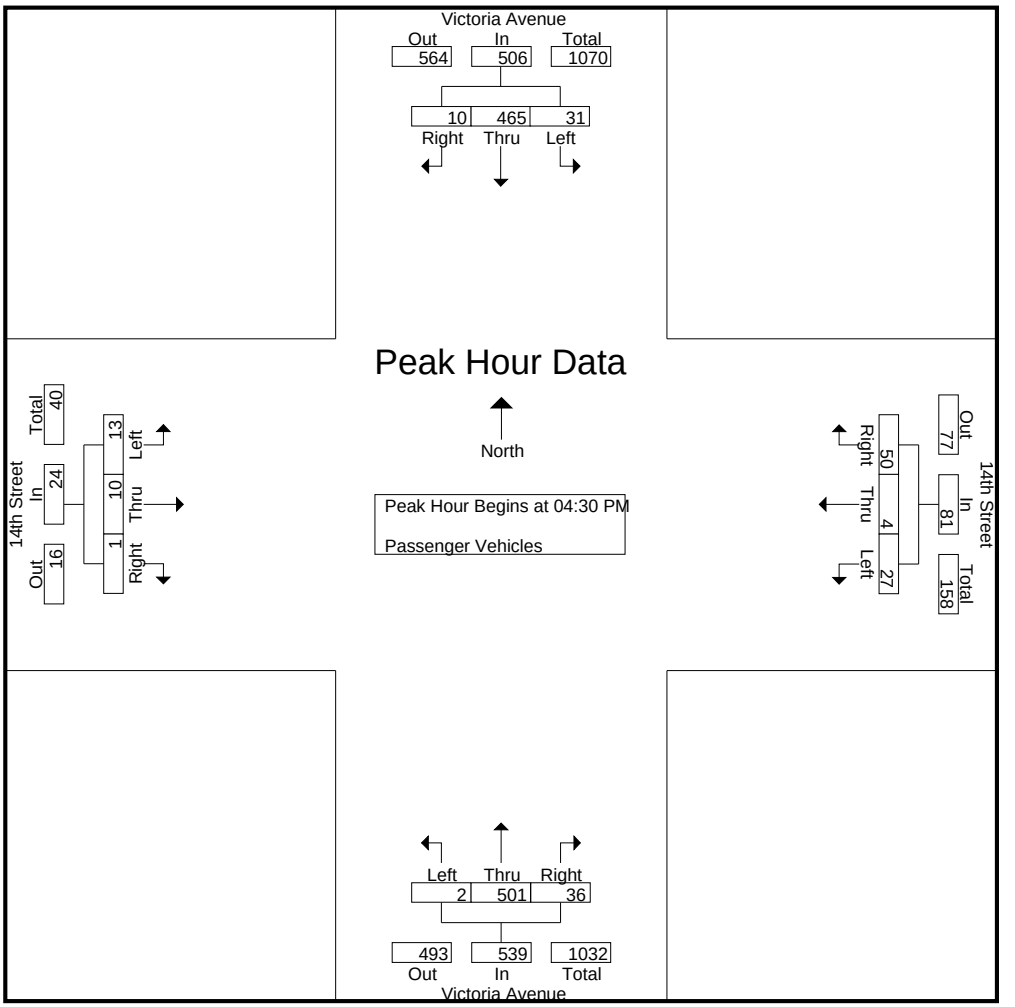

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	5	**130**	1	136	7	**2**	11	20	**2**	112	**10**	124	1	2	0	3
+15 mins.	5	100	2	107	4	1	11	16	0	132	9	141	2	2	**1**	5
+30 mins.	8	109	**5**	122	**10**	1	**14**	**25**	0	121	8	129	**6**	**4**	0	**10**
+45 mins.	**13**	126	2	**141**	6	0	14	20	0	**136**	9	**145**	4	2	0	6
Total Volume	31	465	10	506	27	4	50	81	2	501	36	539	13	10	1	24
% App. Total	6.1	91.9	2		33.3	4.9	61.7		0.4	92.9	6.7		54.2	41.7	4.2	
PHF	.596	.894	.500	.897	.675	.500	.893	.810	.250	.921	.900	.929	.542	.625	.250	.600

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Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	1	0	1	2	0	3	0	3	0	0	0	0	6
03:15 PM	0	1	0	1	0	0	2	2	0	0	0	0	0	0	0	0	3
03:30 PM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
03:45 PM	0	4	0	4	1	0	1	2	0	1	0	1	0	0	0	0	7
Total	0	7	0	7	2	0	5	7	0	4	0	4	0	0	0	0	18
04:00 PM	0	2	0	2	0	0	1	1	0	1	0	1	0	0	0	0	4
04:15 PM	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
04:30 PM	0	2	1	3	0	0	0	0	0	1	0	1	0	0	1	1	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	7	1	9	0	0	1	1	0	3	0	3	0	0	1	1	14
05:00 PM	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	4	1	5	0	0	0	0	6
05:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	2	0	2	0	0	1	1	0	7	2	9	0	0	0	0	12
Grand Total	1	16	1	18	2	0	7	9	0	14	2	16	0	0	1	1	44
Apprch %	5.6	88.9	5.6		22.2	0	77.8		0	87.5	12.5		0	0	100		
Total %	2.3	36.4	2.3	40.9	4.5	0	15.9	20.5	0	31.8	4.5	36.4	0	0	2.3	2.3	

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**2**	**1**	**3**	0	0	0	0	0	1	0	1	0	0	**1**	**1**	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	**1**	**1**	0	0	**1**	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	**4**	1	**5**	0	0	0	0	**6**
Total Volume	0	3	1	4	0	0	1	1	0	5	2	7	0	0	1	1	13
% App. Total	0	75	25		0	0	100		0	71.4	28.6		0	0	100		
PHF	.000	.375	.250	.333	.000	.000	.250	.250	.000	.313	.500	.350	.000	.000	.250	.250	.542

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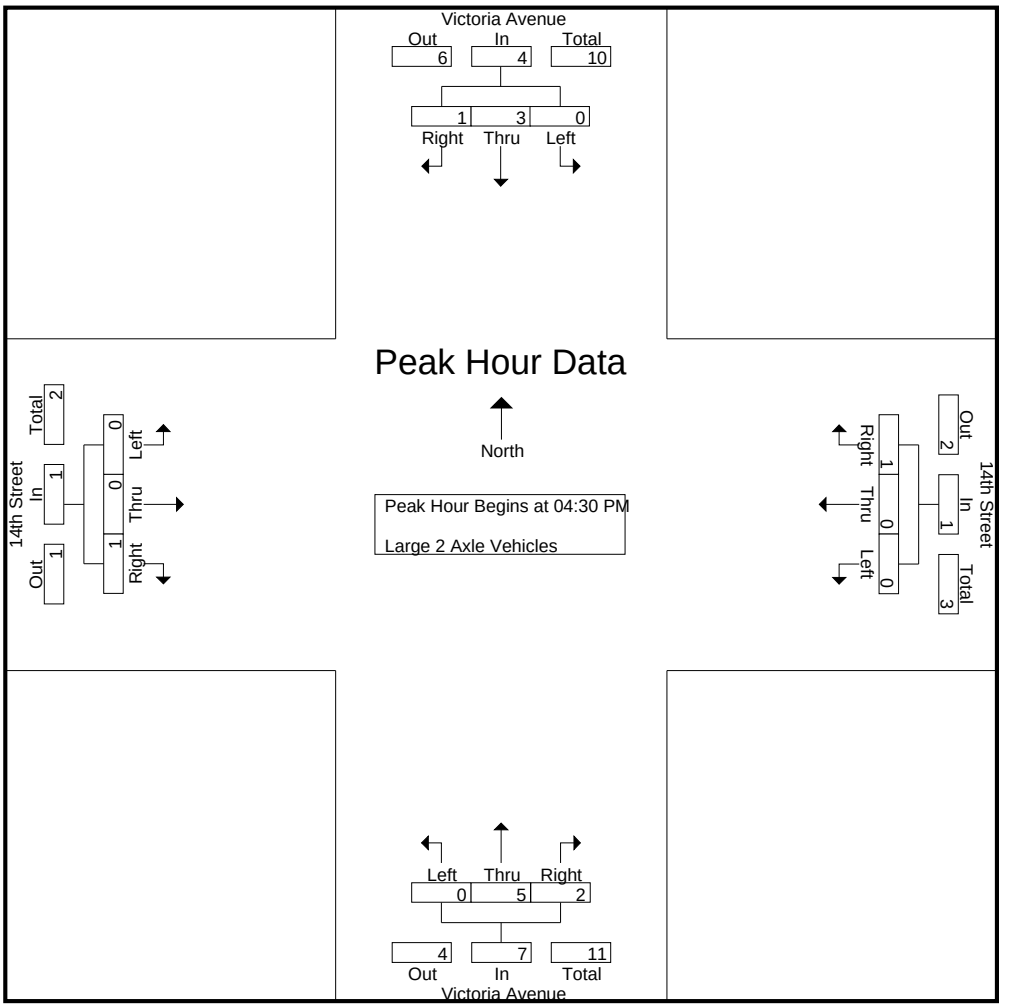

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**2**	**1**	**3**	0	0	0	0	0	1	0	1	0	0	**1**	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	**1**	**1**	0	0	**1**	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	**4**	1	**5**	0	0	0	0
Total Volume	0	3	1	4	0	0	1	1	0	5	2	7	0	0	1	1
% App. Total	0	75	25		0	0	100		0	71.4	28.6		0	0	100	
PHF	.000	.375	.250	.333	.000	.000	.250	.250	.000	.313	.500	.350	.000	.000	.250	.250

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

City of San Bernardino
N/S: Victoria Avenue
E/W: 14th Street
Weather: Clear

File Name : 33_SBC_Victoria_14th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	75	0	75	0	0	0	0	0	25	0	25	0	0	0	0	

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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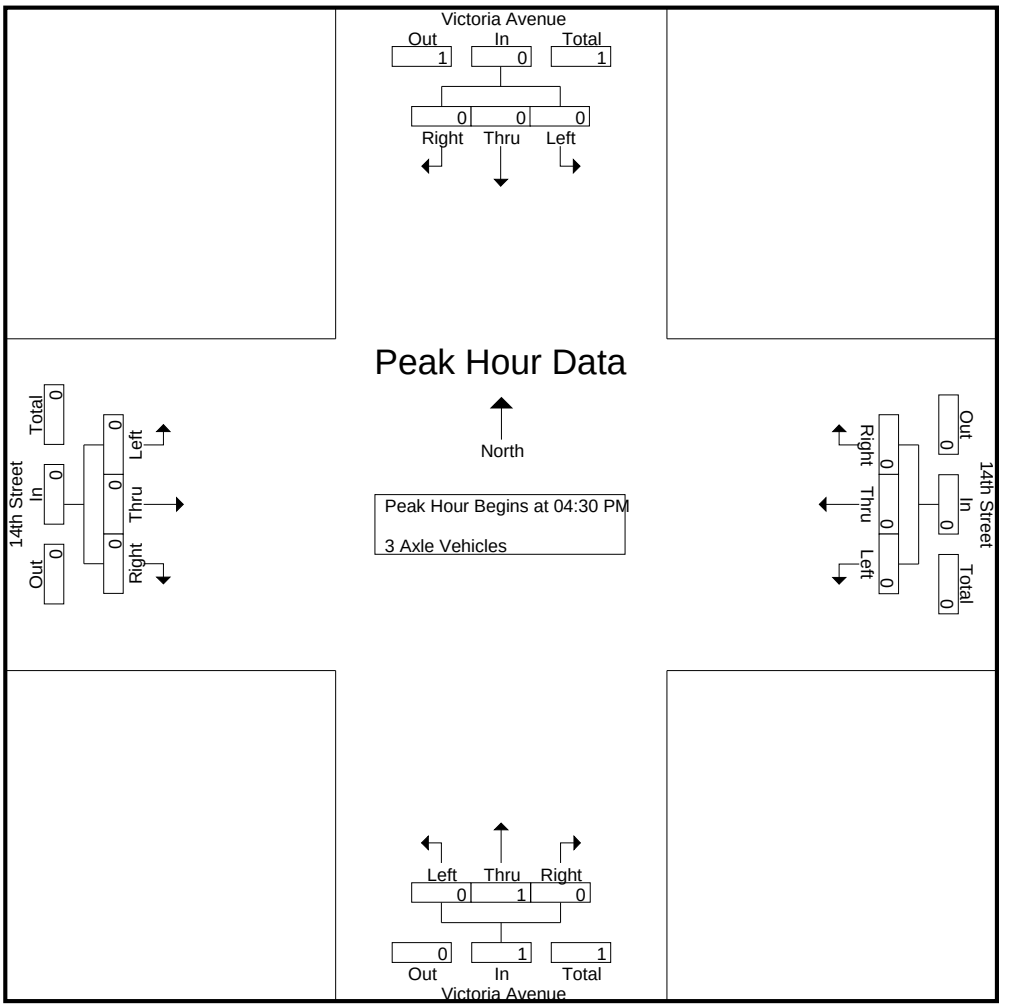

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of San Bernardino
N/S: Victoria Avenue
E/W: 14th Street
Weather: Clear

File Name : 33_SBC_Victoria_14th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	Victoria Avenue Southbound				14th Street Westbound				Victoria Avenue Northbound				14th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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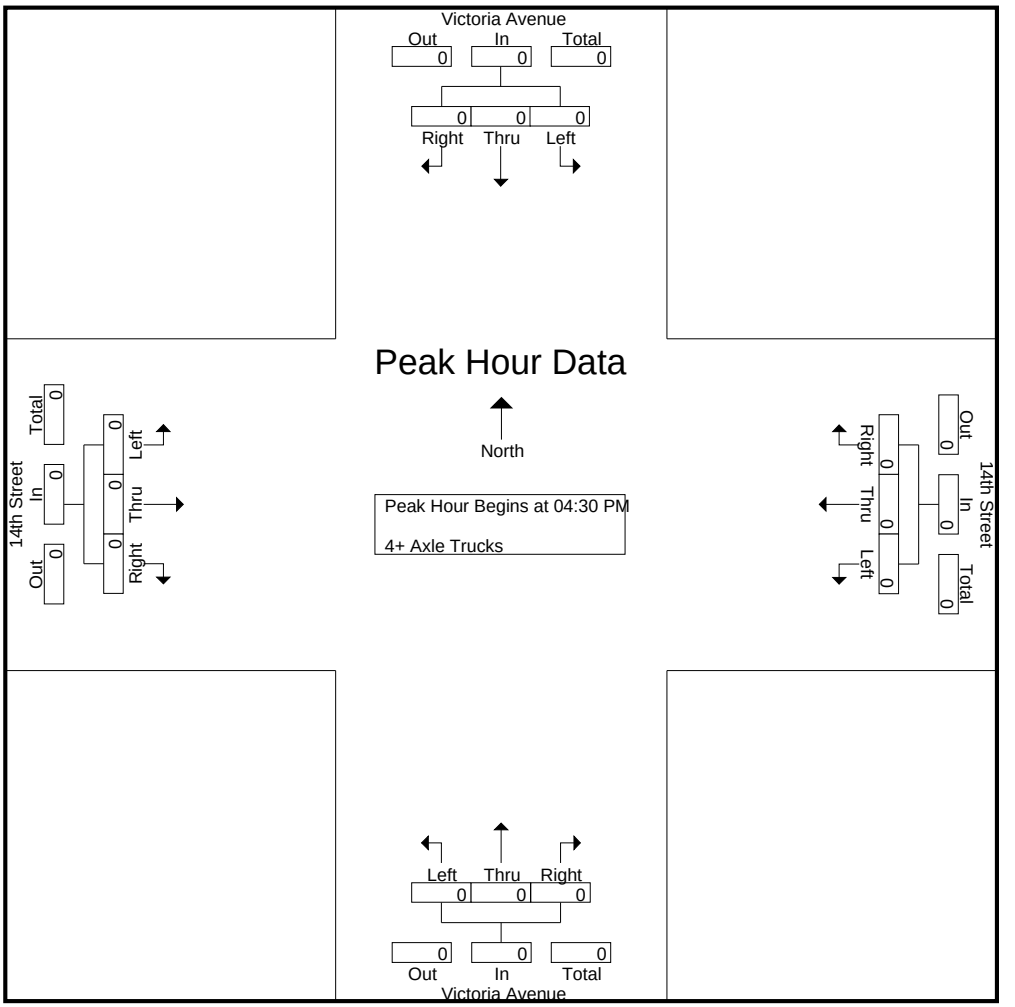

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

Location: San Bernardino
N/S: Victoria Avenue
E/W: 14th Street

Date: 5/17/2018
Day: Thursday

PEDESTRIANS

	North Leg Victoria Avenue	East Leg 14th Street	South Leg Victoria Avenue	West Leg 14th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
6:00 AM	0	2	1	1	4
6:15 AM	0	1	0	0	1
6:30 AM	0	0	0	3	3
6:45 AM	0	0	0	2	2
7:00 AM	0	2	2	1	5
7:15 AM	0	0	0	1	1
7:30 AM	0	0	0	1	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	4	5
8:30 AM	1	0	0	3	4
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	1	6	3	17	27

	North Leg Victoria Avenue	East Leg 14th Street	South Leg Victoria Avenue	West Leg 14th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	1	3	2	3	9
3:15 PM	0	0	3	2	5
3:30 PM	0	2	0	2	4
3:45 PM	0	1	2	2	5
4:00 PM	0	1	0	1	2
4:15 PM	0	0	1	3	4
4:30 PM	0	0	0	1	1
4:45 PM	0	0	3	0	3
5:00 PM	1	1	3	5	10
5:15 PM	0	1	4	10	15
5:30 PM	0	0	1	2	3
5:45 PM	0	0	1	8	9
TOTAL VOLUMES:	2	9	20	39	70

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Location: San Bernardino
N/S: Victoria Avenue
E/W: 14th Street

Date: 5/17/2018
Day: Thursday

BICYCLES

	Southbound Victoria Avenue			Westbound 14th Street			Northbound Victoria Avenue			Eastbound 14th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
7:45 AM	0	1	0	0	0	0	0	1	0	0	1	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	1	0	0	1	0	3
TOTAL VOLUMES:	0	3	0	1	1	0	0	2	0	1	2	0	10

	Southbound Victoria Avenue			Westbound 14th Street			Northbound Victoria Avenue			Eastbound 14th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	1	1	1	0	0	3
3:45 PM	0	0	0	0	1	1	0	1	0	0	0	0	3
4:00 PM	0	1	0	0	0	0	0	0	0	0	1	0	2
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
4:45 PM	0	0	0	0	1	0	0	0	1	0	0	0	2
5:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	5	0	0	2	1	0	2	2	2	1	0	15

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951-268-6268

Prepared by National Data & Surveying Services

Tippecanoe Ave & Baseline St

Peak Hour Turning Movement Count

ID: 19-06039-011
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

PEAK HOURS

AM: 07:15 AM - 08:15 AM
NOON: NONE
PM: 04:15 PM - 05:15 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

SOUTHBOUND — Tippecanoe Ave

AM	2	1	3	0	0	AM
NOON	0	0	0	0	0	NOON
PM	8	0	4	0	6	PM

EASTBOUND — Baseline St

AM	NOON	PM	
586	0	777	⇦
0	0	0	↶ 0
0	0	3	↱ 0
277	0	644	→ 2
191	0	165	↴ 0
AM	NOON	PM	

WESTBOUND — Baseline St

PM	NOON	AM	
2	0	0	0 ↰
490	0	425	2 ←
163	0	190	1 ↰
0	0	1	0 ↰
895	0	431	⇨
PM	NOON	AM	

NORTHBOUND — Tippecanoe Ave

PM	329	1	279	1	247	PM
NOON	0	0	0	0	0	NOON
AM	382	0	159	0	150	AM

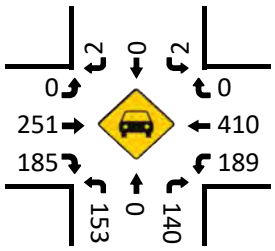
0 2 0 0 — 0 0 2 0

CONTROL

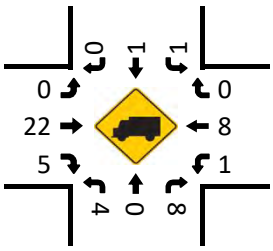
Signalized

TEV	1399 AM	0 NOON	2007 PM
PHF	0.88		0.98

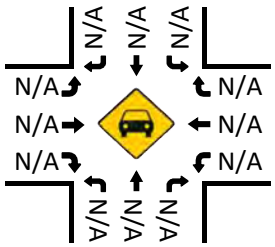
Cars (AM)



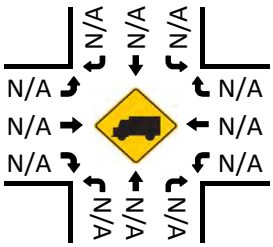
2axle (AM)



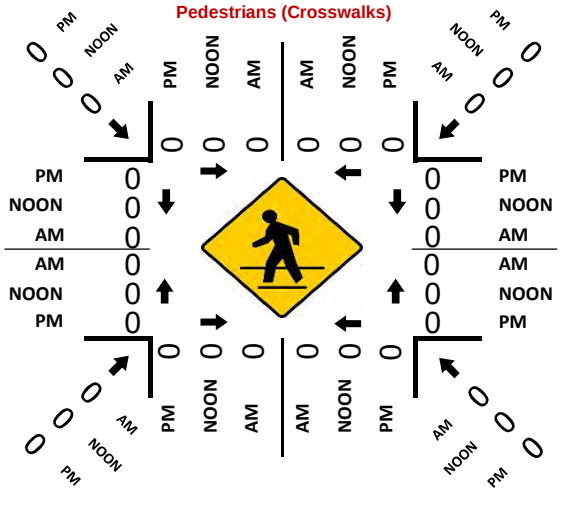
Cars (NOON)



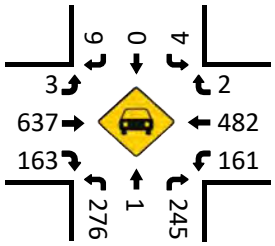
2axle (NOON)



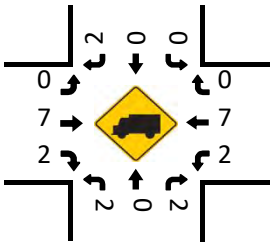
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-011
Date: 3/19/2019

Total

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	24	0	27	0	0	0	0	0	0	70	44	0	31	71	1	0	268
7:15 AM	45	0	43	0	2	0	0	0	0	79	71	0	46	113	0	0	399
7:30 AM	41	0	41	0	0	0	0	0	0	79	53	0	59	108	0	0	381
7:45 AM	31	0	28	0	0	0	2	0	0	74	46	0	49	104	0	1	335
8:00 AM	42	0	38	0	1	1	0	0	0	45	21	0	36	100	0	0	284
8:15 AM	31	0	33	0	1	1	2	0	0	87	35	0	46	101	0	0	337
8:30 AM	38	1	35	0	0	0	0	0	1	82	47	0	24	117	0	0	345
8:45 AM	34	0	38	0	3	0	1	0	2	106	36	0	32	99	1	0	352
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	286	1	283	0	7	2	5	0	3	622	353	0	323	813	2	1	2701
APPROACH %'s :	50.18%	0.18%	49.65%	0.00%	50.00%	14.29%	35.71%	0.00%	0.31%	63.60%	36.09%	0.00%	28.36%	71.38%	0.18%	0.09%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	159	0	150	0	3	1	2	0	0	277	191	0	190	425	0	1	1399
PEAK HR FACTOR :	0.883	0.000	0.872	0.000	0.375	0.250	0.250	0.000	0.000	0.877	0.673	0.000	0.805	0.940	0.000	0.250	0.877
	0.878				0.750				0.780				0.922				

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Baseline St				Baseline St				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	54	0	67	0	3	0	1	0	1	136	40	0	37	136	3	0	478
4:15 PM	55	1	67	1	1	0	3	0	0	162	41	0	42	127	1	0	501
4:30 PM	82	0	55	0	0	0	3	0	0	162	30	0	48	122	0	0	502
4:45 PM	73	0	66	0	1	0	2	0	0	167	43	0	34	125	0	0	511
5:00 PM	69	0	59	0	2	0	0	0	3	153	51	0	39	116	1	0	493
5:15 PM	84	0	87	0	0	0	3	0	2	145	35	1	35	96	0	0	488
5:30 PM	73	0	79	0	3	0	1	0	1	126	41	0	27	120	0	0	471
5:45 PM	64	0	72	0	1	0	0	0	0	127	45	0	36	99	0	0	444
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	554	1	552	1	11	0	13	0	7	1178	326	1	298	941	5	0	3888
APPROACH %'s :	50.00%	0.09%	49.82%	0.09%	45.83%	0.00%	54.17%	0.00%	0.46%	77.91%	21.56%	0.07%	23.95%	75.64%	0.40%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	279	1	247	1	4	0	8	0	3	644	165	0	163	490	2	0	2007
PEAK HR FACTOR :	0.851	0.250	0.922	0.250	0.500	0.000	0.667	0.000	0.250	0.964	0.809	0.000	0.849	0.965	0.500	0.000	0.982
	0.950				0.750				0.967				0.963				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-011
Date: 3/19/2019

Cars

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	22	0	24	0	0	0	0	0	0	62	43	0	29	67	1	0	248
7:15 AM	44	0	39	0	1	0	0	0	0	70	71	0	46	109	0	0	380
7:30 AM	40	0	40	0	0	0	0	0	0	77	52	0	58	104	0	0	371
7:45 AM	30	0	26	0	0	0	2	0	0	63	44	0	49	99	0	1	314
8:00 AM	39	0	35	0	1	0	0	0	0	41	18	0	36	98	0	0	268
8:15 AM	29	0	31	0	1	1	1	0	0	80	34	0	46	97	0	0	320
8:30 AM	38	1	34	0	0	0	0	0	1	76	45	0	24	111	0	0	330
8:45 AM	32	0	36	0	2	0	1	0	2	103	35	0	31	96	1	0	339
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	274	1	265	0	5	1	4	0	3	572	342	0	319	781	2	1	2570
APPROACH %'s :	50.74%	0.19%	49.07%	0.00%	50.00%	10.00%	40.00%	0.00%	0.33%	62.38%	37.30%	0.00%	28.92%	70.81%	0.18%	0.09%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	153	0	140	0	2	0	2	0	0	251	185	0	189	410	0	1	1333
PEAK HR FACTOR :	0.87	0.000	0.875	0.000	0.500	0.000	0.250	0.000	0.000	0.815	0.651	0.000	0.815	0.940	0.000	0.250	0.877
	0.883				0.500				0.773				0.926				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	50	0	66	0	2	0	1	0	1	136	40	0	36	130	3	0	465
4:15 PM	54	1	65	1	1	0	3	0	0	159	41	0	42	123	1	0	491
4:30 PM	81	0	55	0	0	0	2	0	0	160	30	0	47	121	0	0	496
4:45 PM	72	0	66	0	1	0	1	0	0	165	43	0	34	124	0	0	506
5:00 PM	69	0	59	0	2	0	0	0	3	153	49	0	38	114	1	0	488
5:15 PM	84	0	87	0	0	0	3	0	2	142	35	1	34	95	0	0	483
5:30 PM	73	0	78	0	3	0	1	0	1	125	41	0	27	115	0	0	464
5:45 PM	64	0	71	0	1	0	0	0	0	123	45	0	36	97	0	0	437
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	547	1	547	1	10	0	11	0	7	1163	324	1	294	919	5	0	3830
APPROACH %'s :	49.91%	0.09%	49.91%	0.09%	47.62%	0.00%	52.38%	0.00%	0.47%	77.79%	21.67%	0.07%	24.14%	75.45%	0.41%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	276	1	245	1	4	0	6	0	3	637	163	0	161	482	2	0	1981
PEAK HR FACTOR :	0.85	0.250	0.928	0.250	0.500	0.000	0.500	0.000	0.250	0.965	0.832	0.000	0.856	0.972	0.500	0.000	0.979
	0.947				0.625				0.965				0.960				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-011
Date: 3/19/2019

2axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	0	3	0	0	0	0	0	0	6	1	0	2	4	0	0	18
7:15 AM	0	0	4	0	1	0	0	0	0	9	0	0	0	1	0	0	15
7:30 AM	1	0	1	0	0	0	0	0	0	2	1	0	1	3	0	0	9
7:45 AM	1	0	2	0	0	0	0	0	0	8	1	0	0	2	0	0	14
8:00 AM	2	0	1	0	0	1	0	0	0	3	3	0	0	2	0	0	12
8:15 AM	2	0	2	0	0	0	1	0	0	6	1	0	0	0	0	0	12
8:30 AM	0	0	1	0	0	0	0	0	0	6	2	0	0	5	0	0	14
8:45 AM	2	0	1	0	1	0	0	0	0	1	0	0	0	3	0	0	8
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	10	0	15	0	2	1	1	0	0	41	9	0	3	20	0	0	102
APPROACH %'s :	40.00%	0.00%	60.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	82.00%	18.00%	0.00%	13.04%	86.96%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	4	0	8	0	1	1	0	0	0	22	5	0	1	8	0	0	50
PEAK HR FACTOR :	0.500	0.000	0.500	0.000	0.250	0.250	0.000	0.000	0.000	0.611	0.417	0.000	0.250	0.667	0.000	0.000	0.833
	0.750				0.500				0.750				0.563				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	4	0	1	0	1	0	0	0	0	0	0	0	1	6	0	0	13
4:15 PM	1	0	2	0	0	0	0	0	0	3	0	0	0	3	0	0	9
4:30 PM	1	0	0	0	0	0	1	0	0	2	0	0	1	1	0	0	6
4:45 PM	0	0	0	0	0	0	1	0	0	2	0	0	0	1	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	1	2	0	0	5
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0	0	4
5:30 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	5	0	0	7
5:45 PM	0	0	1	0	0	0	0	0	0	4	0	0	0	2	0	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	6	0	5	0	1	0	2	0	0	14	2	0	4	21	0	0	55
APPROACH %'s :	54.55%	0.00%	45.45%	0.00%	33.33%	0.00%	66.67%	0.00%	0.00%	87.50%	12.50%	0.00%	16.00%	84.00%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	2	0	2	0	0	0	2	0	0	7	2	0	2	7	0	0	24
PEAK HR FACTOR :	0.50	0.000	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.583	0.250	0.000	0.500	0.583	0.000	0.000	0.667
	0.333				0.500				0.750				0.750				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-011
Date: 3/19/2019

3axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	0	4
8:00 AM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	0	0	1	1	0	1	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	3	0	0	0	0	0	0	6	2	0	1	5	0	0	18
APPROACH %'s :	25.00%	0.00%	75.00%	0.00%					0.00%	75.00%	25.00%	0.00%	16.67%	83.33%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	0	2	0	0	0	0	0	0	2	1	0	0	3	0	0	9
PEAK HR FACTOR :	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.750	0.000	0.000	0.563
	0.250								0.250				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250
													0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-011
Date: 3/19/2019

4axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	0	0	0	0	0	0	0	3	0	0	0	7	0	0	11
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	0	0	2	0	0	0	4	0	0	7
PEAK HR FACTOR :	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.583
	0.250								0.500				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%													
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
	0.250																

Prepared by National Data & Surveying Services

Del Rosa Dr & Baseline St

Peak Hour Turning Movement Count

ID: 19-06039-012
City: San Bernardino

Day: Thursday
Date: 03/14/2019

PEAK HOURS

AM: 07:15 AM - 08:15 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

SOUTHBOUND — Del Rosa Dr

AM	122	271	28	0	280	AM
NOON	0	0	0	0	0	NOON
PM	90	200	79	0	487	PM
	1	1	1	0		

EASTBOUND — Baseline St

AM	NOON	PM	
536	0	585	
0	0	0	0
47	0	127	1
220	0	689	2
122	0	35	0

WESTBOUND — Baseline St

PM	NOON	AM	
50	0	33	0
451	0	365	2
26	0	88	1
0	0	0	0
832	0	321	

CONTROL

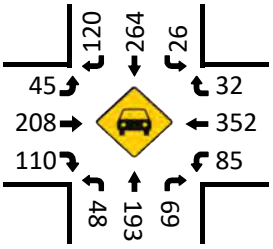
Signalized

TEV	1618	0	2165
	AM	NOON	PM
PHF	0.87		0.92

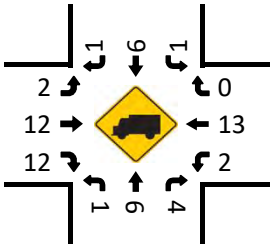
NORTHBOUND — Del Rosa Dr

	0	1	2	0		
PM	261	0	44	310	64	PM
NOON	0	0	0	0	0	NOON
AM	481	0	49	200	73	AM

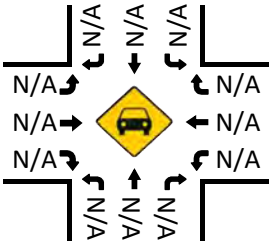
Cars (AM)



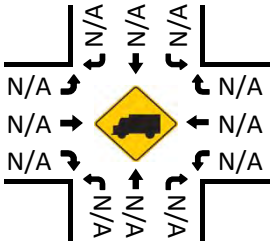
2axle (AM)



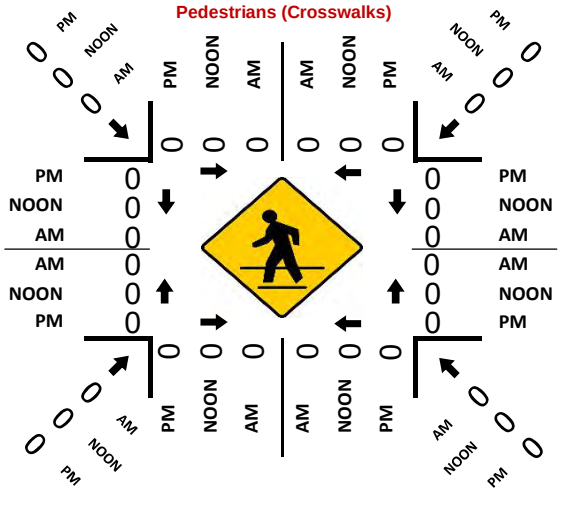
Cars (NOON)



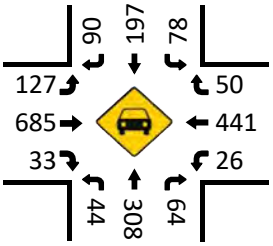
2axle (NOON)



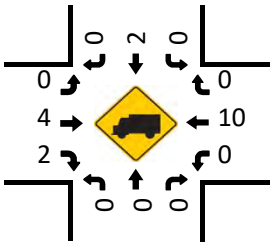
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-012
Date: 3/14/2019

Total

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	30	13	0	5	73	16	0	8	41	28	0	33	64	10	0	327
7:15 AM	14	55	28	0	6	80	36	0	9	46	61	0	33	87	8	0	463
7:30 AM	21	54	31	0	6	70	28	0	9	68	42	0	31	92	8	0	460
7:45 AM	5	49	7	0	8	68	39	0	16	48	12	0	8	95	6	0	361
8:00 AM	9	42	7	0	8	53	19	0	13	58	7	0	16	91	11	0	334
8:15 AM	6	41	7	0	6	49	20	0	21	90	8	0	12	79	11	0	350
8:30 AM	7	27	6	0	10	59	24	0	14	98	9	0	12	103	7	0	376
8:45 AM	7	38	5	0	12	35	24	0	14	102	11	0	12	85	12	0	357
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	75	336	104	0	61	487	206	0	104	551	178	0	157	696	73	0	3028
APPROACH %'s :	14.56%	65.24%	20.19%	0.00%	8.09%	64.59%	27.32%	0.00%	12.48%	66.15%	21.37%	0.00%	16.95%	75.16%	7.88%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	49	200	73	0	28	271	122	0	47	220	122	0	88	365	33	0	1618
PEAK HR FACTOR :	0.583	0.909	0.589	0.000	0.875	0.847	0.782	0.000	0.734	0.809	0.500	0.000	0.667	0.961	0.750	0.000	0.874
		0.759				0.863				0.817				0.927			

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Baseline St				Baseline St				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	67	16	0	25	47	25	0	26	154	4	0	11	97	21	0	502
4:15 PM	10	60	15	0	12	45	32	0	27	142	12	0	7	119	14	0	495
4:30 PM	10	62	14	0	17	58	26	0	27	148	18	0	16	114	16	0	526
4:45 PM	7	61	10	0	21	61	24	0	27	137	11	0	7	121	15	0	502
5:00 PM	11	87	17	0	20	48	19	0	27	160	7	0	7	121	11	0	535
5:15 PM	12	76	20	0	20	58	21	0	40	191	9	0	6	119	15	0	587
5:30 PM	11	75	17	0	17	41	19	0	34	162	10	0	6	110	10	0	512
5:45 PM	10	72	10	0	22	53	31	0	26	176	9	0	7	101	14	0	531
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	80	560	119	0	154	411	197	0	234	1270	80	0	67	902	116	0	4190
APPROACH %'s :	10.54%	73.78%	15.68%	0.00%	20.21%	53.94%	25.85%	0.00%	14.77%	80.18%	5.05%	0.00%	6.18%	83.13%	10.69%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	44	310	64	0	79	200	90	0	127	689	35	0	26	451	50	0	2165
PEAK HR FACTOR :	0.917	0.891	0.800	0.000	0.898	0.862	0.726	0.000	0.794	0.902	0.875	0.000	0.929	0.932	0.833	0.000	0.922
		0.909				0.870				0.886				0.941			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-012
Date: 3/14/2019

Cars

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	29	13	0	5	73	16	0	7	37	27	0	33	62	9	0	317
7:15 AM	14	52	27	0	5	79	35	0	9	45	49	0	32	83	8	0	438
7:30 AM	20	53	29	0	6	70	28	0	9	65	42	0	31	90	7	0	450
7:45 AM	5	48	6	0	8	66	39	0	16	42	12	0	8	90	6	0	346
8:00 AM	9	40	7	0	7	49	18	0	11	56	7	0	14	89	11	0	318
8:15 AM	6	38	5	0	6	46	20	0	21	83	5	0	12	79	10	0	331
8:30 AM	7	27	5	0	9	58	21	0	14	94	9	0	12	98	7	0	361
8:45 AM	6	37	5	0	12	34	23	0	12	98	10	0	12	83	12	0	344
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	73	324	97	0	58	475	200	0	99	520	161	0	154	674	70	0	2905
APPROACH %'s :	14.78%	65.59%	19.64%	0.00%	7.91%	64.80%	27.29%	0.00%	12.69%	66.67%	20.64%	0.00%	17.15%	75.06%	7.80%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	48	193	69	0	26	264	120	0	45	208	110	0	85	352	32	0	1552
PEAK HR FACTOR :	0.60	0.910	0.595	0.000	0.813	0.835	0.769	0.000	0.703	0.800	0.561	0.000	0.664	0.978	0.727	0.000	0.862
	0.760				0.861				0.782				0.916				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	8	64	16	0	24	46	22	0	26	150	3	0	11	95	21	0	486
4:15 PM	10	59	15	0	12	45	32	0	26	138	12	0	7	112	14	0	482
4:30 PM	10	61	14	0	16	56	25	0	26	143	18	0	16	111	16	0	512
4:45 PM	6	59	10	0	21	60	24	0	27	132	11	0	7	120	15	0	492
5:00 PM	11	86	17	0	20	48	19	0	27	158	7	0	7	117	11	0	528
5:15 PM	12	76	20	0	20	56	21	0	40	190	9	0	6	118	15	0	583
5:30 PM	11	75	17	0	17	40	19	0	34	161	10	0	6	108	10	0	508
5:45 PM	10	71	10	0	21	53	31	0	26	176	7	0	7	98	14	0	524
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	78	551	119	0	151	404	193	0	232	1248	77	0	67	879	116	0	4115
APPROACH %'s :	10.43%	73.66%	15.91%	0.00%	20.19%	54.01%	25.80%	0.00%	14.90%	80.15%	4.95%	0.00%	6.31%	82.77%	10.92%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	44	308	64	0	78	197	90	0	127	685	33	0	26	441	50	0	2143
PEAK HR FACTOR :	0.92	0.895	0.800	0.000	0.929	0.879	0.726	0.000	0.794	0.901	0.825	0.000	0.929	0.934	0.833	0.000	0.919
	0.912				0.869				0.884				0.930				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-012
Date: 3/14/2019

2axle

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	0	0	0	1	4	1	0	0	1	1	0	9
7:15 AM	0	3	1	0	0	0	1	0	0	1	12	0	1	4	0	0	23
7:30 AM	1	1	2	0	0	0	0	0	0	3	0	0	0	2	0	0	9
7:45 AM	0	0	1	0	0	2	0	0	0	6	0	0	0	5	0	0	14
8:00 AM	0	2	0	0	1	4	0	0	2	2	0	0	1	2	0	0	14
8:15 AM	0	3	2	0	0	2	0	0	0	7	3	0	0	0	0	0	17
8:30 AM	0	0	0	0	0	1	3	0	0	4	0	0	0	4	0	0	12
8:45 AM	1	1	0	0	0	1	1	0	1	4	1	0	0	2	0	0	12
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	11	6	0	1	10	5	0	4	31	17	0	2	20	1	0	110
APPROACH %'s :	10.53%	57.89%	31.58%	0.00%	6.25%	62.50%	31.25%	0.00%	7.69%	59.62%	32.69%	0.00%	8.70%	86.96%	4.35%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	6	4	0	1	6	1	0	2	12	12	0	2	13	0	0	60
PEAK HR FACTOR :	0.250	0.500	0.500	0.000	0.250	0.375	0.250	0.000	0.250	0.500	0.250	0.000	0.500	0.650	0.000	0.000	0.652
	0.688				0.400				0.500				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	3	0	0	1	0	3	0	0	4	1	0	0	2	0	0	15
4:15 PM	0	1	0	0	0	0	0	0	1	4	0	0	0	7	0	0	13
4:30 PM	0	1	0	0	1	1	1	0	1	5	0	0	0	3	0	0	13
4:45 PM	1	2	0	0	0	1	0	0	0	5	0	0	0	1	0	0	10
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	0	6
5:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	3
5:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	3	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	7	0	0	2	4	4	0	2	22	3	0	0	23	0	0	69
APPROACH %'s :	22.22%	77.78%	0.00%	0.00%	20.00%	40.00%	40.00%	0.00%	7.41%	81.48%	11.11%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	2	0	0	0	4	2	0	0	10	0	0	18
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.625	0.000	0.000	0.750
					0.500				0.750				0.625				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-012
Date: 3/14/2019

3axle

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2
8:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	1	0	1	2	0	0	1	0	0	0	1	0	1	0	7
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	33.33%	66.67%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.500
						0.250								0.250			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
		0.250															

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-012
Date: 3/14/2019

4axle

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	1	0	1	0	0	0	0	0	0	2	1	0	6
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%					0.00%	66.67%	33.33%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	4
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	1.000
	0.250				0.500								0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	33.33%	66.67%	0.00%	0.00%									
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
	0.250				0.500												

National Data & Surveying Services

Sterling Ave & Baseline St

Peak Hour Turning Movement Count

ID: 19-06039-013
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Sterling Ave

SOUTHBOUND

AM	64	389	157	0	494	AM
NOON	0	0	0	0	0	NOON
PM	82	309	201	0	786	PM
	0	2	1	0		

EASTBOUND (Baseline St)

AM	NOON	PM	
408	0	496	
0	0	0	0
58	0	126	1
204	0	543	2
35	0	48	0
AM	NOON	PM	

CONTROL

Signalized

TEV	1762 AM	0 NOON	2519 PM
PHF	0.90		0.93

WESTBOUND (Baseline St)

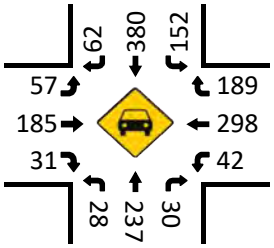
PM	NOON	AM	
0	0	0	0
215	0	192	0
345	0	316	2
60	0	43	1
1	0	0	0
820	0	393	
PM	NOON	AM	

	0	1	2	0		
PM	417	0	69	445	75	PM
NOON	0	0	0	0	0	NOON
AM	467	0	28	244	32	AM

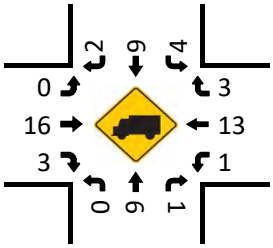
NORTHBOUND

Sterling Ave

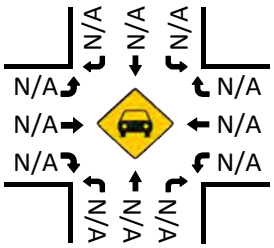
Cars (AM)



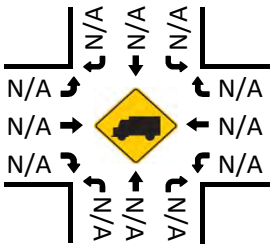
2axle (AM)



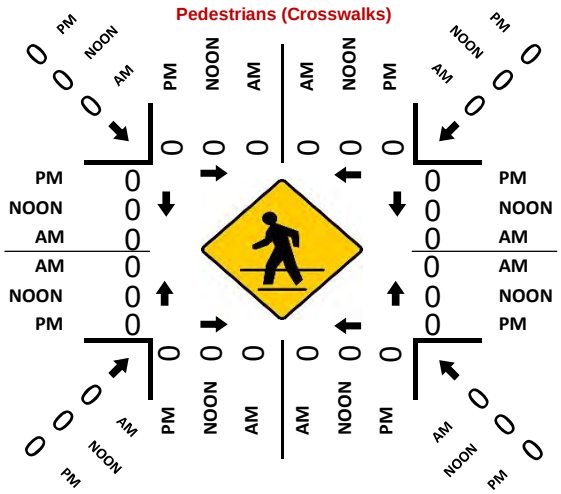
Cars (NOON)



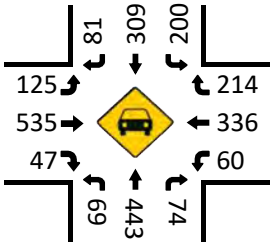
2axle (NOON)



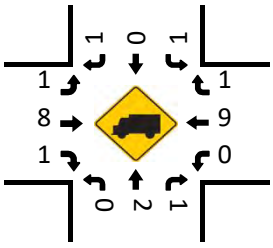
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-013
Date: 3/19/2019

Total

NS/EW Streets:	Sterling Ave				Sterling Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	46	7	0	19	67	12	0	15	40	0	0	10	66	46	0	332
7:15 AM	10	86	9	0	31	91	18	0	19	40	8	0	12	81	83	0	488
7:30 AM	4	59	7	0	61	131	22	0	19	49	8	0	12	63	37	0	472
7:45 AM	12	54	7	0	40	98	11	0	6	54	7	0	15	95	46	0	445
8:00 AM	2	45	9	0	25	69	13	0	14	61	12	0	4	77	26	0	357
8:15 AM	19	66	17	0	16	76	8	0	9	76	10	0	12	87	35	0	431
8:30 AM	21	56	23	0	35	67	12	0	10	71	15	0	17	85	45	0	457
8:45 AM	25	80	7	0	25	82	11	0	13	62	25	0	10	70	41	0	451
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	97	492	86	0	252	681	107	0	105	453	85	0	92	624	359	0	3433
APPROACH %'s :	14.37%	72.89%	12.74%	0.00%	24.23%	65.48%	10.29%	0.00%	16.33%	70.45%	13.22%	0.00%	8.56%	58.05%	33.40%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	28	244	32	0	157	389	64	0	58	204	35	0	43	316	192	0	1762
PEAK HR FACTOR :	0.583	0.709	0.889	0.000	0.643	0.742	0.727	0.000	0.763	0.836	0.729	0.000	0.717	0.832	0.578	0.000	0.903
	0.724				0.713				0.853				0.783				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	19	81	20	0	40	58	13	0	28	138	10	0	18	110	56	0	591
4:15 PM	14	93	13	0	51	68	21	0	28	126	6	0	20	92	51	0	583
4:30 PM	14	80	18	0	62	70	21	0	28	129	14	0	15	96	45	0	592
4:45 PM	19	109	21	0	42	70	20	0	37	120	20	0	13	96	51	0	618
5:00 PM	15	114	16	0	54	75	20	0	27	162	8	0	21	110	55	0	677
5:15 PM	16	120	21	0	41	86	24	0	30	115	11	0	13	63	55	0	595
5:30 PM	19	102	17	0	64	78	18	0	32	146	9	0	13	76	54	1	629
5:45 PM	17	115	12	0	50	58	16	0	27	128	16	0	16	88	41	0	584
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	133	814	138	0	404	563	153	0	237	1064	94	0	129	731	408	1	4869
APPROACH %'s :	12.26%	75.02%	12.72%	0.00%	36.07%	50.27%	13.66%	0.00%	16.99%	76.27%	6.74%	0.00%	10.17%	57.60%	32.15%	0.08%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	69	445	75	0	201	309	82	0	126	543	48	0	60	345	215	1	2519
PEAK HR FACTOR :	0.908	0.927	0.893	0.000	0.785	0.898	0.854	0.000	0.851	0.838	0.600	0.000	0.714	0.784	0.977	0.250	0.930
	0.938				0.925				0.910				0.835				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-013
Date: 3/19/2019

Cars

NS/EW Streets:	Sterling Ave				Sterling Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	45	6	0	17	66	12	0	14	39	0	0	10	63	43	0	319
7:15 AM	10	84	9	0	29	90	17	0	19	36	7	0	12	80	83	0	476
7:30 AM	4	57	6	0	61	129	22	0	19	47	8	0	12	60	37	0	462
7:45 AM	12	51	7	0	39	96	10	0	6	47	6	0	15	85	45	0	419
8:00 AM	2	45	8	0	23	65	13	0	13	55	10	0	3	73	24	0	334
8:15 AM	18	62	14	0	14	74	8	0	8	71	10	0	11	85	32	0	407
8:30 AM	21	56	23	0	34	67	11	0	10	71	15	0	17	84	45	0	454
8:45 AM	25	78	7	0	24	80	11	0	12	60	25	0	10	66	41	0	439
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	96	478	80	0	241	667	104	0	101	426	81	0	90	596	350	0	3310
APPROACH %'s :	14.68%	73.09%	12.23%	0.00%	23.81%	65.91%	10.28%	0.00%	16.61%	70.07%	13.32%	0.00%	8.69%	57.53%	33.78%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	28	237	30	0	152	380	62	0	57	185	31	0	42	298	189	0	1691
PEAK HR FACTOR :	0.58	0.705	0.833	0.000	0.623	0.736	0.705	0.000	0.750	0.841	0.775	0.000	0.700	0.876	0.569	0.000	0.888
	0.716				0.700				0.875				0.756				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	19	80	19	0	40	55	13	0	28	137	9	0	17	106	56	0	579
4:15 PM	13	91	12	0	49	68	21	0	28	123	6	0	19	90	48	0	568
4:30 PM	13	80	16	0	62	68	20	0	27	125	14	0	14	94	45	0	578
4:45 PM	19	109	21	0	42	70	20	0	37	119	20	0	13	95	50	0	615
5:00 PM	15	113	16	0	54	75	20	0	26	157	8	0	21	105	55	0	665
5:15 PM	16	119	21	0	40	86	23	0	30	114	10	0	13	62	55	0	589
5:30 PM	19	102	16	0	64	78	18	0	32	145	9	0	13	74	54	1	625
5:45 PM	17	114	12	0	50	57	16	0	27	127	16	0	16	87	41	0	580
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	131	808	133	0	401	557	151	0	235	1047	92	0	126	713	404	1	4799
APPROACH %'s :	12.22%	75.37%	12.41%	0.00%	36.16%	50.23%	13.62%	0.00%	17.10%	76.20%	6.70%	0.00%	10.13%	57.32%	32.48%	0.08%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	69	443	74	0	200	309	81	0	125	535	47	0	60	336	214	1	2494
PEAK HR FACTOR :	0.91	0.931	0.881	0.000	0.781	0.898	0.880	0.000	0.845	0.852	0.588	0.000	0.714	0.800	0.973	0.250	0.938
	0.939				0.922				0.925				0.844				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-013
Date: 3/19/2019

2axle

NS/EW Streets:	Sterling Ave				Sterling Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	1	0	2	1	0	0	1	1	0	0	0	2	3	0	12
7:15 AM	0	2	0	0	2	1	1	0	0	3	1	0	0	0	0	0	10
7:30 AM	0	1	0	0	0	2	0	0	0	2	0	0	0	3	0	0	8
7:45 AM	0	3	0	0	1	2	1	0	0	7	1	0	0	7	1	0	23
8:00 AM	0	0	1	0	1	4	0	0	0	4	1	0	1	3	2	0	17
8:15 AM	1	4	2	0	2	2	0	0	1	5	0	0	1	2	3	0	23
8:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	3
8:45 AM	0	2	0	0	1	0	0	0	1	1	0	0	0	2	0	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	13	4	0	10	12	3	0	3	23	3	0	2	20	9	0	103
APPROACH %'s :	5.56%	72.22%	22.22%	0.00%	40.00%	48.00%	12.00%	0.00%	10.34%	79.31%	10.34%	0.00%	6.45%	64.52%	29.03%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	6	1	0	4	9	2	0	0	16	3	0	1	13	3	0	58
PEAK HR FACTOR :	0.000	0.500	0.250	0.000	0.500	0.563	0.500	0.000	0.000	0.571	0.750	0.000	0.250	0.464	0.375	0.000	0.630
	0.583				0.750				0.594				0.531				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	1	0	0	3	0	0	0	1	1	0	0	4	0	0	11
4:15 PM	1	2	1	0	2	0	0	0	0	2	0	0	1	2	3	0	14
4:30 PM	1	0	2	0	0	2	1	0	1	4	0	0	1	1	0	0	13
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	3
5:00 PM	0	1	0	0	0	0	0	0	1	5	0	0	0	5	0	0	12
5:15 PM	0	1	0	0	1	0	1	0	0	1	1	0	0	1	0	0	6
5:30 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	2	0	0	4
5:45 PM	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	6	5	0	3	6	2	0	2	16	2	0	2	17	4	0	67
APPROACH %'s :	15.38%	46.15%	38.46%	0.00%	27.27%	54.55%	18.18%	0.00%	10.00%	80.00%	10.00%	0.00%	8.70%	73.91%	17.39%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	2	1	0	1	0	1	0	1	8	1	0	0	9	1	0	25
PEAK HR FACTOR :	0.00	0.500	0.250	0.000	0.250	0.000	0.250	0.000	0.250	0.400	0.250	0.000	0.000	0.450	0.250	0.000	0.521
	0.750				0.250				0.417				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-013
Date: 3/19/2019

3axle

NS/EW Streets:	Sterling Ave				Sterling Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
8:00 AM	0	0	0	0	1	0	0	0	1	1	1	0	0	1	0	0	5
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	1	0	1	2	0	0	1	2	1	0	0	6	0	0	15
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	33.33%	66.67%	0.00%	0.00%	25.00%	50.00%	25.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1	0	0	1	0	0	0	1	2	1	0	0	3	0	0	9
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500	0.250	0.000	0.000	0.375	0.000	0.000	0.450
	0.250				0.250				0.333				0.375				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & Baseline St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-013
Date: 3/19/2019

4axle

NS/EW Streets:	Sterling Ave				Sterling Ave				Baseline St				Baseline St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	1	0	0	0	0	0	0	2	0	0	0	2	0	0	5
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	0	0	1	0	0	0	2	0	0	4
PEAK HR FACTOR :	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.500	0.000	0.000	1.000
	0.250								0.250				0.500				

NS/EW Streets:	Sterling Ave				Sterling Ave				Baseline St				Baseline St				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
APPROACH %'s :													50.00%	50.00%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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City of San Bernardino
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E/W: Baseline Street
Weather: Clear

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Site Code : 99918352
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	6	17	4	27	1	18	7	26	2	21	0	23	12	28	5	45	121
06:15 AM	6	28	2	36	3	27	14	44	5	26	2	33	11	29	2	42	155
06:30 AM	3	36	5	44	4	28	13	45	5	28	2	35	14	37	6	57	181
06:45 AM	7	45	17	69	1	41	12	54	5	31	7	43	15	28	7	50	216
Total	22	126	28	176	9	114	46	169	17	106	11	134	52	122	20	194	673
07:00 AM	14	58	16	88	5	51	22	78	12	62	5	79	22	43	8	73	318
07:15 AM	23	96	32	151	7	59	24	90	10	77	3	90	32	50	3	85	416
07:30 AM	32	92	41	165	9	53	13	75	11	77	3	91	23	62	10	95	426
07:45 AM	14	75	30	119	7	71	11	89	10	34	6	50	19	46	7	72	330
Total	83	321	119	523	28	234	70	332	43	250	17	310	96	201	28	325	1490
08:00 AM	11	37	20	68	11	50	12	73	13	49	10	72	25	47	15	87	300
08:15 AM	16	55	21	92	9	64	15	88	11	45	7	63	25	63	14	102	345
08:30 AM	12	46	13	71	12	67	14	93	14	46	8	68	21	67	14	102	334
08:45 AM	14	51	28	93	10	57	7	74	14	45	8	67	19	61	13	93	327
Total	53	189	82	324	42	238	48	328	52	185	33	270	90	238	56	384	1306
Grand Total	158	636	229	1023	79	586	164	829	112	541	61	714	238	561	104	903	3469
Apprch %	15.4	62.2	22.4		9.5	70.7	19.8		15.7	75.8	8.5		26.4	62.1	11.5		
Total %	4.6	18.3	6.6	29.5	2.3	16.9	4.7	23.9	3.2	15.6	1.8	20.6	6.9	16.2	3	26	
Passenger Vehicles	156	625	220	1001	74	558	158	790	101	520	54	675	225	539	99	863	3329
% Passenger Vehicles	98.7	98.3	96.1	97.8	93.7	95.2	96.3	95.3	90.2	96.1	88.5	94.5	94.5	96.1	95.2	95.6	96
Large 2 Axle Vehicles	2	8	9	19	3	27	4	34	6	15	5	26	11	20	2	33	112
% Large 2 Axle Vehicles	1.3	1.3	3.9	1.9	3.8	4.6	2.4	4.1	5.4	2.8	8.2	3.6	4.6	3.6	1.9	3.7	3.2
3 Axle Vehicles	0	2	0	2	2	1	1	4	3	1	1	5	1	2	1	4	15
% 3 Axle Vehicles	0	0.3	0	0.2	2.5	0.2	0.6	0.5	2.7	0.2	1.6	0.7	0.4	0.4	1	0.4	0.4
4+ Axle Trucks	0	1	0	1	0	0	1	1	2	5	1	8	1	0	2	3	13
% 4+ Axle Trucks	0	0.2	0	0.1	0	0	0.6	0.1	1.8	0.9	1.6	1.1	0.4	0	1.9	0.3	0.4

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	14	58	16	88	5	51	22	78	**12**	62	5	79	22	43	8	73	318
07:15 AM	23	**96**	32	151	7	59	**24**	**90**	10	**77**	3	90	**32**	50	3	85	416
07:30 AM	**32**	92	**41**	**165**	**9**	53	13	75	11	77	3	**91**	23	**62**	**10**	**95**	**426**
07:45 AM	14	75	30	119	7	**71**	11	89	10	34	**6**	50	19	46	7	72	330
Total Volume	83	321	119	523	28	234	70	332	43	250	17	310	96	201	28	325	1490
% App. Total	15.9	61.4	22.8		8.4	70.5	21.1		13.9	80.6	5.5		29.5	61.8	8.6		
PHF	.648	.836	.726	.792	.778	.824	.729	.922	.896	.812	.708	.852	.750	.810	.700	.855	.874

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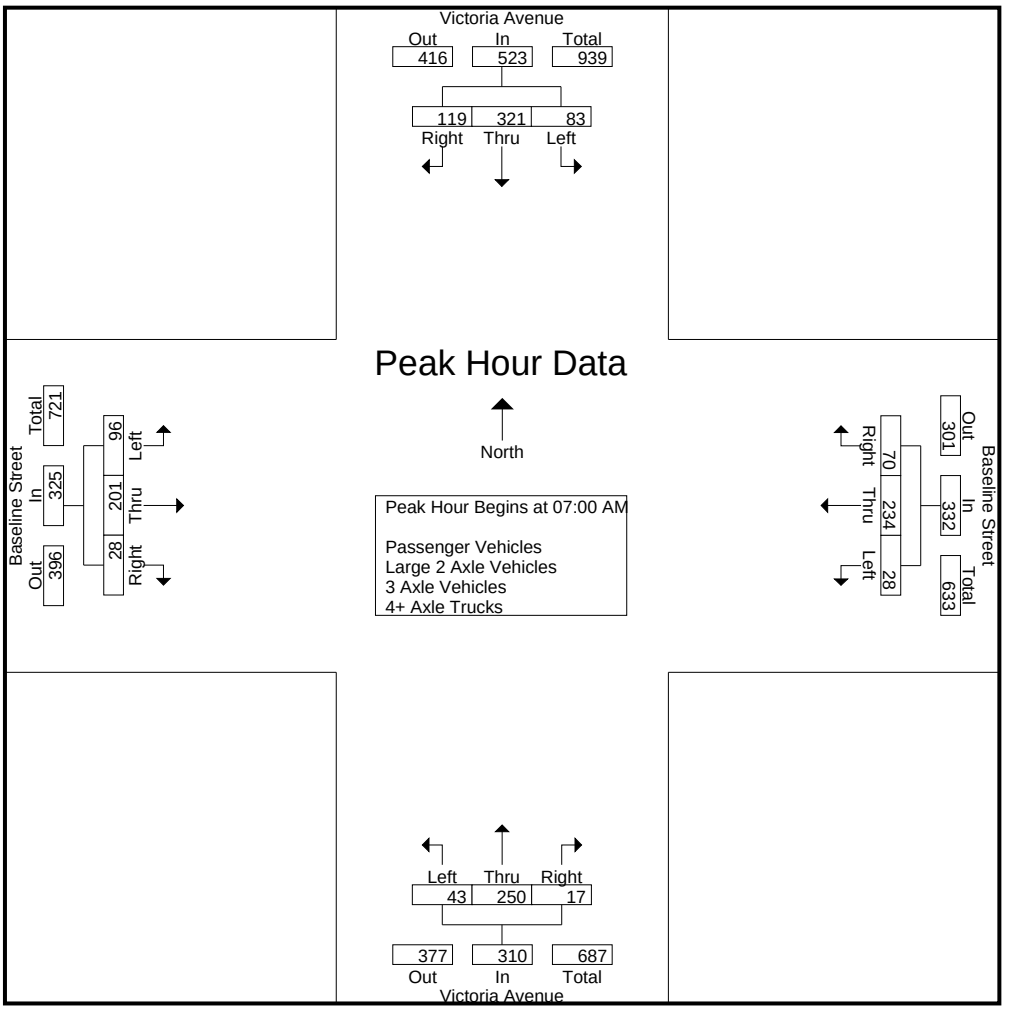

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:45 AM				07:00 AM				08:00 AM			
+0 mins.	14	58	16	88	7	**71**	11	89	**12**	62	5	79	**25**	47	**15**	87
+15 mins.	23	**96**	32	151	11	50	12	73	10	**77**	3	90	25	63	14	**102**
+30 mins.	**32**	92	**41**	**165**	9	64	**15**	88	11	77	3	**91**	21	**67**	14	102
+45 mins.	14	75	30	119	**12**	67	14	**93**	10	34	**6**	50	19	61	13	93
Total Volume	83	321	119	523	39	252	52	343	43	250	17	310	90	238	56	384
% App. Total	15.9	61.4	22.8		11.4	73.5	15.2		13.9	80.6	5.5		23.4	62	14.6	
PHF	.648	.836	.726	.792	.813	.887	.867	.922	.896	.812	.708	.852	.900	.888	.933	.941

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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	6	17	4	27	1	18	6	25	2	20	0	22	12	28	5	45	119
06:15 AM	6	27	2	35	3	25	14	42	4	26	2	32	11	28	2	41	150
06:30 AM	3	36	5	44	4	27	13	44	3	27	2	32	14	36	6	56	176
06:45 AM	7	45	14	66	1	39	12	52	3	31	4	38	14	27	6	47	203
Total	22	125	25	172	9	109	45	163	12	104	8	124	51	119	19	189	648
07:00 AM	14	57	15	86	5	49	22	76	11	58	5	74	20	42	7	69	305
07:15 AM	22	94	31	147	6	55	23	84	9	74	3	86	27	46	3	76	393
07:30 AM	31	91	40	162	9	52	11	72	9	75	2	86	23	60	10	93	413
07:45 AM	14	73	30	117	4	67	11	82	10	30	5	45	17	44	7	68	312
Total	81	315	116	512	24	223	67	314	39	237	15	291	87	192	27	306	1423
08:00 AM	11	35	19	65	11	47	12	70	11	47	9	67	24	44	15	83	285
08:15 AM	16	54	20	90	9	60	13	82	11	42	6	59	24	60	12	96	327
08:30 AM	12	46	13	71	11	63	14	88	14	46	8	68	20	66	13	99	326
08:45 AM	14	50	27	91	10	56	7	73	14	44	8	66	19	58	13	90	320
Total	53	185	79	317	41	226	46	313	50	179	31	260	87	228	53	368	1258
Grand Total	156	625	220	1001	74	558	158	790	101	520	54	675	225	539	99	863	3329
Apprch %	15.6	62.4	22		9.4	70.6	20		15	77	8		26.1	62.5	11.5		
Total %	4.7	18.8	6.6	30.1	2.2	16.8	4.7	23.7	3	15.6	1.6	20.3	6.8	16.2	3	25.9	

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	14	57	15	86	5	49	22	76	**11**	58	**5**	74	20	42	7	69	305
07:15 AM	22	**94**	31	147	6	55	**23**	**84**	9	74	3	**86**	**27**	46	3	76	393
07:30 AM	**31**	91	**40**	**162**	**9**	52	11	72	9	**75**	2	86	23	**60**	**10**	**93**	**413**
07:45 AM	14	73	30	117	4	**67**	11	82	10	30	5	45	17	44	7	68	312
Total Volume	81	315	116	512	24	223	67	314	39	237	15	291	87	192	27	306	1423
% App. Total	15.8	61.5	22.7		7.6	71	21.3		13.4	81.4	5.2		28.4	62.7	8.8		
PHF	.653	.838	.725	.790	.667	.832	.728	.935	.886	.790	.750	.846	.806	.800	.675	.823	.861

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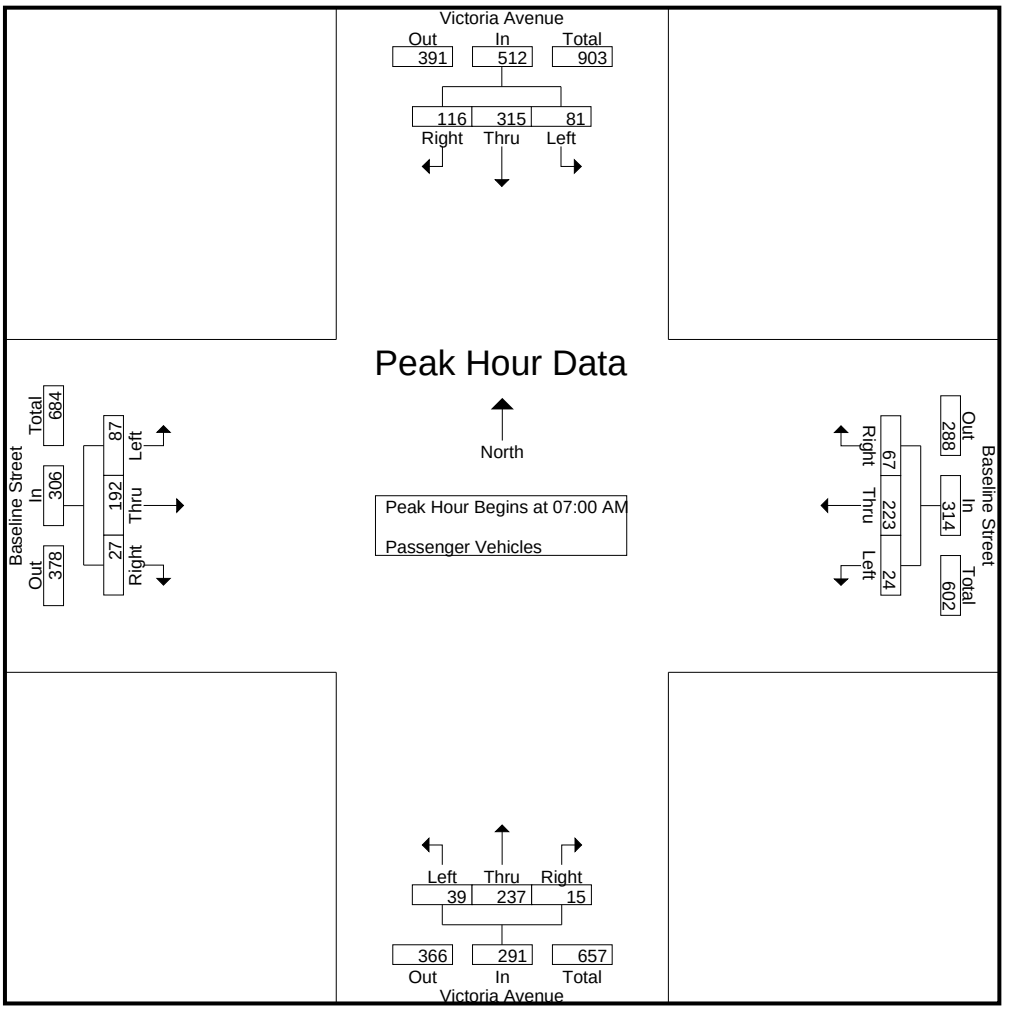

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	14	57	15	86	5	49	22	76	**11**	58	**5**	74	20	42	7	69
+15 mins.	22	**94**	31	147	6	55	**23**	**84**	9	74	3	**86**	**27**	46	3	76
+30 mins.	**31**	91	**40**	**162**	**9**	52	11	72	9	**75**	2	86	23	**60**	**10**	**93**
+45 mins.	14	73	30	117	4	**67**	11	82	10	30	5	45	17	44	7	68
Total Volume	81	315	116	512	24	223	67	314	39	237	15	291	87	192	27	306
% App. Total	15.8	61.5	22.7		7.6	71	21.3		13.4	81.4	5.2		28.4	62.7	8.8	
PHF	.653	.838	.725	.790	.667	.832	.728	.935	.886	.790	.750	.846	.806	.800	.675	.823

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Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
06:30 AM	0	0	0	0	0	1	0	1	1	1	0	2	0	0	0	0	3
06:45 AM	0	0	3	3	0	2	0	2	1	0	2	3	1	1	0	2	10
Total	0	0	3	3	0	5	0	5	2	1	2	5	1	2	0	3	16
07:00 AM	0	0	1	1	0	2	0	2	1	4	0	5	2	1	0	3	11
07:15 AM	1	2	1	4	0	4	1	5	1	2	0	3	5	4	0	9	21
07:30 AM	1	1	1	3	0	1	1	2	1	1	0	2	0	2	0	2	9
07:45 AM	0	1	0	1	2	4	0	6	0	4	1	5	2	1	0	3	15
Total	2	4	3	9	2	11	2	15	3	11	1	15	9	8	0	17	56
08:00 AM	0	2	1	3	0	3	0	3	1	1	1	3	1	3	0	4	13
08:15 AM	0	1	1	2	0	3	2	5	0	2	1	3	0	3	1	4	14
08:30 AM	0	0	0	0	1	4	0	5	0	0	0	0	0	1	1	2	7
08:45 AM	0	1	1	2	0	1	0	1	0	0	0	0	0	3	0	3	6
Total	0	4	3	7	1	11	2	14	1	3	2	6	1	10	2	13	40
Grand Total	2	8	9	19	3	27	4	34	6	15	5	26	11	20	2	33	112
Apprch %	10.5	42.1	47.4		8.8	79.4	11.8		23.1	57.7	19.2		33.3	60.6	6.1		
Total %	1.8	7.1	8	17	2.7	24.1	3.6	30.4	5.4	13.4	4.5	23.2	9.8	17.9	1.8	29.5	

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**1**	1	0	2	0	2	**1**	**4**	0	**5**	2	1	0	3	11
07:15 AM	**1**	**2**	1	**4**	0	**4**	**1**	5	1	2	0	3	**5**	**4**	0	**9**	**21**
07:30 AM	1	1	1	3	0	1	1	2	1	1	0	2	0	2	0	2	9
07:45 AM	0	1	0	1	**2**	4	0	**6**	0	4	**1**	5	2	1	0	3	15
Total Volume	2	4	3	9	2	11	2	15	3	11	1	15	9	8	0	17	56
% App. Total	22.2	44.4	33.3		13.3	73.3	13.3		20	73.3	6.7		52.9	47.1	0		
PHF	.500	.500	.750	.563	.250	.688	.500	.625	.750	.688	.250	.750	.450	.500	.000	.472	.667

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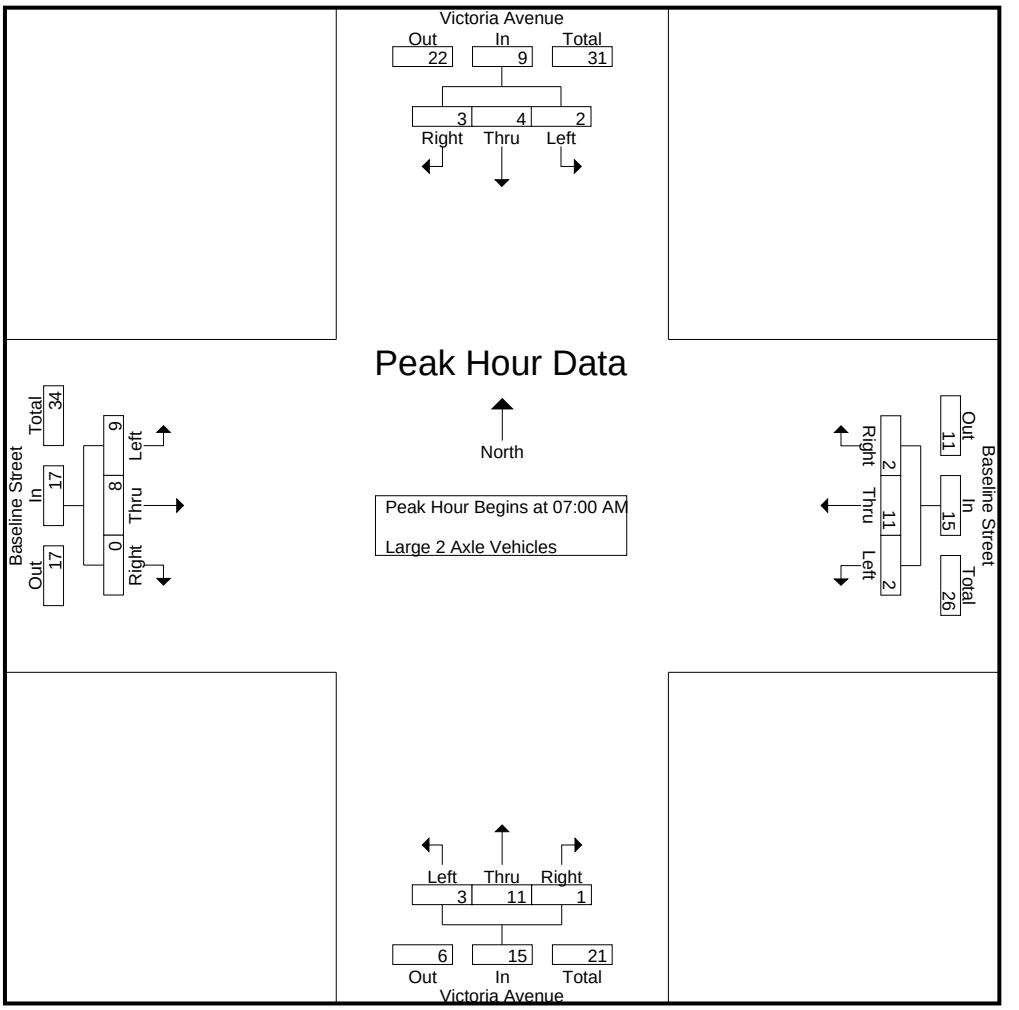

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	**1**	1	0	2	0	2	**1**	**4**	0	**5**	2	1	0	3
+15 mins.	**1**	**2**	1	**4**	0	**4**	**1**	5	1	2	0	3	**5**	**4**	0	**9**
+30 mins.	1	1	1	3	0	1	1	2	1	1	0	2	0	2	0	2
+45 mins.	0	1	0	1	**2**	4	0	**6**	0	4	**1**	5	2	1	0	3
Total Volume	2	4	3	9	2	11	2	15	3	11	1	15	9	8	0	17
% App. Total	22.2	44.4	33.3		13.3	73.3	13.3		20	73.3	6.7		52.9	47.1	0	
PHF	.500	.500	.750	.563	.250	.688	.500	.625	.750	.688	.250	.750	.450	.500	.000	.472

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Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
06:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
06:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	2	0	1	3	0	1	0	1	5
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	2
07:45 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	1	3
Total	0	1	0	1	2	0	1	3	1	0	0	1	0	1	0	1	6
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	1	0	1	1	0	1	2	4
Grand Total	0	2	0	2	2	1	1	4	3	1	1	5	1	2	1	4	15
Apprch %	0	100	0		50	25	25		60	20	20		25	50	25		
Total %	0	13.3	0	13.3	13.3	6.7	6.7	26.7	20	6.7	6.7	33.3	6.7	13.3	6.7	26.7	

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	**1**	1	**1**	0	0	**1**	0	0	0	0	2
07:45 AM	0	**1**	0	**1**	1	0	0	1	0	0	0	0	0	**1**	0	**1**	**3**
Total Volume	0	1	0	1	2	0	1	3	1	0	0	1	0	1	0	1	6
% App. Total	0	100	0		66.7	0	33.3		100	0	0		0	100	0		
PHF	.000	.250	.000	.250	.500	.000	.250	.750	.250	.000	.000	.250	.000	.250	.000	.250	.500

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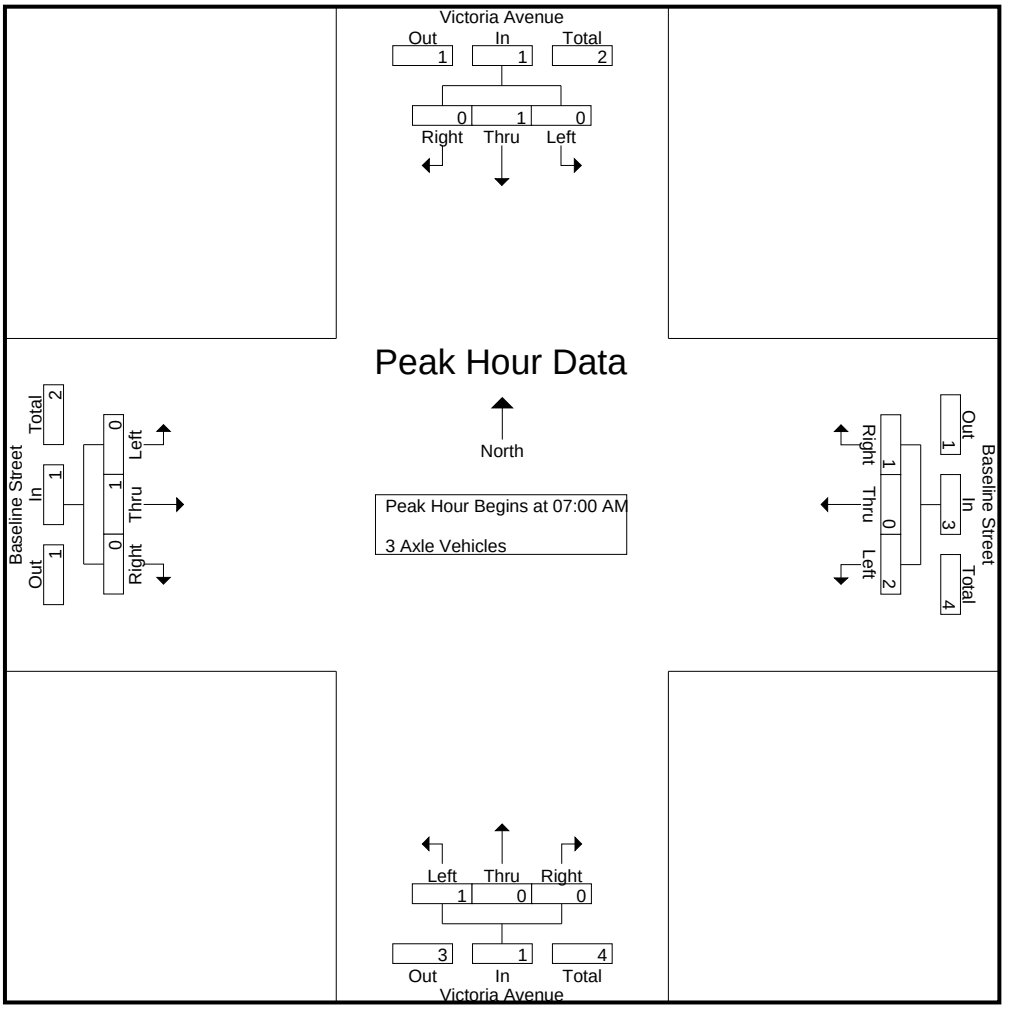

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	**1**	1	**1**	0	0	**1**	0	0	0	0
+45 mins.	0	**1**	0	**1**	1	0	0	1	0	0	0	0	0	**1**	0	**1**
Total Volume	0	1	0	1	2	0	1	3	1	0	0	1	0	1	0	1
% App. Total	0	100	0		66.7	0	33.3		100	0	0		0	100	0	
PHF	.000	.250	.000	.250	.500	.000	.250	.750	.250	.000	.000	.250	.000	.250	.000	.250

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Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
Total	0	0	0	0	0	0	1	1	1	1	0	2	0	0	1	1	4
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	1	3	0	0	1	1	5
08:00 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	2	0	3	1	0	0	1	4
Grand Total	0	1	0	1	0	0	1	1	2	5	1	8	1	0	2	3	13
Apprch %	0	100	0		0	0	100		25	62.5	12.5		33.3	0	66.7		
Total %	0	7.7	0	7.7	0	0	7.7	7.7	15.4	38.5	7.7	61.5	7.7	0	15.4	23.1	

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
07:15 AM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	**1**	**2**	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	1	3	0	0	1	1	5
% App. Total	0	100	0		0	0	0		0	66.7	33.3		0	0	100		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.250	.375	.000	.000	.250	.250	.625

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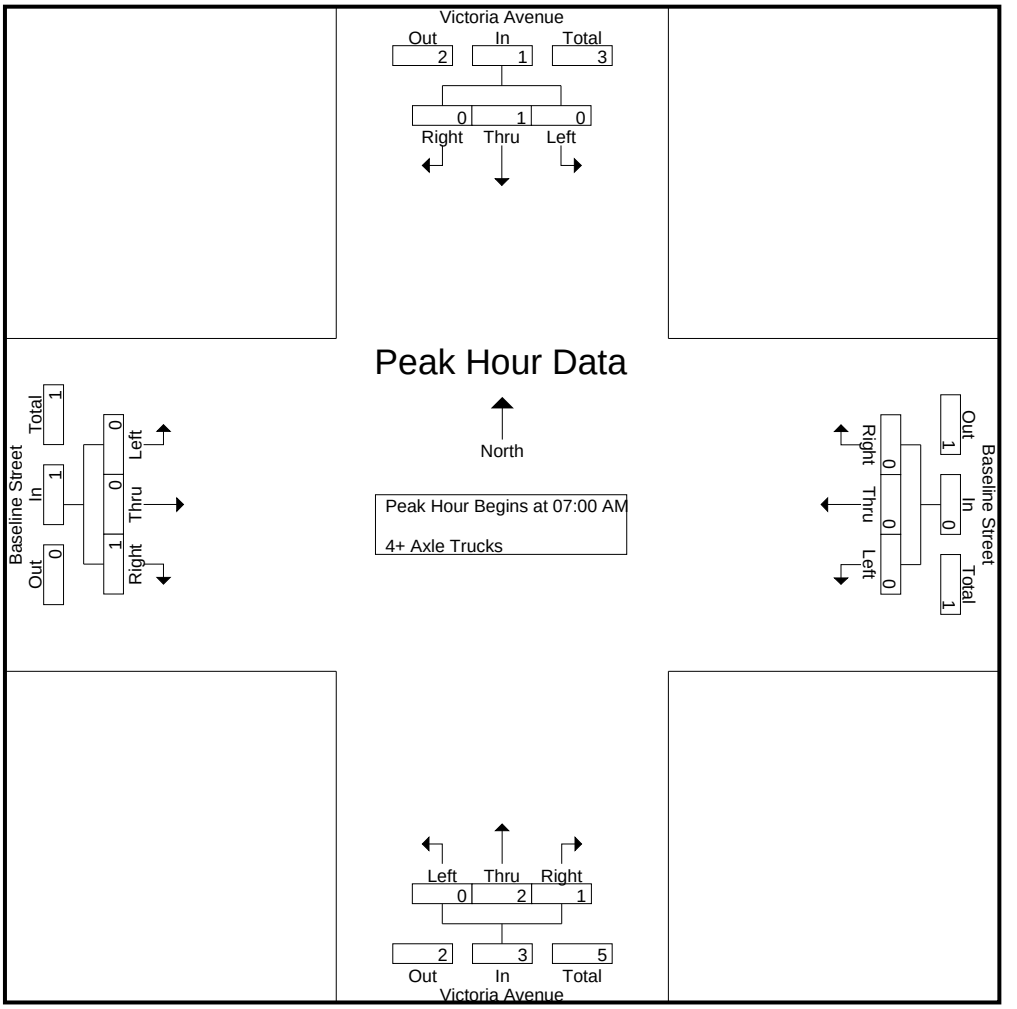

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	**1**	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	**1**	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	1	3	0	0	1	1
% App. Total	0	100	0		0	0	0		0	66.7	33.3		0	0	100	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.250	.375	.000	.000	.250	.250

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

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	23	57	31	111	9	92	23	124	13	71	20	104	17	92	12	121	460
03:15 PM	27	61	24	112	6	83	22	111	13	56	10	79	30	77	10	117	419
03:30 PM	19	52	32	103	14	81	38	133	18	59	14	91	28	95	16	139	466
03:45 PM	36	65	32	133	8	89	31	128	25	71	23	119	29	111	13	153	533
Total	105	235	119	459	37	345	114	496	69	257	67	393	104	375	51	530	1878
04:00 PM	24	78	26	128	9	92	27	128	13	75	8	96	16	102	23	141	493
04:15 PM	23	55	26	104	10	86	25	121	22	77	7	106	26	109	19	154	485
04:30 PM	23	85	27	135	10	77	25	112	14	66	23	103	31	135	14	180	530
04:45 PM	21	65	28	114	9	87	26	122	18	93	20	131	30	117	13	160	527
Total	91	283	107	481	38	342	103	483	67	311	58	436	103	463	69	635	2035
05:00 PM	28	52	32	112	12	84	27	123	11	79	14	104	25	118	16	159	498
05:15 PM	27	72	33	132	4	71	20	95	18	93	16	127	28	112	14	154	508
05:30 PM	18	71	21	110	11	66	16	93	18	84	15	117	22	106	14	142	462
05:45 PM	18	72	23	113	6	87	25	118	16	75	15	106	23	96	23	142	479
Total	91	267	109	467	33	308	88	429	63	331	60	454	98	432	67	597	1947
Grand Total	287	785	335	1407	108	995	305	1408	199	899	185	1283	305	1270	187	1762	5860
Apprch %	20.4	55.8	23.8		7.7	70.7	21.7		15.5	70.1	14.4		17.3	72.1	10.6		
Total %	4.9	13.4	5.7	24	1.8	17	5.2	24	3.4	15.3	3.2	21.9	5.2	21.7	3.2	30.1	
Passenger Vehicles	286	774	330	1390	103	974	304	1381	194	881	180	1255	303	1243	185	1731	5757
% Passenger Vehicles	99.7	98.6	98.5	98.8	95.4	97.9	99.7	98.1	97.5	98	97.3	97.8	99.3	97.9	98.9	98.2	98.2
Large 2 Axle Vehicles	1	10	5	16	5	21	1	27	5	13	5	23	2	26	2	30	96
% Large 2 Axle Vehicles	0.3	1.3	1.5	1.1	4.6	2.1	0.3	1.9	2.5	1.4	2.7	1.8	0.7	2	1.1	1.7	1.6
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
% 3 Axle Vehicles	0	0.1	0	0.1	0	0	0	0	0	0.1	0	0.1	0	0.1	0	0.1	0.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.4	0	0.3	0	0	0	0	0.1

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	23	**85**	27	**135**	10	77	25	112	14	66	**23**	103	**31**	**135**	14	**180**	**530**
04:45 PM	21	65	28	114	9	**87**	26	122	**18**	**93**	20	**131**	30	117	13	160	527
05:00 PM	**28**	52	32	112	**12**	84	**27**	**123**	11	79	14	104	25	118	**16**	159	498
05:15 PM	27	72	**33**	132	4	71	20	95	18	93	16	127	28	112	14	154	508
Total Volume	99	274	120	493	35	319	98	452	61	331	73	465	114	482	57	653	2063
% App. Total	20.1	55.6	24.3		7.7	70.6	21.7		13.1	71.2	15.7		17.5	73.8	8.7		
PHF	.884	.806	.909	.913	.729	.917	.907	.919	.847	.890	.793	.887	.919	.893	.891	.907	.973

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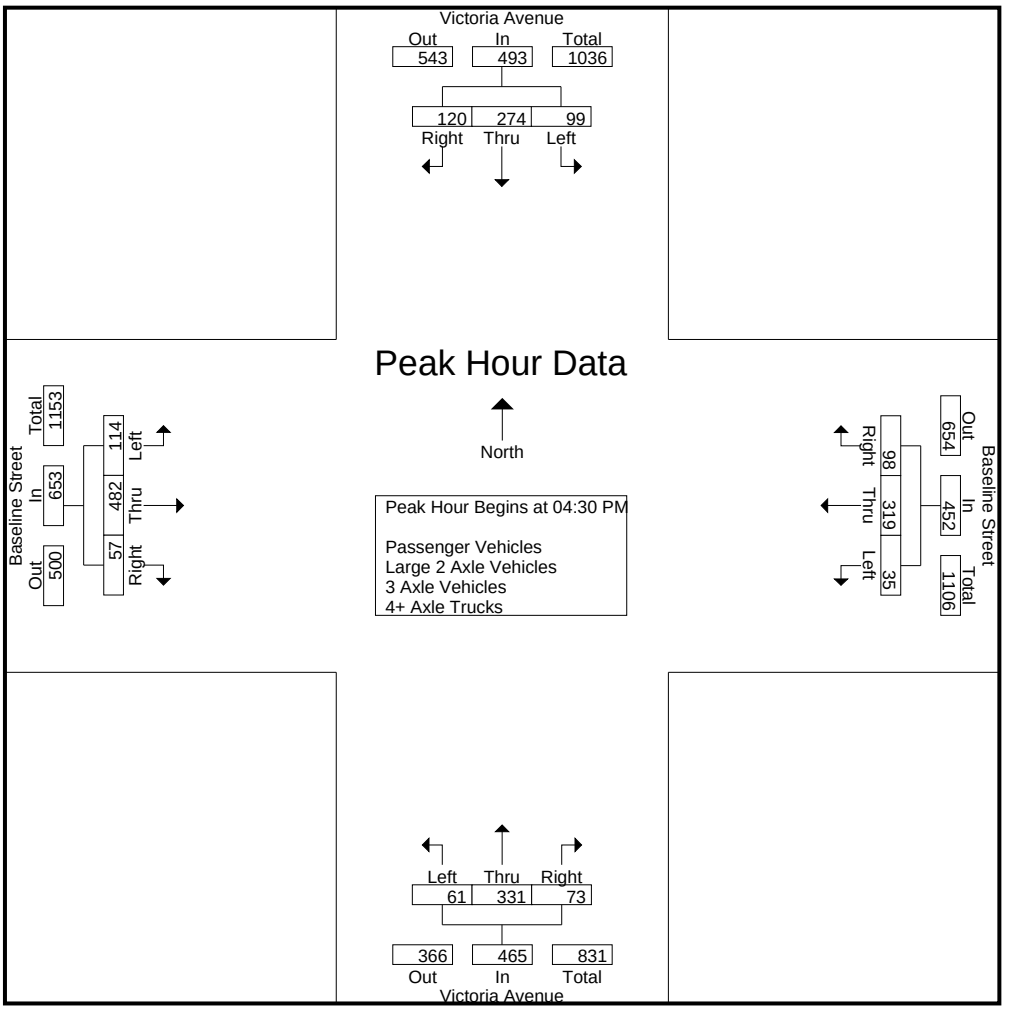

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:30 PM				04:45 PM				04:15 PM			
+0 mins.	**36**	65	**32**	133	**14**	81	**38**	**133**	**18**	**93**	**20**	**131**	26	109	**19**	154
+15 mins.	24	78	26	128	8	89	31	128	11	79	14	104	**31**	**135**	14	**180**
+30 mins.	23	55	26	104	9	**92**	27	128	18	93	16	127	30	117	13	160
+45 mins.	23	**85**	27	**135**	10	86	25	121	18	84	15	117	25	118	16	159
Total Volume	106	283	111	500	41	348	121	510	65	349	65	479	112	479	62	653
% App. Total	21.2	56.6	22.2		8	68.2	23.7		13.6	72.9	13.6		17.2	73.4	9.5	
PHF	.736	.832	.867	.926	.732	.946	.796	.959	.903	.938	.813	.914	.903	.887	.816	.907

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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	23	56	30	109	9	92	23	124	12	68	17	97	17	88	12	117	447
03:15 PM	26	60	24	110	6	81	22	109	13	56	10	79	30	76	10	116	414
03:30 PM	19	52	32	103	13	79	38	130	17	59	14	90	28	92	16	136	459
03:45 PM	36	62	31	129	7	88	31	126	24	70	22	116	29	109	13	151	522
Total	104	230	117	451	35	340	114	489	66	253	63	382	104	365	51	520	1842
04:00 PM	24	76	26	126	9	89	27	125	13	70	8	91	16	101	23	140	482
04:15 PM	23	53	25	101	10	84	25	119	22	77	7	106	25	108	19	152	478
04:30 PM	23	83	26	132	10	74	25	109	13	66	22	101	31	132	13	176	518
04:45 PM	21	65	28	114	7	85	26	118	18	92	20	130	30	115	12	157	519
Total	91	277	105	473	36	332	103	471	66	305	57	428	102	456	67	625	1997
05:00 PM	28	52	32	112	11	81	27	119	11	77	14	102	25	114	16	155	488
05:15 PM	27	72	32	131	4	71	20	95	18	89	16	123	27	109	14	150	499
05:30 PM	18	71	21	110	11	65	15	91	18	82	15	115	22	104	14	140	456
05:45 PM	18	72	23	113	6	85	25	116	15	75	15	105	23	95	23	141	475
Total	91	267	108	466	32	302	87	421	62	323	60	445	97	422	67	586	1918
Grand Total	286	774	330	1390	103	974	304	1381	194	881	180	1255	303	1243	185	1731	5757
Apprch %	20.6	55.7	23.7		7.5	70.5	22		15.5	70.2	14.3		17.5	71.8	10.7		
Total %	5	13.4	5.7	24.1	1.8	16.9	5.3	24	3.4	15.3	3.1	21.8	5.3	21.6	3.2	30.1	

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	23	**83**	26	**132**	10	74	25	109	13	66	**22**	101	**31**	**132**	13	**176**	518
04:45 PM	21	65	28	114	7	**85**	26	118	**18**	**92**	20	**130**	30	115	12	157	**519**
05:00 PM	**28**	52	**32**	112	**11**	81	**27**	**119**	11	77	14	102	25	114	**16**	155	488
05:15 PM	27	72	32	131	4	71	20	95	18	89	16	123	27	109	14	150	499
Total Volume	99	272	118	489	32	311	98	441	60	324	72	456	113	470	55	638	2024
% App. Total	20.2	55.6	24.1		7.3	70.5	22.2		13.2	71.1	15.8		17.7	73.7	8.6		
PHF	.884	.819	.922	.926	.727	.915	.907	.926	.833	.880	.818	.877	.911	.890	.859	.906	.975

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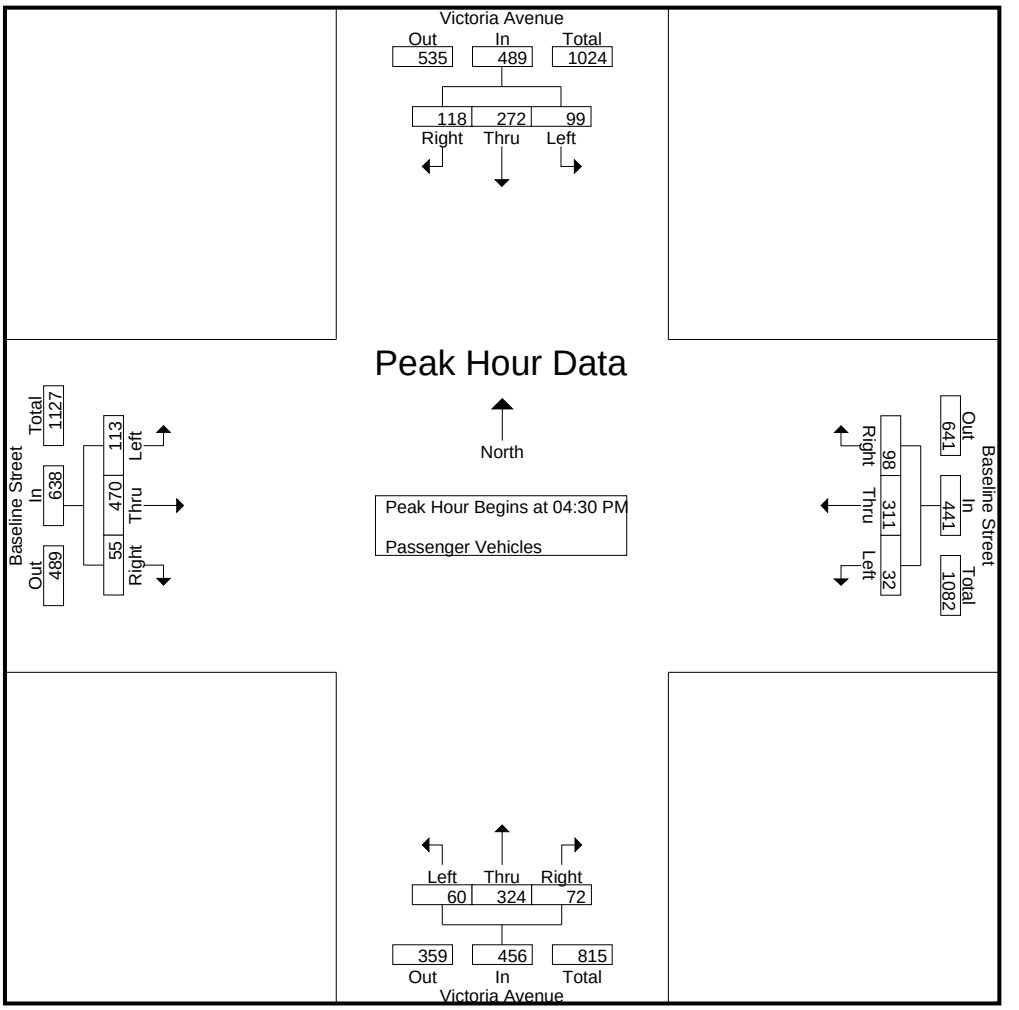

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	23	**83**	26	**132**	10	74	25	109	13	66	**22**	101	**31**	**132**	13	**176**
+15 mins.	21	65	28	114	7	**85**	26	118	**18**	**92**	20	**130**	30	115	12	157
+30 mins.	**28**	52	**32**	112	**11**	81	**27**	**119**	11	77	14	102	25	114	**16**	155
+45 mins.	27	72	32	131	4	71	20	95	18	89	16	123	27	109	14	150
Total Volume	99	272	118	489	32	311	98	441	60	324	72	456	113	470	55	638
% App. Total	20.2	55.6	24.1		7.3	70.5	22.2		13.2	71.1	15.8		17.7	73.7	8.6	
PHF	.884	.819	.922	.926	.727	.915	.907	.926	.833	.880	.818	.877	.911	.890	.859	.906

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Groups Printed- Large 2 Axle Vehicles

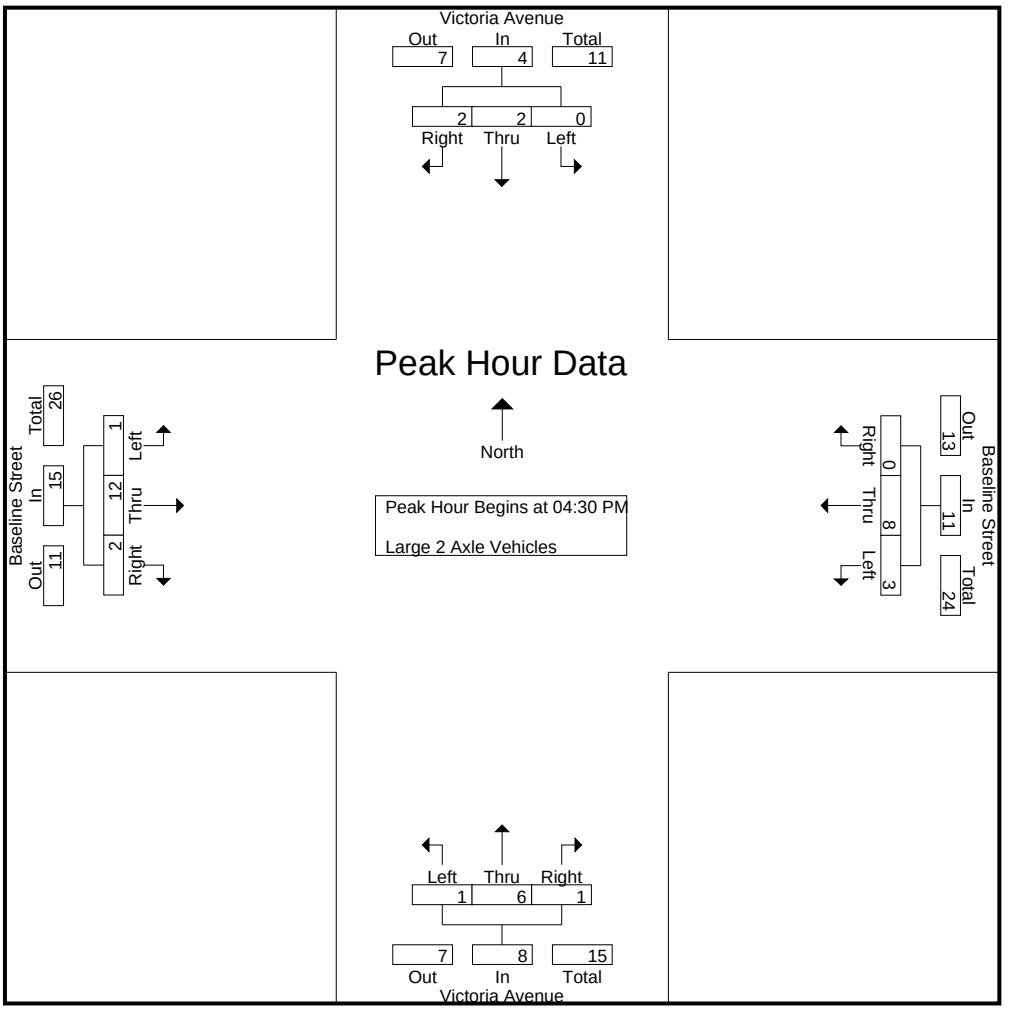
	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	1	1	0	0	0	0	1	3	3	7	0	4	0	4	12
03:15 PM	1	1	0	2	0	2	0	2	0	0	0	0	0	1	0	1	5
03:30 PM	0	0	0	0	1	2	0	3	1	0	0	1	0	2	0	2	6
03:45 PM	0	3	1	4	1	1	0	2	1	1	1	3	0	2	0	2	11
Total	1	4	2	7	2	5	0	7	3	4	4	11	0	9	0	9	34
04:00 PM	0	2	0	2	0	3	0	3	0	1	0	1	0	1	0	1	7
04:15 PM	0	2	1	3	0	2	0	2	0	0	0	0	1	1	0	2	7
04:30 PM	0	2	1	3	0	3	0	3	1	0	1	2	0	3	1	4	12
04:45 PM	0	0	0	0	2	2	0	4	0	0	0	0	0	2	1	3	7
Total	0	6	2	8	2	10	0	12	1	1	1	3	1	7	2	10	33
05:00 PM	0	0	0	0	1	3	0	4	0	2	0	2	0	4	0	4	10
05:15 PM	0	0	1	1	0	0	0	0	0	4	0	4	1	3	0	4	9
05:30 PM	0	0	0	0	0	1	1	2	0	2	0	2	0	2	0	2	6
05:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	1	0	1	4
Total	0	0	1	1	1	6	1	8	1	8	0	9	1	10	0	11	29
Grand Total	1	10	5	16	5	21	1	27	5	13	5	23	2	26	2	30	96
Apprch %	6.2	62.5	31.2		18.5	77.8	3.7		21.7	56.5	21.7		6.7	86.7	6.7		
Total %	1	10.4	5.2	16.7	5.2	21.9	1	28.1	5.2	13.5	5.2	24	2.1	27.1	2.1	31.2	

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**2**	**1**	**3**	0	**3**	0	3	**1**	0	**1**	2	0	3	**1**	**4**	**12**
04:45 PM	0	0	0	0	**2**	2	0	**4**	0	0	0	0	0	2	1	3	7
05:00 PM	0	0	0	0	1	3	0	4	0	2	0	2	0	**4**	0	4	10
05:15 PM	0	0	1	1	0	0	0	0	0	**4**	0	**4**	**1**	3	0	4	9
Total Volume	0	2	2	4	3	8	0	11	1	6	1	8	1	12	2	15	38
% App. Total	0	50	50		27.3	72.7	0		12.5	75	12.5		6.7	80	13.3		
PHF	.000	.250	.500	.333	.375	.667	.000	.688	.250	.375	.250	.500	.250	.750	.500	.938	.792

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

City of San Bernardino
N/S: Victoria Avenue
E/W: Baseline Street
Weather: Clear

File Name : 32_SBC_Victoria_Baseline PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**2**	**1**	**3**	0	**3**	0	3	**1**	0	**1**	2	0	3	**1**	**4**
+15 mins.	0	0	0	0	**2**	2	0	**4**	0	0	0	0	0	2	1	3
+30 mins.	0	0	0	0	1	3	0	4	0	2	0	2	0	**4**	0	4
+45 mins.	0	0	1	1	0	0	0	0	0	**4**	0	**4**	**1**	3	0	4
Total Volume	0	2	2	4	3	8	0	11	1	6	1	8	1	12	2	15
% App. Total	0	50	50		27.3	72.7	0		12.5	75	12.5		6.7	80	13.3	
PHF	.000	.250	.500	.333	.375	.667	.000	.688	.250	.375	.250	.500	.250	.750	.500	.938

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City of San Bernardino
N/S: Victoria Avenue
E/W: Baseline Street
Weather: Clear

File Name : 32_SBC_Victoria_Baseline PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
Apprch %	0	100	0		0	0	0		0	100	0		0	100	0		
Total %	0	33.3	0	33.3	0	0	0	0	0	33.3	0	33.3	0	33.3	0	33.3	

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

Counts Unlimited
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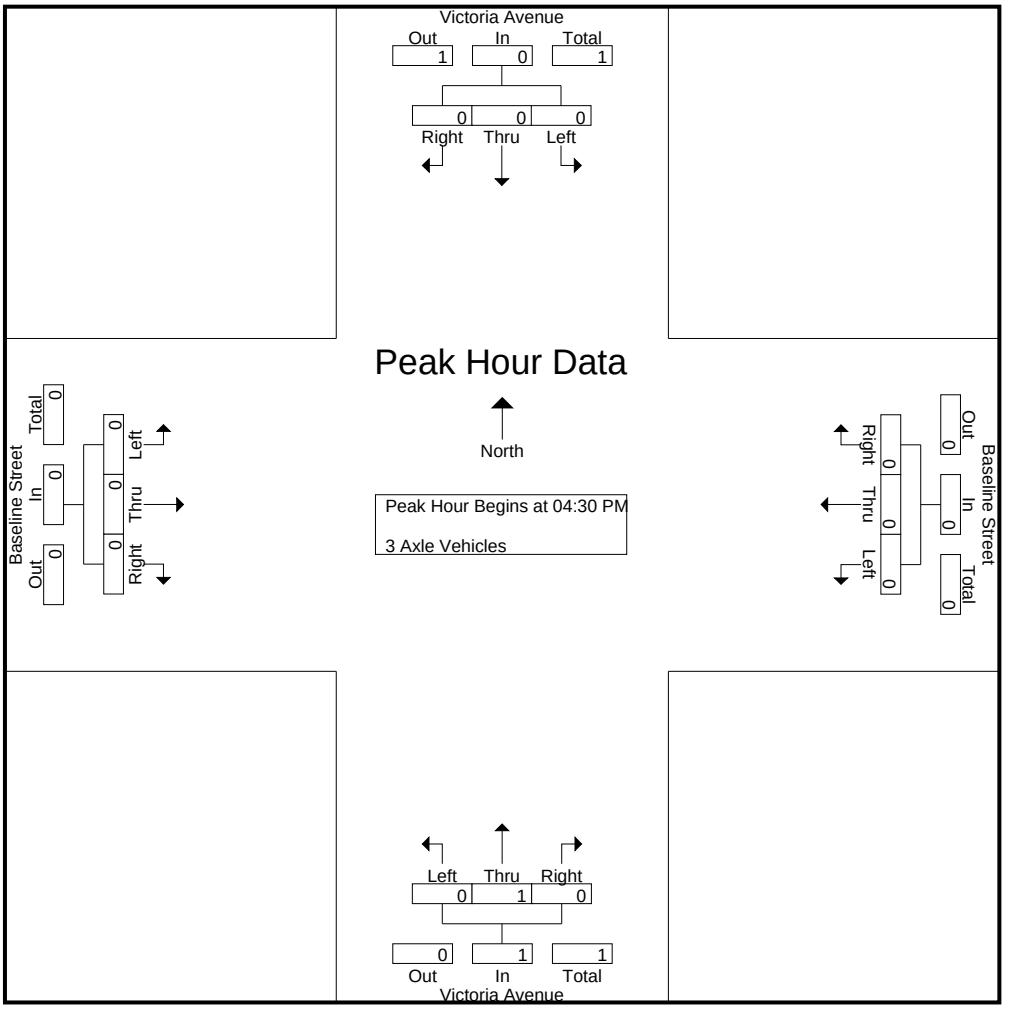
City of San Bernardino
N/S: Victoria Avenue
E/W: Baseline Street
Weather: Clear

File Name : 32_SBC_Victoria_Baseline PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

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

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City of San Bernardino
N/S: Victoria Avenue
E/W: Baseline Street
Weather: Clear

File Name : 32_SBC_Victoria_Baseline PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	Victoria Avenue Southbound				Baseline Street Westbound				Victoria Avenue Northbound				Baseline Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited
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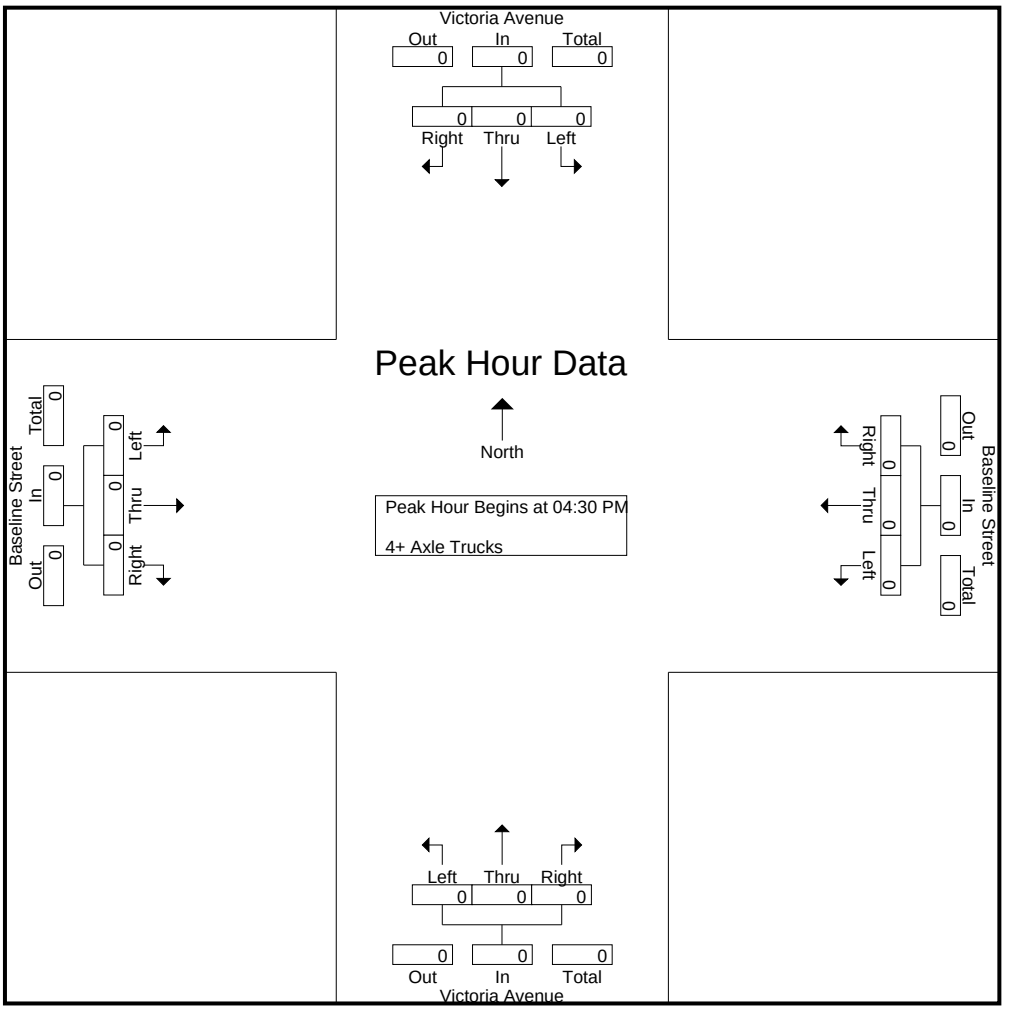
City of San Bernardino
N/S: Victoria Avenue
E/W: Baseline Street
Weather: Clear

File Name : 32_SBC_Victoria_Baseline PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

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

Location: San Bernardino
N/S: Victoria Avenue
E/W: Baseline Street

Date: 5/17/2018
Day: Thursday

PEDESTRIANS

	North Leg Victoria Avenue	East Leg Baseline Street	South Leg Victoria Avenue	West Leg Baseline Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
6:00 AM	0	0	0	1	1
6:15 AM	0	0	1	0	1
6:30 AM	0	1	1	0	2
6:45 AM	0	0	0	3	3
7:00 AM	1	2	3	0	6
7:15 AM	0	0	0	0	0
7:30 AM	2	2	0	1	5
7:45 AM	0	0	0	1	1
8:00 AM	0	0	0	2	2
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	2	0	2
TOTAL VOLUMES:	3	5	7	8	23

	North Leg Victoria Avenue	East Leg Baseline Street	South Leg Victoria Avenue	West Leg Baseline Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	0	1	0	0	1
3:15 PM	1	1	0	0	2
3:30 PM	1	1	1	0	3
3:45 PM	4	0	1	3	8
4:00 PM	1	0	1	1	3
4:15 PM	1	0	0	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	2	1	0	3
5:00 PM	3	3	0	0	6
5:15 PM	0	2	2	4	8
5:30 PM	0	2	4	4	10
5:45 PM	0	0	3	2	5
TOTAL VOLUMES:	11	12	13	14	50

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951-268-6268

Location: San Bernardino
N/S: Victoria Avenue
E/W: Baseline Street

Date: 5/17/2018
Day: Thursday

BICYCLES

	Southbound Victoria Avenue			Westbound Baseline Street			Northbound Victoria Avenue			Eastbound Baseline Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
6:45 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	2	0	0	0	0	0	1	0	3
TOTAL VOLUMES:	0	2	0	0	3	0	0	1	0	0	2	0	8

	Southbound Victoria Avenue			Westbound Baseline Street			Northbound Victoria Avenue			Eastbound Baseline Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
3:45 PM	0	0	0	0	1	0	0	0	0	0	2	0	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	2	2	1	0	0	0	2	0	9

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

Prepared by National Data & Surveying Services

Tippecanoe Ave & 9th St

Peak Hour Turning Movement Count

ID: 19-06039-015
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

PEAK HOURS	
AM	07:00 AM - 08:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS	
AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Tippecanoe Ave — SOUTHBOUND

AM	21	344	24	1	284	AM
NOON	0	0	0	0	0	NOON
PM	35	262	12	0	593	PM
	0	2	1	0		

9th St — EASTBOUND

AM	NOON	PM	
403	0	395	
0	0	2	0
26	0	61	1
330	0	369	2
77	0	75	0
AM	NOON	PM	

CONTROL

Signalized

TEV	1608 AM	0 NOON	1812 PM
PHF	0.78		0.96

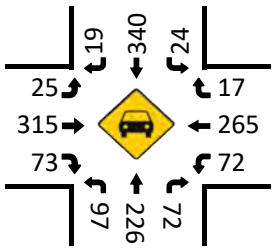
9th St — WESTBOUND

PM	NOON	AM	
22	0	19	0
244	0	279	2
48	0	72	1
1	0	0	0
439	0	428	
PM	NOON	AM	

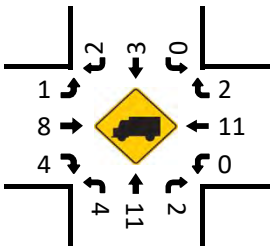
PM	385	0	114	510	57	PM
NOON	0	0	0	0	0	NOON
AM	493	0	103	238	74	AM
		0	1	2	0	

Tippecanoe Ave — NORTHBOUND

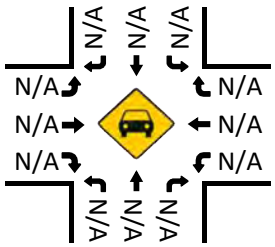
Cars (AM)



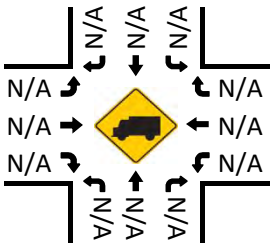
2axle (AM)



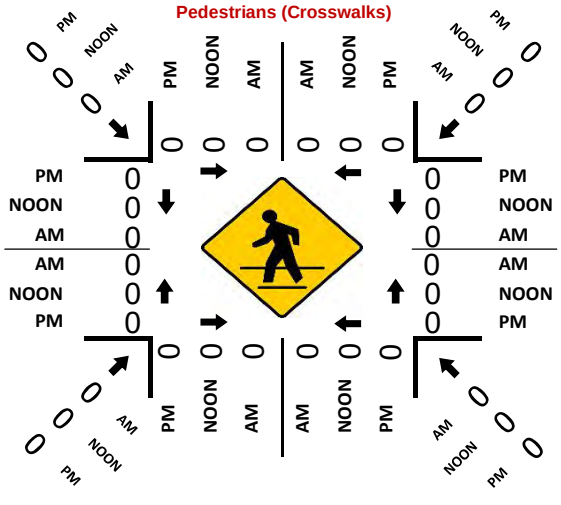
Cars (NOON)



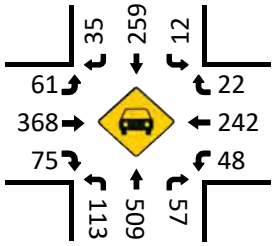
2axle (NOON)



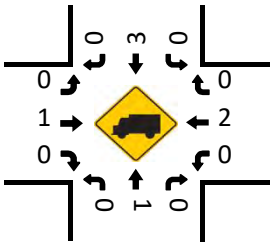
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-015
Date: 3/19/2019

Total

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	14	46	12	0	4	63	4	0	3	78	16	0	17	42	3	0	302
7:15 AM	36	78	29	0	10	106	4	0	10	120	30	0	16	71	4	0	514
7:30 AM	35	61	21	0	7	92	6	0	6	76	14	0	28	92	9	0	447
7:45 AM	18	53	12	0	3	83	7	1	7	56	17	0	11	74	3	0	345
8:00 AM	20	51	17	0	6	56	3	0	7	51	17	0	8	53	13	0	302
8:15 AM	13	45	31	0	10	58	11	0	7	59	17	0	25	61	17	0	354
8:30 AM	10	40	31	0	14	60	6	0	7	55	16	0	46	66	24	0	375
8:45 AM	15	50	19	0	6	53	7	0	12	49	14	0	26	74	15	0	340
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	161	424	172	0	60	571	48	1	59	544	141	0	177	533	88	0	2979
APPROACH %'s :	21.27%	56.01%	22.72%	0.00%	8.82%	83.97%	7.06%	0.15%	7.93%	73.12%	18.95%	0.00%	22.18%	66.79%	11.03%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	103	238	74	0	24	344	21	1	26	330	77	0	72	279	19	0	1608
PEAK HR FACTOR :	0.715	0.763	0.638	0.000	0.600	0.811	0.750	0.250	0.650	0.688	0.642	0.000	0.643	0.758	0.528	0.000	0.782
	0.726				0.813				0.677				0.717				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	26	112	12	0	6	64	5	0	12	102	21	0	8	63	6	0	437
4:15 PM	25	98	9	0	5	73	8	0	13	107	31	1	17	51	8	0	446
4:30 PM	36	118	11	0	1	61	8	0	15	98	14	0	8	62	4	0	436
4:45 PM	25	113	12	1	4	74	8	0	15	73	22	0	9	67	6	0	429
5:00 PM	32	109	11	0	4	75	7	0	13	105	16	0	13	62	6	0	453
5:15 PM	20	158	25	0	4	61	9	0	20	84	17	1	16	49	6	1	471
5:30 PM	28	135	10	0	0	60	5	0	12	106	17	0	12	65	5	0	455
5:45 PM	34	108	11	0	4	66	14	0	16	74	25	1	7	68	5	0	433
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	226	951	101	1	28	534	64	0	116	749	163	3	90	487	46	1	3560
APPROACH %'s :	17.67%	74.35%	7.90%	0.08%	4.47%	85.30%	10.22%	0.00%	11.25%	72.65%	15.81%	0.29%	14.42%	78.04%	7.37%	0.16%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	114	510	57	0	12	262	35	0	61	369	75	2	48	244	22	1	1812
PEAK HR FACTOR :	0.838	0.807	0.570	0.000	0.750	0.873	0.625	0.000	0.763	0.870	0.750	0.500	0.750	0.897	0.917	0.250	0.962
	0.839				0.898				0.939				0.960				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-015
Date: 3/19/2019

Cars

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	13	42	12	0	4	62	2	0	3	76	13	0	17	41	2	0	287
7:15 AM	34	73	28	0	10	106	4	0	10	117	30	0	16	67	4	0	499
7:30 AM	34	59	21	0	7	90	6	0	6	71	13	0	28	92	9	0	436
7:45 AM	16	52	11	0	3	82	7	1	6	51	17	0	11	65	2	0	324
8:00 AM	19	47	13	0	6	51	3	0	7	50	14	0	8	50	11	0	279
8:15 AM	11	42	29	0	10	57	11	0	6	58	16	0	25	57	17	0	339
8:30 AM	10	39	31	0	14	58	6	0	7	54	16	0	41	62	24	0	362
8:45 AM	15	47	18	0	6	51	7	0	11	45	14	0	25	71	15	0	325
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	152	401	163	0	60	557	46	1	56	522	133	0	171	505	84	0	2851
APPROACH %'s :	21.23%	56.01%	22.77%	0.00%	9.04%	83.89%	6.93%	0.15%	7.88%	73.42%	18.71%	0.00%	22.50%	66.45%	11.05%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	97	226	72	0	24	340	19	1	25	315	73	0	72	265	17	0	1546
PEAK HR FACTOR :	0.71	0.774	0.643	0.000	0.600	0.802	0.679	0.250	0.625	0.673	0.608	0.000	0.643	0.720	0.472	0.000	0.775
	0.731				0.800				0.658				0.686				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	25	108	12	0	6	64	5	0	11	101	20	0	7	63	6	0	428
4:15 PM	23	96	9	0	5	72	8	0	13	105	30	1	17	50	7	0	436
4:30 PM	36	116	11	0	1	60	8	0	14	94	14	0	8	58	4	0	424
4:45 PM	25	113	12	1	4	73	8	0	15	71	21	0	9	64	6	0	422
5:00 PM	32	109	11	0	4	73	7	0	13	105	16	0	13	61	6	0	450
5:15 PM	20	158	25	0	4	60	9	0	20	84	17	1	16	49	6	1	470
5:30 PM	27	135	10	0	0	60	5	0	12	106	17	0	12	64	5	0	453
5:45 PM	34	107	11	0	4	66	14	0	16	73	25	1	7	68	5	0	431
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	222	942	101	1	28	528	64	0	114	739	160	3	89	477	45	1	3514
APPROACH %'s :	17.54%	74.41%	7.98%	0.08%	4.52%	85.16%	10.32%	0.00%	11.22%	72.74%	15.75%	0.30%	14.54%	77.94%	7.35%	0.16%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	113	509	57	0	12	259	35	0	61	368	75	2	48	242	22	1	1804
PEAK HR FACTOR :	0.83	0.805	0.570	0.000	0.750	0.887	0.625	0.000	0.763	0.868	0.750	0.500	0.750	0.890	0.917	0.250	0.960
	0.836				0.911				0.937				0.966				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-015
Date: 3/19/2019

2axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	4	0	0	0	1	2	0	0	2	3	0	0	1	1	0	15
7:15 AM	1	4	1	0	0	0	0	0	0	3	0	0	0	4	0	0	13
7:30 AM	1	2	0	0	0	2	0	0	0	1	1	0	0	0	0	0	7
7:45 AM	1	1	1	0	0	0	0	0	1	2	0	0	0	6	1	0	13
8:00 AM	1	1	3	0	0	5	0	0	0	0	3	0	0	2	2	0	17
8:15 AM	1	3	1	0	0	1	0	0	1	1	0	0	0	2	0	0	10
8:30 AM	0	1	0	0	0	2	0	0	0	0	0	0	5	4	0	0	12
8:45 AM	0	3	0	0	0	0	0	0	0	0	0	0	1	2	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	6	19	6	0	0	11	2	0	2	9	7	0	6	21	4	0	93
APPROACH %'s :	19.35%	61.29%	19.35%	0.00%	0.00%	84.62%	15.38%	0.00%	11.11%	50.00%	38.89%	0.00%	19.35%	67.74%	12.90%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	4	11	2	0	0	3	2	0	1	8	4	0	0	11	2	0	48
PEAK HR FACTOR :	1.000	0.688	0.500	0.000	0.000	0.375	0.250	0.000	0.250	0.667	0.333	0.000	0.000	0.458	0.500	0.000	0.800
	0.708				0.417				0.650				0.464				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	4	0	0	0	0	0	0	1	1	1	0	1	0	0	0	9
4:15 PM	2	2	0	0	0	1	0	0	0	2	1	0	0	1	1	0	10
4:30 PM	0	1	0	0	0	1	0	0	1	4	0	0	0	3	0	0	10
4:45 PM	0	0	0	0	0	1	0	0	0	2	1	0	0	3	0	0	7
5:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	8	0	0	0	6	0	0	2	10	3	0	1	9	1	0	43
APPROACH %'s :	27.27%	72.73%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	13.33%	66.67%	20.00%	0.00%	9.09%	81.82%	9.09%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	3	0	0	0	1	0	0	0	2	0	0	7
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.583
	0.250				0.375				0.250				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-015
Date: 3/19/2019

3axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	1	0	0	0	2	0	0	0	2	0	0	5
8:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	1	0	0	5
8:15 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	4
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	2	0	0	1	0	0	0	0	1	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	3	2	0	0	3	0	0	1	3	0	0	0	6	0	0	19
APPROACH %'s :	16.67%	50.00%	33.33%	0.00%	0.00%	100.00%	0.00%	0.00%	25.00%	75.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	3	0	0	0	2	0	0	6
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.250	0.000	0.000	0.300
						0.250				0.375				0.250			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
APPROACH %'s :													0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-015
Date: 3/19/2019

4axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
7:45 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	1	1	0	0	0	0	0	0	10	1	0	0	1	0	0	16
APPROACH %'s :	50.00%	25.00%	25.00%	0.00%					0.00%	90.91%	9.09%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	2	1	0	0	0	0	0	0	0	4	0	0	0	1	0	0	8
PEAK HR FACTOR :	0.500	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.250	0.000	0.000	0.667
	0.375								0.333				0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
APPROACH %'s :	50.00%	50.00%	0.00%	0.00%													
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
	0.250																

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City of San Bernardino
N/S: Del Rosa Drive
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Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th AM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	7	20	3	30	2	16	3	21	1	6	2	9	2	14	4	20	80
06:15 AM	1	38	4	43	3	7	5	15	2	24	7	33	1	26	12	39	130
06:30 AM	12	38	4	54	5	10	5	20	5	26	6	37	2	54	7	63	174
06:45 AM	15	24	14	53	2	25	5	32	6	19	12	37	3	76	5	84	206
Total	35	120	25	180	12	58	18	88	14	75	27	116	8	170	28	206	590
07:00 AM	31	42	10	83	5	57	8	70	15	19	38	72	5	85	19	109	334
07:15 AM	36	52	19	107	7	80	13	100	32	31	38	101	12	120	42	174	482
07:30 AM	33	34	26	93	11	67	15	93	29	33	38	100	21	113	42	176	462
07:45 AM	25	59	12	96	5	26	5	36	2	28	21	51	9	90	14	113	296
Total	125	187	67	379	28	230	41	299	78	111	135	324	47	408	117	572	1574
08:00 AM	12	38	8	58	8	29	9	46	5	33	14	52	6	48	17	71	227
08:15 AM	10	66	11	87	13	33	6	52	12	47	13	72	9	46	12	67	278
08:30 AM	14	84	17	115	31	24	5	60	10	57	13	80	9	43	32	84	339
08:45 AM	6	64	16	86	5	26	4	35	15	58	20	93	5	38	13	56	270
Total	42	252	52	346	57	112	24	193	42	195	60	297	29	175	74	278	1114
Grand Total	202	559	144	905	97	400	83	580	134	381	222	737	84	753	219	1056	3278
Apprch %	22.3	61.8	15.9		16.7	69	14.3		18.2	51.7	30.1		8	71.3	20.7		
Total %	6.2	17.1	4.4	27.6	3	12.2	2.5	17.7	4.1	11.6	6.8	22.5	2.6	23	6.7	32.2	
Passenger Vehicles	192	541	141	874	92	388	71	551	130	362	216	708	82	735	211	1028	3161
% Passenger Vehicles	95	96.8	97.9	96.6	94.8	97	85.5	95	97	95	97.3	96.1	97.6	97.6	96.3	97.3	96.4
Large 2 Axle Vehicles	10	16	2	28	3	10	11	24	1	18	6	25	2	14	8	24	101
% Large 2 Axle Vehicles	5	2.9	1.4	3.1	3.1	2.5	13.3	4.1	0.7	4.7	2.7	3.4	2.4	1.9	3.7	2.3	3.1
3 Axle Vehicles	0	2	1	3	2	0	1	3	3	1	0	4	0	2	0	2	12
% 3 Axle Vehicles	0	0.4	0.7	0.3	2.1	0	1.2	0.5	2.2	0.3	0	0.5	0	0.3	0	0.2	0.4
4+ Axle Trucks	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
% 4+ Axle Trucks	0	0	0	0	0	0.5	0	0.3	0	0	0	0	0	0.3	0	0.2	0.1

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	31	42	10	83	5	57	8	70	15	19	**38**	72	5	85	19	109	334
07:15 AM	**36**	52	19	**107**	7	**80**	13	**100**	**32**	31	38	**101**	12	**120**	**42**	174	**482**
07:30 AM	33	34	**26**	93	**11**	67	**15**	93	29	**33**	38	100	**21**	113	42	**176**	462
07:45 AM	25	**59**	12	96	5	26	5	36	2	28	21	51	9	90	14	113	296
Total Volume	125	187	67	379	28	230	41	299	78	111	135	324	47	408	117	572	1574
% App. Total	33	49.3	17.7		9.4	76.9	13.7		24.1	34.3	41.7		8.2	71.3	20.5		
PHF	.868	.792	.644	.886	.636	.719	.683	.748	.609	.841	.888	.802	.560	.850	.696	.813	.816

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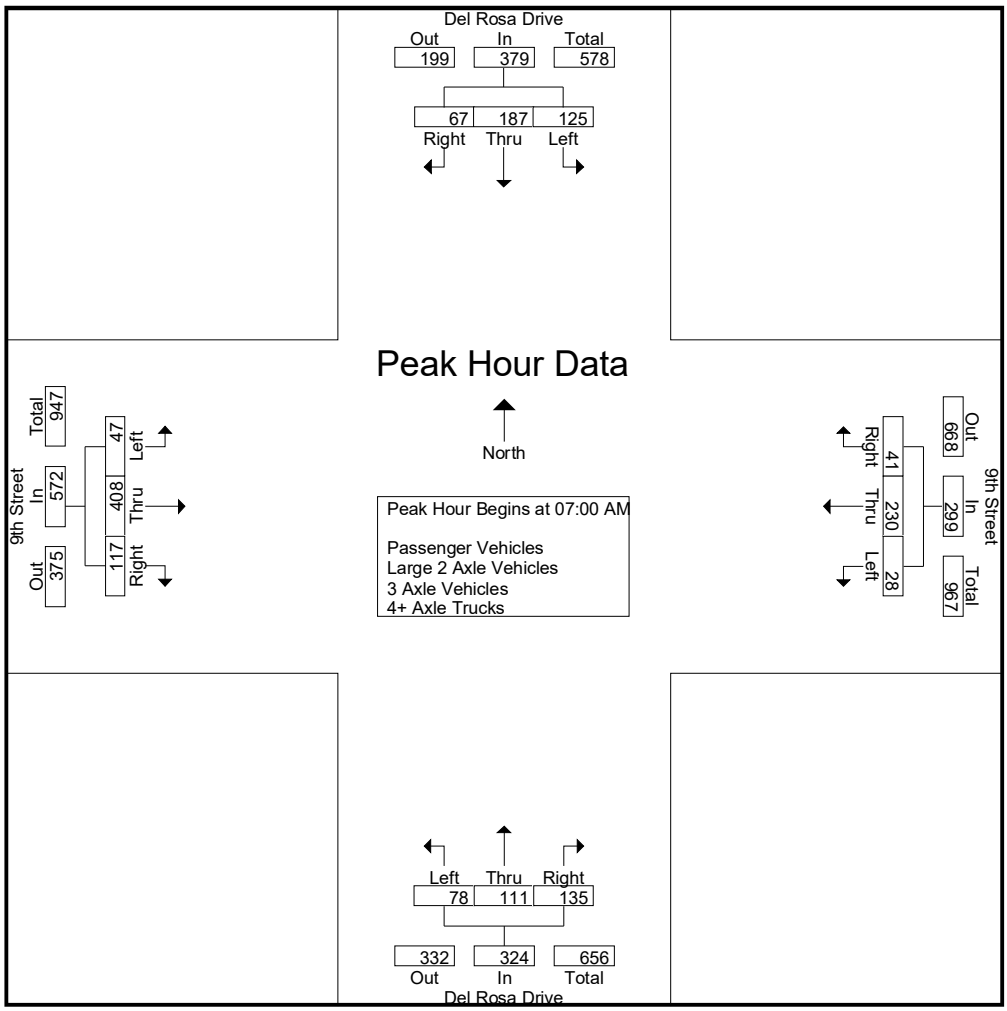

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	31	42	10	83	5	57	8	70	15	19	**38**	72	5	85	19	109
+15 mins.	**36**	52	19	**107**	7	**80**	13	**100**	**32**	31	38	**101**	12	**120**	**42**	174
+30 mins.	33	34	**26**	93	**11**	67	**15**	93	29	**33**	38	100	**21**	113	42	**176**
+45 mins.	25	**59**	12	96	5	26	5	36	2	28	21	51	9	90	14	113
Total Volume	125	187	67	379	28	230	41	299	78	111	135	324	47	408	117	572
% App. Total	33	49.3	17.7		9.4	76.9	13.7		24.1	34.3	41.7		8.2	71.3	20.5	
PHF	.868	.792	.644	.886	.636	.719	.683	.748	.609	.841	.888	.802	.560	.850	.696	.813

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Groups Printed- Passenger Vehicles

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	7	20	3	30	2	16	2	20	1	6	1	8	2	14	4	20	78
06:15 AM	0	37	4	41	3	7	4	14	2	23	7	32	1	26	12	39	126
06:30 AM	12	38	4	54	4	9	4	17	4	22	5	31	2	52	7	61	163
06:45 AM	13	24	13	50	2	25	3	30	6	16	12	34	3	75	4	82	196
Total	32	119	24	175	11	57	13	81	13	67	25	105	8	167	27	202	563
07:00 AM	29	41	9	79	5	57	7	69	15	19	36	70	5	82	19	106	324
07:15 AM	34	49	19	102	7	77	13	97	32	29	38	99	11	117	37	165	463
07:30 AM	33	34	26	93	10	67	13	90	29	30	38	97	21	109	42	172	452
07:45 AM	24	52	11	87	4	26	5	35	2	25	21	48	9	90	13	112	282
Total	120	176	65	361	26	227	38	291	78	103	133	314	46	398	111	555	1521
08:00 AM	12	37	8	57	8	27	8	43	5	31	12	48	6	45	17	68	216
08:15 AM	9	63	11	83	13	28	4	45	12	46	13	71	8	46	11	65	264
08:30 AM	14	82	17	113	29	23	4	56	10	57	13	80	9	43	32	84	333
08:45 AM	5	64	16	85	5	26	4	35	12	58	20	90	5	36	13	54	264
Total	40	246	52	338	55	104	20	179	39	192	58	289	28	170	73	271	1077
Grand Total	192	541	141	874	92	388	71	551	130	362	216	708	82	735	211	1028	3161
Apprch %	22	61.9	16.1		16.7	70.4	12.9		18.4	51.1	30.5		8	71.5	20.5		
Total %	6.1	17.1	4.5	27.6	2.9	12.3	2.2	17.4	4.1	11.5	6.8	22.4	2.6	23.3	6.7	32.5	

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	29	41	9	79	5	57	7	69	15	19	36	70	5	82	19	106	324
07:15 AM	**34**	49	19	**102**	7	**77**	**13**	**97**	**32**	29	**38**	**99**	11	**117**	37	165	**463**
07:30 AM	33	34	**26**	93	**10**	67	13	90	29	**30**	38	97	**21**	109	**42**	**172**	452
07:45 AM	24	**52**	11	87	4	26	5	35	2	25	21	48	9	90	13	112	282
Total Volume	120	176	65	361	26	227	38	291	78	103	133	314	46	398	111	555	1521
% App. Total	33.2	48.8	18		8.9	78	13.1		24.8	32.8	42.4		8.3	71.7	20		
PHF	.882	.846	.625	.885	.650	.737	.731	.750	.609	.858	.875	.793	.548	.850	.661	.807	.821

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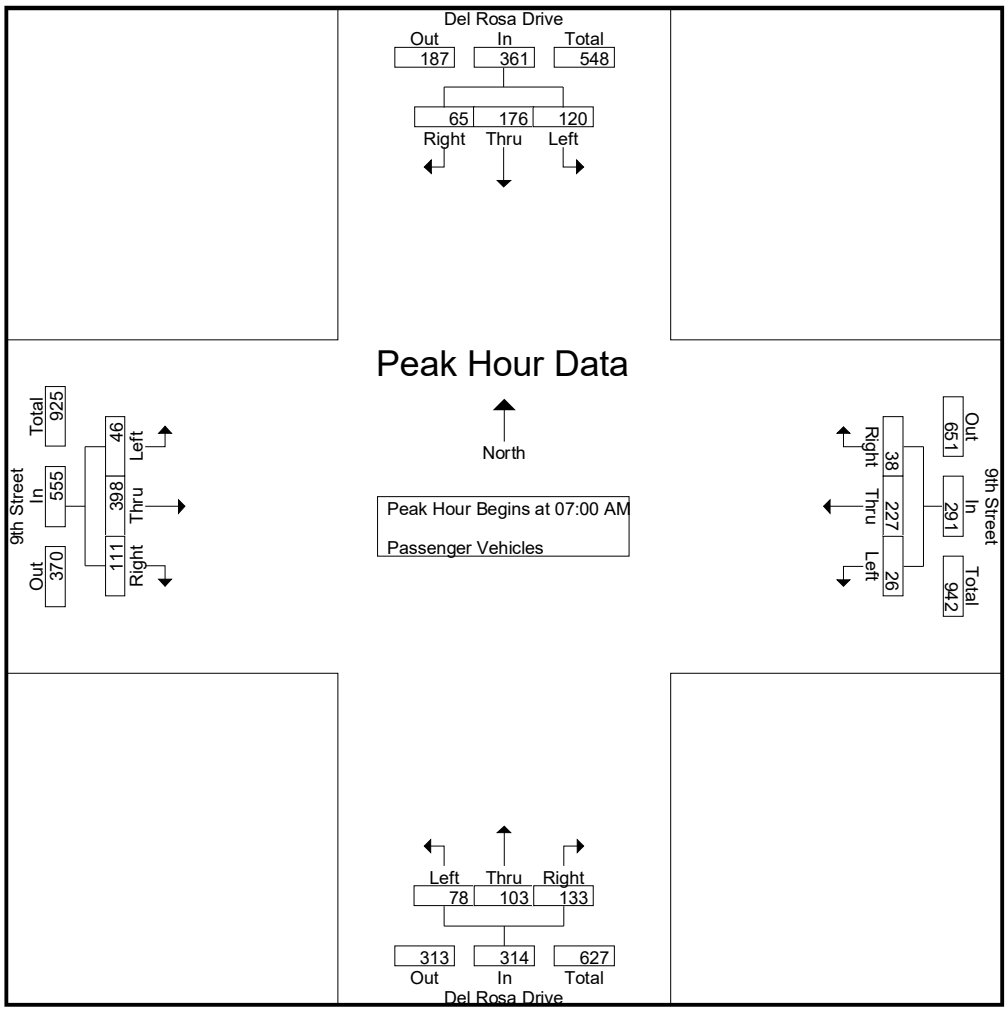

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	29	41	9	79	5	57	7	69	15	19	36	70	5	82	19	106
+15 mins.	**34**	49	19	**102**	7	**77**	**13**	**97**	**32**	29	**38**	**99**	11	**117**	37	165
+30 mins.	33	34	**26**	93	**10**	67	13	90	29	**30**	38	97	**21**	109	**42**	**172**
+45 mins.	24	**52**	11	87	4	26	5	35	2	25	21	48	9	90	13	112
Total Volume	120	176	65	361	26	227	38	291	78	103	133	314	46	398	111	555
% App. Total	33.2	48.8	18		8.9	78	13.1		24.8	32.8	42.4		8.3	71.7	20	
PHF	.882	.846	.625	.885	.650	.737	.731	.750	.609	.858	.875	.793	.548	.850	.661	.807

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File Name : 45_SBC_Del Rosa Dr_9th AM
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Groups Printed- Large 2 Axle Vehicles

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	2
06:15 AM	1	1	0	2	0	0	1	1	0	1	0	1	0	0	0	0	4
06:30 AM	0	0	0	0	1	1	1	3	0	3	1	4	0	1	0	1	8
06:45 AM	2	0	1	3	0	0	1	1	0	3	0	3	0	1	1	2	9
Total	3	1	1	5	1	1	4	6	0	7	2	9	0	2	1	3	23
07:00 AM	2	1	0	3	0	0	1	1	0	0	2	2	0	3	0	3	9
07:15 AM	2	3	0	5	0	3	0	3	0	2	0	2	1	3	5	9	19
07:30 AM	0	0	0	0	1	0	2	3	0	3	0	3	0	1	0	1	7
07:45 AM	1	6	1	8	0	0	0	0	0	3	0	3	0	0	1	1	12
Total	5	10	1	16	1	3	3	7	0	8	2	10	1	7	6	14	47
08:00 AM	0	0	0	0	0	1	1	2	0	2	2	4	0	3	0	3	9
08:15 AM	1	3	0	4	0	4	2	6	0	1	0	1	1	0	1	2	13
08:30 AM	0	2	0	2	1	1	1	3	0	0	0	0	0	0	0	0	5
08:45 AM	1	0	0	1	0	0	0	0	1	0	0	1	0	2	0	2	4
Total	2	5	0	7	1	6	4	11	1	3	2	6	1	5	1	7	31
Grand Total	10	16	2	28	3	10	11	24	1	18	6	25	2	14	8	24	101
Apprch %	35.7	57.1	7.1		12.5	41.7	45.8		4	72	24		8.3	58.3	33.3		
Total %	9.9	15.8	2	27.7	3	9.9	10.9	23.8	1	17.8	5.9	24.8	2	13.9	7.9	23.8	

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	1	0	3	0	0	1	1	0	0	**2**	2	0	**3**	0	3	9
07:15 AM	2	3	0	5	0	**3**	0	**3**	0	2	0	2	**1**	3	**5**	**9**	**19**
07:30 AM	0	0	0	0	**1**	0	**2**	3	0	**3**	0	**3**	0	1	0	1	7
07:45 AM	1	**6**	**1**	**8**	0	0	0	0	0	3	0	3	0	0	1	1	12
Total Volume	5	10	1	16	1	3	3	7	0	8	2	10	1	7	6	14	47
% App. Total	31.2	62.5	6.2		14.3	42.9	42.9		0	80	20		7.1	50	42.9		
PHF	.625	.417	.250	.500	.250	.250	.375	.583	.000	.667	.250	.833	.250	.583	.300	.389	.618

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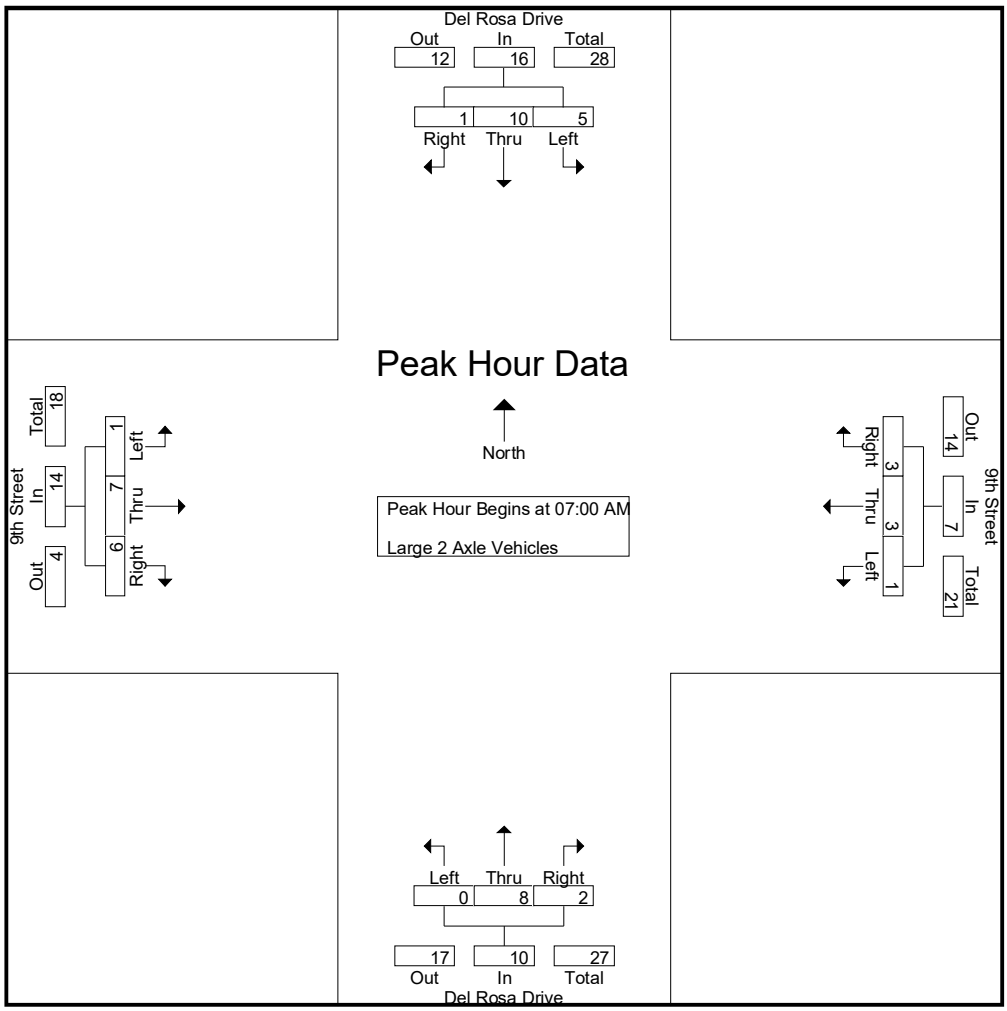

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**2**	1	0	3	0	0	1	1	0	0	**2**	2	0	**3**	0	3
+15 mins.	2	3	0	5	0	**3**	0	**3**	0	2	0	2	**1**	3	**5**	**9**
+30 mins.	0	0	0	0	**1**	0	**2**	3	0	**3**	0	**3**	0	1	0	1
+45 mins.	1	**6**	**1**	**8**	0	0	0	0	0	3	0	3	0	0	1	1
Total Volume	5	10	1	16	1	3	3	7	0	8	2	10	1	7	6	14
% App. Total	31.2	62.5	6.2		14.3	42.9	42.9		0	80	20		7.1	50	42.9	
PHF	.625	.417	.250	.500	.250	.250	.375	.583	.000	.667	.250	.833	.250	.583	.300	.389

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Groups Printed- 3 Axle Vehicles

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	1	0	1	3
06:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	1	1	1	0	2	0	1	0	1	4
07:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Total	0	1	1	2	1	0	0	1	0	0	0	0	0	1	0	1	4
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
Total	0	1	0	1	1	0	0	1	2	0	0	2	0	0	0	0	4
Grand Total	0	2	1	3	2	0	1	3	3	1	0	4	0	2	0	2	12
Apprch %	0	66.7	33.3		66.7	0	33.3		75	25	0		0	100	0		
Total %	0	16.7	8.3	25	16.7	0	8.3	25	25	8.3	0	33.3	0	16.7	0	16.7	

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
07:45 AM	0	**1**	0	1	**1**	0	0	**1**	0	0	0	0	0	0	0	0	**2**
Total Volume	0	1	1	2	1	0	0	1	0	0	0	0	0	1	0	1	4
% App. Total	0	50	50		100	0	0		0	0	0		0	100	0		
PHF	.000	.250	.250	.500	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.500

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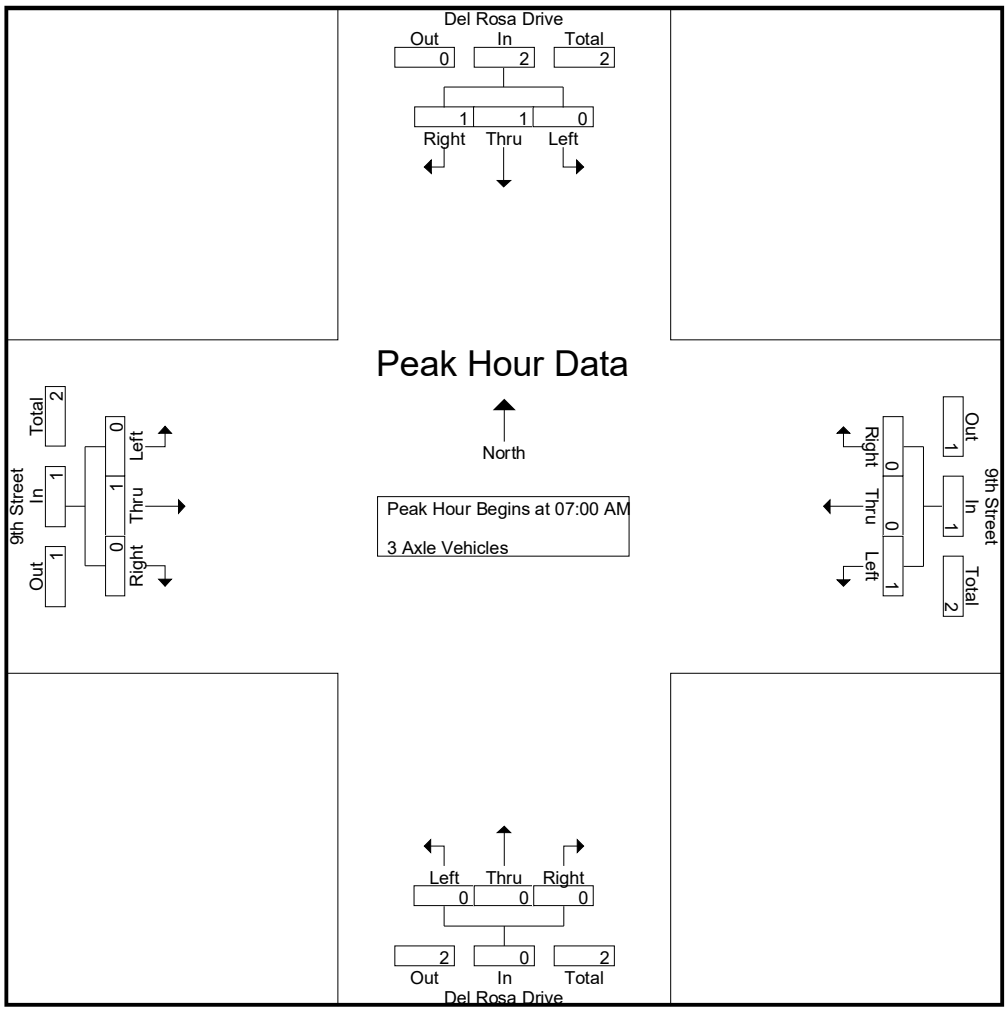

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+45 mins.	0	**1**	0	1	**1**	0	0	**1**	0	0	0	0	0	0	0	0
Total Volume	0	1	1	2	1	0	0	1	0	0	0	0	0	1	0	1
% App. Total	0	50	50		100	0	0		0	0	0		0	100	0	
PHF	.000	.250	.250	.500	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250

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City of San Bernardino
N/S: Del Rosa Drive
E/W: 9th Street
Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**2**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

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Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th AM
Site Code : 99918385
Start Date : 5/16/2018
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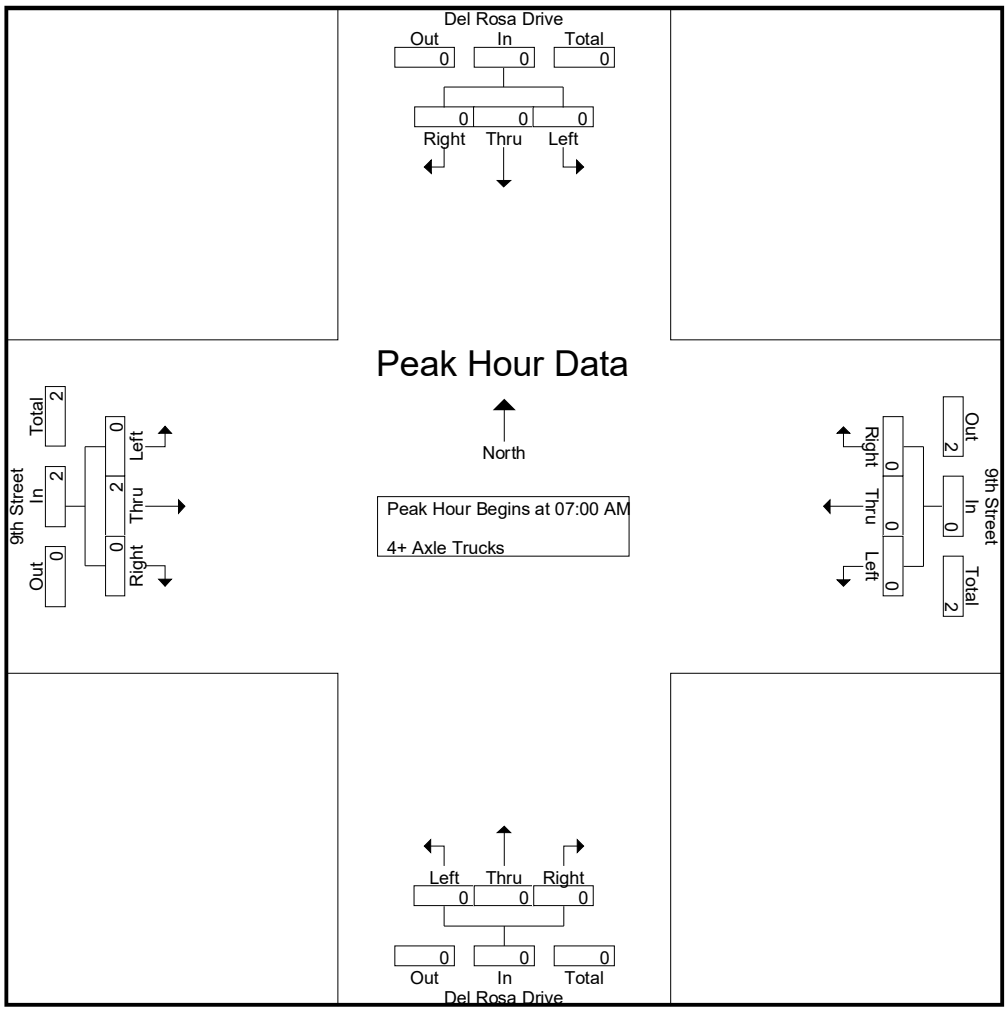

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

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Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

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

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	8	48	11	67	9	70	14	93	9	65	19	93	10	51	14	75	328
03:15 PM	12	58	9	79	17	54	9	80	7	52	11	70	13	38	18	69	298
03:30 PM	15	81	16	112	18	64	13	95	19	100	26	145	14	45	21	80	432
03:45 PM	14	53	10	77	8	77	6	91	15	87	25	127	6	61	18	85	380
Total	49	240	46	335	52	265	42	359	50	304	81	435	43	195	71	309	1438
04:00 PM	3	63	10	76	8	65	13	86	21	81	9	111	10	50	15	75	348
04:15 PM	6	56	8	70	5	70	10	85	22	112	11	145	9	56	9	74	374
04:30 PM	24	54	7	85	9	53	9	71	17	79	17	113	15	61	10	86	355
04:45 PM	11	55	12	78	3	62	12	77	17	72	20	109	14	53	14	81	345
Total	44	228	37	309	25	250	44	319	77	344	57	478	48	220	48	316	1422
05:00 PM	13	60	7	80	5	78	11	94	14	75	17	106	7	56	10	73	353
05:15 PM	10	57	13	80	5	72	10	87	15	99	11	125	14	46	12	72	364
05:30 PM	12	56	13	81	8	74	6	88	22	69	16	107	7	51	13	71	347
05:45 PM	10	51	6	67	10	56	7	73	15	87	16	118	11	60	8	79	337
Total	45	224	39	308	28	280	34	342	66	330	60	456	39	213	43	295	1401
Grand Total	138	692	122	952	105	795	120	1020	193	978	198	1369	130	628	162	920	4261
Apprch %	14.5	72.7	12.8		10.3	77.9	11.8		14.1	71.4	14.5		14.1	68.3	17.6		
Total %	3.2	16.2	2.9	22.3	2.5	18.7	2.8	23.9	4.5	23	4.6	32.1	3.1	14.7	3.8	21.6	
Passenger Vehicles	126	676	121	923	103	783	112	998	190	960	194	1344	128	613	159	900	4165
% Passenger Vehicles	91.3	97.7	99.2	97	98.1	98.5	93.3	97.8	98.4	98.2	98	98.2	98.5	97.6	98.1	97.8	97.7
Large 2 Axle Vehicles	11	16	1	28	2	10	8	20	3	17	3	23	2	11	3	16	87
% Large 2 Axle Vehicles	8	2.3	0.8	2.9	1.9	1.3	6.7	2	1.6	1.7	1.5	1.7	1.5	1.8	1.9	1.7	2
3 Axle Vehicles	1	0	0	1	0	1	0	1	0	0	1	1	0	3	0	3	6
% 3 Axle Vehicles	0.7	0	0	0.1	0	0.1	0	0.1	0	0	0.5	0.1	0	0.5	0	0.3	0.1
4+ Axle Trucks	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
% 4+ Axle Trucks	0	0	0	0	0	0.1	0	0.1	0	0.1	0	0.1	0	0.2	0	0.1	0.1

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	**15**	**81**	**16**	**112**	**18**	64	**13**	**95**	19	100	**26**	**145**	**14**	45	**21**	80	**432**
03:45 PM	14	53	10	77	8	**77**	6	91	15	87	25	127	6	**61**	18	**85**	380
04:00 PM	3	63	10	76	8	65	13	86	21	81	9	111	10	50	15	75	348
04:15 PM	6	56	8	70	5	70	10	85	**22**	**112**	11	145	9	56	9	74	374
Total Volume	38	253	44	335	39	276	42	357	77	380	71	528	39	212	63	314	1534
% App. Total	11.3	75.5	13.1		10.9	77.3	11.8		14.6	72	13.4		12.4	67.5	20.1		
PHF	.633	.781	.688	.748	.542	.896	.808	.939	.875	.848	.683	.910	.696	.869	.750	.924	.888

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File Name : 45_SBC_Del Rosa Dr_9th PM
Site Code : 99918385
Start Date : 5/16/2018
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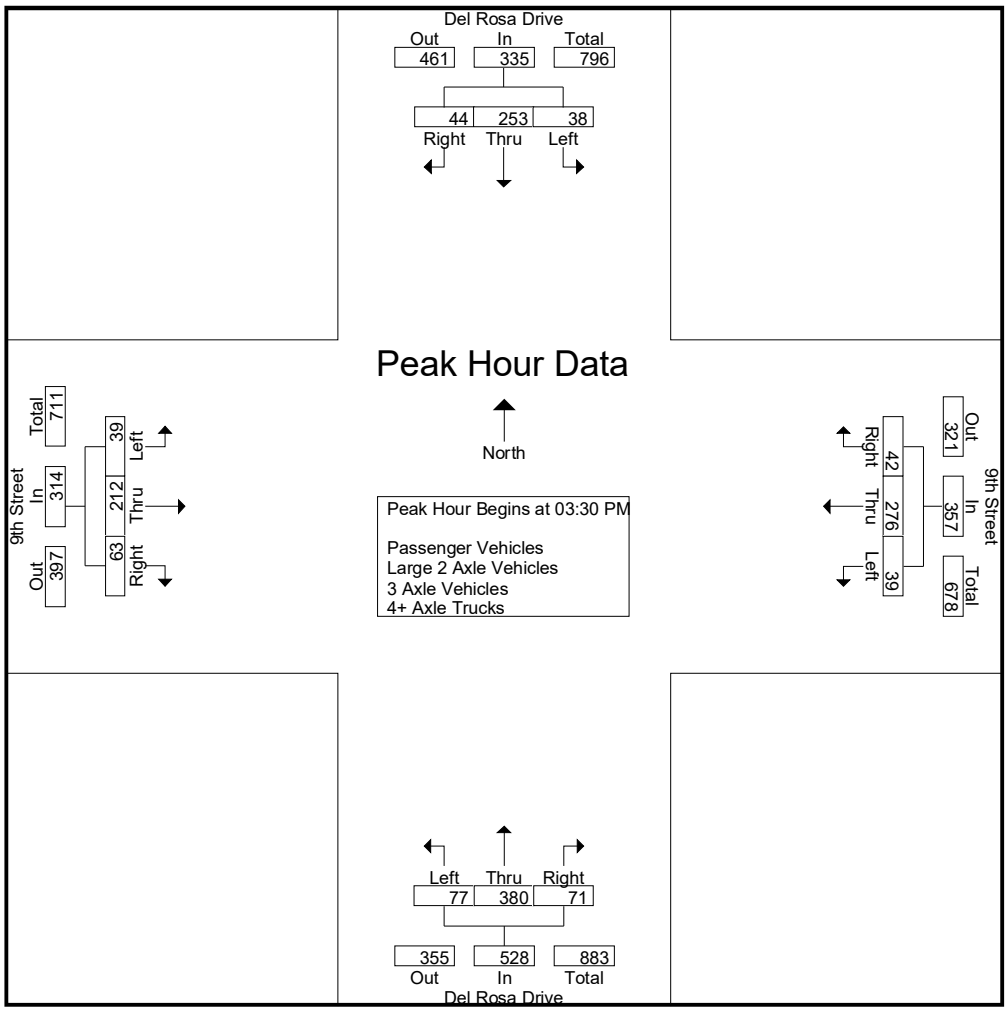

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:15 PM				03:00 PM				03:30 PM				03:45 PM			
+0 mins.	12	58	9	79	9	70	**14**	93	19	100	**26**	**145**	6	**61**	**18**	85
+15 mins.	**15**	**81**	**16**	**112**	17	54	9	80	15	87	25	127	10	50	15	75
+30 mins.	14	53	10	77	**18**	64	13	**95**	21	81	9	111	9	56	9	74
+45 mins.	3	63	10	76	8	**77**	6	91	**22**	**112**	11	145	**15**	61	10	**86**
Total Volume	44	255	45	344	52	265	42	359	77	380	71	528	40	228	52	320
% App. Total	12.8	74.1	13.1		14.5	73.8	11.7		14.6	72	13.4		12.5	71.2	16.2	
PHF	.733	.787	.703	.768	.722	.860	.750	.945	.875	.848	.683	.910	.667	.934	.722	.930

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Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	8	45	11	64	9	70	13	92	9	63	19	91	10	51	14	75	322
03:15 PM	11	58	9	78	17	53	9	79	7	51	10	68	13	36	18	67	292
03:30 PM	14	78	15	107	18	64	12	94	19	97	25	141	13	41	21	75	417
03:45 PM	12	51	10	73	8	74	5	87	15	85	24	124	6	59	18	83	367
Total	45	232	45	322	52	261	39	352	50	296	78	424	42	187	71	300	1398
04:00 PM	3	61	10	74	8	62	11	81	20	78	9	107	10	47	15	72	334
04:15 PM	4	55	8	67	4	69	10	83	22	109	10	141	9	54	9	72	363
04:30 PM	20	51	7	78	9	52	8	69	16	77	17	110	15	61	9	85	342
04:45 PM	10	55	12	77	3	62	12	77	17	71	20	108	14	51	13	78	340
Total	37	222	37	296	24	245	41	310	75	335	56	466	48	213	46	307	1379
05:00 PM	13	60	7	80	4	77	10	91	14	74	17	105	7	56	10	73	349
05:15 PM	9	56	13	78	5	72	10	87	15	99	11	125	14	46	12	72	362
05:30 PM	12	56	13	81	8	74	5	87	21	69	16	106	7	51	12	70	344
05:45 PM	10	50	6	66	10	54	7	71	15	87	16	118	10	60	8	78	333
Total	44	222	39	305	27	277	32	336	65	329	60	454	38	213	42	293	1388
Grand Total	126	676	121	923	103	783	112	998	190	960	194	1344	128	613	159	900	4165
Apprch %	13.7	73.2	13.1		10.3	78.5	11.2		14.1	71.4	14.4		14.2	68.1	17.7		
Total %	3	16.2	2.9	22.2	2.5	18.8	2.7	24	4.6	23	4.7	32.3	3.1	14.7	3.8	21.6	

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	**14**	**78**	**15**	**107**	**18**	64	**12**	**94**	19	97	**25**	**141**	**13**	41	**21**	75	**417**
03:45 PM	12	51	10	73	8	**74**	5	87	15	85	24	124	6	**59**	18	**83**	367
04:00 PM	3	61	10	74	8	62	11	81	20	78	9	107	10	47	15	72	334
04:15 PM	4	55	8	67	4	69	10	83	**22**	**109**	10	141	9	54	9	72	363
Total Volume	33	245	43	321	38	269	38	345	76	369	68	513	38	201	63	302	1481
% App. Total	10.3	76.3	13.4		11	78	11		14.8	71.9	13.3		12.6	66.6	20.9		
PHF	.589	.785	.717	.750	.528	.909	.792	.918	.864	.846	.680	.910	.731	.852	.750	.910	.888

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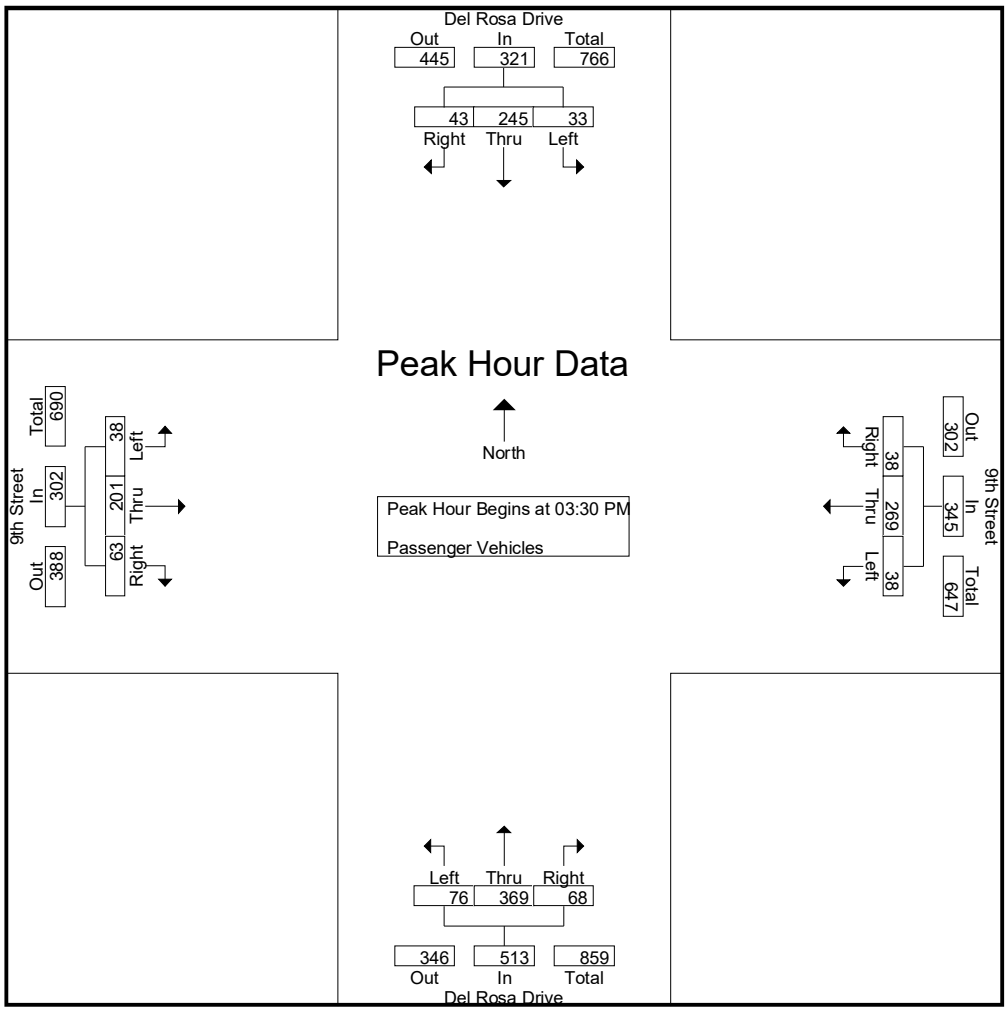

Peak Hour Analysis From 03:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:30 PM				03:30 PM				03:45 PM			
+0 mins.	**14**	**78**	**15**	**107**	**18**	64	**12**	**94**	19	97	**25**	**141**	6	59	**18**	83
+15 mins.	12	51	10	73	8	**74**	5	87	15	85	24	124	10	47	15	72
+30 mins.	3	61	10	74	8	62	11	81	20	78	9	107	9	54	9	72
+45 mins.	4	55	8	67	4	69	10	83	**22**	**109**	10	141	**15**	**61**	9	**85**
Total Volume	33	245	43	321	38	269	38	345	76	369	68	513	40	221	51	312
% App. Total	10.3	76.3	13.4		11	78	11		14.8	71.9	13.3		12.8	70.8	16.3	
PHF	.589	.785	.717	.750	.528	.909	.792	.918	.864	.846	.680	.910	.667	.906	.708	.918

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File Name : 45_SBC_Del Rosa Dr_9th PM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Large 2 Axle Vehicles

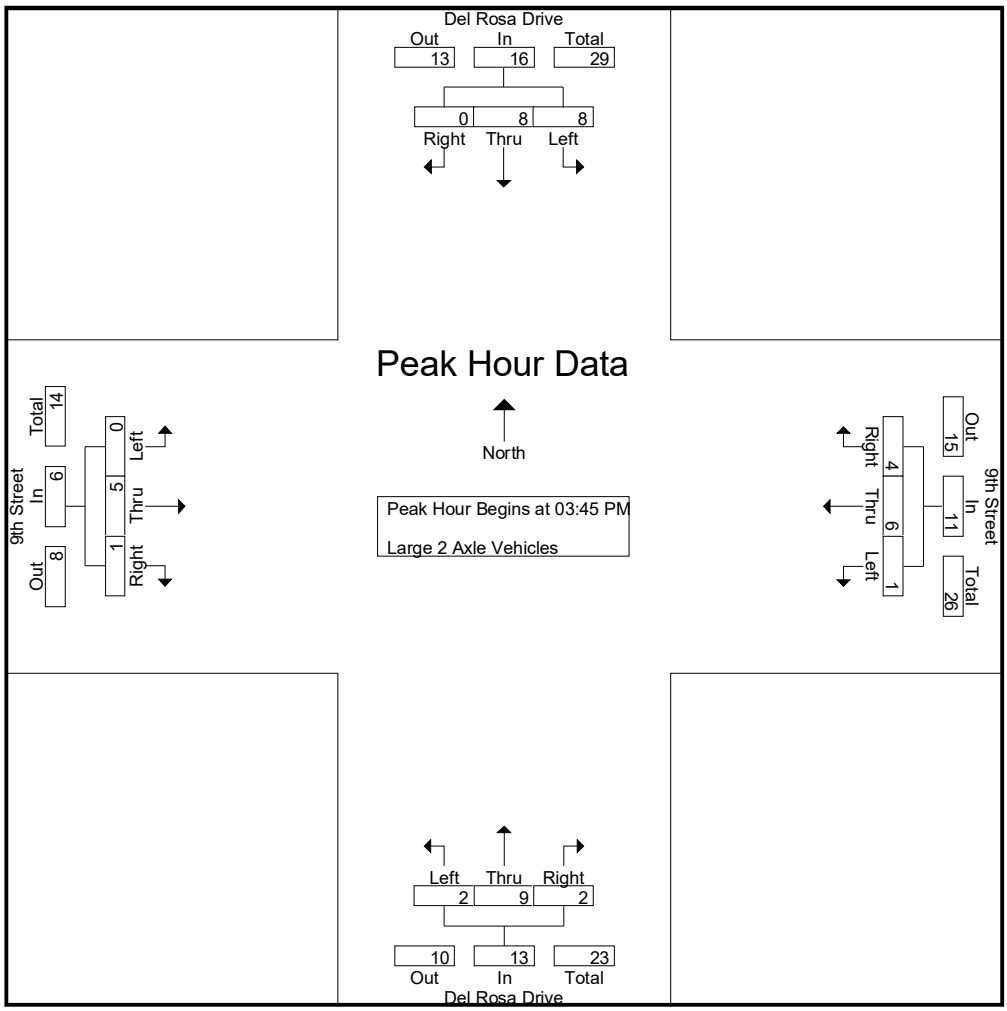
	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	3	0	3	0	0	1	1	0	2	0	2	0	0	0	0	6
03:15 PM	1	0	0	1	0	1	0	1	0	1	1	2	0	1	0	1	5
03:30 PM	0	3	1	4	0	0	1	1	0	3	0	3	1	3	0	4	12
03:45 PM	2	2	0	4	0	1	1	2	0	2	1	3	0	2	0	2	11
Total	3	8	1	12	0	2	3	5	0	8	2	10	1	6	0	7	34
04:00 PM	0	2	0	2	0	3	2	5	1	2	0	3	0	2	0	2	12
04:15 PM	2	1	0	3	1	1	0	2	0	3	1	4	0	1	0	1	10
04:30 PM	4	3	0	7	0	1	1	2	1	2	0	3	0	0	1	1	13
04:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	2	1	3	5
Total	7	6	0	13	1	5	3	9	2	8	1	11	0	5	2	7	40
05:00 PM	0	0	0	0	1	1	1	3	0	1	0	1	0	0	0	0	4
05:15 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	1	1	1	0	0	1	0	0	1	1	3
05:45 PM	0	1	0	1	0	2	0	2	0	0	0	0	1	0	0	1	4
Total	1	2	0	3	1	3	2	6	1	1	0	2	1	0	1	2	13
Grand Total	11	16	1	28	2	10	8	20	3	17	3	23	2	11	3	16	87
Apprch %	39.3	57.1	3.6		10	50	40		13	73.9	13		12.5	68.8	18.8		
Total %	12.6	18.4	1.1	32.2	2.3	11.5	9.2	23	3.4	19.5	3.4	26.4	2.3	12.6	3.4	18.4	

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	2	2	0	4	0	1	1	2	0	2	**1**	3	0	**2**	0	**2**	11
04:00 PM	0	2	0	2	0	**3**	**2**	**5**	**1**	2	0	3	0	2	0	2	12
04:15 PM	2	1	0	3	**1**	1	0	2	0	**3**	1	**4**	0	1	0	1	10
04:30 PM	**4**	**3**	0	**7**	0	1	1	2	1	2	0	3	0	0	**1**	1	**13**
Total Volume	8	8	0	16	1	6	4	11	2	9	2	13	0	5	1	6	46
% App. Total	50	50	0		9.1	54.5	36.4		15.4	69.2	15.4		0	83.3	16.7		
PHF	.500	.667	.000	.571	.250	.500	.500	.550	.500	.750	.500	.813	.000	.625	.250	.750	.885

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

City of San Bernardino
N/S: Del Rosa Drive
E/W: 9th Street
Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



Peak Hour Analysis From 03:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:30 PM				03:30 PM			
+0 mins.	2	2	0	4	0	1	1	2	0	**3**	0	3	**1**	**3**	0	**4**
+15 mins.	0	2	0	2	0	**3**	**2**	**5**	0	2	**1**	3	0	2	0	2
+30 mins.	2	1	0	3	**1**	1	0	2	**1**	2	0	3	0	2	0	2
+45 mins.	**4**	**3**	0	**7**	0	1	1	2	0	3	1	**4**	0	1	0	1
Total Volume	8	8	0	16	1	6	4	11	1	10	2	13	1	8	0	9
% App. Total	50	50	0		9.1	54.5	36.4		7.7	76.9	15.4		11.1	88.9	0	
PHF	.500	.667	.000	.571	.250	.500	.500	.550	.250	.833	.500	.813	.250	.667	.000	.563

Counts Unlimited
PO Box 1178
Corona, CA 92878
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City of San Bernardino
N/S: Del Rosa Drive
E/W: 9th Street
Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

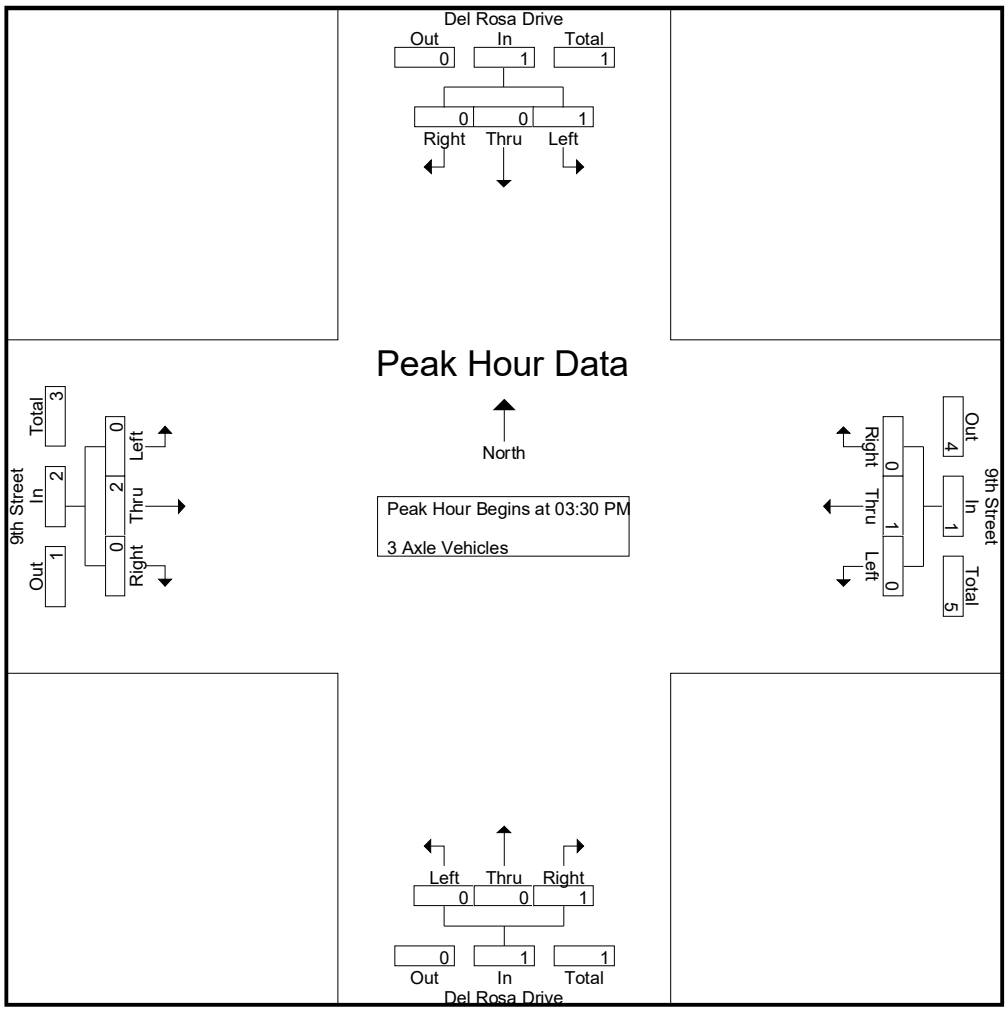
	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
03:30 PM	1	0	0	1	0	0	0	0	0	0	1	1	0	1	0	1	3
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	1	0	1	0	0	1	1	0	2	0	2	5
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	1	0	1	0	1	0	0	1	1	0	3	0	3	6
Apprch %	100	0	0		0	100	0		0	0	100		0	100	0		
Total %	16.7	0	0	16.7	0	16.7	0	16.7	0	0	16.7	16.7	0	50	0	50	

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	**1**	0	0	**1**	0	0	0	0	0	0	**1**	**1**	0	**1**	0	**1**	**3**
03:45 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	1	0	1	0	0	1	1	0	2	0	2	5
% App. Total	100	0	0		0	100	0		0	0	100		0	100	0		
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.000	.250	.250	.000	.500	.000	.500	.417

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

City of San Bernardino
N/S: Del Rosa Drive
E/W: 9th Street
Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



Peak Hour Analysis From 03:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:30 PM				03:30 PM				03:30 PM			
+0 mins.	**1**	0	0	**1**	0	0	0	0	0	0	**1**	**1**	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	1	0	1	0	0	1	1	0	2	0	2
% App. Total	100	0	0		0	100	0		0	0	100		0	100	0	
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.000	.250	.250	.000	.500	.000	.500

Counts Unlimited
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City of San Bernardino
N/S: Del Rosa Drive
E/W: 9th Street
Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
Apprch %	0	0	0		0	100	0		0	100	0		0	100	0		
Total %	0	0	0	0	0	33.3	0	33.3	0	33.3	0	33.3	0	33.3	0	33.3	

	Del Rosa Drive Southbound				9th Street Westbound				Del Rosa Drive Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:30 PM																	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
04:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
Total Volume	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
% App. Total	0	0	0		0	100	0		0	100	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250	.750

Counts Unlimited
PO Box 1178
Corona, CA 92878
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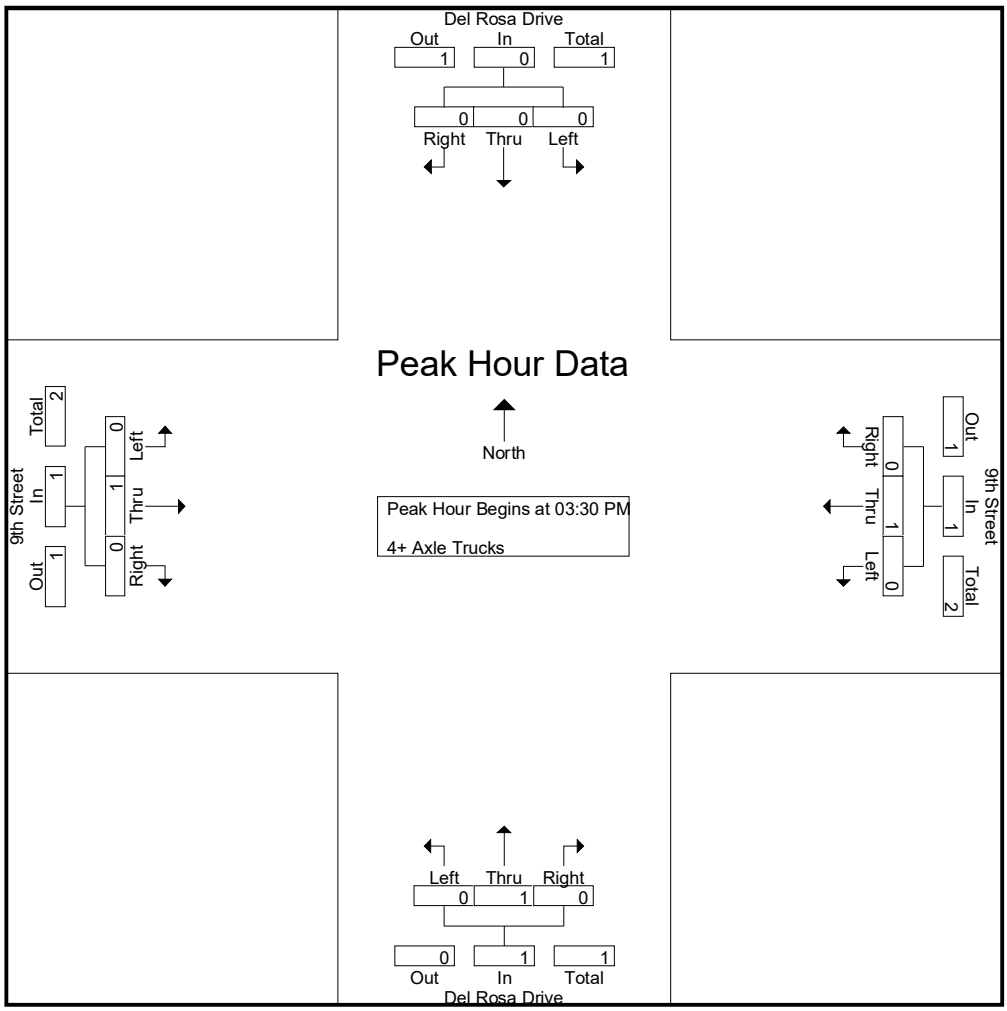
City of San Bernardino
N/S: Del Rosa Drive
E/W: 9th Street
Weather: Clear

File Name : 45_SBC_Del Rosa Dr_9th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



Peak Hour Analysis From 03:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:30 PM				03:30 PM				03:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
Total Volume	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1
% App. Total	0	0	0		0	100	0		0	100	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250

Prepared by National Data & Surveying Services

Sterling Ave & 9th St

Peak Hour Turning Movement Count

ID: 19-06039-017
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

PEAK HOURS	
AM	07:15 AM - 08:15 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS	
AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Sterling Ave — SOUTHBOUND

AM	81	356	49	0	323	AM
NOON	0	0	0	0	0	NOON
PM	75	232	71	1	529	PM

9th St — EASTBOUND

AM	NOON	PM		
346	0	279	⇦	
0	0	0	↶	0
75	0	97	↱	1
168	0	268	→	2
21	0	34	↴	0
AM	NOON	PM		

CONTROL

Signalized

TEV	1345 AM	0 NOON	1568 PM
PHF	0.86		0.87

9th St — WESTBOUND

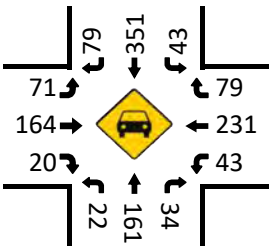
PM	NOON	AM		
73	0	82	↰	0
171	0	243	←	2
50	0	47	↰	1
0	0	0	↰	0
444	0	252	⇨	
PM	NOON	AM		

Sterling Ave — NORTHBOUND

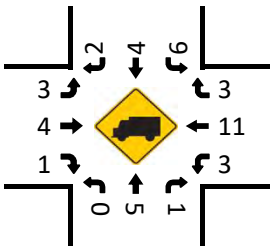
PM	316	0	33	358	105	PM
NOON	0	0	0	0	0	NOON
AM	424	0	22	166	35	AM

Sterling Ave

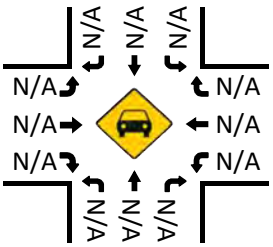
Cars (AM)



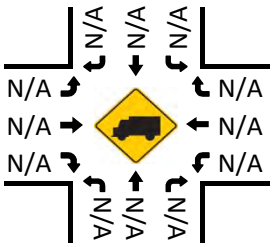
2axle (AM)



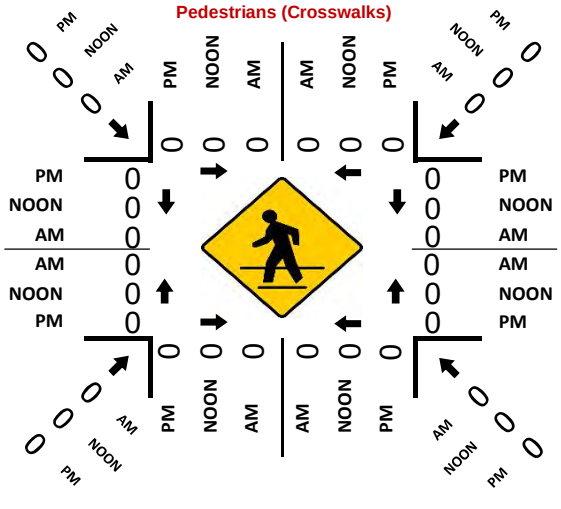
Cars (NOON)



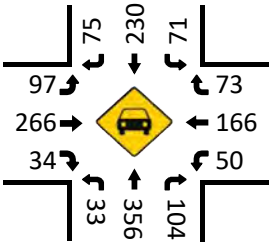
2axle (NOON)



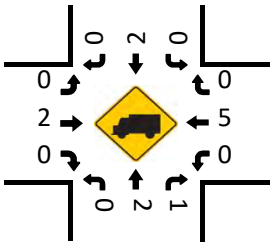
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-017
Date: 3/19/2019

Total

NS/EW Streets:	Sterling Ave				Sterling Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	19	8	0	8	72	13	0	15	25	2	0	17	61	27	0	270
7:15 AM	8	53	11	0	8	93	24	0	17	51	7	0	13	89	19	0	393
7:30 AM	3	44	6	0	15	109	17	0	30	52	8	0	13	53	25	0	375
7:45 AM	6	25	9	0	9	96	21	0	15	33	2	0	12	54	21	0	303
8:00 AM	5	44	9	0	17	58	19	0	13	32	4	0	9	47	17	0	274
8:15 AM	4	44	9	0	13	48	26	0	27	45	4	0	17	63	25	0	325
8:30 AM	2	54	13	0	27	56	24	0	30	35	5	0	19	58	28	0	351
8:45 AM	5	43	9	0	25	70	25	0	29	46	2	0	22	61	42	0	379
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	36	326	74	0	122	602	169	0	176	319	34	0	122	486	204	0	2670
APPROACH %'s :	8.26%	74.77%	16.97%	0.00%	13.66%	67.41%	18.92%	0.00%	33.27%	60.30%	6.43%	0.00%	15.02%	59.85%	25.12%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	22	166	35	0	49	356	81	0	75	168	21	0	47	243	82	0	1345
PEAK HR FACTOR :	0.688	0.783	0.795	0.000	0.721	0.817	0.844	0.000	0.625	0.808	0.656	0.000	0.904	0.683	0.820	0.000	0.856
	0.774				0.862				0.733				0.769				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	6	69	26	0	16	63	23	0	25	70	10	0	13	44	20	0	385
4:15 PM	9	90	21	0	13	45	25	0	33	75	11	0	8	51	24	0	405
4:30 PM	10	84	26	0	24	50	18	0	17	70	9	0	7	43	27	0	385
4:45 PM	7	83	13	0	21	48	21	0	20	45	8	0	10	43	24	0	343
5:00 PM	5	91	30	0	20	52	15	1	24	57	10	0	8	49	16	0	378
5:15 PM	11	112	25	0	20	60	19	0	32	86	9	0	12	45	18	0	449
5:30 PM	10	83	22	0	15	61	14	0	18	75	12	0	17	42	15	0	384
5:45 PM	7	72	28	0	16	59	27	0	23	50	3	0	13	35	24	0	357
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	65	684	191	0	145	438	162	1	192	528	72	0	88	352	168	0	3086
APPROACH %'s :	6.91%	72.77%	20.32%	0.00%	19.44%	58.71%	21.72%	0.13%	24.24%	66.67%	9.09%	0.00%	14.47%	57.89%	27.63%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	33	358	105	0	71	232	75	1	97	268	34	0	50	171	73	0	1568
PEAK HR FACTOR :	0.750	0.799	0.875	0.000	0.888	0.951	0.694	0.250	0.758	0.779	0.708	0.000	0.735	0.872	0.760	0.000	0.873
	0.838				0.929				0.785				0.980				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-017
Date: 3/19/2019

Cars

NS/EW Streets:	Sterling Ave				Sterling Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	18	6	0	8	72	12	0	14	23	2	0	16	58	27	0	258
7:15 AM	8	52	11	0	6	93	24	0	15	50	7	0	13	87	19	0	385
7:30 AM	3	43	5	0	14	108	17	0	29	50	8	0	11	52	23	0	363
7:45 AM	6	24	9	0	8	94	20	0	15	33	1	0	12	47	20	0	289
8:00 AM	5	42	9	0	15	56	18	0	12	31	4	0	7	45	17	0	261
8:15 AM	4	41	7	0	12	47	24	0	26	42	4	0	16	60	25	0	308
8:30 AM	2	51	13	0	26	55	24	0	30	35	5	0	18	54	27	0	340
8:45 AM	5	42	9	0	24	70	24	0	29	45	2	0	22	59	42	0	373
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	35	313	69	0	113	595	163	0	170	309	33	0	115	462	200	0	2577
APPROACH %'s :	8.39%	75.06%	16.55%	0.00%	12.97%	68.31%	18.71%	0.00%	33.20%	60.35%	6.45%	0.00%	14.80%	59.46%	25.74%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	22	161	34	0	43	351	79	0	71	164	20	0	43	231	79	0	1298
PEAK HR FACTOR :	0.69	0.774	0.773	0.000	0.717	0.813	0.823	0.000	0.612	0.820	0.625	0.000	0.827	0.664	0.859	0.000	0.843
	0.764				0.851				0.733				0.742				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	6	67	26	0	15	60	23	0	25	67	10	0	10	44	19	0	372
4:15 PM	8	87	21	0	12	44	25	0	33	71	10	0	7	47	24	0	389
4:30 PM	9	84	26	0	24	49	18	0	17	68	8	0	6	41	27	0	377
4:45 PM	7	82	13	0	21	48	21	0	20	42	7	0	10	42	23	0	336
5:00 PM	5	91	30	0	20	51	15	1	24	57	10	0	8	47	16	0	375
5:15 PM	11	111	25	0	20	60	19	0	32	85	9	0	12	44	18	0	446
5:30 PM	10	82	21	0	15	61	14	0	18	74	12	0	17	42	15	0	381
5:45 PM	7	72	28	0	16	58	27	0	23	50	3	0	13	33	24	0	354
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	63	676	190	0	143	431	162	1	192	514	69	0	83	340	166	0	3030
APPROACH %'s :	6.78%	72.77%	20.45%	0.00%	19.40%	58.48%	21.98%	0.14%	24.77%	66.32%	8.90%	0.00%	14.09%	57.72%	28.18%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	33	356	104	0	71	230	75	1	97	266	34	0	50	166	73	0	1556
PEAK HR FACTOR :	0.75	0.802	0.867	0.000	0.888	0.943	0.694	0.250	0.758	0.782	0.708	0.000	0.735	0.883	0.760	0.000	0.872
	0.838				0.933				0.788				0.976				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-017
Date: 3/19/2019

2axle

NS/EW Streets:	Sterling Ave				Sterling Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	1	2	0	0	0	1	0	0	2	0	0	1	3	0	0	11
7:15 AM	0	1	0	0	2	0	0	0	2	1	0	0	0	2	0	0	8
7:30 AM	0	1	1	0	1	1	0	0	0	2	0	0	2	1	2	0	11
7:45 AM	0	1	0	0	1	1	1	0	0	0	1	0	0	7	1	0	13
8:00 AM	0	2	0	0	2	2	1	0	1	1	0	0	1	1	0	0	11
8:15 AM	0	3	2	0	1	1	2	0	1	3	0	0	1	3	0	0	17
8:30 AM	0	3	0	0	1	1	0	0	0	0	0	0	1	4	0	0	10
8:45 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	13	5	0	8	6	5	0	4	10	1	0	6	23	3	0	85
APPROACH %'s :	5.26%	68.42%	26.32%	0.00%	42.11%	31.58%	26.32%	0.00%	26.67%	66.67%	6.67%	0.00%	18.75%	71.88%	9.38%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	5	1	0	6	4	2	0	3	4	1	0	3	11	3	0	43
PEAK HR FACTOR :	0.000	0.625	0.250	0.000	0.750	0.500	0.500	0.000	0.375	0.500	0.250	0.000	0.375	0.393	0.375	0.000	0.827
		0.750				0.600				0.667				0.531			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	2	0	0	1	2	0	0	0	3	0	0	3	0	1	0	12
4:15 PM	1	3	0	0	1	1	0	0	0	4	1	0	1	4	0	0	16
4:30 PM	1	0	0	0	0	1	0	0	0	2	1	0	1	2	0	0	8
4:45 PM	0	1	0	0	0	0	0	0	0	3	1	0	0	1	1	0	7
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
5:15 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3
5:30 PM	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	8	1	0	2	6	0	0	0	14	3	0	5	12	2	0	55
APPROACH %'s :	18.18%	72.73%	9.09%	0.00%	25.00%	75.00%	0.00%	0.00%	0.00%	82.35%	17.65%	0.00%	26.32%	63.16%	10.53%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	2	1	0	0	2	0	0	0	2	0	0	0	5	0	0	12
PEAK HR FACTOR :	0.00	0.500	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.625	0.000	0.000	1.000
		0.375				0.500				0.500				0.625			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-017
Date: 3/19/2019

3axle

NS/EW Streets:	Sterling Ave				Sterling Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1	1	1	0	1	0	0	0	1	1	1	0	7
APPROACH %'s :					33.33%	33.33%	33.33%	0.00%	100.00%	0.00%	0.00%	0.00%	33.33%	33.33%	33.33%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	3
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.375
						0.250								0.250			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 9th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-017
Date: 3/19/2019

4axle

NS/EW Streets:	Sterling Ave				Sterling Ave				9th St				9th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
APPROACH %'s :									100.00%	0.00%	0.00%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
									0.250								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
APPROACH %'s :					0.00%	100.00%	0.00%	0.00%									
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

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

City of San Bernardino
N/S: Victoria Avenue
E/W: 9th Street
Weather: Clear

File Name : 31_SBC_Victoria_9th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	22	3	28	1	7	5	13	2	10	1	13	5	8	7	20	74
06:15 AM	2	27	4	33	4	14	3	21	5	22	3	30	8	16	8	32	116
06:30 AM	6	40	4	50	6	6	10	22	4	22	1	27	3	12	6	21	120
06:45 AM	2	50	4	56	4	17	3	24	6	28	5	39	10	14	8	32	151
Total	13	139	15	167	15	44	21	80	17	82	10	109	26	50	29	105	461
07:00 AM	5	50	7	62	3	15	22	40	7	28	5	40	11	14	15	40	182
07:15 AM	15	79	15	109	8	22	26	56	13	46	6	65	15	23	5	43	273
07:30 AM	8	61	19	88	12	22	9	43	12	36	3	51	15	20	11	46	228
07:45 AM	9	64	13	86	7	24	7	38	12	27	3	42	7	19	10	36	202
Total	37	254	54	345	30	83	64	177	44	137	17	198	48	76	41	165	885
08:00 AM	10	39	13	62	3	21	11	35	6	41	3	50	14	17	10	41	188
08:15 AM	7	48	24	79	1	19	16	36	13	34	5	52	18	30	9	57	224
08:30 AM	8	52	24	84	7	27	12	46	9	39	2	50	16	29	11	56	236
08:45 AM	6	58	16	80	4	30	11	45	10	37	1	48	22	33	12	67	240
Total	31	197	77	305	15	97	50	162	38	151	11	200	70	109	42	221	888
Grand Total	81	590	146	817	60	224	135	419	99	370	38	507	144	235	112	491	2234
Apprch %	9.9	72.2	17.9		14.3	53.5	32.2		19.5	73	7.5		29.3	47.9	22.8		
Total %	3.6	26.4	6.5	36.6	2.7	10	6	18.8	4.4	16.6	1.7	22.7	6.4	10.5	5	22	
Passenger Vehicles	77	579	141	797	58	208	129	395	96	350	36	482	137	209	107	453	2127
% Passenger Vehicles	95.1	98.1	96.6	97.6	96.7	92.9	95.6	94.3	97	94.6	94.7	95.1	95.1	88.9	95.5	92.3	95.2
Large 2 Axle Vehicles	4	10	4	18	1	15	6	22	1	13	2	16	7	26	3	36	92
% Large 2 Axle Vehicles	4.9	1.7	2.7	2.2	1.7	6.7	4.4	5.3	1	3.5	5.3	3.2	4.9	11.1	2.7	7.3	4.1
3 Axle Vehicles	0	0	1	1	1	1	0	2	2	2	0	4	0	0	2	2	9
% 3 Axle Vehicles	0	0	0.7	0.1	1.7	0.4	0	0.5	2	0.5	0	0.8	0	0	1.8	0.4	0.4
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	5	0	5	0	0	0	0	6
% 4+ Axle Trucks	0	0.2	0	0.1	0	0	0	0	0	1.4	0	1	0	0	0	0	0.3

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**15**	**79**	15	**109**	8	22	**26**	**56**	**13**	**46**	**6**	**65**	**15**	**23**	5	43	**273**
07:30 AM	8	61	**19**	88	**12**	22	9	43	12	36	3	51	15	20	**11**	**46**	228
07:45 AM	9	64	13	86	7	**24**	7	38	12	27	3	42	7	19	10	36	202
08:00 AM	10	39	13	62	3	21	11	35	6	41	3	50	14	17	10	41	188
Total Volume	42	243	60	345	30	89	53	172	43	150	15	208	51	79	36	166	891
% App. Total	12.2	70.4	17.4		17.4	51.7	30.8		20.7	72.1	7.2		30.7	47.6	21.7		
PHF	.700	.769	.789	.791	.625	.927	.510	.768	.827	.815	.625	.800	.850	.859	.818	.902	.816

Counts Unlimited, Inc.
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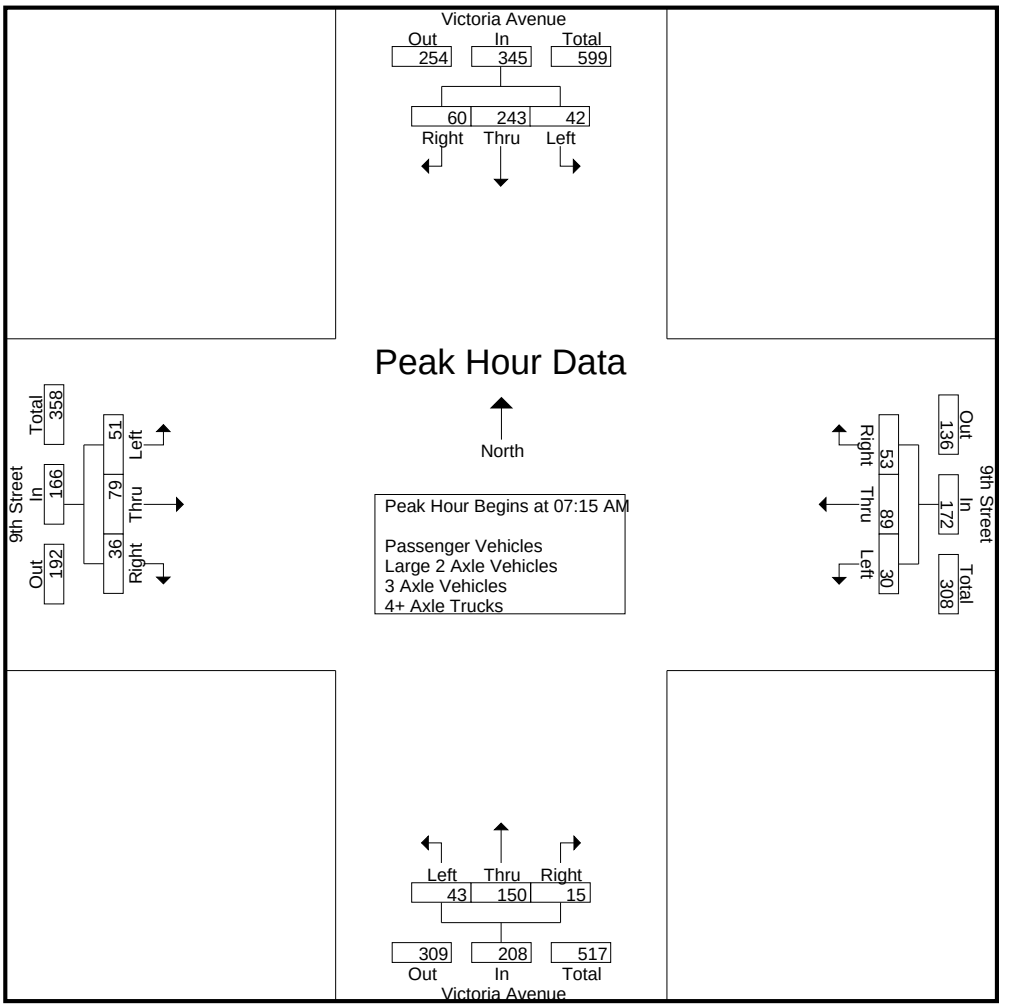
City of San Bernardino
N/S: Victoria Avenue
E/W: 9th Street
Weather: Clear

File Name : 31_SBC_Victoria_9th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				08:00 AM			
+0 mins.	5	50	7	62	3	15	22	40	**13**	**46**	**6**	**65**	14	17	10	41
+15 mins.	**15**	**79**	15	**109**	8	22	**26**	**56**	12	36	3	51	18	30	9	57
+30 mins.	8	61	**19**	88	**12**	22	9	43	12	27	3	42	16	29	11	56
+45 mins.	9	64	13	86	7	**24**	7	38	6	41	3	50	**22**	**33**	**12**	**67**
Total Volume	37	254	54	345	30	83	64	177	43	150	15	208	70	109	42	221
% App. Total	10.7	73.6	15.7		16.9	46.9	36.2		20.7	72.1	7.2		31.7	49.3	19	
PHF	.617	.804	.711	.791	.625	.865	.615	.790	.827	.815	.625	.800	.795	.826	.875	.825

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Corona, CA 92878
(951) 268-6268

City of San Bernardino
N/S: Victoria Avenue
E/W: 9th Street
Weather: Clear

File Name : 31_SBC_Victoria_9th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	22	2	27	1	7	5	13	2	10	1	13	5	8	7	20	73
06:15 AM	2	27	4	33	4	14	3	21	4	20	3	27	8	11	6	25	106
06:30 AM	6	40	4	50	6	5	10	21	3	20	1	24	3	10	6	19	114
06:45 AM	2	50	4	56	4	16	3	23	6	26	4	36	8	13	8	29	144
Total	13	139	14	166	15	42	21	78	15	76	9	100	24	42	27	93	437
07:00 AM	5	48	7	60	3	14	20	37	7	26	5	38	10	13	15	38	173
07:15 AM	14	79	15	108	8	17	25	50	13	45	6	64	14	21	4	39	261
07:30 AM	8	59	17	84	12	22	9	43	11	34	3	48	14	18	10	42	217
07:45 AM	9	61	12	82	7	20	6	33	12	26	2	40	7	18	10	35	190
Total	36	247	51	334	30	73	60	163	43	131	16	190	45	70	39	154	841
08:00 AM	9	38	12	59	2	21	11	34	6	38	3	47	13	10	9	32	172
08:15 AM	5	48	24	77	1	16	15	32	13	33	5	51	18	30	9	57	217
08:30 AM	8	50	24	82	6	27	11	44	9	37	2	48	15	26	11	52	226
08:45 AM	6	57	16	79	4	29	11	44	10	35	1	46	22	31	12	65	234
Total	28	193	76	297	13	93	48	154	38	143	11	192	68	97	41	206	849
Grand Total	77	579	141	797	58	208	129	395	96	350	36	482	137	209	107	453	2127
Apprch %	9.7	72.6	17.7		14.7	52.7	32.7		19.9	72.6	7.5		30.2	46.1	23.6		
Total %	3.6	27.2	6.6	37.5	2.7	9.8	6.1	18.6	4.5	16.5	1.7	22.7	6.4	9.8	5	21.3	

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**14**	**79**	15	**108**	8	17	**25**	**50**	**13**	**45**	**6**	**64**	**14**	**21**	4	39	**261**
07:30 AM	8	59	**17**	84	**12**	**22**	9	43	11	34	3	48	14	18	**10**	**42**	217
07:45 AM	9	61	12	82	7	20	6	33	12	26	2	40	7	18	10	35	190
08:00 AM	9	38	12	59	2	21	11	34	6	38	3	47	13	10	9	32	172
Total Volume	40	237	56	333	29	80	51	160	42	143	14	199	48	67	33	148	840
% App. Total	12	71.2	16.8		18.1	50	31.9		21.1	71.9	7		32.4	45.3	22.3		
PHF	.714	.750	.824	.771	.604	.909	.510	.800	.808	.794	.583	.777	.857	.798	.825	.881	.805

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City of San Bernardino
N/S: Victoria Avenue
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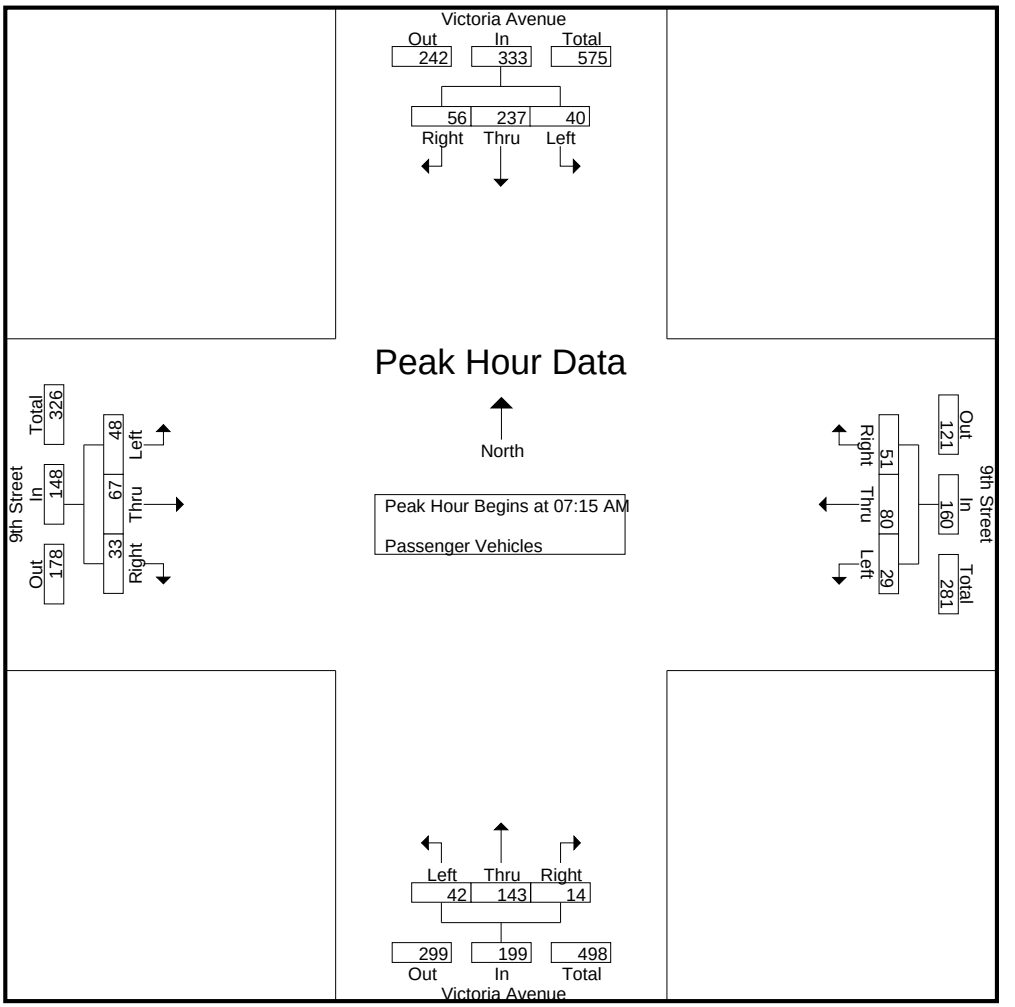
Weather: Clear

File Name : 31_SBC_Victoria_9th AM
Site Code : 99918352
Start Date : 5/17/2018



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**14**	**79**	15	**108**	8	17	**25**	**50**	**13**	**45**	**6**	**64**	**14**	**21**	4	39
+15 mins.	8	59	**17**	84	**12**	**22**	9	43	11	34	3	48	14	18	**10**	**42**
+30 mins.	9	61	12	82	7	20	6	33	12	26	2	40	7	18	10	35
+45 mins.	9	38	12	59	2	21	11	34	6	38	3	47	13	10	9	32
Total Volume	40	237	56	333	29	80	51	160	42	143	14	199	48	67	33	148
% App. Total	12	71.2	16.8		18.1	50	31.9		21.1	71.9	7		32.4	45.3	22.3	
PHF	.714	.750	.824	.771	.604	.909	.510	.800	.808	.794	.583	.777	.857	.798	.825	.881

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City of San Bernardino
N/S: Victoria Avenue
E/W: 9th Street
Weather: Clear

File Name : 31_SBC_Victoria_9th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	6	6
06:30 AM	0	0	0	0	0	1	0	1	1	2	0	3	0	2	0	2	6
06:45 AM	0	0	0	0	0	1	0	1	0	2	1	3	2	1	0	3	7
Total	0	0	1	1	0	2	0	2	1	4	1	6	2	8	1	11	20
07:00 AM	0	1	0	1	0	1	2	3	0	2	0	2	1	1	0	2	8
07:15 AM	1	0	0	1	0	4	1	5	0	0	0	0	1	2	0	3	9
07:30 AM	0	2	1	3	0	0	0	0	0	1	0	1	1	2	1	4	8
07:45 AM	0	3	1	4	0	4	1	5	0	1	1	2	0	1	0	1	12
Total	1	6	2	9	0	9	4	13	0	4	1	5	3	6	1	10	37
08:00 AM	1	1	1	3	0	0	0	0	0	1	0	1	1	7	1	9	13
08:15 AM	2	0	0	2	0	3	1	4	0	1	0	1	0	0	0	0	7
08:30 AM	0	2	0	2	1	0	1	2	0	1	0	1	1	3	0	4	9
08:45 AM	0	1	0	1	0	1	0	1	0	2	0	2	0	2	0	2	6
Total	3	4	1	8	1	4	2	7	0	5	0	5	2	12	1	15	35
Grand Total	4	10	4	18	1	15	6	22	1	13	2	16	7	26	3	36	92
Apprch %	22.2	55.6	22.2		4.5	68.2	27.3		6.2	81.2	12.5		19.4	72.2	8.3		
Total %	4.3	10.9	4.3	19.6	1.1	16.3	6.5	23.9	1.1	14.1	2.2	17.4	7.6	28.3	3.3	39.1	

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	0	0	1	0	**4**	**1**	**5**	0	0	0	0	**1**	2	0	3	9
07:30 AM	0	2	**1**	3	0	0	0	0	0	**1**	0	1	1	2	**1**	4	8
07:45 AM	0	**3**	1	**4**	0	4	1	5	0	1	**1**	**2**	0	1	0	1	12
08:00 AM	1	1	1	3	0	0	0	0	0	1	0	1	1	**7**	1	**9**	**13**
Total Volume	2	6	3	11	0	8	2	10	0	3	1	4	3	12	2	17	42
% App. Total	18.2	54.5	27.3		0	80	20		0	75	25		17.6	70.6	11.8		
PHF	.500	.500	.750	.688	.000	.500	.500	.500	.000	.750	.250	.500	.750	.429	.500	.472	.808

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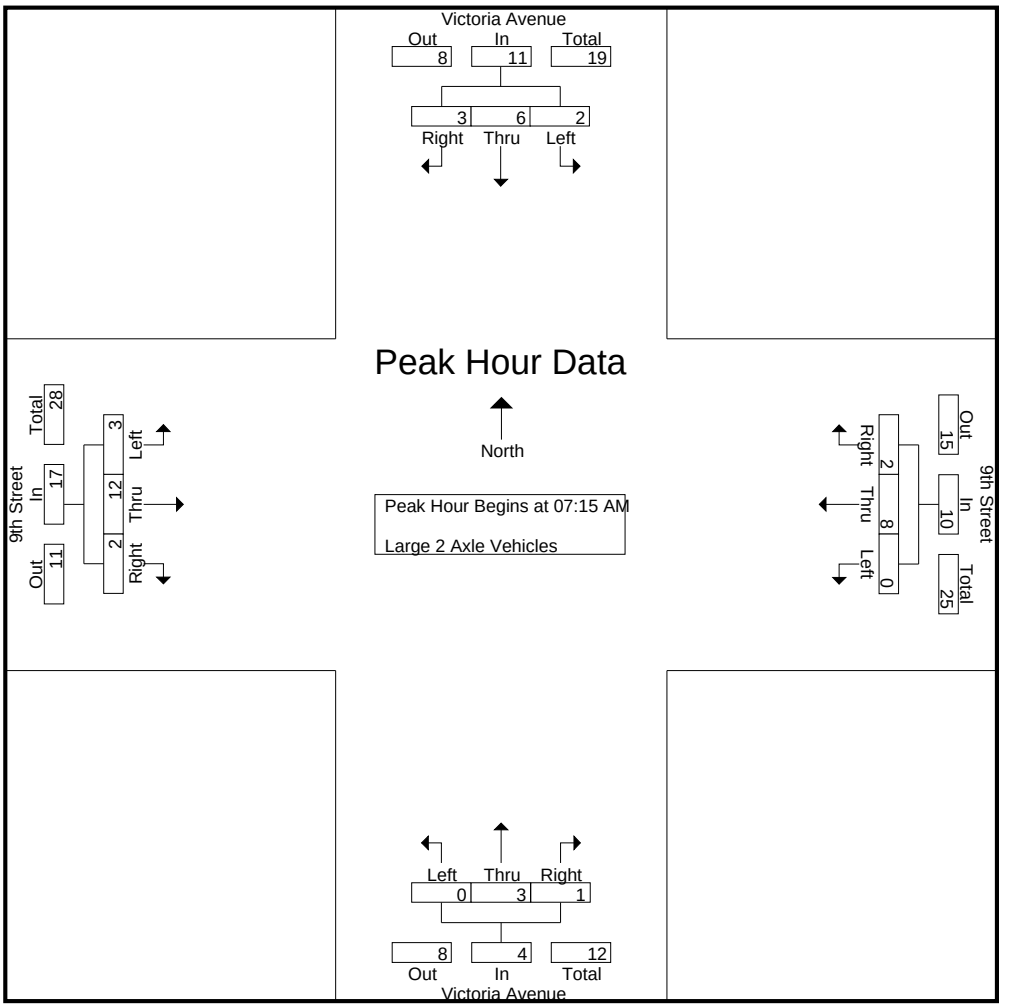
City of San Bernardino
N/S: Victoria Avenue
E/W: 9th Street
Weather: Clear

File Name : 31_SBC_Victoria_9th AM
Site Code : 99918352
Start Date : 5/17/2018



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**1**	0	0	1	0	**4**	**1**	**5**	0	0	0	0	**1**	2	0	3
+15 mins.	0	2	**1**	3	0	0	0	0	0	**1**	0	1	1	2	**1**	4
+30 mins.	0	**3**	1	**4**	0	4	1	5	0	1	**1**	**2**	0	1	0	1
+45 mins.	1	1	1	3	0	0	0	0	0	1	0	1	1	**7**	1	**9**
Total Volume	2	6	3	11	0	8	2	10	0	3	1	4	3	12	2	17
% App. Total	18.2	54.5	27.3		0	80	20		0	75	25		17.6	70.6	11.8	
PHF	.500	.500	.750	.688	.000	.500	.500	.500	.000	.750	.250	.500	.750	.429	.500	.472

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City of San Bernardino
N/S: Victoria Avenue
E/W: 9th Street
Weather: Clear

File Name : 31_SBC_Victoria_9th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	1	3
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	1	3
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
07:30 AM	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	1	0	1	1	0	0	1	0	0	1	1	4
08:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
Grand Total	0	0	1	1	1	1	0	2	2	2	0	4	0	0	2	2	9
Apprch %	0	0	100		50	50	0		50	50	0		0	0	100		
Total %	0	0	11.1	11.1	11.1	11.1	0	22.2	22.2	22.2	0	44.4	0	0	22.2	22.2	

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	**1**	**1**	**2**
07:30 AM	0	0	**1**	**1**	0	0	0	0	**1**	0	0	**1**	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	1	1	0	2	1	0	0	1	0	0	1	1	5
% App. Total	0	0	100		50	50	0		100	0	0		0	0	100		
PHF	.000	.000	.250	.250	.250	.250	.000	.500	.250	.000	.000	.250	.000	.000	.250	.250	.625

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City of San Bernardino
N/S: Victoria Avenue
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Weather: Clear

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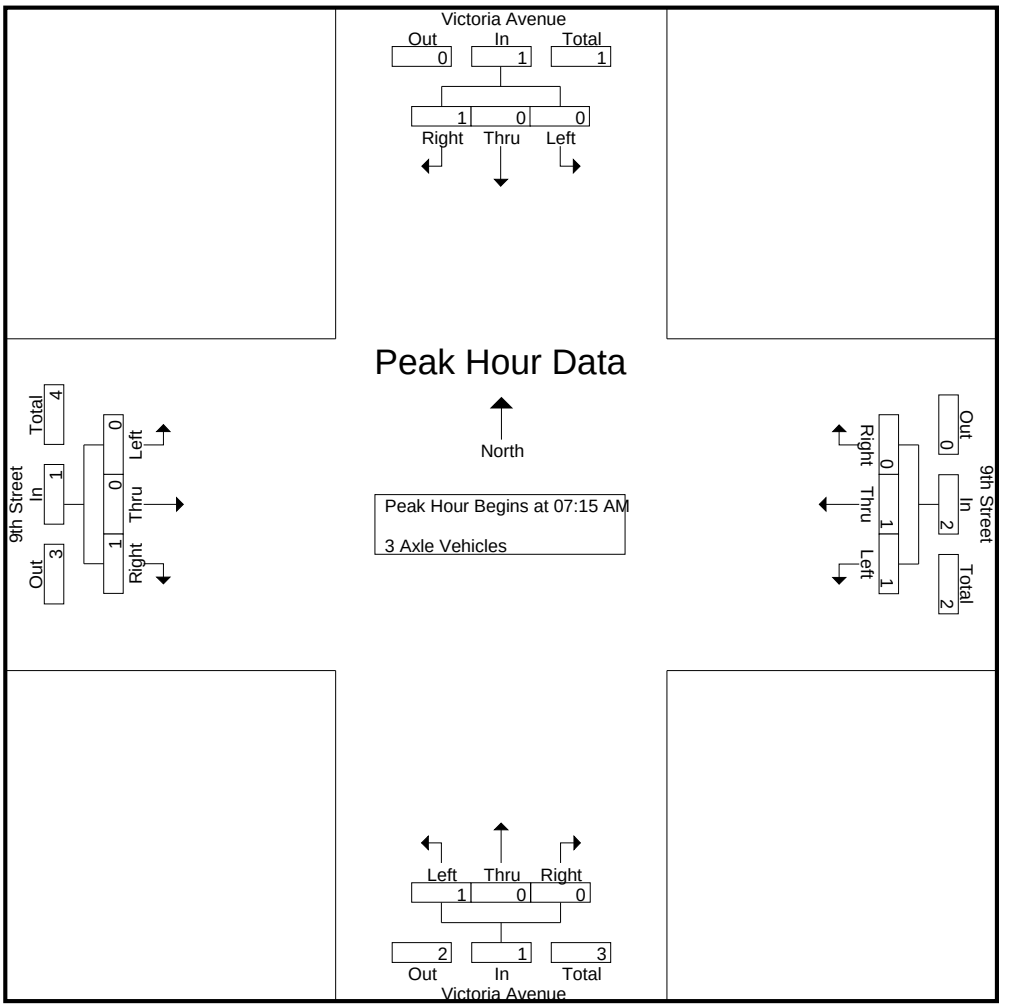
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	**1**	**1**
+15 mins.	0	0	**1**	**1**	0	0	0	0	**1**	0	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	1	1	0	2	1	0	0	1	0	0	1	1
% App. Total	0	0	100		50	50	0		100	0	0		0	0	100	
PHF	.000	.000	.250	.250	.250	.250	.000	.500	.250	.000	.000	.250	.000	.000	.250	.250

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City of San Bernardino
N/S: Victoria Avenue
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Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Grand Total	0	1	0	1	0	0	0	0	0	5	0	5	0	0	0	0	6
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	16.7	0	16.7	0	0	0	0	0	83.3	0	83.3	0	0	0	0	

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**2**
Total Volume	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

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City of San Bernardino
N/S: Victoria Avenue
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Weather: Clear

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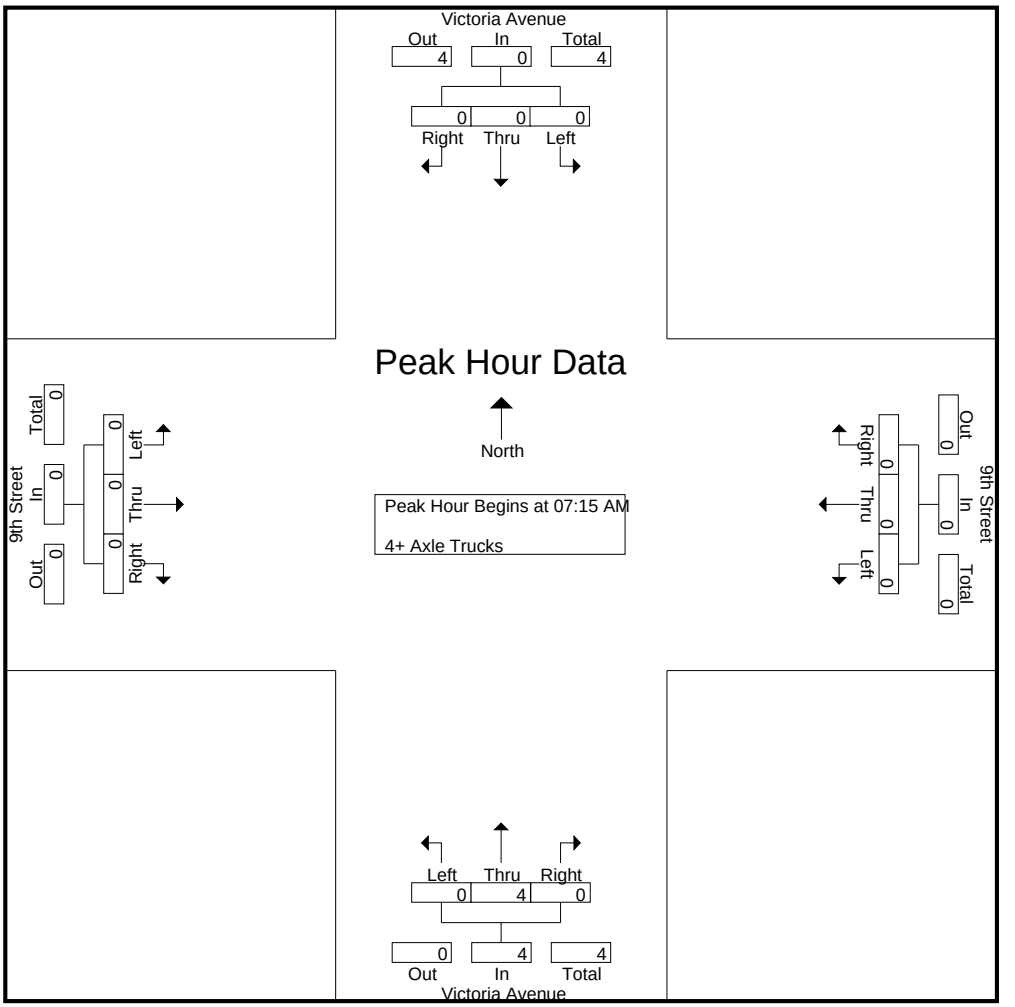
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

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City of San Bernardino
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E/W: 9th Street
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File Name : 31_SBC_Victoria_9th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	10	33	20	63	3	24	8	35	16	60	6	82	15	34	13	62	242
03:15 PM	7	50	18	75	6	26	12	44	9	57	2	68	8	32	9	49	236
03:30 PM	12	47	21	80	5	55	14	74	18	75	11	104	23	33	12	68	326
03:45 PM	14	51	15	80	5	31	12	48	9	63	12	84	35	35	14	84	296
Total	43	181	74	298	19	136	46	201	52	255	31	338	81	134	48	263	1100
04:00 PM	17	59	14	90	2	21	15	38	11	72	6	89	15	27	9	51	268
04:15 PM	7	50	20	77	7	26	13	46	8	72	6	86	19	42	4	65	274
04:30 PM	19	67	21	107	1	27	9	37	11	72	10	93	20	50	8	78	315
04:45 PM	13	50	11	74	2	18	16	36	11	87	5	103	18	30	8	56	269
Total	56	226	66	348	12	92	53	157	41	303	27	371	72	149	29	250	1126
05:00 PM	12	50	13	75	3	29	13	45	8	70	6	84	27	33	15	75	279
05:15 PM	17	57	13	87	2	28	17	47	14	83	7	104	19	43	8	70	308
05:30 PM	20	43	9	72	4	32	15	51	15	71	6	92	16	46	10	72	287
05:45 PM	10	65	25	100	8	29	10	47	8	76	7	91	18	48	9	75	313
Total	59	215	60	334	17	118	55	190	45	300	26	371	80	170	42	292	1187
Grand Total	158	622	200	980	48	346	154	548	138	858	84	1080	233	453	119	805	3413
Apprch %	16.1	63.5	20.4		8.8	63.1	28.1		12.8	79.4	7.8		28.9	56.3	14.8		
Total %	4.6	18.2	5.9	28.7	1.4	10.1	4.5	16.1	4	25.1	2.5	31.6	6.8	13.3	3.5	23.6	
Passenger Vehicles	156	612	195	963	46	333	152	531	136	839	82	1057	225	434	115	774	3325
% Passenger Vehicles	98.7	98.4	97.5	98.3	95.8	96.2	98.7	96.9	98.6	97.8	97.6	97.9	96.6	95.8	96.6	96.1	97.4
Large 2 Axle Vehicles	2	9	5	16	2	12	2	16	2	12	2	16	7	18	2	27	75
% Large 2 Axle Vehicles	1.3	1.4	2.5	1.6	4.2	3.5	1.3	2.9	1.4	1.4	2.4	1.5	3	4	1.7	3.4	2.2
3 Axle Vehicles	0	1	0	1	0	1	0	1	0	1	0	1	0	1	2	3	6
% 3 Axle Vehicles	0	0.2	0	0.1	0	0.3	0	0.2	0	0.1	0	0.1	0	0.2	1.7	0.4	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	6	0	6	1	0	0	1	7
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.7	0	0.6	0.4	0	0	0.1	0.2

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	12	50	13	75	3	29	13	45	8	70	6	84	**27**	33	**15**	**75**	279
05:15 PM	17	57	13	87	2	28	**17**	47	14	**83**	**7**	**104**	19	43	8	70	308
05:30 PM	**20**	43	9	72	4	**32**	15	**51**	**15**	71	6	92	16	46	10	72	287
05:45 PM	10	**65**	**25**	**100**	**8**	29	10	47	8	76	7	91	18	**48**	9	75	**313**
Total Volume	59	215	60	334	17	118	55	190	45	300	26	371	80	170	42	292	1187
% App. Total	17.7	64.4	18		8.9	62.1	28.9		12.1	80.9	7		27.4	58.2	14.4		
PHF	.738	.827	.600	.835	.531	.922	.809	.931	.750	.904	.929	.892	.741	.885	.700	.973	.948

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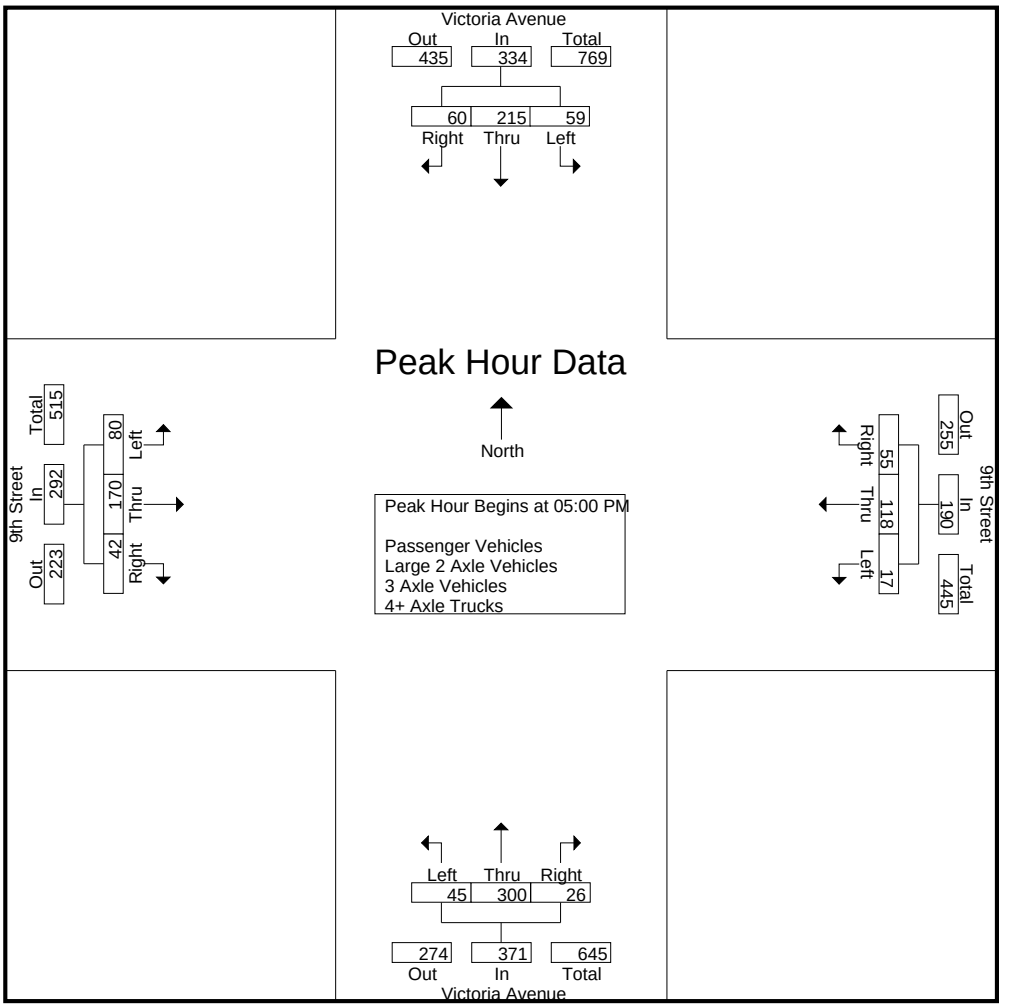
E/W: 9th Street
Weather: Clear

File Name : 31_SBC_Victoria_9th PM
Site Code : 99918352
Start Date : 5/17/2018



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:30 PM				04:30 PM				05:00 PM			
+0 mins.	14	51	15	80	5	**55**	14	**74**	11	72	**10**	93	**27**	33	**15**	**75**
+15 mins.	17	59	14	90	5	31	12	48	11	**87**	5	103	19	43	8	70
+30 mins.	7	50	20	77	2	21	**15**	38	8	70	6	84	16	46	10	72
+45 mins.	**19**	**67**	**21**	**107**	**7**	26	13	46	**14**	83	7	**104**	18	**48**	9	75
Total Volume	57	227	70	354	19	133	54	206	44	312	28	384	80	170	42	292
% App. Total	16.1	64.1	19.8		9.2	64.6	26.2		11.5	81.2	7.3		27.4	58.2	14.4	
PHF	.750	.847	.833	.827	.679	.605	.900	.696	.786	.897	.700	.923	.741	.885	.700	.973

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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	10	31	20	61	3	22	7	32	16	57	6	79	14	33	13	60	232
03:15 PM	6	50	18	74	6	24	12	42	9	55	2	66	8	30	9	47	229
03:30 PM	12	47	21	80	5	53	14	72	18	72	11	101	23	32	11	66	319
03:45 PM	13	50	14	77	5	29	12	46	9	63	12	84	33	33	14	80	287
Total	41	178	73	292	19	128	45	192	52	247	31	330	78	128	47	253	1067
04:00 PM	17	57	14	88	2	21	15	38	11	66	5	82	14	26	8	48	256
04:15 PM	7	49	19	75	7	25	13	45	7	71	6	84	19	41	4	64	268
04:30 PM	19	66	18	103	1	26	9	36	11	72	10	93	19	46	8	73	305
04:45 PM	13	48	11	72	2	17	16	35	11	85	5	101	18	30	8	56	264
Total	56	220	62	338	12	89	53	154	40	294	26	360	70	143	28	241	1093
05:00 PM	12	49	13	74	3	29	13	45	7	69	6	82	26	31	15	72	273
05:15 PM	17	57	13	87	2	28	17	47	14	82	7	103	17	42	7	66	303
05:30 PM	20	43	9	72	4	31	14	49	15	71	5	91	16	46	9	71	283
05:45 PM	10	65	25	100	6	28	10	44	8	76	7	91	18	44	9	71	306
Total	59	214	60	333	15	116	54	185	44	298	25	367	77	163	40	280	1165
Grand Total	156	612	195	963	46	333	152	531	136	839	82	1057	225	434	115	774	3325
Apprch %	16.2	63.6	20.2		8.7	62.7	28.6		12.9	79.4	7.8		29.1	56.1	14.9		
Total %	4.7	18.4	5.9	29	1.4	10	4.6	16	4.1	25.2	2.5	31.8	6.8	13.1	3.5	23.3	

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	12	49	13	74	3	29	13	45	7	69	6	82	**26**	31	**15**	**72**	273
05:15 PM	17	57	13	87	2	28	**17**	47	14	**82**	**7**	**103**	17	42	7	66	303
05:30 PM	**20**	43	9	72	4	**31**	14	**49**	**15**	71	5	91	16	**46**	9	71	283
05:45 PM	10	**65**	**25**	**100**	**6**	28	10	44	8	76	7	91	18	44	9	71	**306**
Total Volume	59	214	60	333	15	116	54	185	44	298	25	367	77	163	40	280	1165
% App. Total	17.7	64.3	18		8.1	62.7	29.2		12	81.2	6.8		27.5	58.2	14.3		
PHF	.738	.823	.600	.833	.625	.935	.794	.944	.733	.909	.893	.891	.740	.886	.667	.972	.952

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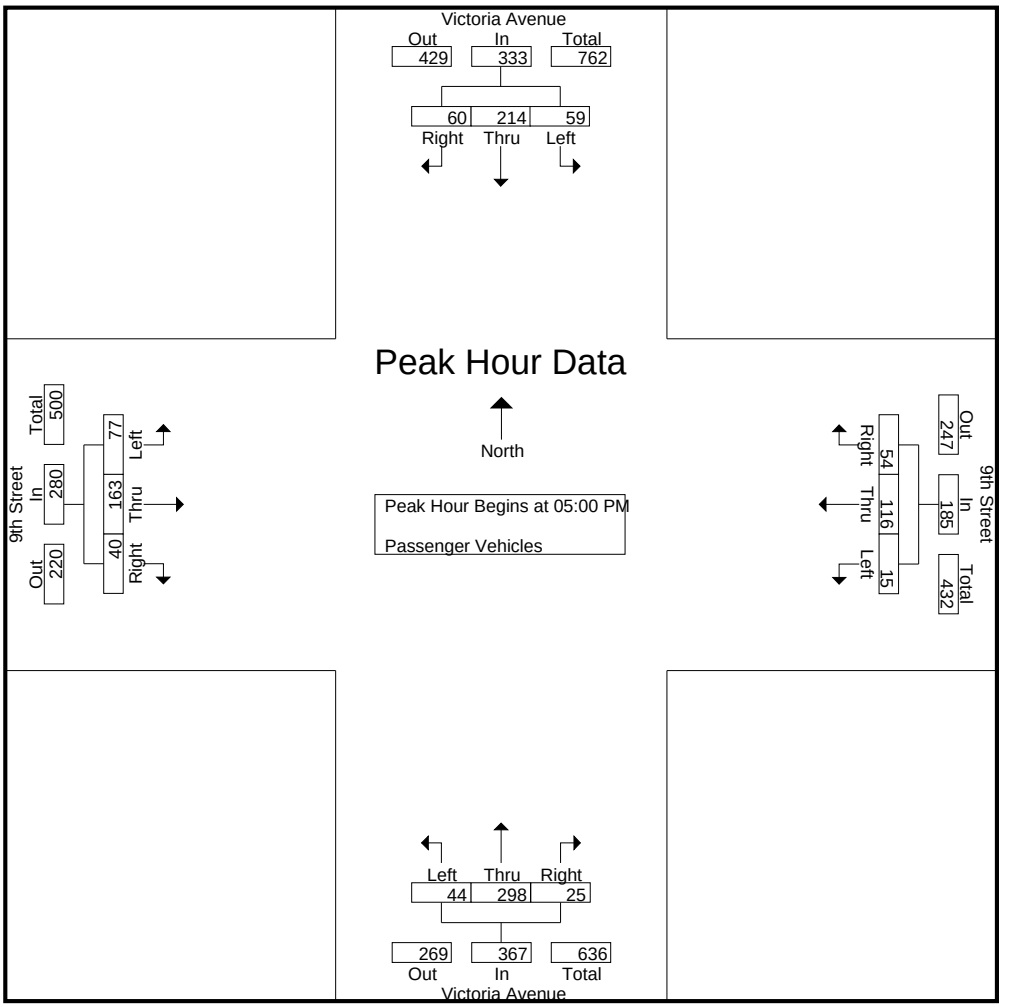

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	12	49	13	74	3	29	13	45	7	69	6	82	**26**	31	**15**	**72**
+15 mins.	17	57	13	87	2	28	**17**	47	14	**82**	**7**	**103**	17	42	7	66
+30 mins.	**20**	43	9	72	4	**31**	14	**49**	**15**	71	5	91	16	**46**	9	71
+45 mins.	10	**65**	**25**	**100**	**6**	28	10	44	8	76	7	91	18	44	9	71
Total Volume	59	214	60	333	15	116	54	185	44	298	25	367	77	163	40	280
% App. Total	17.7	64.3	18		8.1	62.7	29.2		12	81.2	6.8		27.5	58.2	14.3	
PHF	.738	.823	.600	.833	.625	.935	.794	.944	.733	.909	.893	.891	.740	.886	.667	.972

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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	2	1	3	0	3	0	3	1	1	0	2	9
03:15 PM	1	0	0	1	0	2	0	2	0	2	0	2	0	2	0	2	7
03:30 PM	0	0	0	0	0	1	0	1	0	3	0	3	0	1	1	2	6
03:45 PM	1	1	1	3	0	2	0	2	0	0	0	0	2	2	0	4	9
Total	2	2	1	5	0	7	1	8	0	8	0	8	3	6	1	10	31
04:00 PM	0	2	0	2	0	0	0	0	0	1	1	2	0	1	0	1	5
04:15 PM	0	1	1	2	0	1	0	1	1	1	0	2	0	1	0	1	6
04:30 PM	0	1	3	4	0	1	0	1	0	0	0	0	1	4	0	5	10
04:45 PM	0	2	0	2	0	1	0	1	0	1	0	1	0	0	0	0	4
Total	0	6	4	10	0	3	0	3	1	3	1	5	1	6	0	7	25
05:00 PM	0	1	0	1	0	0	0	0	1	1	0	2	1	2	0	3	6
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
05:30 PM	0	0	0	0	0	1	1	2	0	0	1	1	0	0	1	1	4
05:45 PM	0	0	0	0	2	1	0	3	0	0	0	0	0	4	0	4	7
Total	0	1	0	1	2	2	1	5	1	1	1	3	3	6	1	10	19
Grand Total	2	9	5	16	2	12	2	16	2	12	2	16	7	18	2	27	75
Apprch %	12.5	56.2	31.2		12.5	75	12.5		12.5	75	12.5		25.9	66.7	7.4		
Total %	2.7	12	6.7	21.3	2.7	16	2.7	21.3	2.7	16	2.7	21.3	9.3	24	2.7	36	

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**1**	0	**1**	0	0	0	0	**1**	**1**	0	**2**	1	2	0	3	6
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	2	2
05:30 PM	0	0	0	0	0	**1**	**1**	2	0	0	**1**	1	0	0	**1**	1	4
05:45 PM	0	0	0	0	**2**	1	0	**3**	0	0	0	0	0	**4**	0	**4**	**7**
Total Volume	0	1	0	1	2	2	1	5	1	1	1	3	3	6	1	10	19
% App. Total	0	100	0		40	40	20		33.3	33.3	33.3		30	60	10		
PHF	.000	.250	.000	.250	.250	.500	.250	.417	.250	.250	.250	.375	.375	.375	.250	.625	.679

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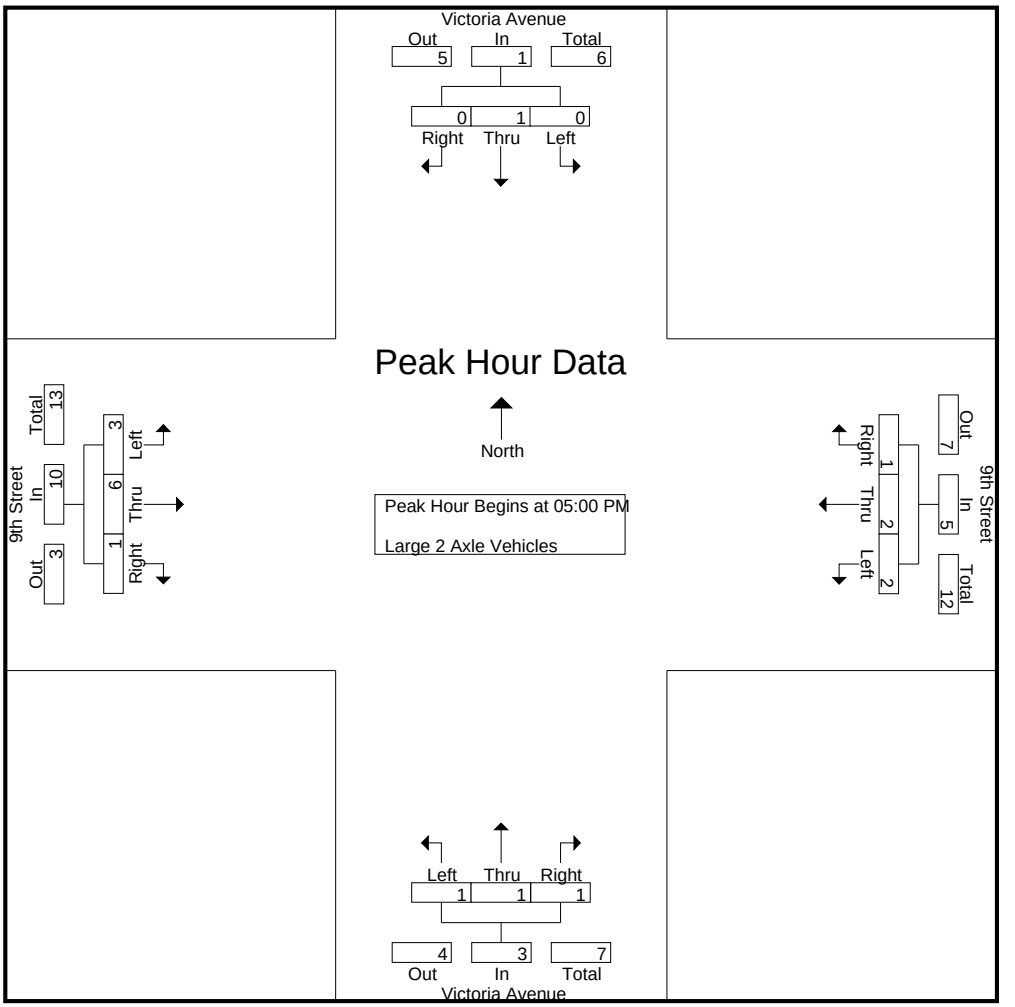

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	**1**	**1**	0	**2**	1	2	0	3
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	2
+30 mins.	0	0	0	0	0	**1**	**1**	2	0	0	**1**	1	0	0	**1**	1
+45 mins.	0	0	0	0	**2**	1	0	**3**	0	0	0	0	0	**4**	0	**4**
Total Volume	0	1	0	1	2	2	1	5	1	1	1	3	3	6	1	10
% App. Total	0	100	0		40	40	20		33.3	33.3	33.3		30	60	10	
PHF	.000	.250	.000	.250	.250	.500	.250	.417	.250	.250	.250	.375	.375	.375	.250	.625

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Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Grand Total	0	1	0	1	0	1	0	1	0	1	0	1	0	1	2	3	6
Apprch %	0	100	0		0	100	0		0	100	0		0	33.3	66.7		
Total %	0	16.7	0	16.7	0	16.7	0	16.7	0	16.7	0	16.7	0	16.7	33.3	50	

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**	**2**
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
% App. Total	0	0	0		0	0	0		0	0	0		0	50	50		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250	.250

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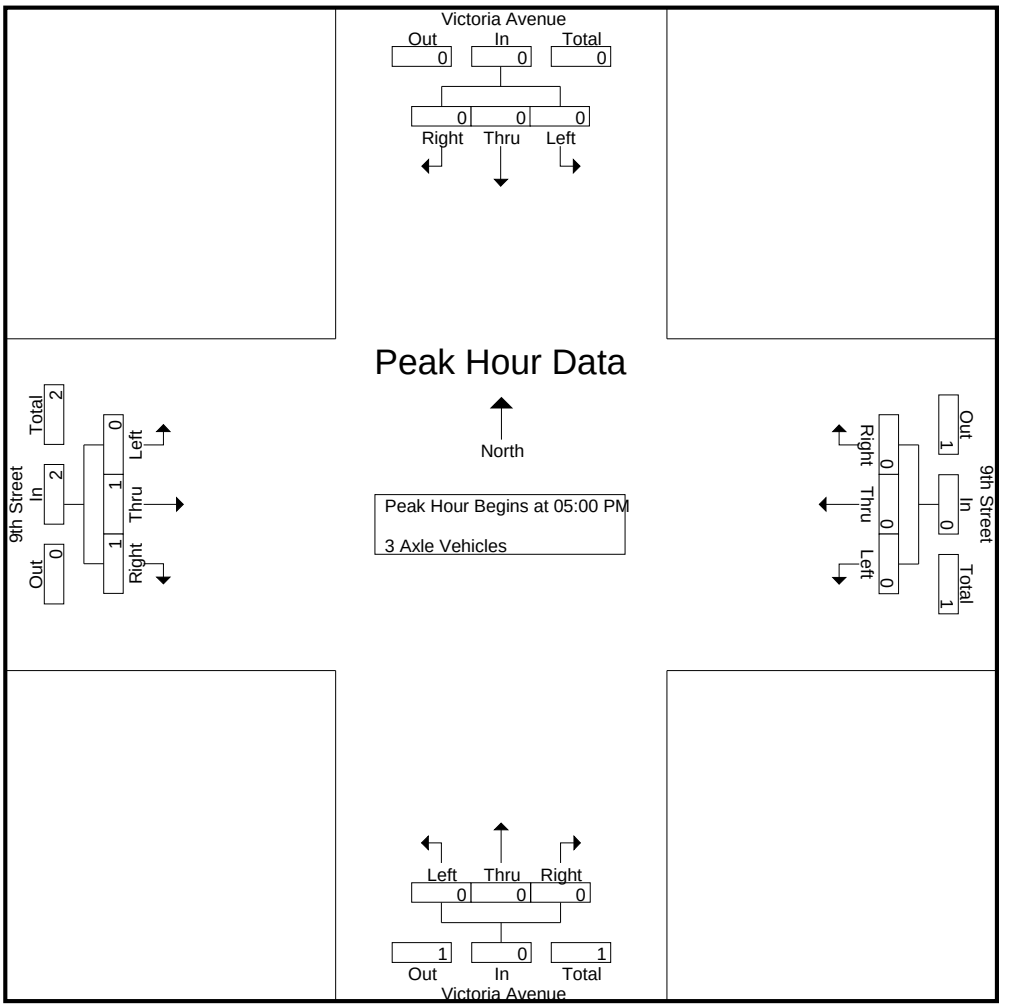

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
% App. Total	0	0	0		0	0	0		0	0	0		0	50	50	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250

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

City of San Bernardino
N/S: Victoria Avenue
E/W: 9th Street
Weather: Clear

File Name : 31_SBC_Victoria_9th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	5	0	5	1	0	0	1	6
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	5	0	5	1	0	0	1	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	6	0	6	1	0	0	1	7
Apprch %	0	0	0		0	0	0		0	100	0		100	0	0		
Total %	0	0	0	0	0	0	0	0	0	85.7	0	85.7	14.3	0	0	14.3	

	Victoria Avenue Southbound				9th Street Westbound				Victoria Avenue Northbound				9th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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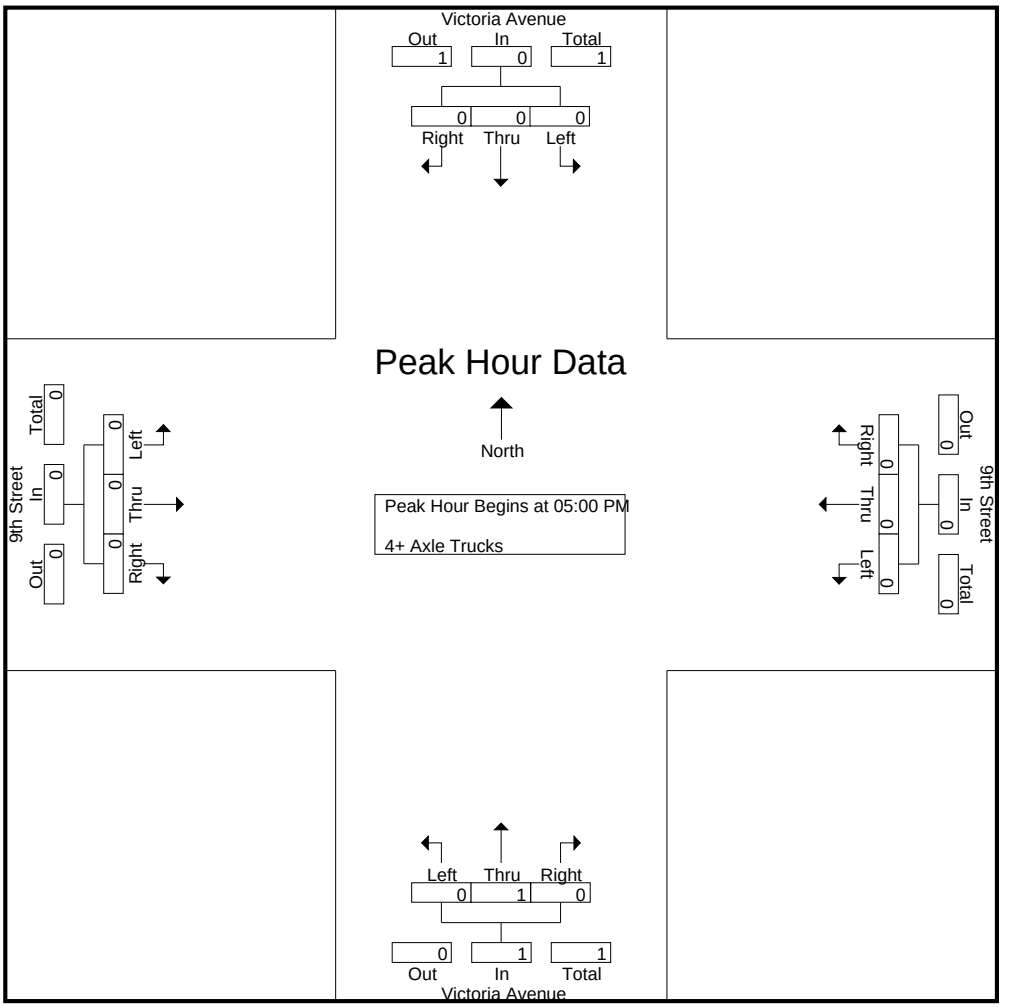
City of San Bernardino
N/S: Victoria Avenue
E/W: 9th Street
Weather: Clear

File Name : 31_SBC_Victoria_9th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

Location: San Bernardino
N/S: Victoria Avenue
E/W: 9th Street

Date: 5/17/2018
Day: Thursday

PEDESTRIANS

	North Leg Victoria Avenue	East Leg 9th Street	South Leg Victoria Avenue	West Leg 9th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
6:00 AM	2	0	1	0	3
6:15 AM	2	0	0	1	3
6:30 AM	0	1	0	0	1
6:45 AM	0	0	0	0	0
7:00 AM	2	1	0	0	3
7:15 AM	1	0	0	0	1
7:30 AM	2	0	0	0	2
7:45 AM	0	0	0	0	0
8:00 AM	2	1	0	0	3
8:15 AM	4	0	0	0	4
8:30 AM	0	1	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	15	4	1	1	21

	North Leg Victoria Avenue	East Leg 9th Street	South Leg Victoria Avenue	West Leg 9th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	0	2	0	0	2
3:15 PM	0	1	0	0	1
3:30 PM	0	0	1	0	1
3:45 PM	8	0	1	4	13
4:00 PM	1	1	0	1	3
4:15 PM	4	0	0	0	4
4:30 PM	3	2	0	0	5
4:45 PM	2	3	0	0	5
5:00 PM	1	3	0	2	6
5:15 PM	1	3	0	2	6
5:30 PM	0	0	0	0	0
5:45 PM	3	0	0	0	3
TOTAL VOLUMES:	23	15	2	9	49

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

Location: San Bernardino
N/S: Victoria Avenue
E/W: 9th Street

Date: 5/17/2018
Day: Thursday

BICYCLES

	Southbound Victoria Avenue			Westbound 9th Street			Northbound Victoria Avenue			Eastbound 9th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
6:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1	0	0	1	0	0	1	0	4

	Southbound Victoria Avenue			Westbound 9th Street			Northbound Victoria Avenue			Eastbound 9th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	0	0	0	0	1	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	1	1	1	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	1	0	0	0	1	2	3	1	0	1	0	10

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Corona, CA 92878
951-268-6268

Prepared by National Data & Surveying Services

Del Rosa Dr & 6th St

Peak Hour Turning Movement Count

ID: 19-06039-019
City: San Bernardino

Day: Thursday
Date: 03/14/2019

PEAK HOURS

AM	07:00 AM - 08:00 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Del Rosa Dr — SOUTHBOUND

AM	92	270	43	0	388	AM
NOON	0	0	0	0	0	NOON
PM	29	218	14	0	380	PM
	0	2	1	0		

6th St — EASTBOUND

AM	NOON	PM	
300	0	124	
0	0	0	0
150	0	55	1
142	0	120	1
46	0	14	0
AM	NOON	PM	

CONTROL

Signalized

TEV	1307 AM	0 NOON	1031 PM
PHF	0.66		0.90

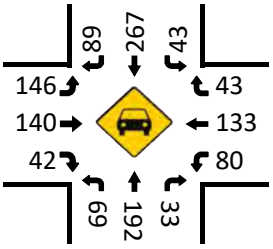
6th St — WESTBOUND

	PM	NOON	AM
0	18	0	43
1	85	0	138
1	39	0	83
0	0	0	0
	256	0	220
	PM	NOON	AM

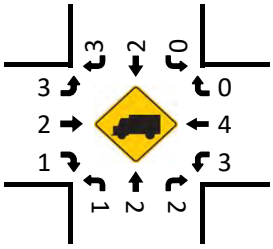
Del Rosa Dr — NORTHBOUND

	0	1	2	0		
PM	271	0	10	307	122	PM
NOON	0	0	0	0	0	NOON
AM	399	0	70	195	35	AM

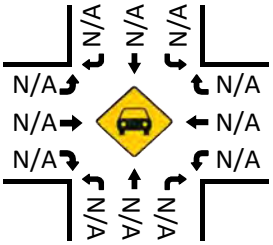
Cars (AM)



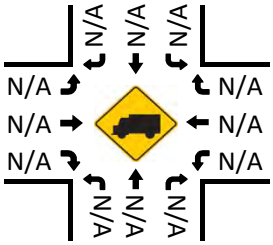
2axle (AM)



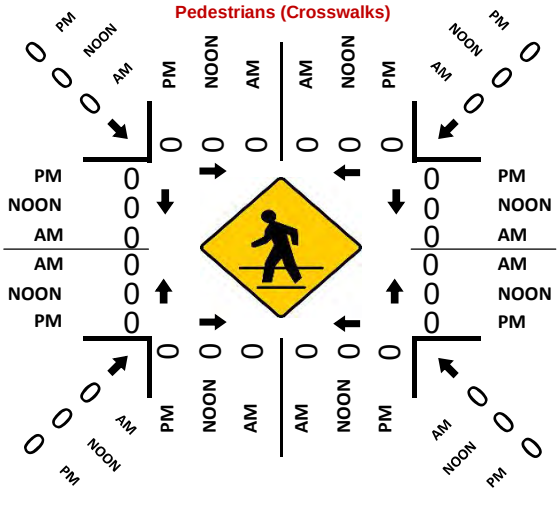
Cars (NOON)



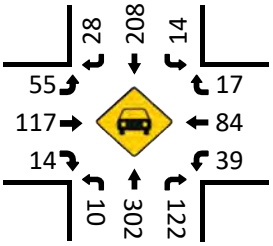
2axle (NOON)



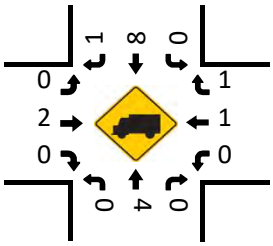
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & 6th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-019
Date: 3/14/2019

Total

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	19	49	9	0	6	44	25	0	29	22	10	0	15	31	11	0	270
7:15 AM	44	67	8	0	27	71	42	0	59	63	15	0	20	62	18	0	496
7:30 AM	4	45	12	0	9	85	18	0	44	47	14	0	23	15	8	0	324
7:45 AM	3	34	6	0	1	70	7	0	18	10	7	0	25	30	6	0	217
8:00 AM	4	37	7	0	4	50	9	0	16	15	2	0	9	21	5	0	179
8:15 AM	0	41	7	0	2	26	6	0	28	27	4	0	9	25	15	0	190
8:30 AM	2	42	8	0	3	48	6	0	11	15	4	0	11	16	7	0	173
8:45 AM	1	26	6	0	6	36	8	0	9	14	5	0	9	32	6	0	158
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	77	341	63	0	58	430	121	0	214	213	61	0	121	232	76	0	2007
APPROACH %'s :	16.01%	70.89%	13.10%	0.00%	9.52%	70.61%	19.87%	0.00%	43.85%	43.65%	12.50%	0.00%	28.21%	54.08%	17.72%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	70	195	35	0	43	270	92	0	150	142	46	0	83	138	43	0	1307
PEAK HR FACTOR :	0.398	0.728	0.729	0.000	0.398	0.794	0.548	0.000	0.636	0.563	0.767	0.000	0.830	0.556	0.597	0.000	0.659
	0.630				0.723				0.617				0.660				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	69	20	0	4	50	4	0	29	30	8	0	6	24	5	0	249
4:15 PM	2	59	16	0	3	47	4	0	9	23	1	0	11	16	4	0	195
4:30 PM	1	64	25	0	5	63	4	0	13	28	2	0	9	18	4	0	236
4:45 PM	1	64	27	0	6	57	7	0	10	22	4	0	8	16	6	0	228
5:00 PM	1	103	31	0	1	48	8	0	9	35	2	0	11	29	2	0	280
5:15 PM	7	76	39	0	2	50	10	0	23	35	6	0	11	22	6	0	287
5:30 PM	2	66	28	0	1	40	3	0	14	36	5	0	10	16	7	0	228
5:45 PM	2	66	22	0	9	45	3	0	14	24	6	0	7	19	3	0	220
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	16	567	208	0	31	400	43	0	121	233	34	0	73	160	37	0	1923
APPROACH %'s :	2.02%	71.68%	26.30%	0.00%	6.54%	84.39%	9.07%	0.00%	31.19%	60.05%	8.76%	0.00%	27.04%	59.26%	13.70%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	10	307	122	0	14	218	29	0	55	120	14	0	39	85	18	0	1031
PEAK HR FACTOR :	0.357	0.745	0.782	0.000	0.583	0.865	0.725	0.000	0.598	0.857	0.583	0.000	0.886	0.733	0.750	0.000	0.898
	0.813				0.906				0.738				0.845				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & 6th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-019
Date: 3/14/2019

Cars

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	18	48	8	0	6	44	22	0	29	21	10	0	15	29	11	0	261
7:15 AM	44	67	8	0	27	68	42	0	57	63	14	0	20	60	18	0	488
7:30 AM	4	44	12	0	9	85	18	0	43	47	13	0	21	15	8	0	319
7:45 AM	3	33	5	0	1	70	7	0	17	9	5	0	24	29	6	0	209
8:00 AM	3	36	7	0	4	44	3	0	16	14	2	0	9	20	5	0	163
8:15 AM	0	40	7	0	1	23	6	0	21	20	4	0	8	25	14	0	169
8:30 AM	0	41	8	0	3	46	6	0	11	15	3	0	11	16	7	0	167
8:45 AM	0	26	5	0	5	34	8	0	9	13	2	0	9	32	6	0	149
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	72	335	60	0	56	414	112	0	203	202	53	0	117	226	75	0	1925
APPROACH %'s :	15.42%	71.73%	12.85%	0.00%	9.62%	71.13%	19.24%	0.00%	44.32%	44.10%	11.57%	0.00%	27.99%	54.07%	17.94%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	69	192	33	0	43	267	89	0	146	140	42	0	80	133	43	0	1277
PEAK HR FACTOR :	0.39	0.716	0.688	0.000	0.398	0.785	0.530	0.000	0.640	0.556	0.750	0.000	0.833	0.554	0.597	0.000	0.654
		0.618				0.728				0.612				0.653			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	68	20	0	4	46	4	0	25	28	7	0	6	21	5	0	234
4:15 PM	2	56	16	0	3	44	4	0	9	23	1	0	10	15	4	0	187
4:30 PM	1	64	25	0	5	59	3	0	13	28	2	0	9	17	4	0	230
4:45 PM	1	62	27	0	6	54	7	0	10	21	4	0	8	16	5	0	221
5:00 PM	1	101	31	0	1	46	8	0	9	35	2	0	11	29	2	0	276
5:15 PM	7	75	39	0	2	49	10	0	23	33	6	0	11	22	6	0	283
5:30 PM	2	66	28	0	1	39	3	0	14	36	5	0	10	16	7	0	227
5:45 PM	2	63	22	0	8	45	3	0	14	22	6	0	7	19	3	0	214
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	16	555	208	0	30	382	42	0	117	226	33	0	72	155	36	0	1872
APPROACH %'s :	2.05%	71.25%	26.70%	0.00%	6.61%	84.14%	9.25%	0.00%	31.12%	60.11%	8.78%	0.00%	27.38%	58.94%	13.69%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	10	302	122	0	14	208	28	0	55	117	14	0	39	84	17	0	1010
PEAK HR FACTOR :	0.36	0.748	0.782	0.000	0.583	0.881	0.700	0.000	0.598	0.836	0.583	0.000	0.886	0.724	0.708	0.000	0.892
		0.816				0.933				0.750				0.833			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & 6th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-019
Date: 3/14/2019

2axle

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	1	1	0	0	0	3	0	0	1	0	0	0	2	0	0	9
7:15 AM	0	0	0	0	0	2	0	0	1	0	0	0	0	1	0	0	4
7:30 AM	0	1	0	0	0	0	0	0	1	0	0	0	2	0	0	0	4
7:45 AM	0	0	1	0	0	0	0	0	1	1	1	0	1	1	0	0	6
8:00 AM	1	1	0	0	0	6	6	0	0	1	0	0	0	1	0	0	16
8:15 AM	0	0	0	0	1	2	0	0	7	7	0	0	0	0	1	0	18
8:30 AM	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	3
8:45 AM	0	0	0	0	1	2	0	0	0	1	0	0	0	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	4	2	0	2	13	9	0	10	11	2	0	3	5	1	0	64
APPROACH %'s :	25.00%	50.00%	25.00%	0.00%	8.33%	54.17%	37.50%	0.00%	43.48%	47.83%	8.70%	0.00%	33.33%	55.56%	11.11%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	1	2	2	0	0	2	3	0	3	2	1	0	3	4	0	0	23
PEAK HR FACTOR :	0.250	0.500	0.500	0.000	0.000	0.250	0.250	0.000	0.750	0.500	0.250	0.000	0.375	0.500	0.000	0.000	0.639
	0.417				0.417				0.500				0.875				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	2	0	0	4	2	1	0	0	3	0	0	13
4:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	1	1	0	0	6
4:30 PM	0	0	0	0	0	3	1	0	0	0	0	0	0	1	0	0	5
4:45 PM	0	2	0	0	0	3	0	0	0	0	0	0	0	0	1	0	6
5:00 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	9	0	0	1	13	1	0	4	4	1	0	1	5	1	0	40
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	6.67%	86.67%	6.67%	0.00%	44.44%	44.44%	11.11%	0.00%	14.29%	71.43%	14.29%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	4	0	0	0	8	1	0	0	2	0	0	0	1	1	0	17
PEAK HR FACTOR :	0.00	0.500	0.000	0.000	0.000	0.667	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.000	0.708
	0.500				0.563				0.250				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & 6th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-019
Date: 3/14/2019

3axle

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	3
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	1	0	0	3	0	0	1	0	0	0	1	1	0	0	8
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	3
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250
						0.250				0.250				0.250			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2	0	0	0	2	0	0	0	3	0	0	0	0	0	0	7
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500
						0.250				0.250							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Del Rosa Dr & 6th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-019
Date: 3/14/2019

4axle

NS/EW Streets:	Del Rosa Dr				Del Rosa Dr				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	1	0	0	0	0	0	0	0	0	6	0	0	0	0	0	10
APPROACH %'s :	75.00%	25.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%					
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	4
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.500
	0.250								0.750								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.250				0.250												

Prepared by National Data & Surveying Services

Sterling Ave & 6th St

Peak Hour Turning Movement Count

ID: 19-06039-020
City: San Bernardino

Day: Thursday
Date: 03/14/2019

	PEAK HOURS	COUNT PERIODS
AM	07:00 AM - 08:00 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Sterling Ave — SOUTHBOUND

	Right	Through	Left	U-Turn	Departing
AM	39	462	23	0	182
NOON	0	0	0	0	0
PM	22	235	25	0	525
(red)	0	2	0	0	

6th St — EASTBOUND

	AM	NOON	PM	(red)
Departing	164	0	111	
U-Turn	0	0	0	0
Left	36	0	54	0
Through	100	0	103	1
Right	12	0	11	0

6th St — WESTBOUND

	(red)	PM	NOON	AM
Right	0	17	0	14
Through	1	75	0	113
Left	0	9	0	8
U-Turn	0	0	0	0
Departing		165	0	132

Sterling Ave — NORTHBOUND

	Departing	U-Turn	Left	Through	Right
(red)		0	0	2	0
PM	255	0	14	454	37
NOON	0	0	0	0	0
AM	482	0	12	132	9

CONTROL

2-Way Stop (EB/WB)

	AM	NOON	PM
TEV	960	0	1056
PHF	0.84		0.92

Cars and 2axle

	Cars (AM)	Cars (NOON)	Cars (PM)	2axle (AM)	2axle (NOON)	2axle (PM)
SB Right	36	N/A	21	2	N/A	1
SB Through	456	N/A	233	5	N/A	2
SB Left	22	N/A	24	1	N/A	1
EB Left	35	N/A	53	1	N/A	1
EB Through	98	N/A	102	2	N/A	1
EB Right	12	N/A	11	0	N/A	0
WB Right	14	N/A	16	0	N/A	1
WB Through	110	N/A	74	3	N/A	1
WB Left	7	N/A	8	1	N/A	1
NB Left	12	N/A	13	0	N/A	1
NB Through	126	N/A	451	6	N/A	2
NB Right	9	N/A	36	0	N/A	1

Pedestrians (Crosswalks)

All crosswalk and diagonal counts (AM, NOON, PM): 0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 6th St
City: San Bernardino
Control: 2-Way Stop (EB/WB)

Project ID: 19-06039-020
Date: 3/14/2019

Total

NS/EW Streets:	Sterling Ave				Sterling Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	29	2	0	4	78	14	0	7	18	3	0	3	27	3	0	193
7:15 AM	4	38	2	0	5	119	13	0	8	41	3	0	0	48	6	0	287
7:30 AM	3	37	2	0	3	117	3	0	18	30	5	0	3	16	1	0	238
7:45 AM	0	28	3	0	11	148	9	0	3	11	1	0	2	22	4	0	242
8:00 AM	3	52	3	0	7	54	3	0	6	18	3	0	1	20	4	0	174
8:15 AM	2	43	2	0	4	69	9	0	11	18	2	0	2	27	6	0	195
8:30 AM	3	46	0	0	13	60	5	0	8	14	3	1	2	20	6	0	181
8:45 AM	1	36	4	0	4	72	12	0	5	12	6	0	1	20	5	0	178
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	21	309	18	0	51	717	68	0	66	162	26	1	14	200	35	0	1688
APPROACH %'s :	6.03%	88.79%	5.17%	0.00%	6.10%	85.77%	8.13%	0.00%	25.88%	63.53%	10.20%	0.39%	5.62%	80.32%	14.06%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	12	132	9	0	23	462	39	0	36	100	12	0	8	113	14	0	960
PEAK HR FACTOR :	0.600	0.868	0.750	0.000	0.523	0.780	0.696	0.000	0.500	0.610	0.600	0.000	0.667	0.589	0.583	0.000	0.836
	0.869				0.780				0.698				0.625				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	3	91	4	0	5	63	5	0	14	25	1	0	4	11	7	0	233
4:15 PM	3	106	7	0	4	51	4	0	10	17	3	0	1	10	0	0	216
4:30 PM	4	96	6	0	4	63	10	0	9	25	1	0	1	21	5	0	245
4:45 PM	4	104	11	0	7	65	4	0	12	19	0	0	2	12	5	0	245
5:00 PM	3	112	14	0	12	61	8	0	13	26	5	0	2	26	4	0	286
5:15 PM	4	116	7	0	3	55	5	0	14	35	5	0	1	20	6	0	271
5:30 PM	3	122	5	0	3	54	5	0	15	23	1	0	4	17	2	0	254
5:45 PM	1	100	6	0	1	49	11	0	11	17	1	0	2	12	1	0	212
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	25	847	60	0	39	461	52	0	98	187	17	0	17	129	30	0	1962
APPROACH %'s :	2.68%	90.88%	6.44%	0.00%	7.07%	83.51%	9.42%	0.00%	32.45%	61.92%	5.63%	0.00%	9.66%	73.30%	17.05%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	14	454	37	0	25	235	22	0	54	103	11	0	9	75	17	0	1056
PEAK HR FACTOR :	0.875	0.930	0.661	0.000	0.521	0.904	0.688	0.000	0.900	0.736	0.550	0.000	0.563	0.721	0.708	0.000	0.923
	0.971				0.870				0.778				0.789				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 6th St
City: San Bernardino
Control: 2-Way Stop (EB/WB)

Project ID: 19-06039-020
Date: 3/14/2019

Cars

NS/EW Streets:	Sterling Ave				Sterling Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	26	2	0	4	78	11	0	6	17	3	0	3	26	3	0	184
7:15 AM	4	37	2	0	5	117	13	0	8	41	3	0	0	48	6	0	284
7:30 AM	3	36	2	0	3	115	3	0	18	30	5	0	2	16	1	0	234
7:45 AM	0	27	3	0	10	146	9	0	3	10	1	0	2	20	4	0	235
8:00 AM	3	51	3	0	6	53	3	0	5	17	3	0	1	19	4	0	168
8:15 AM	2	40	1	0	4	67	9	0	7	15	2	0	2	27	6	0	182
8:30 AM	3	44	0	0	13	57	5	0	8	13	3	1	2	19	5	0	173
8:45 AM	1	36	4	0	4	71	12	0	5	10	6	0	1	19	5	0	174
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	21	297	17	0	49	704	65	0	60	153	26	1	13	194	34	0	1634
APPROACH %'s :	6.27%	88.66%	5.07%	0.00%	5.99%	86.06%	7.95%	0.00%	25.00%	63.75%	10.83%	0.42%	5.39%	80.50%	14.11%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	12	126	9	0	22	456	36	0	35	98	12	0	7	110	14	0	937
PEAK HR FACTOR :	0.60	0.851	0.750	0.000	0.550	0.781	0.692	0.000	0.486	0.598	0.600	0.000	0.583	0.573	0.583	0.000	0.825
		0.855				0.779				0.684				0.606			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	3	90	4	0	5	57	5	0	12	25	1	0	4	10	7	0	223
4:15 PM	3	105	7	0	4	50	4	0	10	17	3	0	1	9	0	0	213
4:30 PM	4	95	6	0	4	61	9	0	9	25	1	0	1	20	5	0	240
4:45 PM	3	104	11	0	6	64	3	0	12	19	0	0	2	12	4	0	240
5:00 PM	3	111	13	0	12	61	8	0	13	26	5	0	1	26	4	0	283
5:15 PM	4	115	7	0	3	55	5	0	13	34	5	0	1	20	6	0	268
5:30 PM	3	121	5	0	3	53	5	0	15	23	1	0	4	16	2	0	251
5:45 PM	1	99	6	0	1	49	11	0	11	15	1	0	2	12	1	0	209
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	24	840	59	0	38	450	50	0	95	184	17	0	16	125	29	0	1927
APPROACH %'s :	2.60%	91.01%	6.39%	0.00%	7.06%	83.64%	9.29%	0.00%	32.09%	62.16%	5.74%	0.00%	9.41%	73.53%	17.06%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	13	451	36	0	24	233	21	0	53	102	11	0	8	74	16	0	1042
PEAK HR FACTOR :	0.81	0.932	0.692	0.000	0.500	0.910	0.656	0.000	0.883	0.750	0.550	0.000	0.500	0.712	0.667	0.000	0.920
		0.969				0.858				0.798				0.790			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 6th St
City: San Bernardino
Control: 2-Way Stop (EB/WB)

Project ID: 19-06039-020
Date: 3/14/2019

2axle

NS/EW Streets:	Sterling Ave				Sterling Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	3	0	0	0	0	2	0	1	1	0	0	0	1	0	0	8
7:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	0	4
7:45 AM	0	1	0	0	1	2	0	0	0	1	0	0	0	2	0	0	7
8:00 AM	0	1	0	0	1	1	0	0	1	1	0	0	0	1	0	0	6
8:15 AM	0	3	1	0	0	2	0	0	4	3	0	0	0	0	0	0	13
8:30 AM	0	2	0	0	0	3	0	0	0	1	0	0	0	1	0	0	7
8:45 AM	0	0	0	0	0	1	0	0	0	2	0	0	0	1	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	12	1	0	2	12	2	0	6	9	0	0	1	6	0	0	51
APPROACH %'s :	0.00%	92.31%	7.69%	0.00%	12.50%	75.00%	12.50%	0.00%	40.00%	60.00%	0.00%	0.00%	14.29%	85.71%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	6	0	0	1	5	2	0	1	2	0	0	1	3	0	0	21
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.250	0.625	0.250	0.000	0.250	0.500	0.000	0.000	0.250	0.375	0.000	0.000	0.656
	0.500				0.667				0.375				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	6	0	0	2	0	0	0	0	1	0	0	10
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	3
4:30 PM	0	1	0	0	0	2	1	0	0	0	0	0	0	1	0	0	5
4:45 PM	1	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	5
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2
5:15 PM	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3
5:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	3
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	6	1	0	1	11	2	0	3	1	0	0	1	4	1	0	32
APPROACH %'s :	12.50%	75.00%	12.50%	0.00%	7.14%	78.57%	14.29%	0.00%	75.00%	25.00%	0.00%	0.00%	16.67%	66.67%	16.67%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	13
PEAK HR FACTOR :	0.25	0.500	0.250	0.000	0.250	0.500	0.250	0.000	0.250	0.250	0.000	0.000	0.250	0.250	0.250	0.000	0.650
	1.000				0.333				0.250				0.750				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 6th St
City: San Bernardino
Control: 2-Way Stop (EB/WB)

Project ID: 19-06039-020
Date: 3/14/2019

3axle

NS/EW Streets:	Sterling Ave				Sterling Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
APPROACH %'s :					0.00%	50.00%	50.00%	0.00%									
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
						0.500											

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sterling Ave & 6th St
City: San Bernardino
Control: 2-Way Stop (EB/WB)

Project ID: 19-06039-020
Date: 3/14/2019

4axle

NS/EW Streets:	Sterling Ave				Sterling Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
APPROACH %'s :													0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%													
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
		0.250															

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

City of San Bernardino
N/S: Victoria Avenue
E/W: 6th Street
Weather: Clear

File Name : 29_SBC_Victoria_6th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	29	0	29	1	3	1	5	2	11	1	14	0	2	4	6	54
06:15 AM	0	32	1	33	2	0	1	3	1	22	0	23	1	3	2	6	65
06:30 AM	1	56	2	59	0	3	2	5	2	13	0	15	2	3	7	12	91
06:45 AM	2	62	2	66	1	3	4	8	3	20	0	23	4	3	4	11	108
Total	3	179	5	187	4	9	8	21	8	66	1	75	7	11	17	35	318
07:00 AM	2	63	5	70	3	9	3	15	5	31	0	36	4	3	7	14	135
07:15 AM	5	76	9	90	2	8	4	14	11	29	0	40	10	12	7	29	173
07:30 AM	2	82	5	89	1	8	4	13	7	26	0	33	7	8	16	31	166
07:45 AM	4	76	2	82	2	7	6	15	5	34	1	40	2	10	11	23	160
Total	13	297	21	331	8	32	17	57	28	120	1	149	23	33	41	97	634
08:00 AM	1	50	2	53	2	10	3	15	9	30	0	39	3	6	2	11	118
08:15 AM	1	43	2	46	1	7	0	8	4	32	0	36	3	7	7	17	107
08:30 AM	3	49	6	58	0	8	2	10	5	20	0	25	4	5	12	21	114
08:45 AM	1	38	4	43	1	3	2	6	5	15	0	20	2	4	3	9	78
Total	6	180	14	200	4	28	7	39	23	97	0	120	12	22	24	58	417
Grand Total	22	656	40	718	16	69	32	117	59	283	2	344	42	66	82	190	1369
Apprch %	3.1	91.4	5.6		13.7	59	27.4		17.2	82.3	0.6		22.1	34.7	43.2		
Total %	1.6	47.9	2.9	52.4	1.2	5	2.3	8.5	4.3	20.7	0.1	25.1	3.1	4.8	6	13.9	
Passenger Vehicles	22	642	37	701	15	69	31	115	54	280	2	336	42	66	81	189	1341
% Passenger Vehicles	100	97.9	92.5	97.6	93.8	100	96.9	98.3	91.5	98.9	100	97.7	100	100	98.8	99.5	98
Large 2 Axle Vehicles	0	12	3	15	1	0	1	2	4	2	0	6	0	0	1	1	24
% Large 2 Axle Vehicles	0	1.8	7.5	2.1	6.2	0	3.1	1.7	6.8	0.7	0	1.7	0	0	1.2	0.5	1.8
3 Axle Vehicles	0	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0	4
% 3 Axle Vehicles	0	0.3	0	0.3	0	0	0	0	1.7	0.4	0	0.6	0	0	0	0	0.3
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	63	5	70	**3**	**9**	3	**15**	5	31	0	36	4	3	7	14	135
07:15 AM	**5**	76	**9**	**90**	2	8	4	14	**11**	29	0	**40**	**10**	**12**	7	29	**173**
07:30 AM	2	**82**	5	89	1	8	4	13	7	26	0	33	7	8	**16**	**31**	166
07:45 AM	4	76	2	82	2	7	**6**	15	5	**34**	**1**	40	2	10	11	23	160
Total Volume	13	297	21	331	8	32	17	57	28	120	1	149	23	33	41	97	634
% App. Total	3.9	89.7	6.3		14	56.1	29.8		18.8	80.5	0.7		23.7	34	42.3		
PHF	.650	.905	.583	.919	.667	.889	.708	.950	.636	.882	.250	.931	.575	.688	.641	.782	.916

Counts Unlimited, Inc.
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Corona, CA 92878
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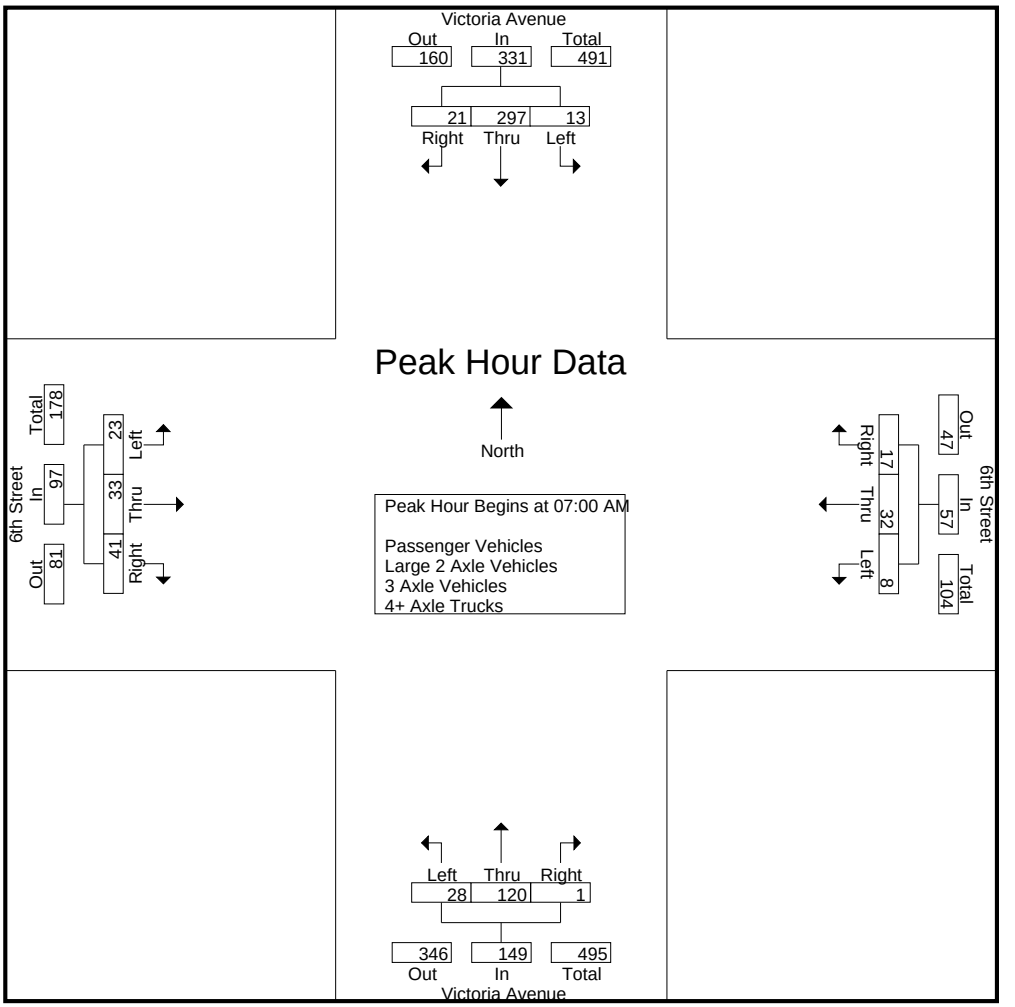
City of San Bernardino
N/S: Victoria Avenue
E/W: 6th Street
Weather: Clear

File Name : 29_SBC_Victoria_6th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	2	63	5	70	**3**	**9**	3	**15**	**11**	29	0	**40**	4	3	7	14
+15 mins.	**5**	76	**9**	**90**	2	8	4	14	7	26	0	33	**10**	**12**	7	29
+30 mins.	2	**82**	5	89	1	8	4	13	5	**34**	**1**	40	7	8	**16**	**31**
+45 mins.	4	76	2	82	2	7	**6**	15	9	30	0	39	2	10	11	23
Total Volume	13	297	21	331	8	32	17	57	32	119	1	152	23	33	41	97
% App. Total	3.9	89.7	6.3		14	56.1	29.8		21.1	78.3	0.7		23.7	34	42.3	
PHF	.650	.905	.583	.919	.667	.889	.708	.950	.727	.875	.250	.950	.575	.688	.641	.782

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City of San Bernardino
N/S: Victoria Avenue
E/W: 6th Street
Weather: Clear

File Name : 29_SBC_Victoria_6th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	29	0	29	1	3	1	5	1	11	1	13	0	2	4	6	53
06:15 AM	0	31	1	32	2	0	1	3	1	22	0	23	1	3	2	6	64
06:30 AM	1	55	2	58	0	3	2	5	2	12	0	14	2	3	6	11	88
06:45 AM	2	62	2	66	1	3	4	8	3	18	0	21	4	3	4	11	106
Total	3	177	5	185	4	9	8	21	7	63	1	71	7	11	16	34	311
07:00 AM	2	63	4	69	2	9	3	14	4	31	0	35	4	3	7	14	132
07:15 AM	5	76	9	90	2	8	4	14	11	29	0	40	10	12	7	29	173
07:30 AM	2	80	4	86	1	8	4	13	7	26	0	33	7	8	16	31	163
07:45 AM	4	76	2	82	2	7	5	14	4	34	1	39	2	10	11	23	158
Total	13	295	19	327	7	32	16	55	26	120	1	147	23	33	41	97	626
08:00 AM	1	47	2	50	2	10	3	15	8	30	0	38	3	6	2	11	114
08:15 AM	1	40	2	43	1	7	0	8	4	32	0	36	3	7	7	17	104
08:30 AM	3	46	5	54	0	8	2	10	5	20	0	25	4	5	12	21	110
08:45 AM	1	37	4	42	1	3	2	6	4	15	0	19	2	4	3	9	76
Total	6	170	13	189	4	28	7	39	21	97	0	118	12	22	24	58	404
Grand Total	22	642	37	701	15	69	31	115	54	280	2	336	42	66	81	189	1341
Apprch %	3.1	91.6	5.3		13	60	27		16.1	83.3	0.6		22.2	34.9	42.9		
Total %	1.6	47.9	2.8	52.3	1.1	5.1	2.3	8.6	4	20.9	0.1	25.1	3.1	4.9	6	14.1	

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	63	4	69	**2**	**9**	3	**14**	4	31	0	35	4	3	7	14	132
07:15 AM	**5**	76	**9**	**90**	2	8	4	14	**11**	29	0	**40**	**10**	**12**	7	29	**173**
07:30 AM	2	**80**	4	86	1	8	4	13	7	26	0	33	7	8	**16**	**31**	163
07:45 AM	4	76	2	82	2	7	**5**	14	4	**34**	**1**	39	2	10	11	23	158
Total Volume	13	295	19	327	7	32	16	55	26	120	1	147	23	33	41	97	626
% App. Total	4	90.2	5.8		12.7	58.2	29.1		17.7	81.6	0.7		23.7	34	42.3		
PHF	.650	.922	.528	.908	.875	.889	.800	.982	.591	.882	.250	.919	.575	.688	.641	.782	.905

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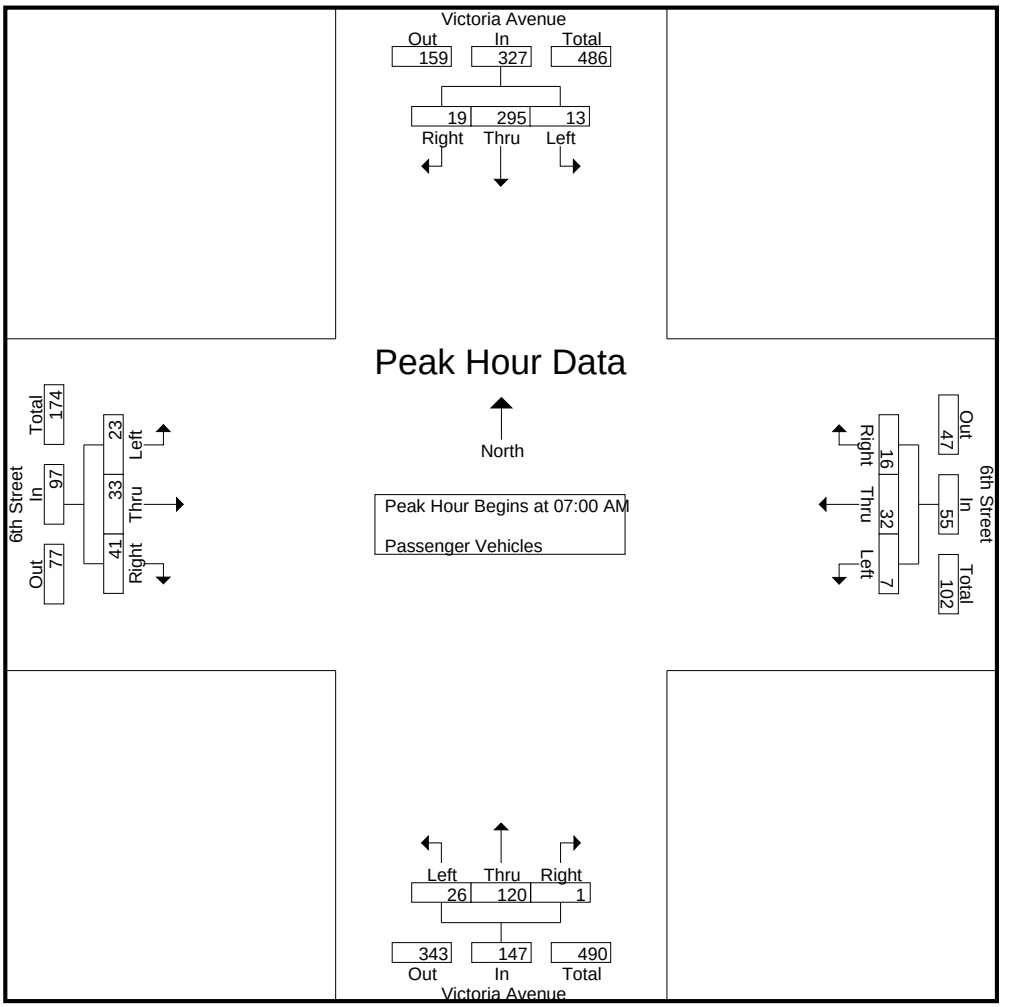
City of San Bernardino
N/S: Victoria Avenue
E/W: 6th Street
Weather: Clear

File Name : 29_SBC_Victoria_6th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	2	63	4	69	**2**	**9**	3	**14**	4	31	0	35	4	3	7	14
+15 mins.	**5**	76	**9**	**90**	2	8	4	14	**11**	29	0	**40**	**10**	**12**	7	29
+30 mins.	2	**80**	4	86	1	8	4	13	7	26	0	33	7	8	**16**	**31**
+45 mins.	4	76	2	82	2	7	**5**	14	4	**34**	**1**	39	2	10	11	23
Total Volume	13	295	19	327	7	32	16	55	26	120	1	147	23	33	41	97
% App. Total	4	90.2	5.8		12.7	58.2	29.1		17.7	81.6	0.7		23.7	34	42.3	
PHF	.650	.922	.528	.908	.875	.889	.800	.982	.591	.882	.250	.919	.575	.688	.641	.782

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City of San Bernardino
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E/W: 6th Street
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File Name : 29_SBC_Victoria_6th AM
Site Code : 99918352
Start Date : 5/17/2018
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Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
06:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
06:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	2	0	2	0	0	0	0	1	2	0	3	0	0	1	1	6
07:00 AM	0	0	1	1	1	0	0	1	1	0	0	1	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	2	2	4	1	0	1	2	1	0	0	1	0	0	0	0	7
08:00 AM	0	3	0	3	0	0	0	0	1	0	0	1	0	0	0	0	4
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	4
08:45 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
Total	0	8	1	9	0	0	0	0	2	0	0	2	0	0	0	0	11
Grand Total	0	12	3	15	1	0	1	2	4	2	0	6	0	0	1	1	24
Apprch %	0	80	20		50	0	50		66.7	33.3	0		0	0	100		
Total %	0	50	12.5	62.5	4.2	0	4.2	8.3	16.7	8.3	0	25	0	0	4.2	4.2	

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**1**	1	**1**	0	0	**1**	**1**	0	0	**1**	0	0	0	0	**3**
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	**2**	1	**3**	0	0	0	0	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0	1
Total Volume	0	2	2	4	1	0	1	2	1	0	0	1	0	0	0	0	7
% App. Total	0	50	50		50	0	50		100	0	0		0	0	0		
PHF	.000	.250	.500	.333	.250	.000	.250	.500	.250	.000	.000	.250	.000	.000	.000	.000	.583

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Site Code : 99918352
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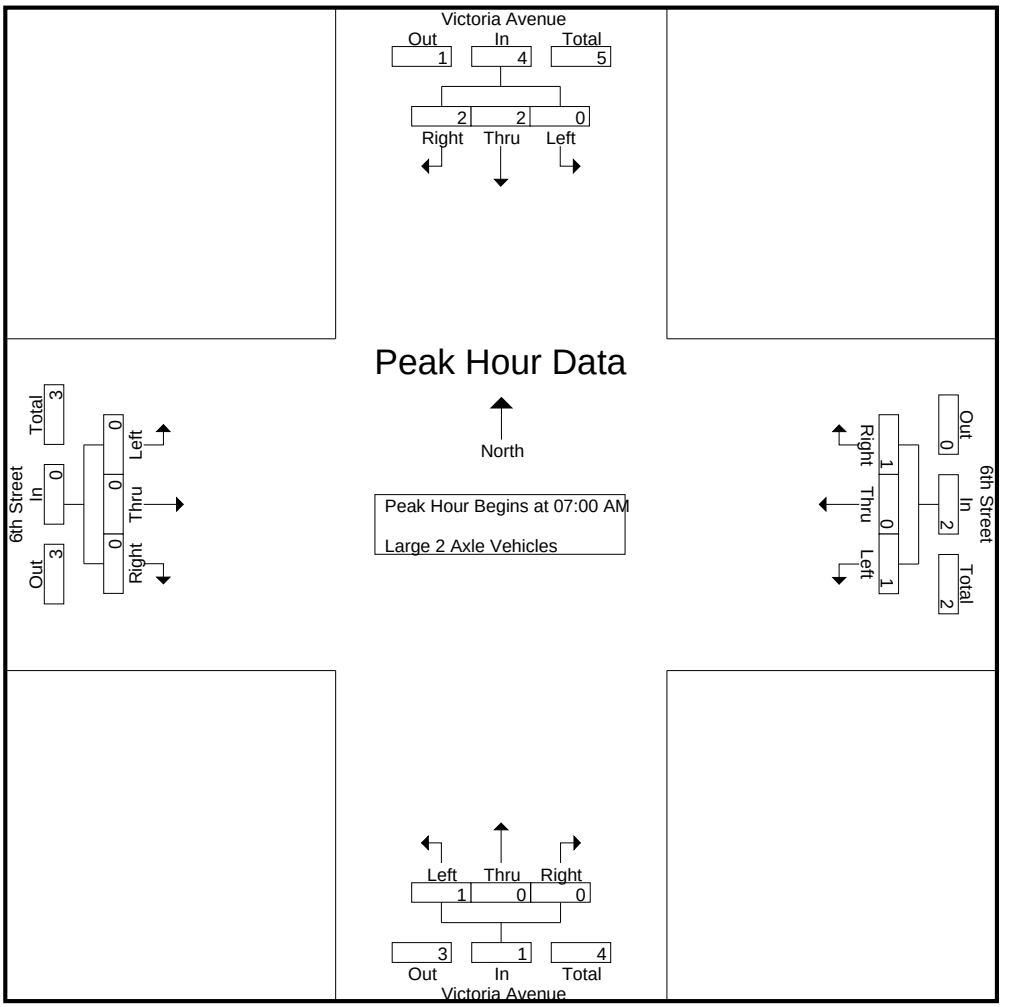

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	**1**	1	**1**	0	0	**1**	**1**	0	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**2**	1	**3**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0
Total Volume	0	2	2	4	1	0	1	2	1	0	0	1	0	0	0	0
% App. Total	0	50	50		50	0	50		100	0	0		0	0	0	
PHF	.000	.250	.500	.333	.250	.000	.250	.500	.250	.000	.000	.250	.000	.000	.000	.000

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E/W: 6th Street
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File Name : 29_SBC_Victoria_6th AM
Site Code : 99918352
Start Date : 5/17/2018
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Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0	4
Apprch %	0	100	0		0	0	0		50	50	0		0	0	0		
Total %	0	50	0	50	0	0	0	0	25	25	0	50	0	0	0	0	

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	**1**
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		100	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.250

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Weather: Clear

File Name : 29_SBC_Victoria_6th AM
Site Code : 99918352
Start Date : 5/17/2018
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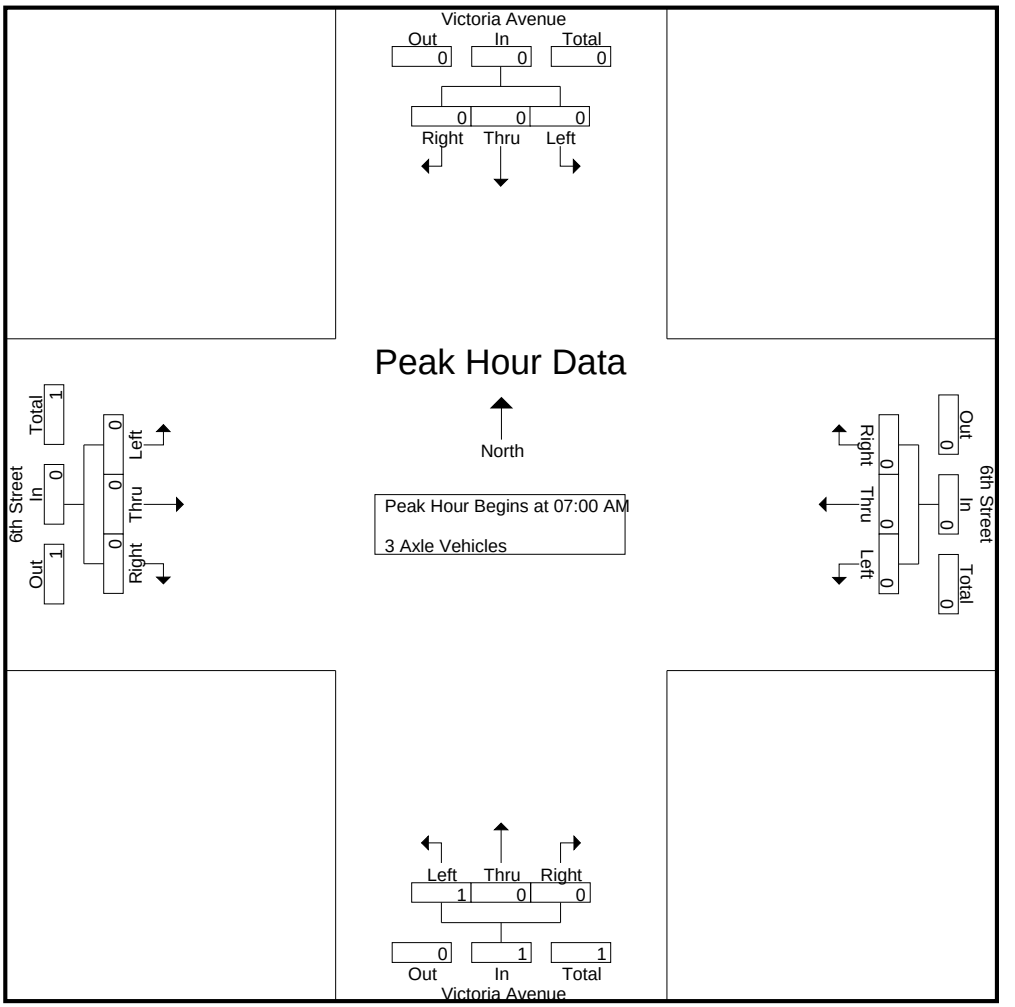

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of San Bernardino
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Weather: Clear

File Name : 29_SBC_Victoria_6th AM
Site Code : 99918352
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Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of San Bernardino
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File Name : 29_SBC_Victoria_6th AM
Site Code : 99918352
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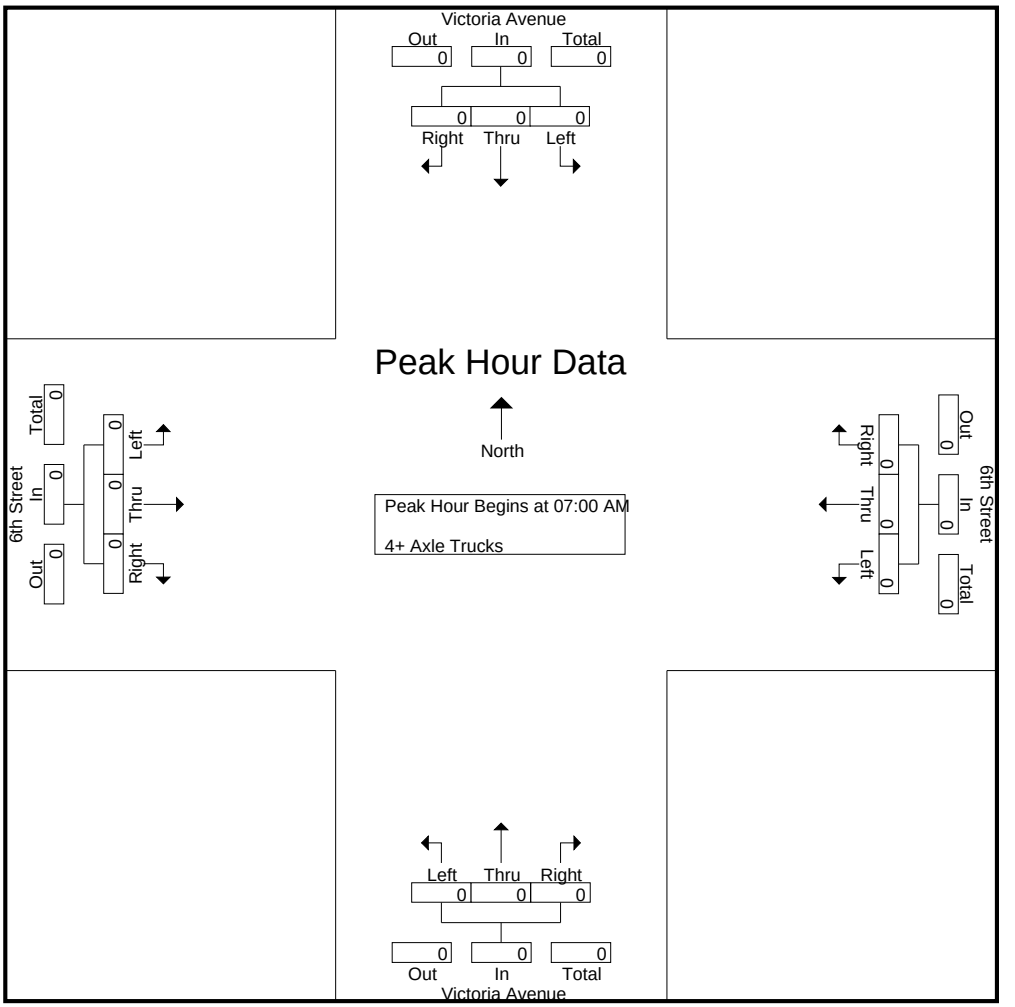

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Weather: Clear

File Name : 29_SBC_Victoria_6th PM
Site Code : 99918352
Start Date : 5/17/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	3	24	4	31	2	7	4	13	5	59	2	66	4	12	4	20	130
03:15 PM	3	32	2	37	0	8	3	11	10	50	3	63	4	7	7	18	129
03:30 PM	2	45	4	51	0	9	8	17	5	64	2	71	3	9	5	17	156
03:45 PM	2	39	6	47	1	5	2	8	9	47	0	56	3	7	5	15	126
Total	10	140	16	166	3	29	17	49	29	220	7	256	14	35	21	70	541
04:00 PM	8	42	6	56	2	7	1	10	3	62	6	71	5	12	10	27	164
04:15 PM	6	43	9	58	0	3	2	5	11	75	1	87	5	6	9	20	170
04:30 PM	7	49	7	63	0	10	3	13	14	76	0	90	10	12	13	35	201
04:45 PM	4	54	4	62	2	7	3	12	13	90	4	107	5	14	6	25	206
Total	25	188	26	239	4	27	9	40	41	303	11	355	25	44	38	107	741
05:00 PM	3	49	5	57	1	7	2	10	9	74	0	83	3	5	2	10	160
05:15 PM	2	45	7	54	0	5	2	7	10	96	1	107	8	12	4	24	192
05:30 PM	5	42	0	47	0	7	3	10	9	97	2	108	3	13	7	23	188
05:45 PM	6	48	11	65	1	5	2	8	7	84	1	92	10	14	4	28	193
Total	16	184	23	223	2	24	9	35	35	351	4	390	24	44	17	85	733
Grand Total	51	512	65	628	9	80	35	124	105	874	22	1001	63	123	76	262	2015
Apprch %	8.1	81.5	10.4		7.3	64.5	28.2		10.5	87.3	2.2		24	46.9	29		
Total %	2.5	25.4	3.2	31.2	0.4	4	1.7	6.2	5.2	43.4	1.1	49.7	3.1	6.1	3.8	13	
Passenger Vehicles	50	502	62	614	9	78	35	122	102	862	22	986	60	122	75	257	1979
% Passenger Vehicles	98	98	95.4	97.8	100	97.5	100	98.4	97.1	98.6	100	98.5	95.2	99.2	98.7	98.1	98.2
Large 2 Axle Vehicles	1	6	3	10	0	2	0	2	3	9	0	12	2	1	1	4	28
% Large 2 Axle Vehicles	2	1.2	4.6	1.6	0	2.5	0	1.6	2.9	1	0	1.2	3.2	0.8	1.3	1.5	1.4
3 Axle Vehicles	0	4	0	4	0	0	0	0	0	1	0	1	1	0	0	1	6
% 3 Axle Vehicles	0	0.8	0	0.6	0	0	0	0	0	0.1	0	0.1	1.6	0	0	0.4	0.3
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0.1

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**7**	49	**7**	**63**	0	**10**	**3**	**13**	**14**	76	0	90	**10**	12	**13**	**35**	201
04:45 PM	4	**54**	4	62	**2**	7	3	12	13	90	**4**	**107**	5	**14**	6	25	**206**
05:00 PM	3	49	5	57	1	7	2	10	9	74	0	83	3	5	2	10	160
05:15 PM	2	45	7	54	0	5	2	7	10	**96**	1	107	8	12	4	24	192
Total Volume	16	197	23	236	3	29	10	42	46	336	5	387	26	43	25	94	759
% App. Total	6.8	83.5	9.7		7.1	69	23.8		11.9	86.8	1.3		27.7	45.7	26.6		
PHF	.571	.912	.821	.937	.375	.725	.833	.808	.821	.875	.313	.904	.650	.768	.481	.671	.921

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Weather: Clear

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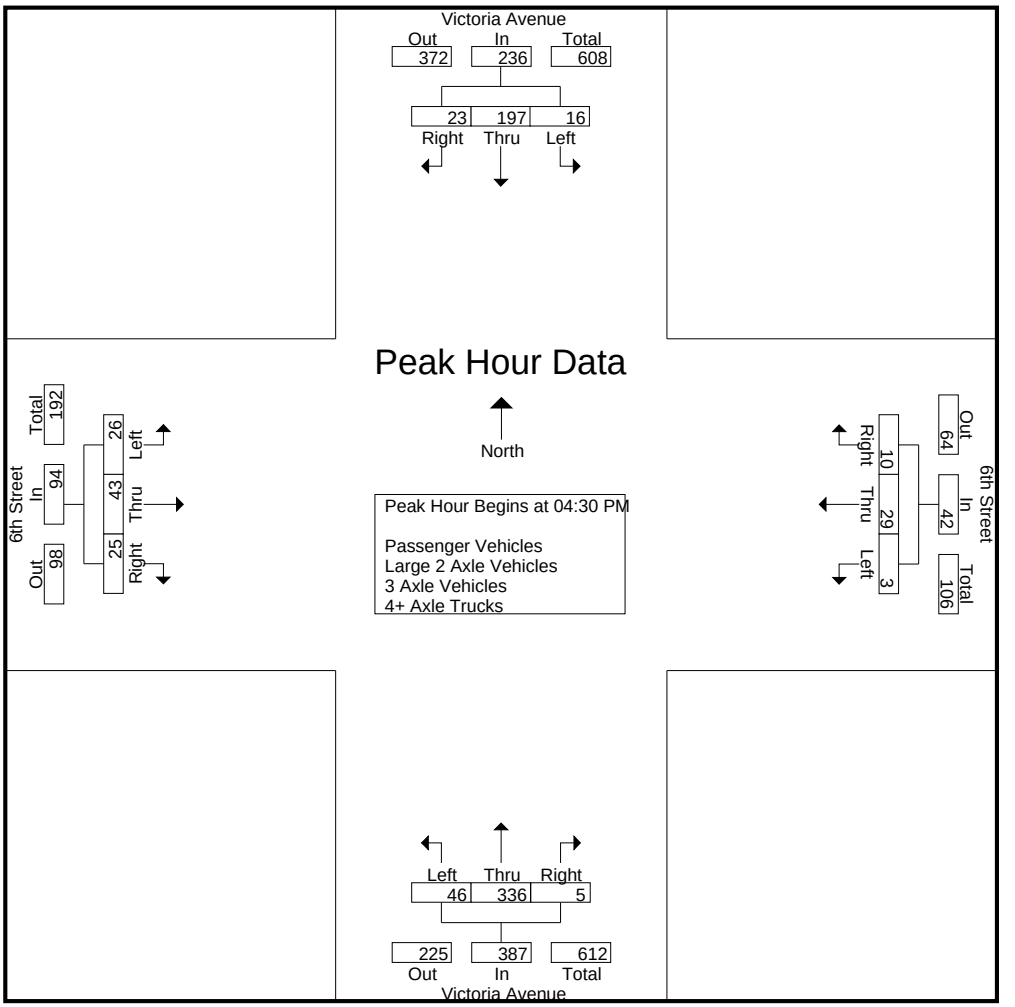
Site Code : 99918352
Start Date : 5/17/2018



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				03:00 PM				04:45 PM				04:00 PM			
+0 mins.	6	43	**9**	58	**2**	7	4	13	**13**	90	**4**	107	5	12	10	27
+15 mins.	**7**	49	7	**63**	0	8	3	11	9	74	0	83	5	6	9	20
+30 mins.	4	**54**	4	62	0	**9**	**8**	**17**	10	96	1	107	**10**	12	**13**	**35**
+45 mins.	3	49	5	57	1	5	2	8	9	**97**	2	**108**	5	**14**	6	25
Total Volume	20	195	25	240	3	29	17	49	41	357	7	405	25	44	38	107
% App. Total	8.3	81.2	10.4		6.1	59.2	34.7		10.1	88.1	1.7		23.4	41.1	35.5	
PHF	.714	.903	.694	.952	.375	.806	.531	.721	.788	.920	.438	.938	.625	.786	.731	.764

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City of San Bernardino
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File Name : 29_SBC_Victoria_6th PM
Site Code : 99918352
Start Date : 5/17/2018
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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	3	24	4	31	2	7	4	13	5	57	2	64	3	12	4	19	127
03:15 PM	3	31	2	36	0	8	3	11	9	48	3	60	3	7	7	17	124
03:30 PM	2	44	4	50	0	9	8	17	5	64	2	71	2	9	5	16	154
03:45 PM	2	39	5	46	1	4	2	7	8	46	0	54	3	7	5	15	122
Total	10	138	15	163	3	28	17	48	27	215	7	249	11	35	21	67	527
04:00 PM	7	41	6	54	2	6	1	9	3	60	6	69	5	12	10	27	159
04:15 PM	6	43	8	57	0	3	2	5	11	75	1	87	5	6	9	20	169
04:30 PM	7	48	7	62	0	10	3	13	14	75	0	89	10	12	13	35	199
04:45 PM	4	52	3	59	2	7	3	12	13	89	4	106	5	13	6	24	201
Total	24	184	24	232	4	26	9	39	41	299	11	351	25	43	38	106	728
05:00 PM	3	47	5	55	1	7	2	10	9	72	0	81	3	5	2	10	156
05:15 PM	2	45	7	54	0	5	2	7	10	96	1	107	8	12	4	24	192
05:30 PM	5	40	0	45	0	7	3	10	8	96	2	106	3	13	6	22	183
05:45 PM	6	48	11	65	1	5	2	8	7	84	1	92	10	14	4	28	193
Total	16	180	23	219	2	24	9	35	34	348	4	386	24	44	16	84	724
Grand Total	50	502	62	614	9	78	35	122	102	862	22	986	60	122	75	257	1979
Apprch %	8.1	81.8	10.1		7.4	63.9	28.7		10.3	87.4	2.2		23.3	47.5	29.2		
Total %	2.5	25.4	3.1	31	0.5	3.9	1.8	6.2	5.2	43.6	1.1	49.8	3	6.2	3.8	13	

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**7**	48	**7**	**62**	0	**10**	**3**	**13**	**14**	75	0	89	**10**	12	**13**	**35**	199
04:45 PM	4	**52**	3	59	**2**	7	3	12	13	89	**4**	106	5	**13**	6	24	**201**
05:00 PM	3	47	5	55	1	7	2	10	9	72	0	81	3	5	2	10	156
05:15 PM	2	45	7	54	0	5	2	7	10	**96**	1	**107**	8	12	4	24	192
Total Volume	16	192	22	230	3	29	10	42	46	332	5	383	26	42	25	93	748
% App. Total	7	83.5	9.6		7.1	69	23.8		12	86.7	1.3		28	45.2	26.9		
PHF	.571	.923	.786	.927	.375	.725	.833	.808	.821	.865	.313	.895	.650	.808	.481	.664	.930

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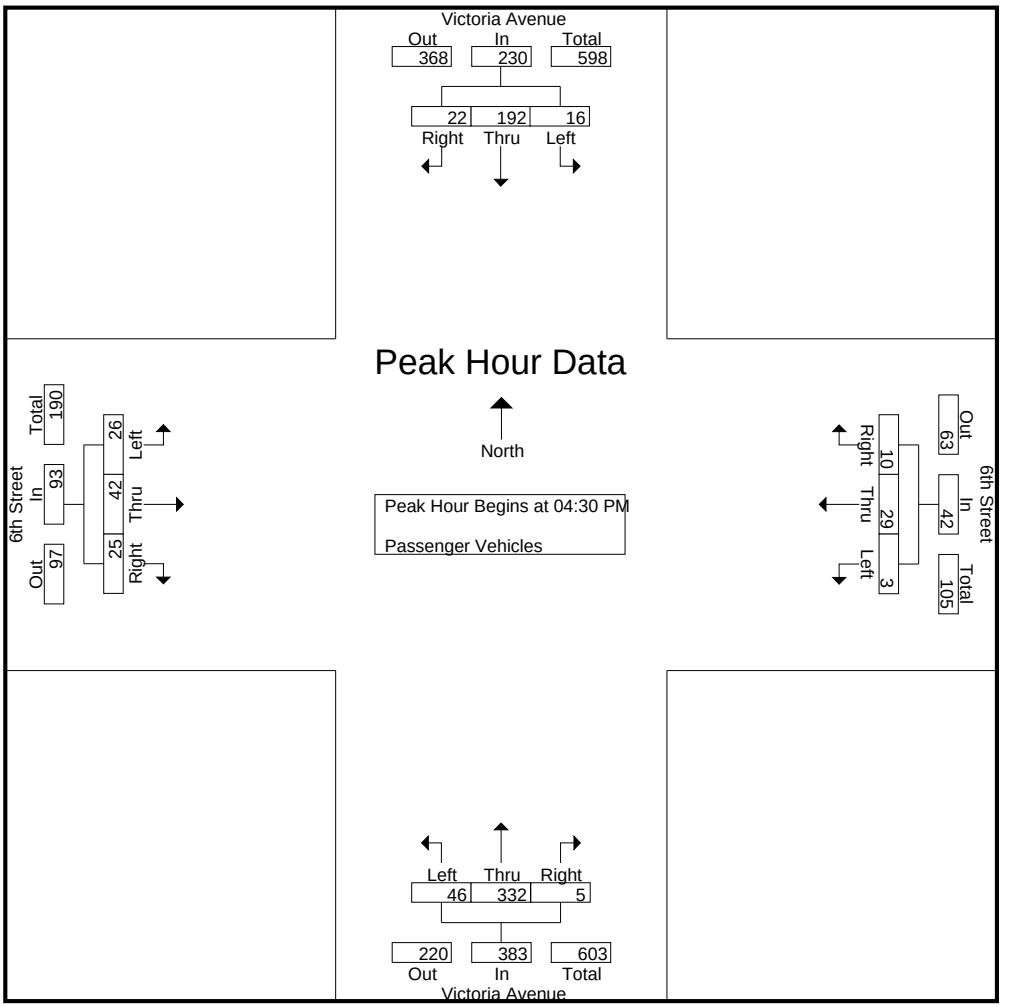

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**7**	48	**7**	**62**	0	**10**	**3**	**13**	**14**	75	0	89	**10**	12	**13**	**35**
+15 mins.	4	**52**	3	59	**2**	7	3	12	13	89	**4**	106	5	**13**	6	24
+30 mins.	3	47	5	55	1	7	2	10	9	72	0	81	3	5	2	10
+45 mins.	2	45	7	54	0	5	2	7	10	**96**	1	**107**	8	12	4	24
Total Volume	16	192	22	230	3	29	10	42	46	332	5	383	26	42	25	93
% App. Total	7	83.5	9.6		7.1	69	23.8		12	86.7	1.3		28	45.2	26.9	
PHF	.571	.923	.786	.927	.375	.725	.833	.808	.821	.865	.313	.895	.650	.808	.481	.664

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File Name : 29_SBC_Victoria_6th PM
Site Code : 99918352
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Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	1	3
03:15 PM	0	1	0	1	0	0	0	0	1	2	0	3	0	0	0	0	4
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
03:45 PM	0	0	1	1	0	1	0	1	1	1	0	2	0	0	0	0	4
Total	0	1	1	2	0	1	0	1	2	5	0	7	2	0	0	2	12
04:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:45 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
Total	1	2	2	5	0	1	0	1	0	1	0	1	0	1	0	1	8
05:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	1	1	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	1	3	0	4	0	0	1	1	8
Grand Total	1	6	3	10	0	2	0	2	3	9	0	12	2	1	1	4	28
Apprch %	10	60	30		0	100	0		25	75	0		50	25	25		
Total %	3.6	21.4	10.7	35.7	0	7.1	0	7.1	10.7	32.1	0	42.9	7.1	3.6	3.6	14.3	

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:45 PM	0	1	**1**	**2**	0	0	0	0	0	0	0	0	0	**1**	0	**1**	3
05:00 PM	0	**2**	0	2	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**4**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	4	1	5	0	0	0	0	0	3	0	3	0	1	0	1	9
% App. Total	0	80	20		0	0	0		0	100	0		0	100	0		
PHF	.000	.500	.250	.625	.000	.000	.000	.000	.000	.375	.000	.375	.000	.250	.000	.250	.563

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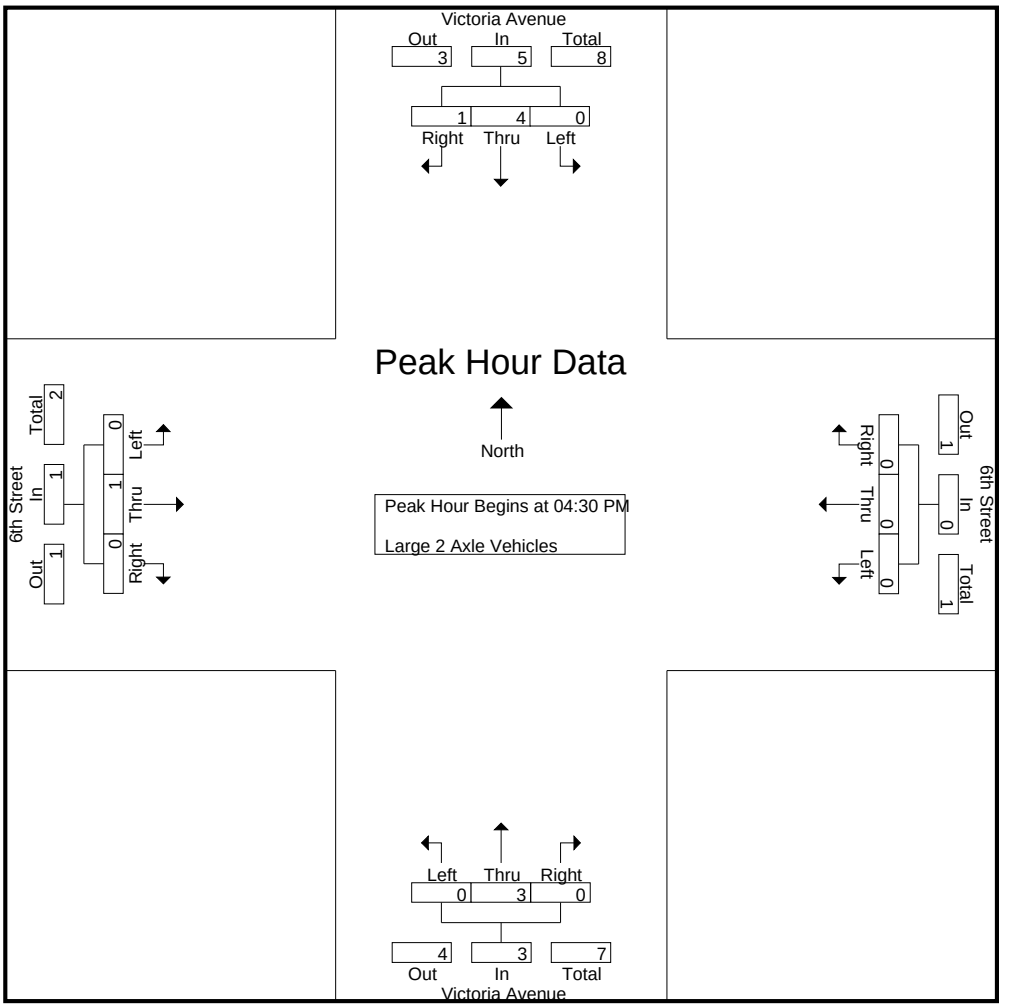

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	1	**1**	**2**	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	**2**	0	2	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	4	1	5	0	0	0	0	0	3	0	3	0	1	0	1
% App. Total	0	80	20		0	0	0		0	100	0		0	100	0	
PHF	.000	.500	.250	.625	.000	.000	.000	.000	.000	.375	.000	.375	.000	.250	.000	.250

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Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
03:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	4	0	4	0	0	0	0	0	1	0	1	1	0	0	1	6
Apprch %	0	100	0		0	0	0		0	100	0		100	0	0		
Total %	0	66.7	0	66.7	0	0	0	0	0	16.7	0	16.7	16.7	0	0	16.7	

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**2**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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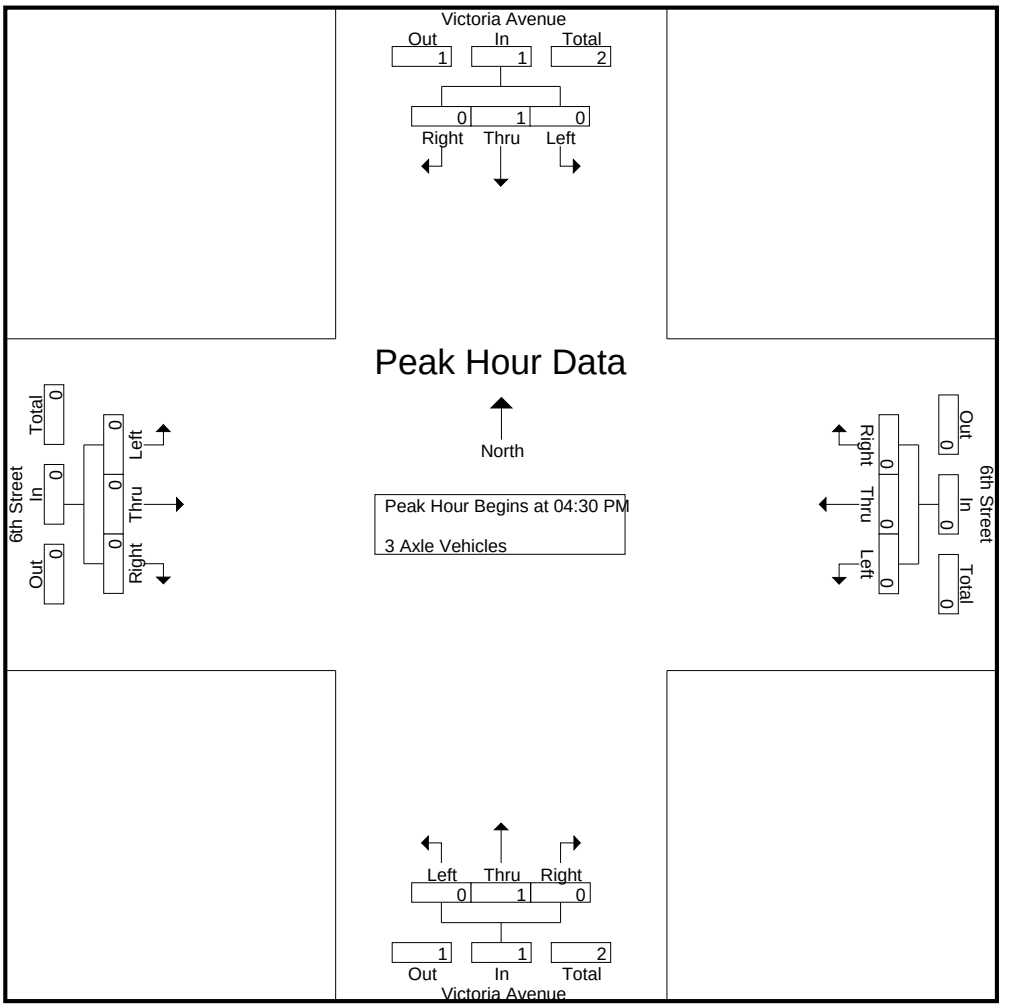

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	Victoria Avenue Southbound				6th Street Westbound				Victoria Avenue Northbound				6th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
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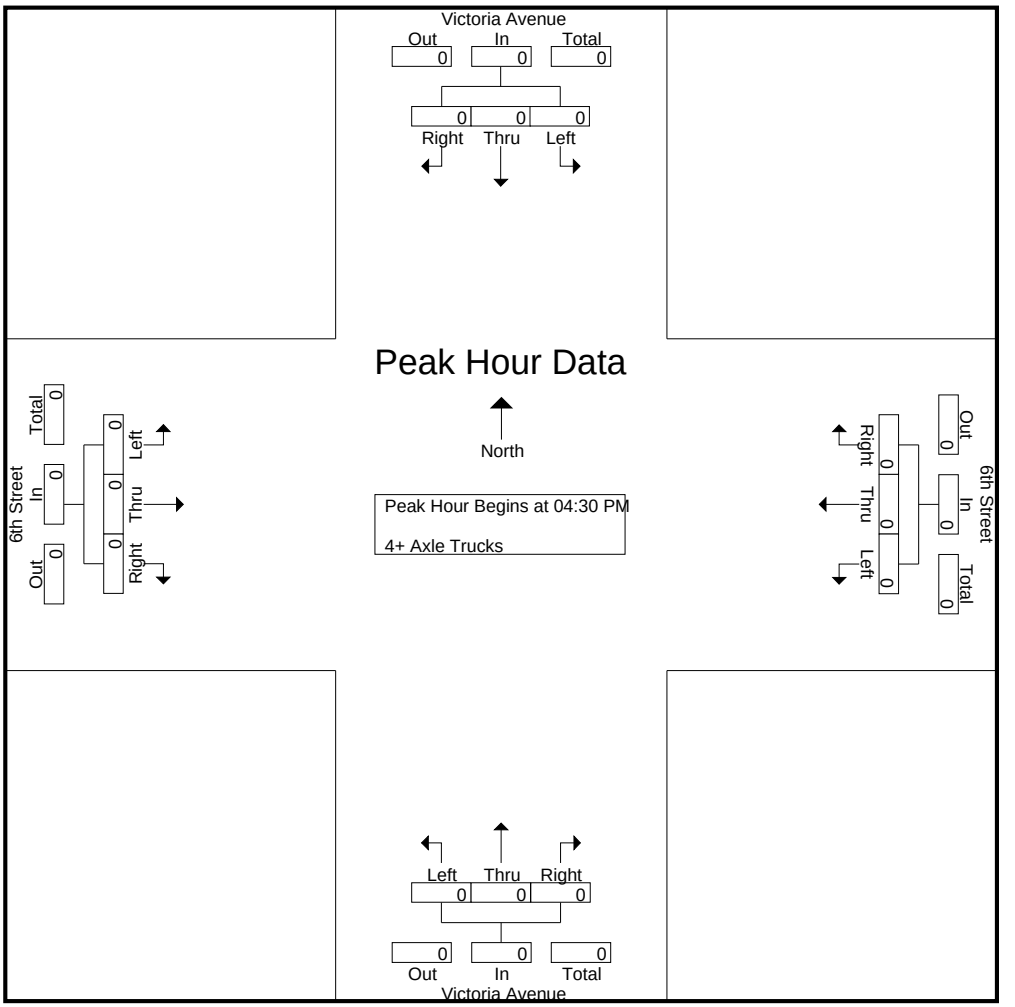
City of San Bernardino
N/S: Victoria Avenue
E/W: 6th Street
Weather: Clear

File Name : 29_SBC_Victoria_6th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

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

Location: San Bernardino
N/S: Victoria Avenue
E/W: 6th Street

Date: 5/17/2018
Day: Thursday

PEDESTRIANS

	North Leg Victoria Avenue	East Leg 6th Street	South Leg Victoria Avenue	West Leg 6th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
6:00 AM	0	0	0	0	0
6:15 AM	0	0	1	0	1
6:30 AM	0	0	0	0	0
6:45 AM	0	0	0	0	0
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

	North Leg Victoria Avenue	East Leg 6th Street	South Leg Victoria Avenue	West Leg 6th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	0	1	0	0	1
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	2

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951-268-6268

Location: San Bernardino
N/S: Victoria Avenue
E/W: 6th Street

Date: 5/17/2018
Day: Thursday

BICYCLES

	Southbound Victoria Avenue			Westbound 6th Street			Northbound Victoria Avenue			Eastbound 6th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	1	0	0	1	0	0	1	0	3
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1	0	0	1	0	0	1	0	4

	Southbound Victoria Avenue			Westbound 6th Street			Northbound Victoria Avenue			Eastbound 6th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	2
3:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	1	0	0	0	0	1	1	0	0	1	0	5

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

Prepared by National Data & Surveying Services

Central Ave & 6th St

Peak Hour Turning Movement Count

ID: 19-06039-022
City: Highland

Day: Tuesday
Date: 03/19/2019

	PEAK HOURS	COUNT PERIODS
AM	08:00 AM - 09:00 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Central Ave — SOUTHBOUND

	Right	Through	Left	U-Turn	Departure
AM	33	100	0	0	116
NOON	0	0	0	0	0
PM	30	70	0	0	216
	0	1	0	0	

6th St — EASTBOUND

	AM	NOON	PM	
Departure	42	0	52	
U-Turn	0	0	0	0
Left	41	0	50	0
Through	0	0	0	1
Right	25	0	27	0

6th St — WESTBOUND

		PM	NOON	AM
Right	0	0	0	0
Through	0	0	0	0
Left	0	0	0	0
U-Turn	0	0	0	0
Departure		0	0	0

Central Ave — NORTHBOUND

	Departure	U-Turn	Left	Through	Right
		0	0	1	0
PM	97	0	22	166	0
NOON	0	0	0	0	0
AM	125	0	9	75	0

CONTROL

1-Way Stop (EB)

	AM	NOON	PM
TEV	283	0	365
PHF	0.74		0.92

Cars (AM)

Approach	Left	Through	Right
Southbound	0	93	33
Eastbound	38	0	23
Westbound	0	0	0
Northbound	9	70	0

2axle (AM)

Approach	Left	Through	Right
Southbound	0	7	0
Eastbound	3	0	2
Westbound	0	0	0
Northbound	0	5	0

Cars (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

2axle (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Cars (PM)

Approach	Left	Through	Right
Southbound	0	65	30
Eastbound	50	0	27
Westbound	0	0	0
Northbound	22	160	0

2axle (PM)

Approach	Left	Through	Right
Southbound	0	5	0
Eastbound	0	0	0
Westbound	0	0	0
Northbound	0	5	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (westbound direction)	0	0	0
North leg (eastbound direction)	0	0	0
West leg (southbound direction)	0	0	0
West leg (northbound direction)	0	0	0
East leg (southbound direction)	0	0	0
East leg (northbound direction)	0	0	0
South leg (eastbound direction)	0	0	0
South leg (westbound direction)	0	0	0
NW corner diagonal	0	0	0
NE corner diagonal	0	0	0
SW corner diagonal	0	0	0
SE corner diagonal	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Central Ave & 6th St
City: Highland
Control: 1-Way Stop (EB)

Project ID: 19-06039-022
Date: 3/19/2019

Total

NS/EW Streets:	Central Ave				Central Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	5	0	0	0	17	6	0	3	0	3	0	0	0	0	0	38
7:15 AM	1	15	0	0	0	23	1	0	13	0	10	0	0	0	0	0	63
7:30 AM	2	11	0	0	0	24	9	0	9	0	6	0	0	0	0	0	61
7:45 AM	2	17	0	0	0	27	3	0	7	0	5	0	0	0	0	0	61
8:00 AM	5	27	0	0	0	24	2	0	4	0	4	0	0	0	0	0	66
8:15 AM	1	9	0	0	0	13	5	0	10	0	7	0	0	0	0	0	45
8:30 AM	1	20	0	0	0	39	10	0	15	0	10	0	0	0	0	0	95
8:45 AM	2	19	0	0	0	24	16	0	12	0	4	0	0	0	0	0	77
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	18	123	0	0	0	191	52	0	73	0	49	0	0	0	0	0	506
APPROACH %'s :	12.77%	87.23%	0.00%	0.00%	0.00%	78.60%	21.40%	0.00%	59.84%	0.00%	40.16%	0.00%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	9	75	0	0	0	100	33	0	41	0	25	0	0	0	0	0	283
PEAK HR FACTOR :	0.450	0.694	0.000	0.000	0.000	0.641	0.516	0.000	0.683	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.745
	0.656				0.679				0.660								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	31	0	1	0	23	8	0	10	0	6	0	0	0	0	0	88
4:15 PM	11	29	0	0	0	16	7	0	13	0	8	0	0	0	0	0	84
4:30 PM	4	28	0	0	0	23	8	0	11	0	4	0	0	0	0	0	78
4:45 PM	2	41	0	0	0	16	13	0	12	0	7	0	0	0	0	0	91
5:00 PM	9	40	0	0	0	21	6	0	14	0	9	0	0	0	0	0	99
5:15 PM	8	48	0	0	0	15	6	0	11	0	2	0	0	0	0	0	90
5:30 PM	3	37	0	0	0	18	5	0	13	0	9	0	0	0	0	0	85
5:45 PM	3	33	0	0	0	19	6	0	7	0	7	0	0	0	0	0	75
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	49	287	0	1	0	151	59	0	91	0	52	0	0	0	0	0	690
APPROACH %'s :	14.54%	85.16%	0.00%	0.30%	0.00%	71.90%	28.10%	0.00%	63.64%	0.00%	36.36%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	22	166	0	0	0	70	30	0	50	0	27	0	0	0	0	0	365
PEAK HR FACTOR :	0.611	0.865	0.000	0.000	0.000	0.833	0.577	0.000	0.893	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.922
	0.839				0.862				0.837								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Central Ave & 6th St
City: Highland
Control: 1-Way Stop (EB)

Project ID: 19-06039-022
Date: 3/19/2019

Cars

NS/EW Streets:	Central Ave				Central Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	4	0	0	0	16	6	0	2	0	3	0	0	0	0	0	35
7:15 AM	1	15	0	0	0	23	1	0	13	0	10	0	0	0	0	0	63
7:30 AM	2	10	0	0	0	22	8	0	9	0	6	0	0	0	0	0	57
7:45 AM	2	15	0	0	0	27	3	0	7	0	5	0	0	0	0	0	59
8:00 AM	5	26	0	0	0	23	2	0	4	0	4	0	0	0	0	0	64
8:15 AM	1	8	0	0	0	13	5	0	7	0	6	0	0	0	0	0	40
8:30 AM	1	20	0	0	0	35	10	0	15	0	9	0	0	0	0	0	90
8:45 AM	2	16	0	0	0	22	16	0	12	0	4	0	0	0	0	0	72
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	18	114	0	0	0	181	51	0	69	0	47	0	0	0	0	0	480
APPROACH %'s :	13.64%	86.36%	0.00%	0.00%	0.00%	78.02%	21.98%	0.00%	59.48%	0.00%	40.52%	0.00%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	9	70	0	0	0	93	33	0	38	0	23	0	0	0	0	0	266
PEAK HR FACTOR :	0.45	0.673	0.000	0.000	0.000	0.664	0.516	0.000	0.633	0.000	0.639	0.000	0.000	0.000	0.000	0.000	0.739
	0.637				0.700				0.635								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	31	0	1	0	23	8	0	10	0	6	0	0	0	0	0	88
4:15 PM	11	28	0	0	0	14	5	0	13	0	7	0	0	0	0	0	78
4:30 PM	4	28	0	0	0	23	8	0	11	0	4	0	0	0	0	0	78
4:45 PM	2	38	0	0	0	13	13	0	12	0	7	0	0	0	0	0	85
5:00 PM	9	40	0	0	0	20	6	0	14	0	9	0	0	0	0	0	98
5:15 PM	8	46	0	0	0	14	6	0	11	0	2	0	0	0	0	0	87
5:30 PM	3	36	0	0	0	18	5	0	13	0	9	0	0	0	0	0	84
5:45 PM	3	32	0	0	0	18	6	0	7	0	7	0	0	0	0	0	73
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	49	279	0	1	0	143	57	0	91	0	51	0	0	0	0	0	671
APPROACH %'s :	14.89%	84.80%	0.00%	0.30%	0.00%	71.50%	28.50%	0.00%	64.08%	0.00%	35.92%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	22	160	0	0	0	65	30	0	50	0	27	0	0	0	0	0	354
PEAK HR FACTOR :	0.61	0.870	0.000	0.000	0.000	0.813	0.577	0.000	0.893	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.903
	0.843				0.913				0.837								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Central Ave & 6th St
City: Highland
Control: 1-Way Stop (EB)

Project ID: 19-06039-022
Date: 3/19/2019

2axle

NS/EW Streets:	Central Ave				Central Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	4
7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	1	0	0	0	0	0	0	3	0	1	0	0	0	0	0	5
8:30 AM	0	0	0	0	0	4	0	0	0	0	1	0	0	0	0	0	5
8:45 AM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	9	0	0	0	10	1	0	4	0	2	0	0	0	0	0	26
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	90.91%	9.09%	0.00%	66.67%	0.00%	33.33%	0.00%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	5	0	0	0	7	0	0	3	0	2	0	0	0	0	0	17
PEAK HR FACTOR :	0.000	0.417	0.000	0.000	0.000	0.438	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.850
	0.417				0.438				0.313								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	2	2	0	0	0	1	0	0	0	0	0	6
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	7	0	0	0	8	2	0	0	0	1	0	0	0	0	0	18
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	80.00%	20.00%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10
PEAK HR FACTOR :	0.00	0.625	0.000	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.625				0.417												

National Data & Surveying Services

Intersection Turning Movement Count

Location: Central Ave & 6th St
City: Highland
Control: 1-Way Stop (EB)

Project ID: 19-06039-022
Date: 3/19/2019

3axle

NS/EW Streets:	Central Ave				Central Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%													
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
	0.250																

National Data & Surveying Services

Intersection Turning Movement Count

Location: Central Ave & 6th St
City: Highland
Control: 1-Way Stop (EB)

Project ID: 19-06039-022
Date: 3/19/2019

4axle

NS/EW Streets:	Central Ave				Central Ave				6th St				6th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Prepared by National Data & Surveying Services

I-215 SB Ramps & 5th St

Peak Hour Turning Movement Count

ID: 19-06039-023
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

SOUTHBOUND – I-215 SB Ramps

	Right	Thru	Left	U-Turn	Departing
AM	169	5	525	0	0
NOON	0	0	0	0	0
PM	174	6	189	0	0
%	1.3	0.3	1.3	0	

EASTBOUND – 5th St

	AM	NOON	PM	%
Departing	596	0	927	
U-Turn	0	0	0	0
Left	0	0	0	0
Thru	411	0	558	4
Right	304	0	340	0

WESTBOUND – 5th St

	PM	NOON	AM	%
Right	0	0	0	0
Thru	753	0	427	2
Left	483	0	302	2
U-Turn	0	0	0	0
Departing	747	0	936	

NORTHBOUND – I-215 SB Ramps

	Departing	U-Turn	Left	Thru	Right
PM	829	0	0	0	0
NOON	0	0	0	0	0
AM	611	0	0	0	0
%		0	0	0	0

CONTROL: Signalized

	AM	NOON	PM
TEV	2143	0	2503
PHF	0.96		0.97

Cars (AM)

Approach	Left	Thru	Right
Southbound	520	5	154
Eastbound	0	388	274
Westbound	292	377	0
Northbound	0	0	0

Cars (NOON)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Cars (PM)

Approach	Left	Thru	Right
Southbound	184	6	167
Eastbound	0	536	305
Westbound	470	720	0
Northbound	0	0	0

2axle (AM)

Approach	Left	Thru	Right
Southbound	3	0	3
Eastbound	0	14	12
Westbound	6	21	0
Northbound	0	0	0

2axle (NOON)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

2axle (PM)

Approach	Left	Thru	Right
Southbound	0	0	1
Eastbound	0	12	13
Westbound	10	13	0
Northbound	0	0	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (westward)	0	0	0
North leg (eastward)	0	0	0
South leg (westward)	0	0	0
South leg (eastward)	0	0	0
West leg (southward)	0	0	0
West leg (northward)	0	0	0
East leg (southward)	0	0	0
East leg (northward)	0	0	0
NW corner diagonal	0	0	0
NE corner diagonal	0	0	0
SW corner diagonal	0	0	0
SE corner diagonal	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-023
Date: 3/19/2019

Total

NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	122	1	23	0	0	81	82	0	78	89	0	0	476
7:15 AM	0	0	0	0	133	3	29	0	0	91	79	0	92	110	0	0	537
7:30 AM	0	0	0	0	140	2	30	0	0	102	81	0	67	90	0	0	512
7:45 AM	0	0	0	0	145	0	48	0	0	104	86	0	66	107	0	0	556
8:00 AM	0	0	0	0	139	1	27	0	0	94	53	0	68	113	0	0	495
8:15 AM	0	0	0	0	127	3	54	0	0	100	85	0	86	104	0	0	559
8:30 AM	0	0	0	0	114	1	40	0	0	113	80	0	82	103	0	0	533
8:45 AM	0	0	0	0	114	1	44	0	0	100	94	0	82	104	0	0	539
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1034	12	295	0	0	785	640	0	621	820	0	0	4207
APPROACH %'s :					77.11%	0.89%	22.00%	0.00%	0.00%	55.09%	44.91%	0.00%	43.10%	56.90%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	525	5	169	0	0	411	304	0	302	427	0	0	2143
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.905	0.417	0.782	0.000	0.000	0.909	0.884	0.000	0.878	0.945	0.000	0.000	0.958
					0.905				0.926				0.959				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	50	2	47	0	0	128	77	0	145	176	0	0	625
4:15 PM	0	0	0	0	50	0	36	0	0	105	62	0	93	182	0	0	528
4:30 PM	0	0	0	0	46	1	41	0	0	126	100	0	152	179	0	0	645
4:45 PM	0	0	0	0	54	5	55	0	0	150	72	0	97	210	0	0	643
5:00 PM	0	0	0	0	54	0	34	0	0	145	70	0	116	185	0	0	604
5:15 PM	0	0	0	0	35	0	44	0	0	137	98	0	118	179	0	0	611
5:30 PM	0	0	0	0	50	0	48	0	0	123	76	0	115	164	0	0	576
5:45 PM	0	0	0	0	52	1	47	0	0	133	70	0	97	177	0	0	577
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	391	9	352	0	0	1047	625	0	933	1452	0	0	4809
APPROACH %'s :					51.99%	1.20%	46.81%	0.00%	0.00%	62.62%	37.38%	0.00%	39.12%	60.88%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	189	6	174	0	0	558	340	0	483	753	0	0	2503
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.875	0.300	0.791	0.000	0.000	0.930	0.850	0.000	0.794	0.896	0.000	0.000	0.970
					0.809				0.955				0.934				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-023
Date: 3/19/2019

Cars

NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	121	1	19	0	0	76	76	0	78	80	0	0	451
7:15 AM	0	0	0	0	132	3	27	0	0	82	75	0	91	96	0	0	506
7:30 AM	0	0	0	0	138	2	30	0	0	96	73	0	66	80	0	0	485
7:45 AM	0	0	0	0	144	0	43	0	0	97	81	0	62	98	0	0	525
8:00 AM	0	0	0	0	137	1	25	0	0	88	48	0	68	97	0	0	464
8:15 AM	0	0	0	0	125	3	50	0	0	95	74	0	84	90	0	0	521
8:30 AM	0	0	0	0	114	1	36	0	0	108	71	0	78	92	0	0	500
8:45 AM	0	0	0	0	112	1	42	0	0	95	83	0	78	94	0	0	505
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1023	12	272	0	0	737	581	0	605	727	0	0	3957
APPROACH %'s :					78.27%	0.92%	20.81%	0.00%	0.00%	55.92%	44.08%	0.00%	45.42%	54.58%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	520	5	154	0	0	388	274	0	292	377	0	0	2010
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.903	0.417	0.770	0.000	0.000	0.898	0.846	0.000	0.869	0.962	0.000	0.000	0.957
							0.908				0.925				0.961		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	50	2	45	0	0	126	67	0	141	164	0	0	595
4:15 PM	0	0	0	0	50	0	36	0	0	101	55	0	91	174	0	0	507
4:30 PM	0	0	0	0	43	1	40	0	0	121	88	0	148	169	0	0	610
4:45 PM	0	0	0	0	53	5	52	0	0	146	62	0	93	204	0	0	615
5:00 PM	0	0	0	0	54	0	32	0	0	140	64	0	115	173	0	0	578
5:15 PM	0	0	0	0	34	0	43	0	0	129	91	0	114	174	0	0	585
5:30 PM	0	0	0	0	49	0	45	0	0	120	69	0	113	153	0	0	549
5:45 PM	0	0	0	0	51	1	44	0	0	129	61	0	95	168	0	0	549
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	384	9	337	0	0	1012	557	0	910	1379	0	0	4588
APPROACH %'s :					52.60%	1.23%	46.16%	0.00%	0.00%	64.50%	35.50%	0.00%	39.76%	60.24%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	184	6	167	0	0	536	305	0	470	720	0	0	2388
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.852	0.300	0.803	0.000	0.000	0.918	0.838	0.000	0.794	0.882	0.000	0.000	0.971
							0.811				0.956				0.938		

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-023
Date: 3/19/2019

2axle

NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	1	0	0	0	0	4	0	0	0	4	0	0	9
7:15 AM	0	0	0	0	1	0	0	0	0	5	0	0	1	7	0	0	14
7:30 AM	0	0	0	0	1	0	0	0	0	4	1	0	0	7	0	0	13
7:45 AM	0	0	0	0	1	0	0	0	0	4	1	0	2	6	0	0	14
8:00 AM	0	0	0	0	1	0	0	0	0	3	1	0	0	7	0	0	12
8:15 AM	0	0	0	0	1	0	3	0	0	2	3	0	2	6	0	0	17
8:30 AM	0	0	0	0	0	0	0	0	0	5	7	0	2	2	0	0	16
8:45 AM	0	0	0	0	1	0	0	0	0	4	0	0	2	5	0	0	12
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	7	0	3	0	0	31	13	0	9	44	0	0	107
APPROACH %'s :					70.00%	0.00%	30.00%	0.00%	0.00%	70.45%	29.55%	0.00%	16.98%	83.02%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	3	0	3	0	0	14	12	0	6	21	0	0	59
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.750	0.000	0.250	0.000	0.000	0.700	0.429	0.000	0.750	0.750	0.000	0.000	0.868
							0.375				0.542				0.844		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	1	3	0	2	6	0	0	12
4:15 PM	0	0	0	0	0	0	0	0	0	3	3	0	2	2	0	0	10
4:30 PM	0	0	0	0	0	0	0	0	0	4	5	0	4	3	0	0	16
4:45 PM	0	0	0	0	0	0	0	0	0	4	2	0	3	4	0	0	13
5:00 PM	0	0	0	0	0	0	1	0	0	1	2	0	1	4	0	0	9
5:15 PM	0	0	0	0	0	0	0	0	0	3	4	0	2	2	0	0	11
5:30 PM	0	0	0	0	1	0	1	0	0	3	0	0	2	2	0	0	9
5:45 PM	0	0	0	0	1	0	0	0	0	3	0	0	1	2	0	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	2	0	0	22	19	0	17	25	0	0	87
APPROACH %'s :					50.00%	0.00%	50.00%	0.00%	0.00%	53.66%	46.34%	0.00%	40.48%	59.52%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	12	13	0	10	13	0	0	49
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.750	0.650	0.000	0.625	0.813	0.000	0.000	0.766
							0.250				0.694				0.821		

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-023
Date: 3/19/2019

3axle

NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	2	2	0	0	2	0	0	6
7:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	4	0	0	1	0	0	1	0	0	0	6
8:00 AM	0	0	0	0	0	0	1	0	0	1	3	0	0	0	0	0	5
8:15 AM	0	0	0	0	1	0	0	0	0	0	2	0	0	2	0	0	5
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	2	2	0	0	5
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	7	0	0	4	9	0	4	9	0	0	35
APPROACH %'s :					22.22%	0.00%	77.78%	0.00%	0.00%	30.77%	69.23%	0.00%	30.77%	69.23%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	6	0	0	2	5	0	3	4	0	0	21
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.000	0.500	0.417	0.000	0.375	0.500	0.000	0.000	0.875
							0.438				0.438				0.438		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	1	0	0	0	2	0	2	0	0	0	5
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	2	0	1	0	0	0	4	0	0	1	0	0	8
4:45 PM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	1	2	0	2	2	0	0	7
5:30 PM	0	0	0	0	0	0	1	0	0	0	2	0	0	4	0	0	7
5:45 PM	0	0	0	0	0	0	1	0	0	0	2	0	0	1	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	5	0	0	3	14	0	4	8	0	0	36
APPROACH %'s :					28.57%	0.00%	71.43%	0.00%	0.00%	17.65%	82.35%	0.00%	33.33%	66.67%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	2	0	2	0	0	2	8	0	2	3	0	0	19
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.500	0.000	0.250	0.375	0.000	0.000	0.594
							0.333				0.625				0.313		

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-023
Date: 3/19/2019

4axle

NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	4	0	0	1	5	0	0	3	0	0	13
7:15 AM	0	0	0	0	0	0	2	0	0	2	2	0	0	5	0	0	11
7:30 AM	0	0	0	0	0	0	0	0	0	2	6	0	1	3	0	0	12
7:45 AM	0	0	0	0	0	0	1	0	0	2	4	0	1	3	0	0	11
8:00 AM	0	0	0	0	1	0	1	0	0	2	1	0	0	9	0	0	14
8:15 AM	0	0	0	0	0	0	1	0	0	3	6	0	0	6	0	0	16
8:30 AM	0	0	0	0	0	0	3	0	0	0	2	0	0	7	0	0	12
8:45 AM	0	0	0	0	1	0	1	0	0	1	11	0	1	4	0	0	19
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	13	0	0	13	37	0	3	40	0	0	108
APPROACH %'s :					13.33%	0.00%	86.67%	0.00%	0.00%	26.00%	74.00%	0.00%	6.98%	93.02%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	6	0	0	7	13	0	1	25	0	0	53
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.583	0.542	0.000	0.250	0.694	0.000	0.000	0.828
							0.583				0.556				0.722		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	1	0	0	1	5	0	0	6	0	0	13
4:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	6	0	0	10
4:30 PM	0	0	0	0	1	0	0	0	0	1	3	0	0	6	0	0	11
4:45 PM	0	0	0	0	1	0	2	0	0	0	7	0	1	2	0	0	13
5:00 PM	0	0	0	0	0	0	1	0	0	3	3	0	0	8	0	0	15
5:15 PM	0	0	0	0	1	0	1	0	0	4	1	0	0	1	0	0	8
5:30 PM	0	0	0	0	0	0	1	0	0	0	5	0	0	5	0	0	11
5:45 PM	0	0	0	0	0	0	2	0	0	1	7	0	1	6	0	0	17
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	3	0	8	0	0	10	35	0	2	40	0	0	98
APPROACH %'s :					27.27%	0.00%	72.73%	0.00%	0.00%	22.22%	77.78%	0.00%	4.76%	95.24%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	3	0	4	0	0	8	14	0	1	17	0	0	47
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.750	0.000	0.500	0.000	0.000	0.500	0.500	0.000	0.250	0.531	0.000	0.000	0.783
							0.583				0.786				0.563		

Prepared by National Data & Surveying Services

I-215 NB Ramps & 5th St

Peak Hour Turning Movement Count

ID: 19-06039-024
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

PEAK HOURS

AM: 07:15 AM - 08:15 AM
NOON: NONE
PM: 04:30 PM - 05:30 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

I-215 NB Ramps — SOUTHBOUND

AM	0	0	0	0	273	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	851	PM

EASTBOUND — 5th St

AM	NOON	PM		
718	0	1237	⇦	
0	0	0	↶	0
131	0	206	↱	2
811	0	542	→	2
0	0	0	↷	0
AM	NOON	PM		

WESTBOUND — 5th St

PM	NOON	AM		
				0 0 0 0
642	0	142	↰	1
895	0	476	←	4
0	0	0	↶	0
0	0	0	↶	0
951	0	1344	⇨	
PM	NOON	AM		

CONTROL: Signalized

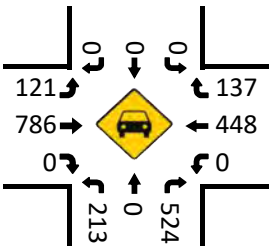
TEV	2335 AM	0 NOON	3039 PM
PHF	0.99		1.00

0 1.3 0.3 1.3

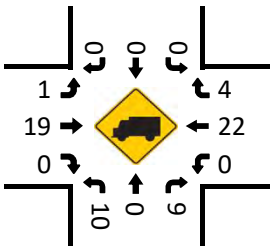
NORTHBOUND — I-215 NB Ramps

PM	0	0	342	3	409	PM
NOON	0	0	0	0	0	NOON
AM	0	0	242	0	533	AM

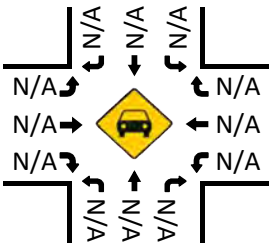
Cars (AM)



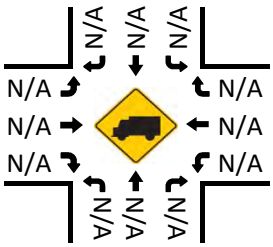
2axle (AM)



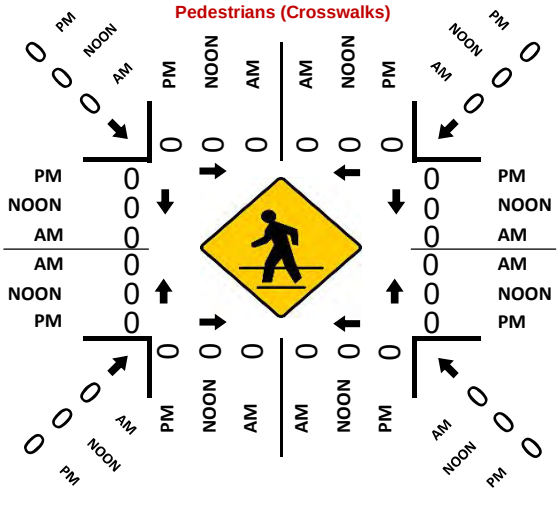
Cars (NOON)



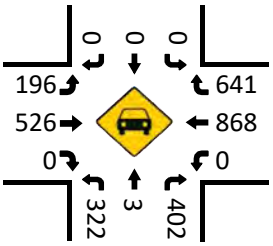
2axle (NOON)



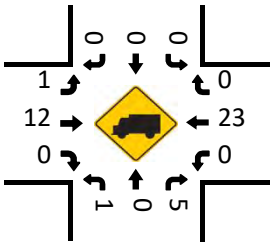
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-024
Date: 3/19/2019

Total

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	59	0	118	0	0	0	0	0	33	167	0	0	0	113	35	0	525
7:15 AM	69	0	130	0	0	0	0	0	34	186	0	0	0	129	39	0	587
7:30 AM	53	0	137	0	0	0	0	0	37	213	0	0	0	107	39	0	586
7:45 AM	63	0	142	0	0	0	0	0	31	212	0	0	0	108	27	0	583
8:00 AM	57	0	124	0	0	0	0	0	29	200	0	0	0	132	37	0	579
8:15 AM	57	1	98	0	0	0	0	0	35	200	0	0	0	125	38	0	554
8:30 AM	49	0	137	0	0	0	0	0	47	177	0	0	0	129	47	0	586
8:45 AM	40	3	111	0	0	0	0	0	31	187	0	0	0	148	38	0	558
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	447	4	997	0	0	0	0	0	277	1542	0	0	0	991	300	0	4558
APPROACH %'s :	30.87%	0.28%	68.85%	0.00%					15.23%	84.77%	0.00%	0.00%	0.00%	76.76%	23.24%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	242	0	533	0	0	0	0	0	131	811	0	0	0	476	142	0	2335
PEAK HR FACTOR :	0.877	0.000	0.938	0.000	0.000	0.000	0.000	0.000	0.885	0.952	0.000	0.000	0.000	0.902	0.910	0.000	0.994
	0.945								0.942				0.914				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	75	2	124	0	0	0	0	0	36	142	0	0	0	238	136	0	753
4:15 PM	78	2	129	0	0	0	0	0	42	108	0	0	0	203	125	0	687
4:30 PM	95	1	115	0	0	0	0	0	44	132	0	0	0	227	147	0	761
4:45 PM	95	2	105	0	0	0	0	0	49	151	0	0	0	219	139	0	760
5:00 PM	79	0	83	0	0	0	0	0	63	134	0	0	0	225	171	0	755
5:15 PM	73	0	106	0	0	0	0	0	50	125	0	0	0	224	185	0	763
5:30 PM	76	0	84	0	0	0	0	0	52	127	0	0	0	205	127	0	671
5:45 PM	77	0	104	0	0	0	0	0	59	123	0	0	0	196	104	0	663
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	648	7	850	0	0	0	0	0	395	1042	0	0	0	1737	1134	0	5813
APPROACH %'s :	43.06%	0.47%	56.48%	0.00%					27.49%	72.51%	0.00%	0.00%	0.00%	60.50%	39.50%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	342	3	409	0	0	0	0	0	206	542	0	0	0	895	642	0	3039
PEAK HR FACTOR :	0.900	0.375	0.889	0.000	0.000	0.000	0.000	0.000	0.817	0.897	0.000	0.000	0.000	0.986	0.868	0.000	0.996
	0.893								0.935				0.939				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-024
Date: 3/19/2019

Cars

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	54	0	117	0	0	0	0	0	32	163	0	0	0	109	35	0	510
7:15 AM	60	0	128	0	0	0	0	0	30	180	0	0	0	122	39	0	559
7:30 AM	47	0	136	0	0	0	0	0	36	205	0	0	0	102	38	0	564
7:45 AM	57	0	140	0	0	0	0	0	28	207	0	0	0	99	26	0	557
8:00 AM	49	0	120	0	0	0	0	0	27	194	0	0	0	125	34	0	549
8:15 AM	49	1	98	0	0	0	0	0	32	197	0	0	0	119	37	0	533
8:30 AM	40	0	135	0	0	0	0	0	44	174	0	0	0	123	47	0	563
8:45 AM	33	3	106	0	0	0	0	0	29	182	0	0	0	141	36	0	530
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	389	4	980	0	0	0	0	0	258	1502	0	0	0	940	292	0	4365
APPROACH %'s :	28.33%	0.29%	71.38%	0.00%					14.66%	85.34%	0.00%	0.00%	0.00%	76.30%	23.70%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	213	0	524	0	0	0	0	0	121	786	0	0	0	448	137	0	2229
PEAK HR FACTOR :	0.89	0.000	0.936	0.000	0.000	0.000	0.000	0.000	0.840	0.949	0.000	0.000	0.000	0.896	0.878	0.000	0.988
	0.935								0.941				0.908				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	66	2	122	0	0	0	0	0	35	141	0	0	0	231	136	0	733
4:15 PM	73	2	128	0	0	0	0	0	41	105	0	0	0	198	124	0	671
4:30 PM	89	1	113	0	0	0	0	0	42	127	0	0	0	219	147	0	738
4:45 PM	93	2	103	0	0	0	0	0	48	147	0	0	0	211	139	0	743
5:00 PM	70	0	82	0	0	0	0	0	60	132	0	0	0	221	171	0	736
5:15 PM	70	0	104	0	0	0	0	0	46	120	0	0	0	217	184	0	741
5:30 PM	67	0	80	0	0	0	0	0	51	124	0	0	0	202	127	0	651
5:45 PM	70	0	102	0	0	0	0	0	58	119	0	0	0	192	102	0	643
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	598	7	834	0	0	0	0	0	381	1015	0	0	0	1691	1130	0	5656
APPROACH %'s :	41.56%	0.49%	57.96%	0.00%					27.29%	72.71%	0.00%	0.00%	0.00%	59.94%	40.06%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	322	3	402	0	0	0	0	0	196	526	0	0	0	868	641	0	2958
PEAK HR FACTOR :	0.87	0.375	0.889	0.000	0.000	0.000	0.000	0.000	0.817	0.895	0.000	0.000	0.000	0.982	0.871	0.000	0.995
	0.895								0.926				0.941				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-024
Date: 3/19/2019

2axle

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	0	1	0	0	0	0	0	1	4	0	0	0	3	0	0	10
7:15 AM	3	0	2	0	0	0	0	0	1	5	0	0	0	5	0	0	16
7:30 AM	4	0	1	0	0	0	0	0	0	5	0	0	0	3	1	0	14
7:45 AM	2	0	2	0	0	0	0	0	0	5	0	0	0	8	1	0	18
8:00 AM	1	0	4	0	0	0	0	0	0	4	0	0	0	6	2	0	17
8:15 AM	1	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0	8
8:30 AM	0	0	1	0	0	0	0	0	3	3	0	0	0	4	0	0	11
8:45 AM	2	0	2	0	0	0	0	0	1	4	0	0	0	5	1	0	15
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	14	0	13	0	0	0	0	0	6	32	0	0	0	39	5	0	109
APPROACH %'s :	51.85%	0.00%	48.15%	0.00%					15.79%	84.21%	0.00%	0.00%	0.00%	88.64%	11.36%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	10	0	9	0	0	0	0	0	1	19	0	0	0	22	4	0	65
PEAK HR FACTOR :	0.625	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.250	0.950	0.000	0.000	0.000	0.688	0.500	0.000	0.903
	0.950								0.833				0.722				

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				5th St				5th St				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	0	2	0	0	0	0	0	0	1	0	0	0	7	0	0	11
4:15 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	4	0	0	7
4:30 PM	0	0	2	0	0	0	0	0	0	4	0	0	0	7	0	0	13
4:45 PM	0	0	1	0	0	0	0	0	1	3	0	0	0	7	0	0	12
5:00 PM	1	0	1	0	0	0	0	0	0	2	0	0	0	4	0	0	8
5:15 PM	0	0	1	0	0	0	0	0	0	3	0	0	0	5	0	0	9
5:30 PM	0	0	2	0	0	0	0	0	1	3	0	0	0	3	0	0	9
5:45 PM	0	0	1	0	0	0	0	0	1	3	0	0	0	3	1	0	9
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	0	11	0	0	0	0	0	3	21	0	0	0	40	1	0	78
APPROACH %'s :	15.38%	0.00%	84.62%	0.00%					12.50%	87.50%	0.00%	0.00%	0.00%	97.56%	2.44%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	0	5	0	0	0	0	0	1	12	0	0	0	23	0	0	42
PEAK HR FACTOR :	0.25	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.250	0.750	0.000	0.000	0.000	0.821	0.000	0.000	0.808
	0.750								0.813				0.821				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-024
Date: 3/19/2019

3axle

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
7:15 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:15 AM	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
8:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4
8:45 AM	1	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	7	0	2	0	0	0	0	0	1	5	0	0	0	6	0	0	21
APPROACH %'s :	77.78%	0.00%	22.22%	0.00%					16.67%	83.33%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	0	1	4	0	0	0	2	0	0	8
PEAK HR FACTOR :	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.250	0.000	0.000	0.500
	0.250								0.625				0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	2	0	0	0	0	0	0	0	0	1	0	0	0	2	1	0	6
5:30 PM	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:45 PM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	9	0	2	0	0	0	0	0	1	3	0	0	0	3	2	0	20
APPROACH %'s :	81.82%	0.00%	18.18%	0.00%					25.00%	75.00%	0.00%	0.00%	0.00%	60.00%	40.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	2	0	0	0	0	0	0	0	0	2	0	0	0	3	1	0	8
PEAK HR FACTOR :	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.375	0.250	0.000	0.333
	0.250								0.500				0.333				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-024
Date: 3/19/2019

4axle

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	5	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	8
7:30 AM	2	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	6
7:45 AM	4	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	7
8:00 AM	7	0	0	0	0	0	0	0	2	1	0	0	0	1	1	0	12
8:15 AM	5	0	0	0	0	0	0	0	3	0	0	0	0	1	1	0	10
8:30 AM	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
8:45 AM	4	0	1	0	0	0	0	0	1	1	0	0	0	1	1	0	9
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	37	0	2	0	0	0	0	0	12	3	0	0	0	6	3	0	63
APPROACH %'s :	94.87%	0.00%	5.13%	0.00%					80.00%	20.00%	0.00%	0.00%	0.00%	66.67%	33.33%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	18	0	0	0	0	0	0	0	8	2	0	0	0	4	1	0	33
PEAK HR FACTOR :	0.643	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.500	0.000	0.000	0.000	0.500	0.250	0.000	0.688
	0.643								0.833				0.625				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	7
4:15 PM	5	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	7
4:30 PM	6	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	8
4:45 PM	2	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	5
5:00 PM	8	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	11
5:15 PM	1	0	1	0	0	0	0	0	4	1	0	0	0	0	0	0	7
5:30 PM	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	6	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	8
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	39	0	3	0	0	0	0	0	10	3	0	0	0	3	1	0	59
APPROACH %'s :	92.86%	0.00%	7.14%	0.00%					76.92%	23.08%	0.00%	0.00%	0.00%	75.00%	25.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	17	0	2	0	0	0	0	0	9	2	0	0	0	1	0	0	31
PEAK HR FACTOR :	0.53	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.563	0.500	0.000	0.000	0.000	0.250	0.000	0.000	0.705
	0.594								0.550				0.250				

Prepared by National Data & Surveying Services

E St & 5th St

Peak Hour Turning Movement Count

ID: 19-06039-025
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

SOUTHBOUND (E St)

AM	14	120	10	0	171	AM
NOON	0	0	0	0	0	NOON
PM	57	151	20	1	317	PM

EASTBOUND (5th St)

AM	NOON	PM	
430	0	970	
0	0	0	0
74	0	26	1
918	0	523	2
31	0	37	0

WESTBOUND (5th St)

	PM	NOON	AM
0	20	0	7
2	825	0	396
1	33	0	6
0	0	0	0
	570	0	946

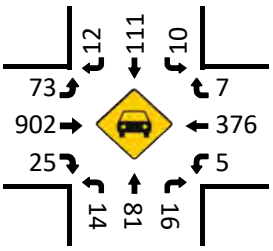
NORTHBOUND (E St)

PM	222	1	88	270	27	PM
NOON	0	0	0	0	0	NOON
AM	157	0	20	90	18	AM

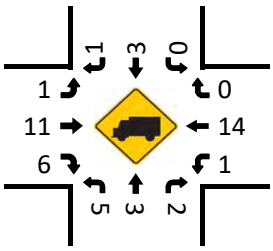
	0	1	1	0

CONTROL			
Signalized			
TEV	1704 AM	0 NOON	2079 PM
PHF	0.97		0.93

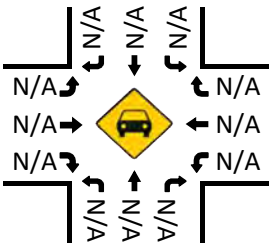
Cars (AM)



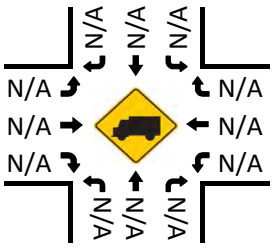
2axle (AM)



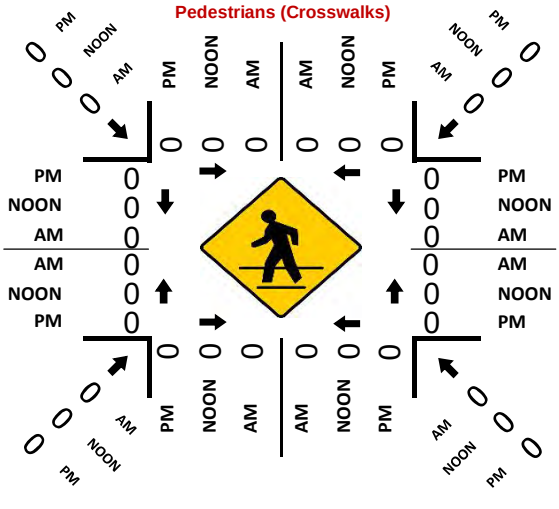
Cars (NOON)



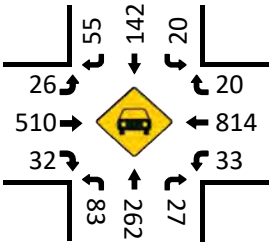
2axle (NOON)



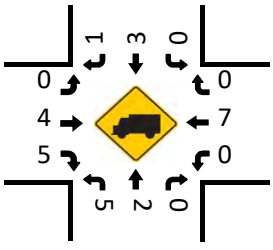
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: E St & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-025
Date: 3/19/2019

Total

NS/EW Streets:	E St				E St				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	13	1	0	3	16	4	0	13	215	4	0	3	102	0	0	377
7:15 AM	6	15	7	0	2	26	1	0	19	226	5	0	2	107	0	0	416
7:30 AM	5	19	4	0	2	32	4	0	20	220	12	0	3	96	4	0	421
7:45 AM	2	26	5	0	5	37	3	0	13	246	9	0	1	89	1	0	437
8:00 AM	7	30	2	0	1	25	6	0	22	226	5	0	0	104	2	0	430
8:15 AM	8	30	6	0	9	31	4	1	12	205	7	0	4	87	1	0	405
8:30 AM	8	25	5	0	9	34	8	1	15	202	6	0	2	102	0	0	417
8:45 AM	6	21	7	0	2	40	6	0	15	213	12	0	2	124	3	0	451
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	45	179	37	0	33	241	36	2	129	1753	60	0	17	811	11	0	3354
APPROACH %'s :	17.24%	68.58%	14.18%	0.00%	10.58%	77.24%	11.54%	0.64%	6.64%	90.27%	3.09%	0.00%	2.03%	96.66%	1.31%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	20	90	18	0	10	120	14	0	74	918	31	0	6	396	7	0	1704
PEAK HR FACTOR :	0.714	0.750	0.643	0.000	0.500	0.811	0.583	0.000	0.841	0.933	0.646	0.000	0.500	0.925	0.438	0.000	0.975
	0.821				0.800				0.954				0.938				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	19	48	7	0	11	44	7	0	4	142	10	0	6	224	9	0	531
4:15 PM	19	53	10	0	5	36	18	0	5	125	12	0	10	198	6	0	497
4:30 PM	20	73	4	0	6	46	13	1	3	128	11	0	7	211	5	0	528
4:45 PM	23	60	4	1	6	31	22	0	7	131	12	0	6	175	3	0	481
5:00 PM	23	58	7	0	5	34	8	0	10	132	7	0	9	261	3	0	557
5:15 PM	22	79	12	0	3	40	14	0	6	132	7	0	11	178	9	0	513
5:30 PM	21	58	1	0	4	52	13	0	6	103	8	0	4	211	4	0	485
5:45 PM	23	84	6	0	4	42	14	0	8	146	6	0	5	158	3	0	499
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	170	513	51	1	44	325	109	1	49	1039	73	0	58	1616	42	0	4091
APPROACH %'s :	23.13%	69.80%	6.94%	0.14%	9.19%	67.85%	22.76%	0.21%	4.22%	89.49%	6.29%	0.00%	3.38%	94.17%	2.45%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	88	270	27	1	20	151	57	1	26	523	37	0	33	825	20	0	2079
PEAK HR FACTOR :	0.957	0.854	0.563	0.250	0.833	0.821	0.648	0.250	0.650	0.991	0.771	0.000	0.750	0.790	0.556	0.000	0.933
	0.854				0.867				0.977				0.804				

National Data & Surveying Services

Intersection Turning Movement Count

Location: E St & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-025
Date: 3/19/2019

Cars

NS/EW Streets:	E St				E St				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	10	1	0	3	12	4	0	13	211	3	0	3	99	0	0	361
7:15 AM	4	13	7	0	2	24	1	0	19	223	3	0	2	103	0	0	401
7:30 AM	3	16	3	0	2	29	2	0	20	216	10	0	2	95	4	0	402
7:45 AM	1	24	4	0	5	34	3	0	12	243	8	0	1	81	1	0	417
8:00 AM	6	28	2	0	1	24	6	0	22	220	4	0	0	97	2	0	412
8:15 AM	6	28	6	0	9	27	4	1	12	200	6	0	4	83	1	0	387
8:30 AM	7	22	5	0	9	30	7	1	14	200	5	0	2	97	0	0	399
8:45 AM	5	19	7	0	2	35	5	0	14	206	10	0	2	119	3	0	427
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	34	160	35	0	33	215	32	2	126	1719	49	0	16	774	11	0	3206
APPROACH %'s :	14.85%	69.87%	15.28%	0.00%	11.70%	76.24%	11.35%	0.71%	6.65%	90.76%	2.59%	0.00%	2.00%	96.63%	1.37%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	14	81	16	0	10	111	12	0	73	902	25	0	5	376	7	0	1632
PEAK HR FACTOR :	0.58	0.723	0.571	0.000	0.500	0.816	0.500	0.000	0.830	0.928	0.625	0.000	0.625	0.913	0.438	0.000	0.978
	0.771				0.792				0.951				0.924				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	18	45	7	0	11	44	7	0	4	141	9	0	5	221	9	0	521
4:15 PM	17	52	10	0	5	34	18	0	5	124	11	0	9	197	6	0	488
4:30 PM	19	70	4	0	6	42	13	1	3	126	9	0	7	207	5	0	512
4:45 PM	21	58	4	1	6	27	20	0	7	127	12	0	6	173	3	0	465
5:00 PM	22	55	7	0	5	34	8	0	10	129	6	0	9	260	3	0	548
5:15 PM	21	79	12	0	3	39	14	0	6	128	5	0	11	174	9	0	501
5:30 PM	19	55	1	0	4	49	13	0	6	99	7	0	4	210	4	0	471
5:45 PM	22	81	6	0	4	40	14	0	8	145	5	0	5	154	3	0	487
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	159	495	51	1	44	309	107	1	49	1019	64	0	56	1596	42	0	3993
APPROACH %'s :	22.52%	70.11%	7.22%	0.14%	9.54%	67.03%	23.21%	0.22%	4.33%	90.02%	5.65%	0.00%	3.31%	94.21%	2.48%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	83	262	27	1	20	142	55	1	26	510	32	0	33	814	20	0	2026
PEAK HR FACTOR :	0.94	0.829	0.563	0.250	0.833	0.845	0.688	0.250	0.650	0.988	0.667	0.000	0.750	0.783	0.556	0.000	0.924
	0.833				0.879				0.973				0.797				

National Data & Surveying Services

Intersection Turning Movement Count

Location: E St & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-025
Date: 3/19/2019

2axle

NS/EW Streets:	E St				E St				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	2	0	0	0	3	0	0	0	4	1	0	0	3	0	0	14
7:15 AM	1	0	0	0	0	0	0	0	0	2	2	0	0	3	0	0	8
7:30 AM	2	2	1	0	0	2	1	0	0	1	2	0	1	0	0	0	12
7:45 AM	1	0	1	0	0	1	0	0	1	3	1	0	0	7	0	0	15
8:00 AM	1	1	0	0	0	0	0	0	0	5	1	0	0	4	0	0	12
8:15 AM	2	0	0	0	0	2	0	0	0	3	1	0	0	2	0	0	10
8:30 AM	1	2	0	0	0	3	0	0	1	1	1	0	0	4	0	0	13
8:45 AM	1	0	0	0	0	2	1	0	0	4	2	0	0	2	0	0	12
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	10	7	2	0	0	13	2	0	2	23	11	0	1	25	0	0	96
APPROACH %'s :	52.63%	36.84%	10.53%	0.00%	0.00%	86.67%	13.33%	0.00%	5.56%	63.89%	30.56%	0.00%	3.85%	96.15%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	5	3	2	0	0	3	1	0	1	11	6	0	1	14	0	0	47
PEAK HR FACTOR :	0.625	0.375	0.500	0.000	0.000	0.375	0.250	0.000	0.250	0.550	0.750	0.000	0.250	0.500	0.000	0.000	0.783
	0.500				0.333				0.750				0.536				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	2	0	0	0	0	0	0	0	1	1	0	1	2	0	0	8
4:15 PM	2	0	0	0	0	1	0	0	0	1	1	0	1	0	0	0	6
4:30 PM	1	0	0	0	0	2	0	0	0	0	2	0	0	3	0	0	8
4:45 PM	2	1	0	0	0	1	1	0	0	1	0	0	0	2	0	0	8
5:00 PM	1	1	0	0	0	0	0	0	0	2	1	0	0	1	0	0	6
5:15 PM	1	0	0	0	0	0	0	0	0	1	2	0	0	1	0	0	5
5:30 PM	2	0	0	0	0	0	0	0	0	3	1	0	0	1	0	0	7
5:45 PM	1	1	0	0	0	2	0	0	0	1	1	0	0	2	0	0	8
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	11	5	0	0	0	6	1	0	0	10	9	0	2	12	0	0	56
APPROACH %'s :	68.75%	31.25%	0.00%	0.00%	0.00%	85.71%	14.29%	0.00%	0.00%	52.63%	47.37%	0.00%	14.29%	85.71%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	5	2	0	0	0	3	1	0	0	4	5	0	0	7	0	0	27
PEAK HR FACTOR :	0.63	0.500	0.000	0.000	0.000	0.375	0.250	0.000	0.000	0.500	0.625	0.000	0.000	0.583	0.000	0.000	0.844
	0.583				0.500				0.750				0.583				

National Data & Surveying Services

Intersection Turning Movement Count

Location: E St & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-025
Date: 3/19/2019

3axle

NS/EW Streets:	E St				E St				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	1	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	7
7:30 AM	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	4
7:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
8:00 AM	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	4
8:15 AM	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	5
8:30 AM	0	1	0	0	0	1	1	0	0	1	0	0	0	1	0	0	5
8:45 AM	0	2	0	0	0	2	0	0	1	0	0	0	0	1	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	12	0	0	0	12	1	0	1	6	0	0	0	4	0	0	37
APPROACH %'s :	7.69%	92.31%	0.00%	0.00%	0.00%	92.31%	7.69%	0.00%	14.29%	85.71%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	6	0	0	0	6	0	0	0	4	0	0	0	2	0	0	19
PEAK HR FACTOR :	0.250	0.750	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.679
	0.583				0.750				0.500				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	3	0	0	0	2	0	0	0	2	0	0	0	1	0	0	8
4:45 PM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
5:00 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	3	0	0	5
5:30 PM	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5
5:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	12	0	0	0	10	0	0	0	4	0	0	0	5	0	0	31
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	6	0	0	0	6	0	0	0	4	0	0	0	4	0	0	20
PEAK HR FACTOR :	0.00	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.333	0.000	0.000	0.625
	0.500				0.500				0.500				0.333				

National Data & Surveying Services

Intersection Turning Movement Count

Location: E St & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-025
Date: 3/19/2019

4axle

NS/EW Streets:	E St				E St				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	0	0	3	0	0	0	2	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	1	0	0	5	0	0	0	8	0	0	15
APPROACH %'s :					0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	1	0	0	0	4	0	0	6
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.500
							0.250				0.250				0.500		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
5:30 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	0	1	0	0	6	0	0	0	3	0	0	11
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	5	0	0	0	0	0	0	6
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.375
							0.250				0.417						

Prepared by National Data & Surveying Services

Arrowhead Ave & 5th St

Peak Hour Turning Movement Count

ID: 19-06039-026
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Arrowhead Ave – SOUTHBOUND

	↲	↓	↳	U	⇧
AM	24	168	25	0	146
NOON	0	0	0	0	0
PM	51	133	26	1	365
	0	2	0	0	

5th St – EASTBOUND

	AM	NOON	PM	
⇦	431	0	722	
U	0	0	0	0
Left	43	0	46	1
Thru	613	0	475	2
Right	128	0	30	0

5th St – WESTBOUND

		PM	NOON	AM
Right	0	20	0	12
Thru	2	577	0	371
Left	1	39	0	28
U	0	0	0	1
⇨		565	0	670

Arrowhead Ave – NORTHBOUND

	⇩	U	Left	Thru	Right
		0	1	2	0
PM	202	0	94	298	64
NOON	0	0	0	0	0
AM	324	0	36	91	31

CONTROL

Signalized

	AM	NOON	PM
TEV	1571	0	1854
PHF	0.95		0.89

Cars / 2axle

	SB (↲ / ↓ / ↳)	EB (Left / Thru / Right)	WB (Right / Thru / Left)	NB (Left / Thru / Right)
Cars (AM)	24 / 162 / 24	43 / 600 / 126	12 / 353 / 28	34 / 85 / 30
Cars (NOON)	N/A / N/A / N/A	N/A / N/A / N/A	N/A / N/A / N/A	N/A / N/A / N/A
Cars (PM)	51 / 124 / 26	46 / 465 / 30	20 / 568 / 39	93 / 291 / 64
2axle (AM)	0 / 6 / 1	0 / 10 / 1	0 / 12 / 0	2 / 5 / 1
2axle (NOON)	N/A / N/A / N/A	N/A / N/A / N/A	N/A / N/A / N/A	N/A / N/A / N/A
2axle (PM)	0 / 9 / 0	0 / 4 / 0	0 / 7 / 0	1 / 7 / 0

Pedestrians (Crosswalks)

	AM	NOON	PM
North leg (eastbound / westbound)	0 / 0	0 / 0	0 / 0
South leg (eastbound / westbound)	0 / 0	0 / 0	0 / 0
West leg (northbound / southbound)	0 / 0	0 / 0	0 / 0
East leg (northbound / southbound)	0 / 0	0 / 0	0 / 0
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Arrowhead Ave & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-026
Date: 3/19/2019

Total

NS/EW Streets:	Arrowhead Ave				Arrowhead Ave				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	9	11	4	0	2	16	4	0	10	137	13	0	2	90	5	0	303
7:15 AM	5	12	9	0	5	42	5	0	9	168	25	0	6	103	5	0	394
7:30 AM	4	22	7	0	4	51	3	0	10	146	28	0	7	103	3	0	388
7:45 AM	13	23	11	0	11	51	7	0	11	159	34	0	9	81	2	0	412
8:00 AM	14	34	4	0	5	24	9	0	13	140	41	0	6	84	2	1	377
8:15 AM	8	13	8	0	4	30	8	0	13	149	25	0	6	72	5	0	341
8:30 AM	13	19	13	0	5	23	9	0	18	111	20	0	11	82	6	0	330
8:45 AM	15	21	15	0	5	27	10	0	20	134	20	0	10	109	7	0	393
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	81	155	71	0	41	264	55	0	104	1144	206	0	57	724	35	1	2938
APPROACH %'s :	26.38%	50.49%	23.13%	0.00%	11.39%	73.33%	15.28%	0.00%	7.15%	78.68%	14.17%	0.00%	6.98%	88.62%	4.28%	0.12%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	36	91	31	0	25	168	24	0	43	613	128	0	28	371	12	1	1571
PEAK HR FACTOR :	0.643	0.669	0.705	0.000	0.568	0.824	0.667	0.000	0.827	0.912	0.780	0.000	0.778	0.900	0.600	0.250	0.953
	0.760				0.786				0.961				0.904				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	35	67	15	0	5	34	20	0	11	137	7	0	11	172	4	0	518
4:15 PM	21	64	19	0	6	44	10	0	16	119	6	0	7	135	2	0	449
4:30 PM	18	56	16	0	9	33	14	1	14	106	11	0	11	158	5	0	452
4:45 PM	14	85	15	0	4	28	17	0	5	130	5	0	12	112	5	0	432
5:00 PM	41	93	14	0	7	28	10	0	11	120	8	0	9	172	8	0	521
5:15 PM	23	68	22	0	2	27	9	0	16	123	10	1	8	114	3	0	426
5:30 PM	21	65	15	0	8	26	18	0	6	91	6	0	11	159	5	0	431
5:45 PM	11	41	12	0	4	27	11	0	22	112	5	1	14	114	1	0	375
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	184	539	128	0	45	247	109	1	101	938	58	2	83	1136	33	0	3604
APPROACH %'s :	21.62%	63.34%	15.04%	0.00%	11.19%	61.44%	27.11%	0.25%	9.19%	85.35%	5.28%	0.18%	6.63%	90.73%	2.64%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	94	298	64	0	26	133	51	1	46	475	30	0	39	577	20	0	1854
PEAK HR FACTOR :	0.573	0.801	0.842	0.000	0.722	0.756	0.750	0.250	0.719	0.913	0.682	0.000	0.813	0.839	0.625	0.000	0.890
	0.770				0.879				0.977				0.841				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Arrowhead Ave & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-026
Date: 3/19/2019

Cars

NS/EW Streets:	Arrowhead Ave				Arrowhead Ave				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	7	8	4	0	2	16	4	0	10	134	12	0	2	88	4	0	291
7:15 AM	5	11	9	0	5	39	5	0	9	166	24	0	6	100	5	0	384
7:30 AM	4	22	6	0	4	49	3	0	10	142	27	0	7	100	3	0	377
7:45 AM	11	20	11	0	11	51	7	0	11	155	34	0	9	76	2	0	398
8:00 AM	14	32	4	0	4	23	9	0	13	137	41	0	6	77	2	1	363
8:15 AM	8	12	8	0	4	30	7	0	13	144	24	0	6	67	5	0	328
8:30 AM	13	18	12	0	5	22	9	0	18	109	18	0	11	79	6	0	320
8:45 AM	14	20	14	0	5	25	10	0	18	129	20	0	9	105	6	0	375
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	76	143	68	0	40	255	54	0	102	1116	200	0	56	692	33	1	2836
APPROACH %'s :	26.48%	49.83%	23.69%	0.00%	11.46%	73.07%	15.47%	0.00%	7.19%	78.70%	14.10%	0.00%	7.16%	88.49%	4.22%	0.13%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	34	85	30	0	24	162	24	0	43	600	126	0	28	353	12	1	1522
PEAK HR FACTOR :	0.61	0.664	0.682	0.000	0.545	0.794	0.667	0.000	0.827	0.904	0.768	0.000	0.778	0.883	0.600	0.250	0.956
	0.745				0.761				0.961				0.887				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	35	66	15	0	5	33	20	0	11	136	7	0	10	169	4	0	511
4:15 PM	20	63	19	0	6	41	10	0	16	118	6	0	7	133	2	0	441
4:30 PM	18	55	16	0	9	29	14	1	14	104	11	0	11	155	5	0	442
4:45 PM	14	82	15	0	4	26	17	0	5	126	5	0	12	109	5	0	420
5:00 PM	41	91	14	0	7	28	10	0	11	117	8	0	9	171	8	0	515
5:15 PM	21	68	22	0	2	24	9	0	16	120	9	1	8	113	3	0	416
5:30 PM	20	64	15	0	8	25	18	0	5	88	6	0	11	158	5	0	423
5:45 PM	11	40	12	0	4	25	11	0	22	111	5	1	14	110	1	0	367
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	180	529	128	0	45	231	109	1	100	920	57	2	82	1118	33	0	3535
APPROACH %'s :	21.51%	63.20%	15.29%	0.00%	11.66%	59.84%	28.24%	0.26%	9.27%	85.26%	5.28%	0.19%	6.65%	90.67%	2.68%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	93	291	64	0	26	124	51	1	46	465	30	0	39	568	20	0	1818
PEAK HR FACTOR :	0.57	0.799	0.842	0.000	0.722	0.756	0.750	0.250	0.719	0.923	0.682	0.000	0.813	0.830	0.625	0.000	0.883
	0.767				0.886				0.966				0.834				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Arrowhead Ave & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-026
Date: 3/19/2019

2axle

NS/EW Streets:	Arrowhead Ave				Arrowhead Ave				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	2	0	0	0	0	0	0	0	3	1	0	0	2	1	0	11
7:15 AM	0	1	0	0	0	3	0	0	0	1	1	0	0	2	0	0	8
7:30 AM	0	0	1	0	0	2	0	0	0	2	0	0	0	2	0	0	7
7:45 AM	2	2	0	0	0	0	0	0	0	4	0	0	0	4	0	0	12
8:00 AM	0	2	0	0	1	1	0	0	0	3	0	0	0	4	0	0	11
8:15 AM	0	1	0	0	0	0	1	0	0	3	1	0	0	3	0	0	9
8:30 AM	0	1	1	0	0	1	0	0	0	1	1	0	0	2	0	0	7
8:45 AM	0	1	0	0	0	2	0	0	1	3	0	0	1	2	1	0	11
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	10	2	0	1	9	1	0	1	20	4	0	1	21	2	0	76
APPROACH %'s :	25.00%	62.50%	12.50%	0.00%	9.09%	81.82%	9.09%	0.00%	4.00%	80.00%	16.00%	0.00%	4.17%	87.50%	8.33%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	2	5	1	0	1	6	0	0	0	10	1	0	0	12	0	0	38
PEAK HR FACTOR :	0.250	0.625	0.250	0.000	0.250	0.500	0.000	0.000	0.000	0.625	0.250	0.000	0.000	0.750	0.000	0.000	0.792
	0.500				0.583				0.688				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	1	0	0	0	1	0	0	1	2	0	0	6
4:15 PM	1	1	0	0	0	3	0	0	0	1	0	0	0	1	0	0	7
4:30 PM	0	1	0	0	0	4	0	0	0	0	0	0	0	2	0	0	7
4:45 PM	0	3	0	0	0	2	0	0	0	1	0	0	0	3	0	0	9
5:00 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	1	0	0	5
5:15 PM	1	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	5
5:30 PM	1	1	0	0	0	1	0	0	1	2	0	0	0	0	0	0	6
5:45 PM	0	1	0	0	0	2	0	0	0	1	0	0	0	2	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	10	0	0	0	16	0	0	1	8	1	0	1	11	0	0	51
APPROACH %'s :	23.08%	76.92%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	10.00%	80.00%	10.00%	0.00%	8.33%	91.67%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	1	7	0	0	0	9	0	0	0	4	0	0	0	7	0	0	28
PEAK HR FACTOR :	0.25	0.583	0.000	0.000	0.000	0.563	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.583	0.000	0.000	0.778
	0.667				0.563				0.500				0.583				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Arrowhead Ave & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-026
Date: 3/19/2019

3axle

NS/EW Streets:	Arrowhead Ave				Arrowhead Ave				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	0	0	0	0	5	1	0	0	4	0	0	11
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%					0.00%	83.33%	16.67%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	5
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.500	0.000	0.000	0.625
									0.375				0.500				

NS/EW Streets:	Arrowhead Ave				Arrowhead Ave				5th St				5th St				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:15 PM	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	9
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.250	0.000	0.000	0.333
									0.375				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Arrowhead Ave & 5th St
City: San Bernardino
Control: Signalized

Project ID: 19-06039-026
Date: 3/19/2019

4axle

NS/EW Streets:	Arrowhead Ave				Arrowhead Ave				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	0	1	0	0	0	0	0	1	2	0	0	0	1	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	1	1	0	0	0	0	0	1	3	1	0	0	7	0	0	15
APPROACH %'s :	33.33%	33.33%	33.33%	0.00%					20.00%	60.00%	20.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	1	0	0	4	0	0	6
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.750
	0.250								0.250				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	6	0	0	0	3	0	0	9
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.333
									0.250				0.250				

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

City of San Bernardino
N/S: Waterman Avenue
E/W: 5th Street
Weather: Clear

File Name : 22_SBC_Waterman_5th AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

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

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	45	10	57	3	24	1	28	12	31	2	45	7	10	12	29	159
06:15 AM	1	51	20	72	3	28	0	31	14	27	3	44	11	22	17	50	197
06:30 AM	2	58	17	77	2	39	1	42	15	45	6	66	12	21	22	55	240
06:45 AM	4	108	15	127	4	49	2	55	19	43	10	72	9	50	29	88	342
Total	9	262	62	333	12	140	4	156	60	146	21	227	39	103	80	222	938
07:00 AM	3	72	18	93	9	55	5	69	18	59	10	87	13	36	37	86	335
07:15 AM	3	117	22	142	18	67	4	89	25	70	11	106	15	40	30	85	422
07:30 AM	5	133	31	169	18	79	3	100	16	72	16	104	13	38	42	93	466
07:45 AM	1	138	26	165	20	78	3	101	25	91	9	125	23	39	37	99	490
Total	12	460	97	569	65	279	15	359	84	292	46	422	64	153	146	363	1713
08:00 AM	5	104	21	130	12	61	5	78	32	121	8	161	13	38	37	88	457
08:15 AM	6	110	21	137	12	46	7	65	22	93	12	127	22	36	22	80	409
08:30 AM	0	101	29	130	11	46	9	66	20	89	15	124	23	39	25	87	407
08:45 AM	6	113	25	144	10	47	5	62	25	98	9	132	21	41	18	80	418
Total	17	428	96	541	45	200	26	271	99	401	44	544	79	154	102	335	1691
Grand Total	38	1150	255	1443	122	619	45	786	243	839	111	1193	182	410	328	920	4342
Apprch %	2.6	79.7	17.7		15.5	78.8	5.7		20.4	70.3	9.3		19.8	44.6	35.7		
Total %	0.9	26.5	5.9	33.2	2.8	14.3	1	18.1	5.6	19.3	2.6	27.5	4.2	9.4	7.6	21.2	
Passenger Vehicles	37	1090	230	1357	112	585	41	738	207	772	102	1081	156	387	318	861	4037
% Passenger Vehicles	97.4	94.8	90.2	94	91.8	94.5	91.1	93.9	85.2	92	91.9	90.6	85.7	94.4	97	93.6	93
Large 2 Axle Vehicles	1	49	21	71	7	16	3	26	24	55	8	87	23	13	7	43	227
% Large 2 Axle Vehicles	2.6	4.3	8.2	4.9	5.7	2.6	6.7	3.3	9.9	6.6	7.2	7.3	12.6	3.2	2.1	4.7	5.2
3 Axle Vehicles	0	4	2	6	1	13	0	14	6	3	1	10	1	4	2	7	37
% 3 Axle Vehicles	0	0.3	0.8	0.4	0.8	2.1	0	1.8	2.5	0.4	0.9	0.8	0.5	1	0.6	0.8	0.9
4+ Axle Trucks	0	7	2	9	2	5	1	8	6	9	0	15	2	6	1	9	41
% 4+ Axle Trucks	0	0.6	0.8	0.6	1.6	0.8	2.2	1	2.5	1.1	0	1.3	1.1	1.5	0.3	1	0.9

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	117	22	142	18	67	4	89	25	70	11	106	15	**40**	30	85	422
07:30 AM	**5**	133	**31**	**169**	18	**79**	3	100	16	72	**16**	104	13	38	**42**	93	466
07:45 AM	1	**138**	26	165	**20**	78	3	**101**	25	91	9	125	**23**	39	37	**99**	**490**
08:00 AM	5	104	21	130	12	61	**5**	78	**32**	**121**	8	**161**	13	38	37	88	457
Total Volume	14	492	100	606	68	285	15	368	98	354	44	496	64	155	146	365	1835
% App. Total	2.3	81.2	16.5		18.5	77.4	4.1		19.8	71.4	8.9		17.5	42.5	40		
PHF	.700	.891	.806	.896	.850	.902	.750	.911	.766	.731	.688	.770	.696	.969	.869	.922	.936

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Weather: Clear

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Site Code : 99918385
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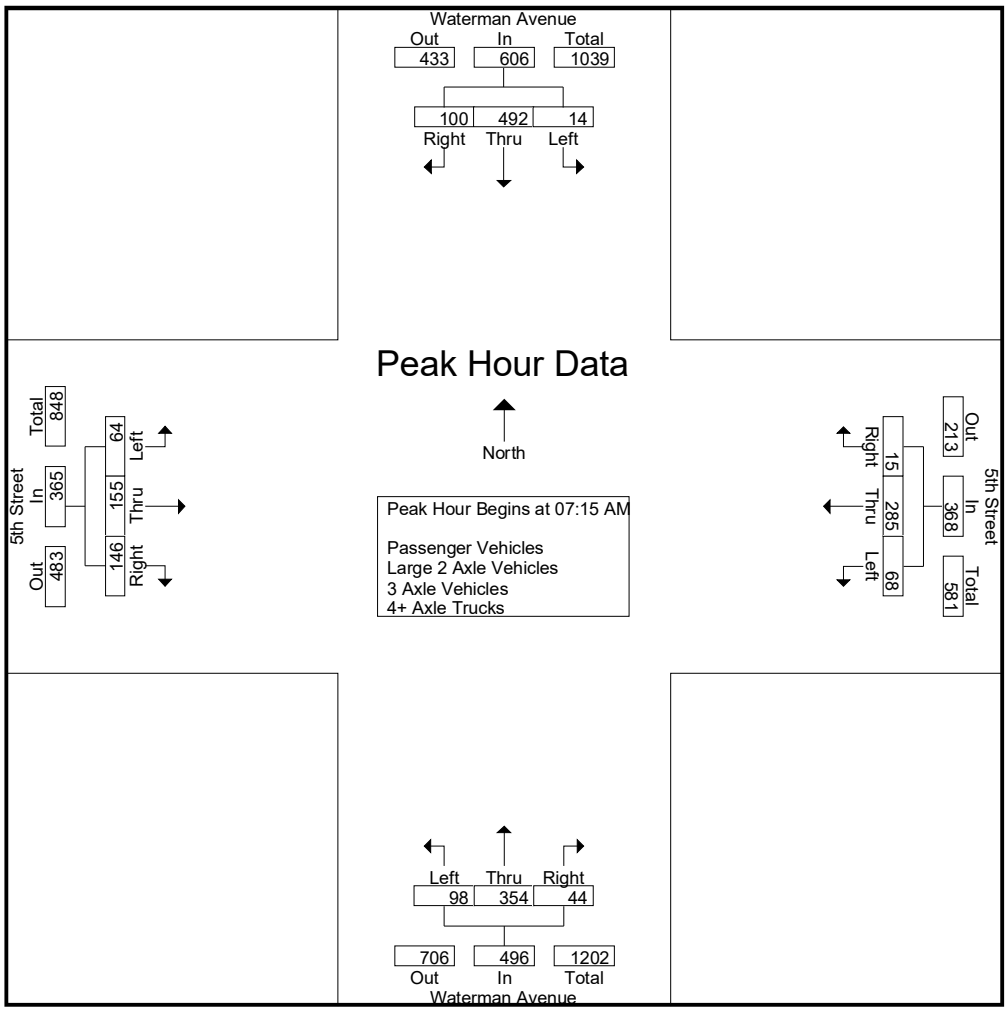

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				08:00 AM				07:15 AM			
+0 mins.	3	117	22	142	18	67	4	89	**32**	**121**	8	**161**	15	**40**	30	85
+15 mins.	**5**	133	**31**	**169**	18	**79**	3	100	22	93	12	127	13	38	**42**	93
+30 mins.	1	**138**	26	165	**20**	78	3	**101**	20	89	**15**	124	**23**	39	37	**99**
+45 mins.	5	104	21	130	12	61	**5**	78	25	98	9	132	13	38	37	88
Total Volume	14	492	100	606	68	285	15	368	99	401	44	544	64	155	146	365
% App. Total	2.3	81.2	16.5		18.5	77.4	4.1		18.2	73.7	8.1		17.5	42.5	40	
PHF	.700	.891	.806	.896	.850	.902	.750	.911	.773	.829	.733	.845	.696	.969	.869	.922

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Groups Printed- Passenger Vehicles

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	43	7	52	3	20	1	24	10	29	2	41	6	10	11	27	144
06:15 AM	1	46	17	64	3	26	0	29	13	26	2	41	8	20	17	45	179
06:30 AM	2	56	15	73	2	34	0	36	8	38	6	52	9	19	22	50	211
06:45 AM	4	102	13	119	4	46	2	52	13	36	9	58	8	50	29	87	316
Total	9	247	52	308	12	126	3	141	44	129	19	192	31	99	79	209	850
07:00 AM	3	70	17	90	9	53	5	67	16	50	7	73	10	35	34	79	309
07:15 AM	3	114	20	137	18	67	4	89	17	65	10	92	14	37	30	81	399
07:30 AM	5	129	29	163	17	76	3	96	15	68	16	99	11	37	40	88	446
07:45 AM	1	126	24	151	15	76	3	94	21	82	8	111	22	38	33	93	449
Total	12	439	90	541	59	272	15	346	69	265	41	375	57	147	137	341	1603
08:00 AM	5	101	19	125	12	59	4	75	29	114	7	150	11	34	37	82	432
08:15 AM	5	105	20	130	10	43	6	59	22	87	12	121	18	34	22	74	384
08:30 AM	0	92	27	119	11	44	8	63	20	85	14	119	22	36	25	83	384
08:45 AM	6	106	22	134	8	41	5	54	23	92	9	124	17	37	18	72	384
Total	16	404	88	508	41	187	23	251	94	378	42	514	68	141	102	311	1584
Grand Total	37	1090	230	1357	112	585	41	738	207	772	102	1081	156	387	318	861	4037
Apprch %	2.7	80.3	16.9		15.2	79.3	5.6		19.1	71.4	9.4		18.1	44.9	36.9		
Total %	0.9	27	5.7	33.6	2.8	14.5	1	18.3	5.1	19.1	2.5	26.8	3.9	9.6	7.9	21.3	

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	114	20	137	**18**	67	**4**	89	17	65	10	92	14	37	30	81	399
07:30 AM	**5**	**129**	**29**	**163**	17	**76**	3	**96**	15	68	**16**	99	11	37	**40**	88	446
07:45 AM	1	126	24	151	15	76	3	94	21	82	8	111	**22**	**38**	33	**93**	**449**
08:00 AM	5	101	19	125	12	59	4	75	**29**	**114**	7	**150**	11	34	37	82	432
Total Volume	14	470	92	576	62	278	14	354	82	329	41	452	58	146	140	344	1726
% App. Total	2.4	81.6	16		17.5	78.5	4		18.1	72.8	9.1		16.9	42.4	40.7		
PHF	.700	.911	.793	.883	.861	.914	.875	.922	.707	.721	.641	.753	.659	.961	.875	.925	.961

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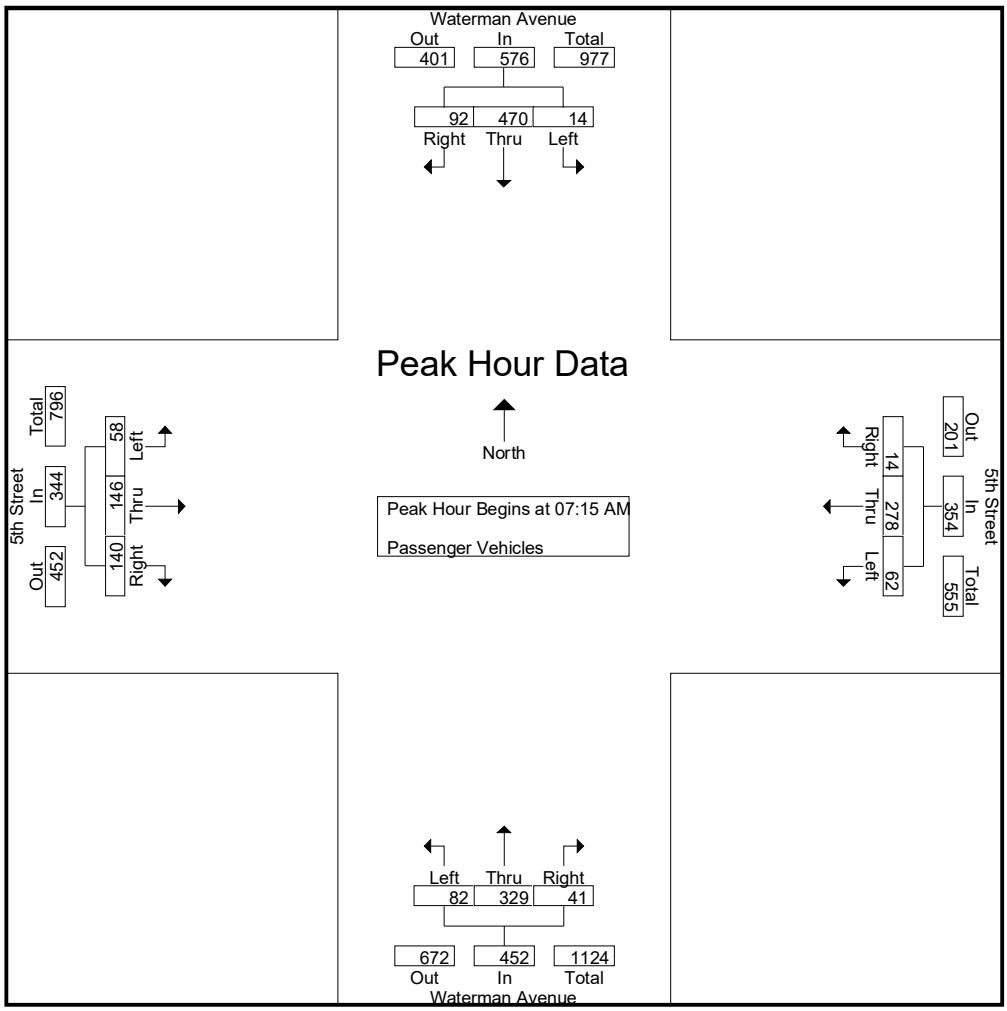

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	3	114	20	137	**18**	67	**4**	89	17	65	10	92	14	37	30	81
+15 mins.	**5**	**129**	**29**	**163**	17	**76**	3	**96**	15	68	**16**	99	11	37	**40**	88
+30 mins.	1	126	24	151	15	76	3	94	21	82	8	111	**22**	**38**	33	**93**
+45 mins.	5	101	19	125	12	59	4	75	**29**	**114**	7	**150**	11	34	37	82
Total Volume	14	470	92	576	62	278	14	354	82	329	41	452	58	146	140	344
% App. Total	2.4	81.6	16		17.5	78.5	4		18.1	72.8	9.1		16.9	42.4	40.7	
PHF	.700	.911	.793	.883	.861	.914	.875	.922	.707	.721	.641	.753	.659	.961	.875	.925

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Groups Printed- Large 2 Axle Vehicles

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	3	4	0	2	0	2	1	1	0	2	1	0	1	2	10
06:15 AM	0	4	2	6	0	1	0	1	0	1	1	2	2	0	0	2	11
06:30 AM	0	2	2	4	0	2	0	2	3	4	0	7	3	2	0	5	18
06:45 AM	0	6	1	7	0	0	0	0	5	6	1	12	1	0	0	1	20
Total	0	13	8	21	0	5	0	5	9	12	2	23	7	2	1	10	59
07:00 AM	0	2	1	3	0	1	0	1	1	8	3	12	2	0	1	3	19
07:15 AM	0	1	1	2	0	0	0	0	6	5	1	12	1	2	0	3	17
07:30 AM	0	4	2	6	1	0	0	1	1	3	0	4	2	0	2	4	15
07:45 AM	0	8	2	10	3	1	0	4	4	7	0	11	1	1	3	5	30
Total	0	15	6	21	4	2	0	6	12	23	4	39	6	3	6	15	81
08:00 AM	0	3	1	4	0	1	1	2	2	7	1	10	2	1	0	3	19
08:15 AM	1	4	1	6	2	3	1	6	0	4	0	4	4	1	0	5	21
08:30 AM	0	7	2	9	0	2	1	3	0	3	1	4	1	2	0	3	19
08:45 AM	0	7	3	10	1	3	0	4	1	6	0	7	3	4	0	7	28
Total	1	21	7	29	3	9	3	15	3	20	2	25	10	8	0	18	87
Grand Total	1	49	21	71	7	16	3	26	24	55	8	87	23	13	7	43	227
Apprch %	1.4	69	29.6		26.9	61.5	11.5		27.6	63.2	9.2		53.5	30.2	16.3		
Total %	0.4	21.6	9.3	31.3	3.1	7	1.3	11.5	10.6	24.2	3.5	38.3	10.1	5.7	3.1	18.9	

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	1	1	2	0	0	0	0	**6**	5	**1**	**12**	1	**2**	0	3	17
07:30 AM	0	4	**2**	6	1	0	0	1	1	3	0	4	**2**	0	2	4	15
07:45 AM	0	**8**	2	**10**	**3**	**1**	0	**4**	4	**7**	0	11	1	1	**3**	**5**	**30**
08:00 AM	0	3	1	4	0	1	**1**	2	2	7	1	10	2	1	0	3	19
Total Volume	0	16	6	22	4	2	1	7	13	22	2	37	6	4	5	15	81
% App. Total	0	72.7	27.3		57.1	28.6	14.3		35.1	59.5	5.4		40	26.7	33.3		
PHF	.000	.500	.750	.550	.333	.500	.250	.438	.542	.786	.500	.771	.750	.500	.417	.750	.675

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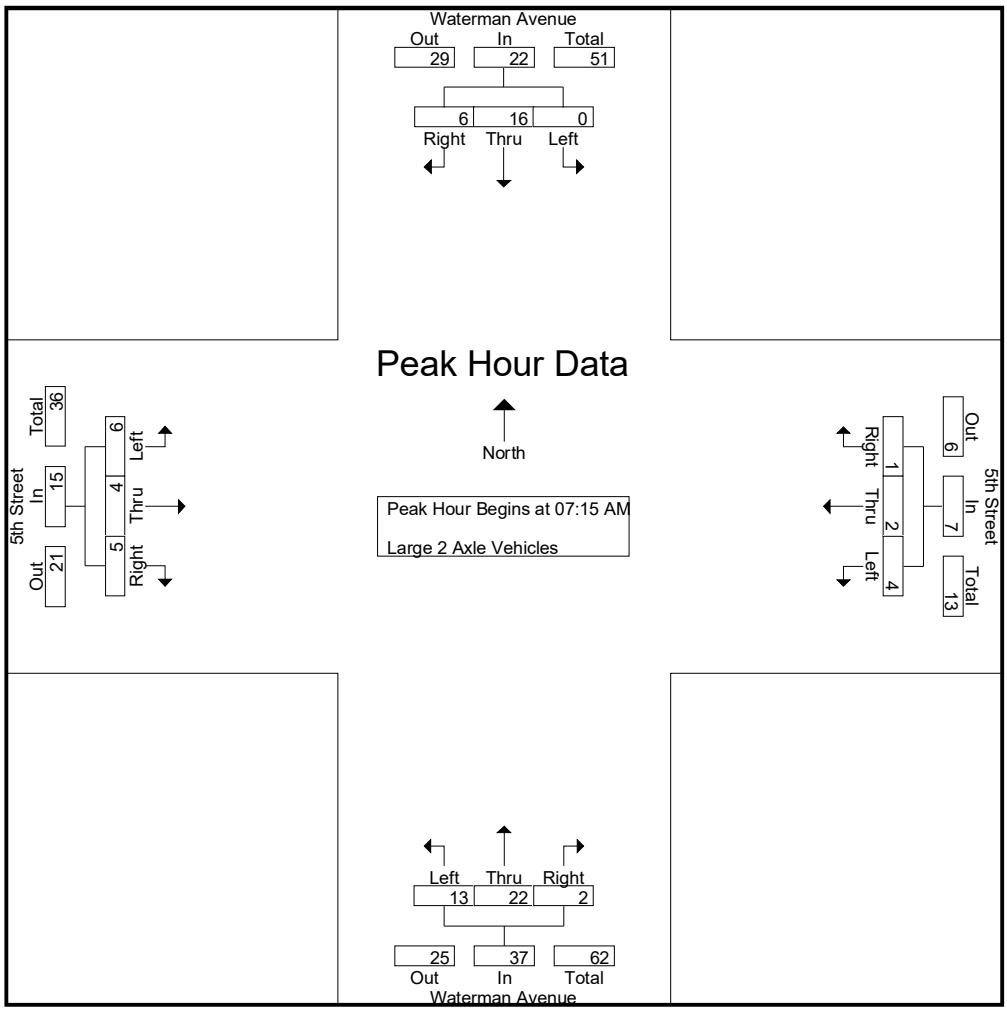

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	1	1	2	0	0	0	0	**6**	5	**1**	**12**	1	**2**	0	3
+15 mins.	0	4	**2**	6	1	0	0	1	1	3	0	4	**2**	0	2	4
+30 mins.	0	**8**	2	**10**	**3**	**1**	0	**4**	4	**7**	0	11	1	1	**3**	**5**
+45 mins.	0	3	1	4	0	1	**1**	2	2	7	1	10	2	1	0	3
Total Volume	0	16	6	22	4	2	1	7	13	22	2	37	6	4	5	15
% App. Total	0	72.7	27.3		57.1	28.6	14.3		35.1	59.5	5.4		40	26.7	33.3	
PHF	.000	.500	.750	.550	.333	.500	.250	.438	.542	.786	.500	.771	.750	.500	.417	.750

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Groups Printed- 3 Axle Vehicles

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
06:15 AM	0	1	1	2	0	1	0	1	1	0	0	1	0	1	0	1	5
06:30 AM	0	0	0	0	0	3	0	3	3	1	0	4	0	0	0	0	7
06:45 AM	0	0	0	0	0	3	0	3	1	1	0	2	0	0	0	0	5
Total	0	1	1	2	0	9	0	9	5	2	0	7	0	1	0	1	19
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
07:15 AM	0	0	1	1	0	0	0	0	1	0	0	1	0	1	0	1	3
07:30 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
07:45 AM	0	2	0	2	1	0	0	1	0	0	1	1	0	0	1	1	5
Total	0	2	1	3	1	2	0	3	1	1	1	3	0	1	2	3	12
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	0	0	1	3
Total	0	1	0	1	0	2	0	2	0	0	0	0	1	2	0	3	6
Grand Total	0	4	2	6	1	13	0	14	6	3	1	10	1	4	2	7	37
Apprch %	0	66.7	33.3		7.1	92.9	0		60	30	10		14.3	57.1	28.6		
Total %	0	10.8	5.4	16.2	2.7	35.1	0	37.8	16.2	8.1	2.7	27	2.7	10.8	5.4	18.9	

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	**1**	1	0	0	0	0	**1**	0	0	**1**	0	**1**	0	**1**	3
07:30 AM	0	0	0	0	0	**1**	0	**1**	0	**1**	0	1	0	0	0	0	2
07:45 AM	0	**2**	0	**2**	**1**	0	0	1	0	0	**1**	1	0	0	**1**	1	**5**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	1	3	1	1	0	2	1	1	1	3	0	1	1	2	10
% App. Total	0	66.7	33.3		50	50	0		33.3	33.3	33.3		0	50	50		
PHF	.000	.250	.250	.375	.250	.250	.000	.500	.250	.250	.250	.750	.000	.250	.250	.500	.500

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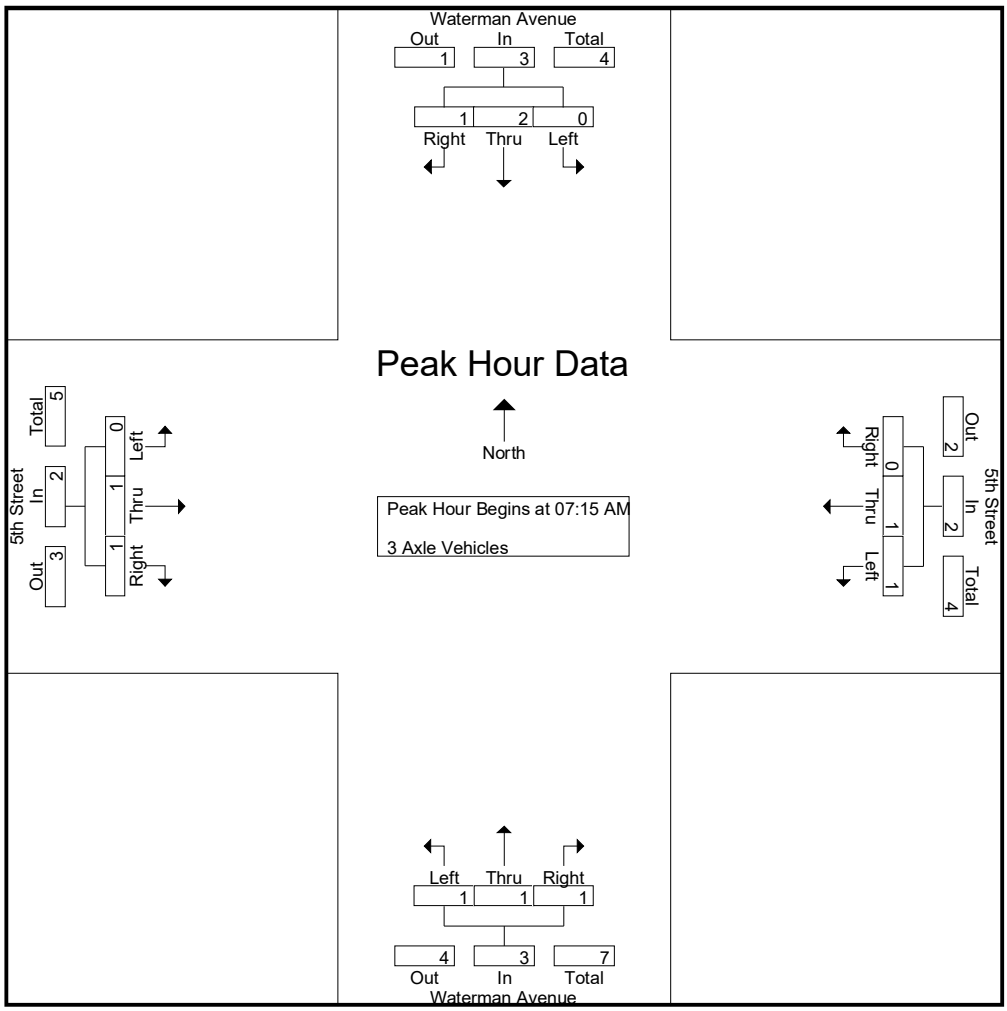

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	**1**	1	0	0	0	0	**1**	0	0	**1**	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	**1**	0	1	0	0	0	0
+30 mins.	0	**2**	0	**2**	**1**	0	0	1	0	0	**1**	1	0	0	**1**	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	1	3	1	1	0	2	1	1	1	3	0	1	1	2
% App. Total	0	66.7	33.3		50	50	0		33.3	33.3	33.3		0	50	50	
PHF	.000	.250	.250	.375	.250	.250	.000	.500	.250	.250	.250	.750	.000	.250	.250	.500

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City of San Bernardino
N/S: Waterman Avenue
E/W: 5th Street
Weather: Clear

File Name : 22_SBC_Waterman_5th AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	3
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
06:30 AM	0	0	0	0	0	0	1	1	1	2	0	3	0	0	0	0	4
06:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	0	0	1	1	2	3	0	5	1	1	0	2	10
07:00 AM	0	0	0	0	0	0	0	0	1	1	0	2	1	1	1	3	5
07:15 AM	0	2	0	2	0	0	0	0	1	0	0	1	0	0	0	0	3
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	0	2	0	2	1	1	0	2	0	2	0	2	0	0	0	0	6
Total	0	4	0	4	1	3	0	4	2	3	0	5	1	2	1	4	17
08:00 AM	0	0	1	1	0	1	0	1	1	0	0	1	0	3	0	3	6
08:15 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	0	0	0	1	1	0	2	1	0	0	1	0	0	0	0	3
Total	0	2	1	3	1	2	0	3	2	3	0	5	0	3	0	3	14
Grand Total	0	7	2	9	2	5	1	8	6	9	0	15	2	6	1	9	41
Apprch %	0	77.8	22.2		25	62.5	12.5		40	60	0		22.2	66.7	11.1		
Total %	0	17.1	4.9	22	4.9	12.2	2.4	19.5	14.6	22	0	36.6	4.9	14.6	2.4	22	

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**2**	0	**2**	0	0	0	0	**1**	0	0	1	0	0	0	0	3
07:30 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1	3
07:45 AM	0	2	0	2	**1**	1	0	2	0	**2**	0	**2**	0	0	0	0	**6**
08:00 AM	0	0	**1**	1	0	1	0	1	1	0	0	1	0	**3**	0	**3**	6
Total Volume	0	4	1	5	1	4	0	5	2	2	0	4	0	4	0	4	18
% App. Total	0	80	20		20	80	0		50	50	0		0	100	0		
PHF	.000	.500	.250	.625	.250	.500	.000	.625	.500	.250	.000	.500	.000	.333	.000	.333	.750

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City of San Bernardino
N/S: Waterman Avenue
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Weather: Clear

File Name : 22_SBC_Waterman_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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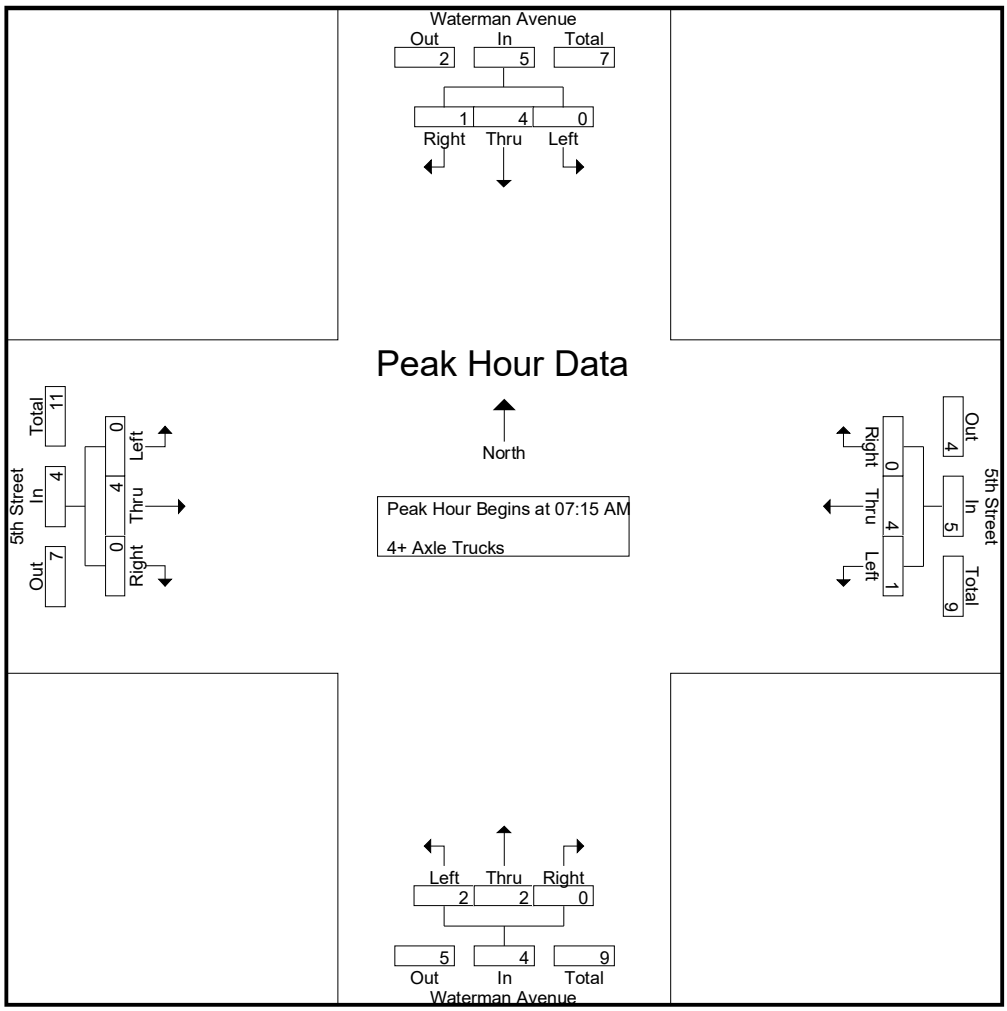

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**2**	0	**2**	0	0	0	0	**1**	0	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1
+30 mins.	0	2	0	2	**1**	1	0	2	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	0	**1**	1	0	1	0	1	1	0	0	1	0	**3**	0	**3**
Total Volume	0	4	1	5	1	4	0	5	2	2	0	4	0	4	0	4
% App. Total	0	80	20		20	80	0		50	50	0		0	100	0	
PHF	.000	.500	.250	.625	.250	.500	.000	.625	.500	.250	.000	.500	.000	.333	.000	.333

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City of San Bernardino
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File Name : 22_SBC_Waterman_5th PM
Site Code : 99918385
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	14	162	33	209	9	43	7	59	28	160	19	207	30	54	25	109	584
03:15 PM	15	135	25	175	17	55	8	80	32	134	14	180	36	59	35	130	565
03:30 PM	8	143	28	179	9	52	9	70	37	154	12	203	27	73	29	129	581
03:45 PM	9	157	24	190	17	61	7	85	40	142	21	203	33	58	38	129	607
Total	46	597	110	753	52	211	31	294	137	590	66	793	126	244	127	497	2337
04:00 PM	9	164	35	208	13	53	4	70	30	147	15	192	29	89	24	142	612
04:15 PM	11	152	36	199	17	45	7	69	28	154	21	203	36	94	31	161	632
04:30 PM	10	158	29	197	8	49	9	66	25	169	23	217	29	76	32	137	617
04:45 PM	13	130	29	172	16	47	6	69	40	193	16	249	34	88	26	148	638
Total	43	604	129	776	54	194	26	274	123	663	75	861	128	347	113	588	2499
05:00 PM	16	121	31	168	21	56	11	88	39	144	29	212	30	121	33	184	652
05:15 PM	5	128	28	161	9	49	6	64	31	170	28	229	28	104	23	155	609
05:30 PM	11	116	29	156	9	50	10	69	26	167	23	216	39	95	29	163	604
05:45 PM	12	125	15	152	7	48	9	64	18	167	14	199	18	108	27	153	568
Total	44	490	103	637	46	203	36	285	114	648	94	856	115	428	112	655	2433
Grand Total	133	1691	342	2166	152	608	93	853	374	1901	235	2510	369	1019	352	1740	7269
Apprch %	6.1	78.1	15.8		17.8	71.3	10.9		14.9	75.7	9.4		21.2	58.6	20.2		
Total %	1.8	23.3	4.7	29.8	2.1	8.4	1.3	11.7	5.1	26.2	3.2	34.5	5.1	14	4.8	23.9	
Passenger Vehicles	125	1647	316	2088	149	580	88	817	359	1853	220	2432	349	979	333	1661	6998
% Passenger Vehicles	94	97.4	92.4	96.4	98	95.4	94.6	95.8	96	97.5	93.6	96.9	94.6	96.1	94.6	95.5	96.3
Large 2 Axle Vehicles	8	37	25	70	0	16	4	20	7	44	12	63	18	16	9	43	196
% Large 2 Axle Vehicles	6	2.2	7.3	3.2	0	2.6	4.3	2.3	1.9	2.3	5.1	2.5	4.9	1.6	2.6	2.5	2.7
3 Axle Vehicles	0	5	0	5	3	7	0	10	2	2	2	6	2	14	7	23	44
% 3 Axle Vehicles	0	0.3	0	0.2	2	1.2	0	1.2	0.5	0.1	0.9	0.2	0.5	1.4	2	1.3	0.6
4+ Axle Trucks	0	2	1	3	0	5	1	6	6	2	1	9	0	10	3	13	31
% 4+ Axle Trucks	0	0.1	0.3	0.1	0	0.8	1.1	0.7	1.6	0.1	0.4	0.4	0	1	0.9	0.7	0.4

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	11	152	**36**	**199**	17	45	7	69	28	154	21	203	**36**	94	31	161	632
04:30 PM	10	**158**	29	197	8	49	9	66	25	169	23	217	29	76	32	137	617
04:45 PM	13	130	29	172	16	47	6	69	**40**	**193**	16	**249**	34	88	26	148	638
05:00 PM	**16**	121	31	168	**21**	**56**	**11**	**88**	39	144	**29**	212	30	**121**	**33**	**184**	**652**
Total Volume	50	561	125	736	62	197	33	292	132	660	89	881	129	379	122	630	2539
% App. Total	6.8	76.2	17		21.2	67.5	11.3		15	74.9	10.1		20.5	60.2	19.4		
PHF	.781	.888	.868	.925	.738	.879	.750	.830	.825	.855	.767	.885	.896	.783	.924	.856	.974

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Site Code : 99918385
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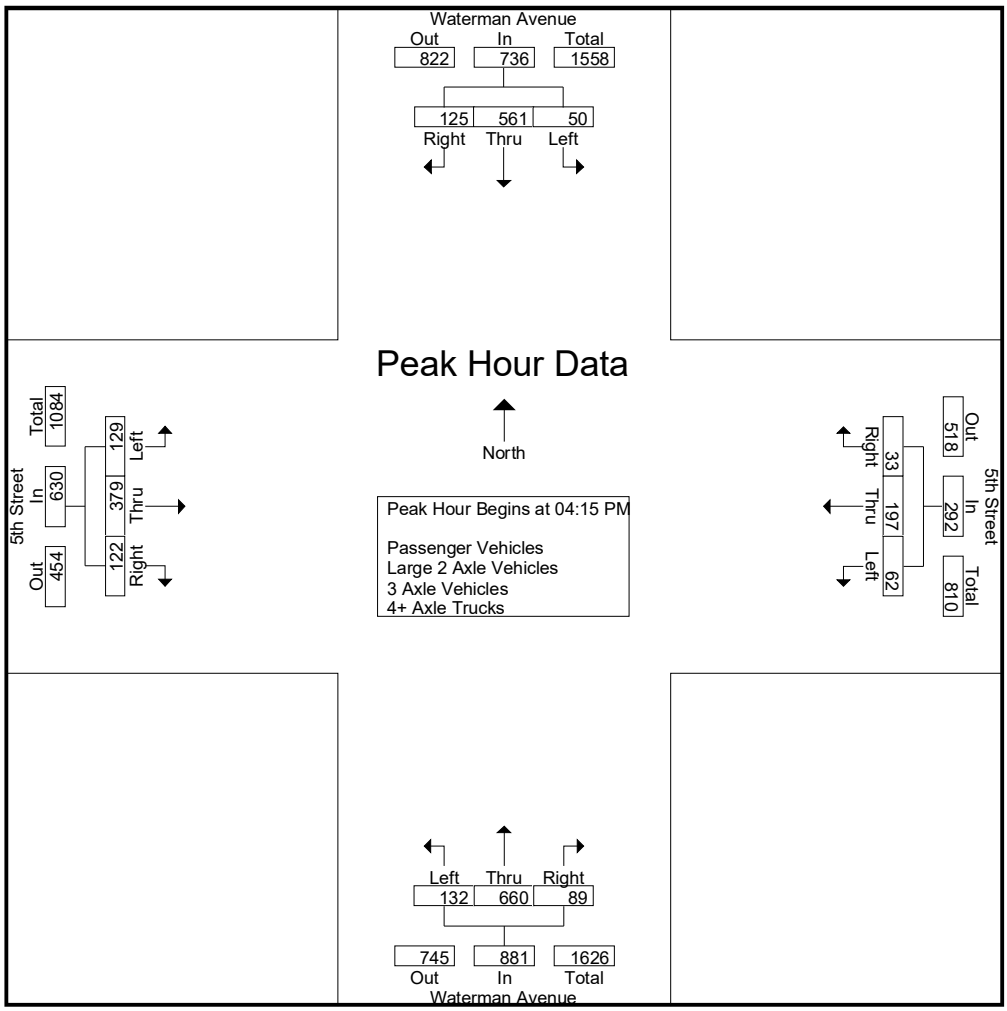

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:15 PM				04:30 PM				05:00 PM			
+0 mins.	9	157	24	190	**17**	55	8	80	25	169	23	217	30	**121**	**33**	**184**
+15 mins.	9	**164**	35	**208**	9	52	**9**	70	**40**	**193**	16	**249**	28	104	23	155
+30 mins.	**11**	152	**36**	199	17	**61**	7	**85**	39	144	**29**	212	**39**	95	29	163
+45 mins.	10	158	29	197	13	53	4	70	31	170	28	229	18	108	27	153
Total Volume	39	631	124	794	56	221	28	305	135	676	96	907	115	428	112	655
% App. Total	4.9	79.5	15.6		18.4	72.5	9.2		14.9	74.5	10.6		17.6	65.3	17.1	
PHF	.886	.962	.861	.954	.824	.906	.778	.897	.844	.876	.828	.911	.737	.884	.848	.890

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File Name : 22_SBC_Waterman_5th PM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Passenger Vehicles

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	13	157	30	200	8	43	7	58	28	156	16	200	29	52	24	105	563
03:15 PM	12	133	22	167	17	51	6	74	31	126	14	171	35	56	32	123	535
03:30 PM	8	137	26	171	9	52	8	69	35	151	11	197	26	65	28	119	556
03:45 PM	8	149	24	181	17	56	7	80	40	138	18	196	31	55	36	122	579
Total	41	576	102	719	51	202	28	281	134	571	59	764	121	228	120	469	2233
04:00 PM	8	158	29	195	13	50	4	67	29	140	15	184	28	85	22	135	581
04:15 PM	9	146	33	188	17	44	7	68	27	151	17	195	32	93	29	154	605
04:30 PM	10	158	29	197	8	47	9	64	23	164	22	209	28	72	31	131	601
04:45 PM	13	127	28	168	16	44	6	66	40	190	15	245	33	85	23	141	620
Total	40	589	119	748	54	185	26	265	119	645	69	833	121	335	105	561	2407
05:00 PM	16	118	28	162	21	51	11	83	35	140	29	204	29	119	32	180	629
05:15 PM	5	125	26	156	9	48	6	63	30	167	27	224	27	101	23	151	594
05:30 PM	11	114	27	152	7	47	10	64	25	166	22	213	34	92	28	154	583
05:45 PM	12	125	14	151	7	47	7	61	16	164	14	194	17	104	25	146	552
Total	44	482	95	621	44	193	34	271	106	637	92	835	107	416	108	631	2358
Grand Total	125	1647	316	2088	149	580	88	817	359	1853	220	2432	349	979	333	1661	6998
Apprch %	6	78.9	15.1		18.2	71	10.8		14.8	76.2	9		21	58.9	20		
Total %	1.8	23.5	4.5	29.8	2.1	8.3	1.3	11.7	5.1	26.5	3.1	34.8	5	14	4.8	23.7	

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	9	146	**33**	188	17	44	7	68	27	151	17	195	32	93	29	154	605
04:30 PM	10	**158**	29	**197**	8	47	9	64	23	164	22	209	28	72	31	131	601
04:45 PM	13	127	28	168	16	44	6	66	**40**	**190**	15	**245**	**33**	85	23	141	620
05:00 PM	**16**	118	28	162	**21**	**51**	**11**	**83**	35	140	**29**	204	29	**119**	**32**	**180**	**629**
Total Volume	48	549	118	715	62	186	33	281	125	645	83	853	122	369	115	606	2455
% App. Total	6.7	76.8	16.5		22.1	66.2	11.7		14.7	75.6	9.7		20.1	60.9	19		
PHF	.750	.869	.894	.907	.738	.912	.750	.846	.781	.849	.716	.870	.924	.775	.898	.842	.976

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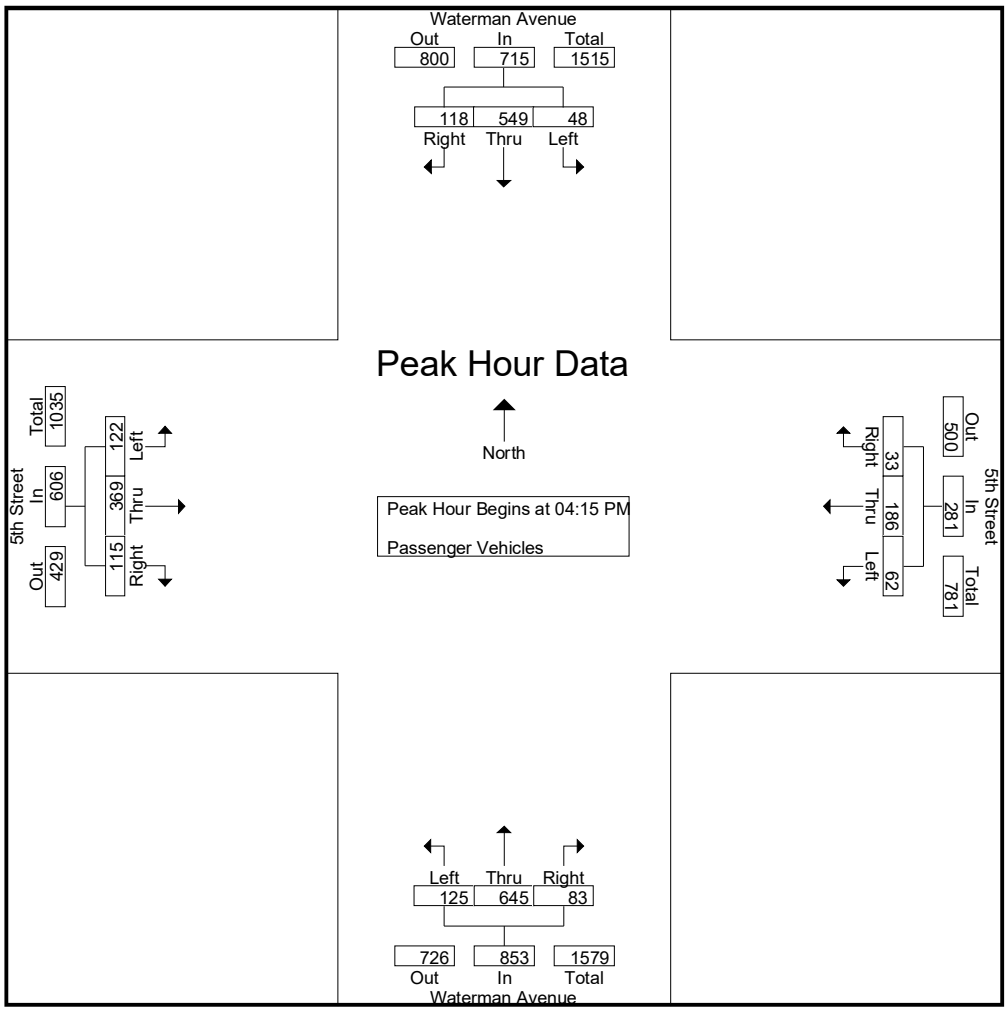

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	9	146	**33**	188	17	44	7	68	27	151	17	195	32	93	29	154
+15 mins.	10	**158**	29	**197**	8	47	9	64	23	164	22	209	28	72	31	131
+30 mins.	13	127	28	168	16	44	6	66	**40**	**190**	15	**245**	**33**	85	23	141
+45 mins.	**16**	118	28	162	**21**	**51**	**11**	**83**	35	140	**29**	204	29	**119**	**32**	**180**
Total Volume	48	549	118	715	62	186	33	281	125	645	83	853	122	369	115	606
% App. Total	6.7	76.8	16.5		22.1	66.2	11.7		14.7	75.6	9.7		20.1	60.9	19	
PHF	.750	.869	.894	.907	.738	.912	.750	.846	.781	.849	.716	.870	.924	.775	.898	.842

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Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Large 2 Axle Vehicles

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	4	3	8	0	0	0	0	0	4	3	7	1	2	1	4	19
03:15 PM	3	2	2	7	0	3	1	4	1	8	0	9	1	1	2	4	24
03:30 PM	0	4	2	6	0	0	1	1	1	3	1	5	1	4	0	5	17
03:45 PM	1	7	0	8	0	3	0	3	0	4	3	7	2	2	1	5	23
Total	5	17	7	29	0	6	2	8	2	19	7	28	5	9	4	18	83
04:00 PM	1	4	6	11	0	2	0	2	0	7	0	7	1	1	2	4	24
04:15 PM	2	5	3	10	0	1	0	1	1	3	2	6	3	0	1	4	21
04:30 PM	0	0	0	0	0	0	0	0	0	4	1	5	1	1	0	2	7
04:45 PM	0	3	1	4	0	1	0	1	0	2	0	2	1	0	2	3	10
Total	3	12	10	25	0	4	0	4	1	16	3	20	6	2	5	13	62
05:00 PM	0	3	3	6	0	3	0	3	2	3	0	5	1	1	0	2	16
05:15 PM	0	3	2	5	0	0	0	0	1	2	1	4	1	2	0	3	12
05:30 PM	0	2	2	4	0	3	0	3	1	1	1	3	4	1	0	5	15
05:45 PM	0	0	1	1	0	0	2	2	0	3	0	3	1	1	0	2	8
Total	0	8	8	16	0	6	2	8	4	9	2	15	7	5	0	12	51
Grand Total	8	37	25	70	0	16	4	20	7	44	12	63	18	16	9	43	196
Apprch %	11.4	52.9	35.7		0	80	20		11.1	69.8	19		41.9	37.2	20.9		
Total %	4.1	18.9	12.8	35.7	0	8.2	2	10.2	3.6	22.4	6.1	32.1	9.2	8.2	4.6	21.9	

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**2**	**5**	**3**	**10**	0	1	0	1	1	3	**2**	**6**	**3**	0	1	**4**	**21**
04:30 PM	0	0	0	0	0	0	0	0	0	**4**	1	5	1	**1**	0	2	7
04:45 PM	0	3	1	4	0	1	0	1	0	2	0	2	1	0	**2**	3	10
05:00 PM	0	3	3	6	0	**3**	0	**3**	**2**	3	0	5	1	1	0	2	16
Total Volume	2	11	7	20	0	5	0	5	3	12	3	18	6	2	3	11	54
% App. Total	10	55	35		0	100	0		16.7	66.7	16.7		54.5	18.2	27.3		
PHF	.250	.550	.583	.500	.000	.417	.000	.417	.375	.750	.375	.750	.500	.500	.375	.688	.643

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City of San Bernardino
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E/W: 5th Street
Weather: Clear

File Name : 22_SBC_Waterman_5th PM
Site Code : 99918385
Start Date : 5/16/2018
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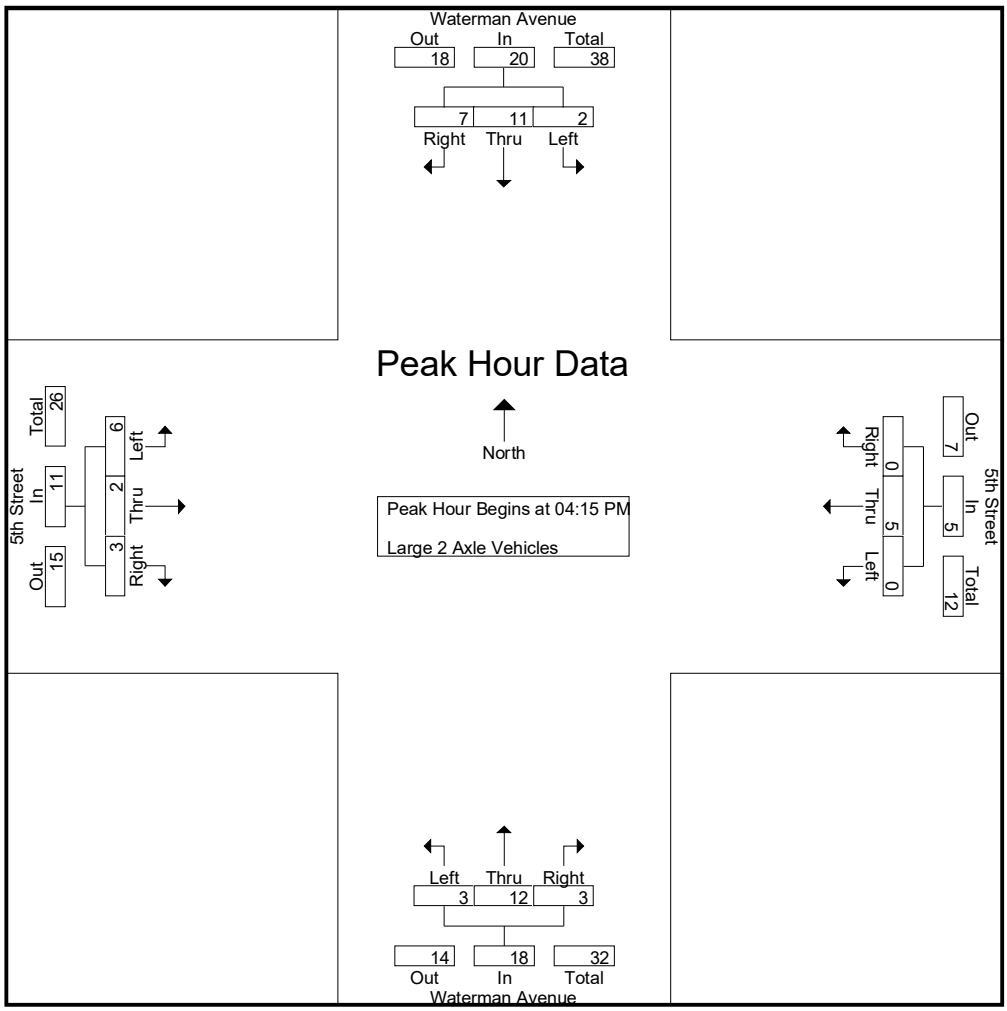

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	**2**	**5**	**3**	**10**	0	1	0	1	1	3	**2**	**6**	**3**	0	1	**4**
+15 mins.	0	0	0	0	0	0	0	0	0	**4**	1	5	1	**1**	0	2
+30 mins.	0	3	1	4	0	1	0	1	0	2	0	2	1	0	**2**	3
+45 mins.	0	3	3	6	0	**3**	0	**3**	**2**	3	0	5	1	1	0	2
Total Volume	2	11	7	20	0	5	0	5	3	12	3	18	6	2	3	11
% App. Total	10	55	35		0	100	0		16.7	66.7	16.7		54.5	18.2	27.3	
PHF	.250	.550	.583	.500	.000	.417	.000	.417	.375	.750	.375	.750	.500	.500	.375	.688

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City of San Bernardino
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Weather: Clear

File Name : 22_SBC_Waterman_5th PM
Site Code : 99918385
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Groups Printed- 3 Axle Vehicles

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
03:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	3	4
03:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	3	0	3	1	1	0	2	0	0	0	0	0	4	2	6	11
04:00 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	2	0	2	4
04:15 PM	0	1	0	1	0	0	0	0	0	0	1	1	1	0	1	2	4
04:30 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
04:45 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	3	0	3	6
Total	0	2	0	2	0	3	0	3	1	1	2	4	1	6	1	8	17
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	1	2	4
05:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
05:30 PM	0	0	0	0	2	0	0	2	0	0	0	0	1	2	1	4	6
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	2	3	4
Total	0	0	0	0	2	3	0	5	1	1	0	2	1	4	4	9	16
Grand Total	0	5	0	5	3	7	0	10	2	2	2	6	2	14	7	23	44
Apprch %	0	100	0		30	70	0		33.3	33.3	33.3		8.7	60.9	30.4		
Total %	0	11.4	0	11.4	6.8	15.9	0	22.7	4.5	4.5	4.5	13.6	4.5	31.8	15.9	52.3	

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**1**	0	**1**	0	0	0	0	0	0	**1**	**1**	**1**	0	**1**	2	4
04:30 PM	0	0	0	0	0	1	0	1	0	**1**	0	1	0	1	0	1	3
04:45 PM	0	0	0	0	0	**2**	0	**2**	0	0	1	1	0	**3**	0	**3**	**6**
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	1	2	4
Total Volume	0	1	0	1	0	5	0	5	0	1	2	3	1	5	2	8	17
% App. Total	0	100	0		0	100	0		0	33.3	66.7		12.5	62.5	25		
PHF	.000	.250	.000	.250	.000	.625	.000	.625	.000	.250	.500	.750	.250	.417	.500	.667	.708

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City of San Bernardino
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Weather: Clear

File Name : 22_SBC_Waterman_5th PM
Site Code : 99918385
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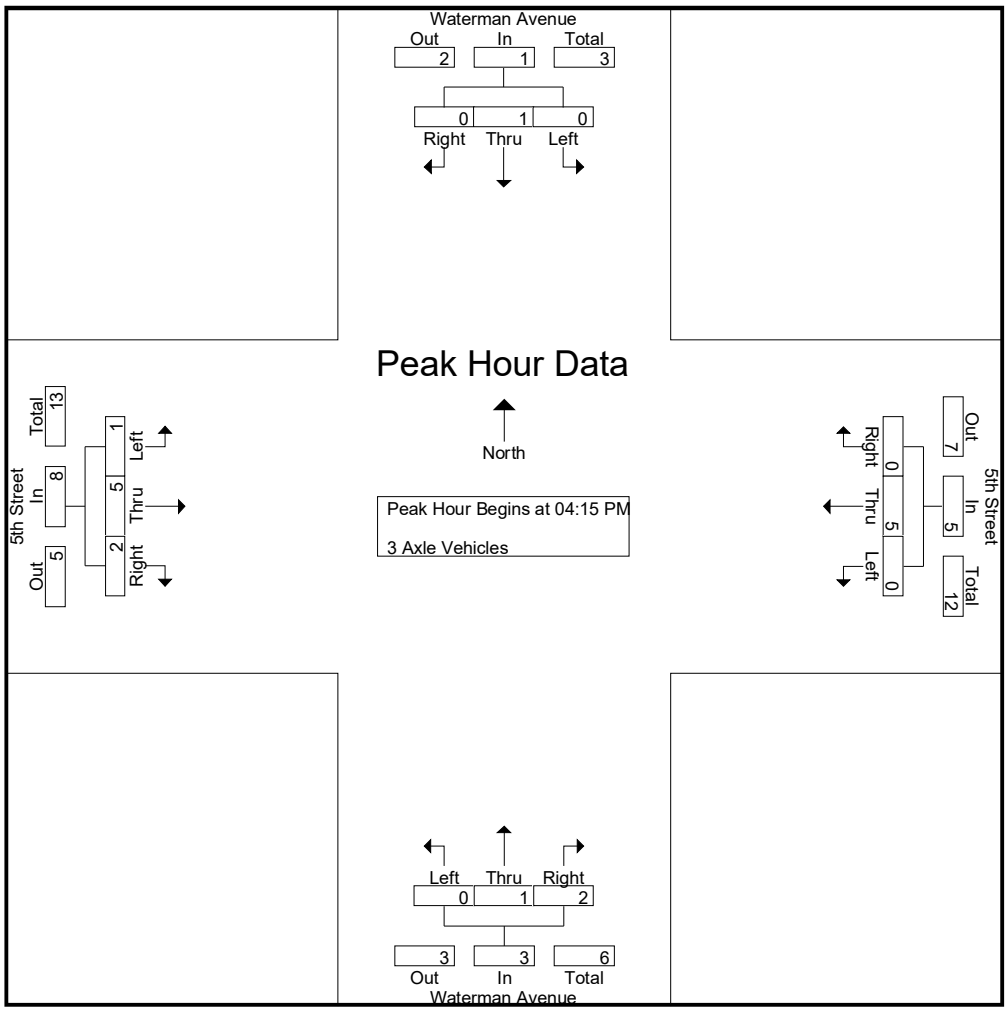

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	**1**	**1**	**1**	0	**1**	2
+15 mins.	0	0	0	0	0	1	0	1	0	**1**	0	1	0	1	0	1
+30 mins.	0	0	0	0	0	**2**	0	**2**	0	0	1	1	0	**3**	0	**3**
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	1	2
Total Volume	0	1	0	1	0	5	0	5	0	1	2	3	1	5	2	8
% App. Total	0	100	0		0	100	0		0	33.3	66.7		12.5	62.5	25	
PHF	.000	.250	.000	.250	.000	.625	.000	.625	.000	.250	.500	.750	.250	.417	.500	.667

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City of San Bernardino
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Weather: Clear

File Name : 22_SBC_Waterman_5th PM
Site Code : 99918385
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Groups Printed- 4+ Axle Trucks

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	1	1	0	1	1	2	0	0	0	0	0	1	0	1	4
03:30 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	2	0	2	4
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
Total	0	1	1	2	0	2	1	3	1	0	0	1	0	3	1	4	10
04:00 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	2
04:30 PM	0	0	0	0	0	1	0	1	2	0	0	2	0	2	1	3	6
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Total	0	1	0	1	0	2	0	2	2	1	1	4	0	4	2	6	13
05:00 PM	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	2	0	2	4
Total	0	0	0	0	0	1	0	1	3	1	0	4	0	3	0	3	8
Grand Total	0	2	1	3	0	5	1	6	6	2	1	9	0	10	3	13	31
Apprch %	0	66.7	33.3		0	83.3	16.7		66.7	22.2	11.1		0	76.9	23.1		
Total %	0	6.5	3.2	9.7	0	16.1	3.2	19.4	19.4	6.5	3.2	29	0	32.3	9.7	41.9	

	Waterman Avenue Southbound				5th Street Westbound				Waterman Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	**1**	1	0	1	0	1	2
04:30 PM	0	0	0	0	0	**1**	0	**1**	**2**	0	0	2	0	**2**	**1**	**3**	**6**
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	1	1	2
05:00 PM	0	0	0	0	0	0	0	0	2	1	0	**3**	0	0	0	0	3
Total Volume	0	0	0	0	0	1	0	1	4	2	1	7	0	3	2	5	13
% App. Total	0	0	0		0	100	0		57.1	28.6	14.3		0	60	40		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.500	.500	.250	.583	.000	.375	.500	.417	.542

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Weather: Clear

File Name : 22_SBC_Waterman_5th PM
Site Code : 99918385
Start Date : 5/16/2018
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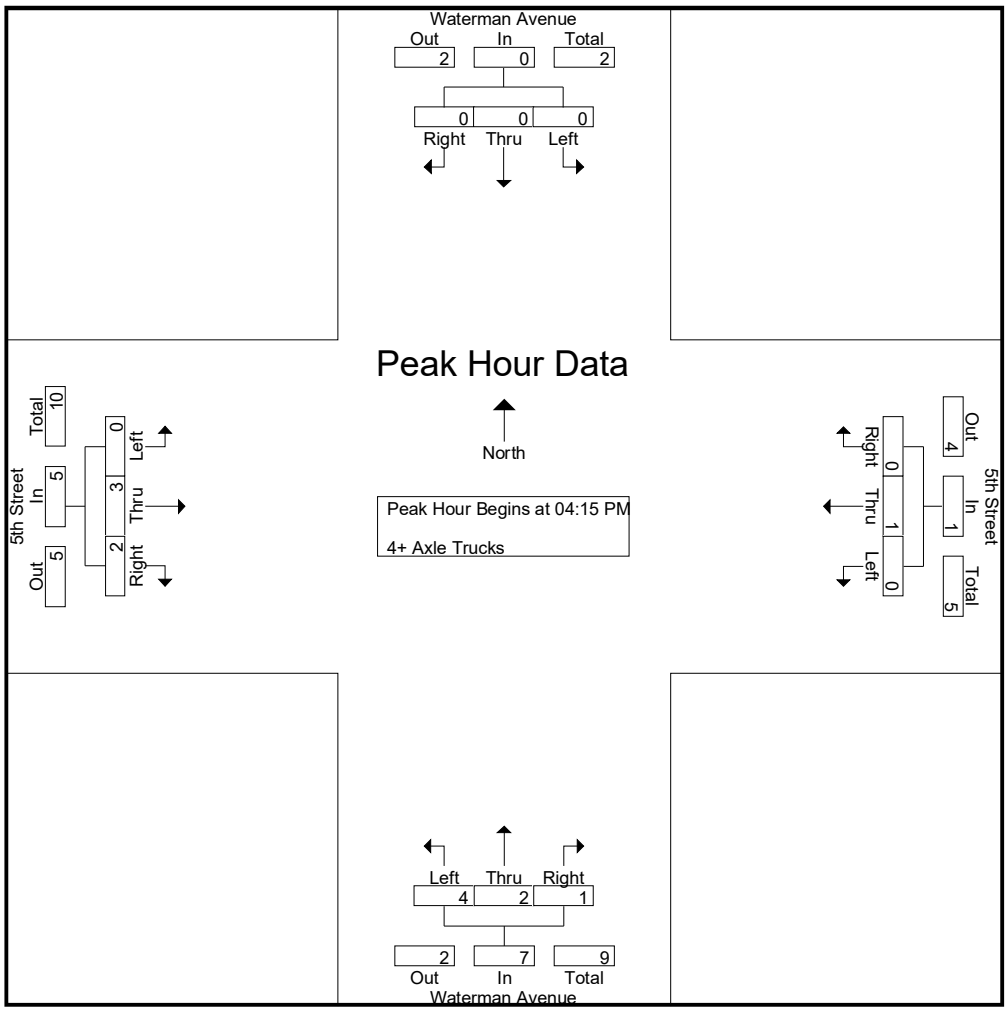

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	0	1	0	1
+15 mins.	0	0	0	0	0	**1**	0	**1**	**2**	0	0	2	0	**2**	**1**	**3**
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	2	1	0	**3**	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	4	2	1	7	0	3	2	5
% App. Total	0	0	0		0	100	0		57.1	28.6	14.3		0	60	40	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.500	.500	.250	.583	.000	.375	.500	.417

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City of San Bernardino
N/S: Tippecanoe Avenue
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Weather: Clear

File Name : 23_SBC_Tippecanoe_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	46	1	49	1	8	1	10	4	19	0	23	0	15	6	21	103
06:15 AM	2	53	4	59	1	22	2	25	2	20	2	24	2	9	9	20	128
06:30 AM	1	63	5	69	3	22	1	26	3	17	6	26	2	19	12	33	154
06:45 AM	1	97	4	102	3	31	5	39	7	30	0	37	6	24	19	49	227
Total	6	259	14	279	8	83	9	100	16	86	8	110	10	67	46	123	612
07:00 AM	1	83	9	93	5	45	3	53	14	35	2	51	6	11	7	24	221
07:15 AM	4	86	10	100	5	54	8	67	8	44	2	54	4	16	10	30	251
07:30 AM	5	90	9	104	5	47	5	57	4	39	3	46	2	14	8	24	231
07:45 AM	7	92	12	111	5	43	3	51	9	44	4	57	5	12	7	24	243
Total	17	351	40	408	20	189	19	228	35	162	11	208	17	53	32	102	946
08:00 AM	2	65	8	75	4	51	9	64	4	38	5	47	5	18	10	33	219
08:15 AM	8	70	2	80	3	42	4	49	5	33	6	44	3	17	6	26	199
08:30 AM	7	62	9	78	4	22	9	35	8	30	4	42	5	18	3	26	181
08:45 AM	7	52	6	65	4	30	3	37	8	55	3	66	3	22	6	31	199
Total	24	249	25	298	15	145	25	185	25	156	18	199	16	75	25	116	798
Grand Total	47	859	79	985	43	417	53	513	76	404	37	517	43	195	103	341	2356
Apprch %	4.8	87.2	8		8.4	81.3	10.3		14.7	78.1	7.2		12.6	57.2	30.2		
Total %	2	36.5	3.4	41.8	1.8	17.7	2.2	21.8	3.2	17.1	1.6	21.9	1.8	8.3	4.4	14.5	
Passenger Vehicles	46	839	75	960	42	405	50	497	73	380	37	490	41	182	100	323	2270
% Passenger Vehicles	97.9	97.7	94.9	97.5	97.7	97.1	94.3	96.9	96.1	94.1	100	94.8	95.3	93.3	97.1	94.7	96.3
Large 2 Axle Vehicles	1	11	3	15	1	6	2	9	2	13	0	15	2	7	2	11	50
% Large 2 Axle Vehicles	2.1	1.3	3.8	1.5	2.3	1.4	3.8	1.8	2.6	3.2	0	2.9	4.7	3.6	1.9	3.2	2.1
3 Axle Vehicles	0	4	1	5	0	2	1	3	1	7	0	8	0	2	1	3	19
% 3 Axle Vehicles	0	0.5	1.3	0.5	0	0.5	1.9	0.6	1.3	1.7	0	1.5	0	1	1	0.9	0.8
4+ Axle Trucks	0	5	0	5	0	4	0	4	0	4	0	4	0	4	0	4	17
% 4+ Axle Trucks	0	0.6	0	0.5	0	1	0	0.8	0	1	0	0.8	0	2.1	0	1.2	0.7

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	83	9	93	**5**	45	3	53	**14**	35	2	51	**6**	11	7	24	221
07:15 AM	4	86	10	100	5	**54**	**8**	**67**	8	**44**	2	54	4	**16**	**10**	**30**	**251**
07:30 AM	5	90	9	104	5	47	5	57	4	39	3	46	2	14	8	24	231
07:45 AM	**7**	**92**	**12**	**111**	5	43	3	51	9	44	**4**	**57**	5	12	7	24	243
Total Volume	17	351	40	408	20	189	19	228	35	162	11	208	17	53	32	102	946
% App. Total	4.2	86	9.8		8.8	82.9	8.3		16.8	77.9	5.3		16.7	52	31.4		
PHF	.607	.954	.833	.919	1.00	.875	.594	.851	.625	.920	.688	.912	.708	.828	.800	.850	.942

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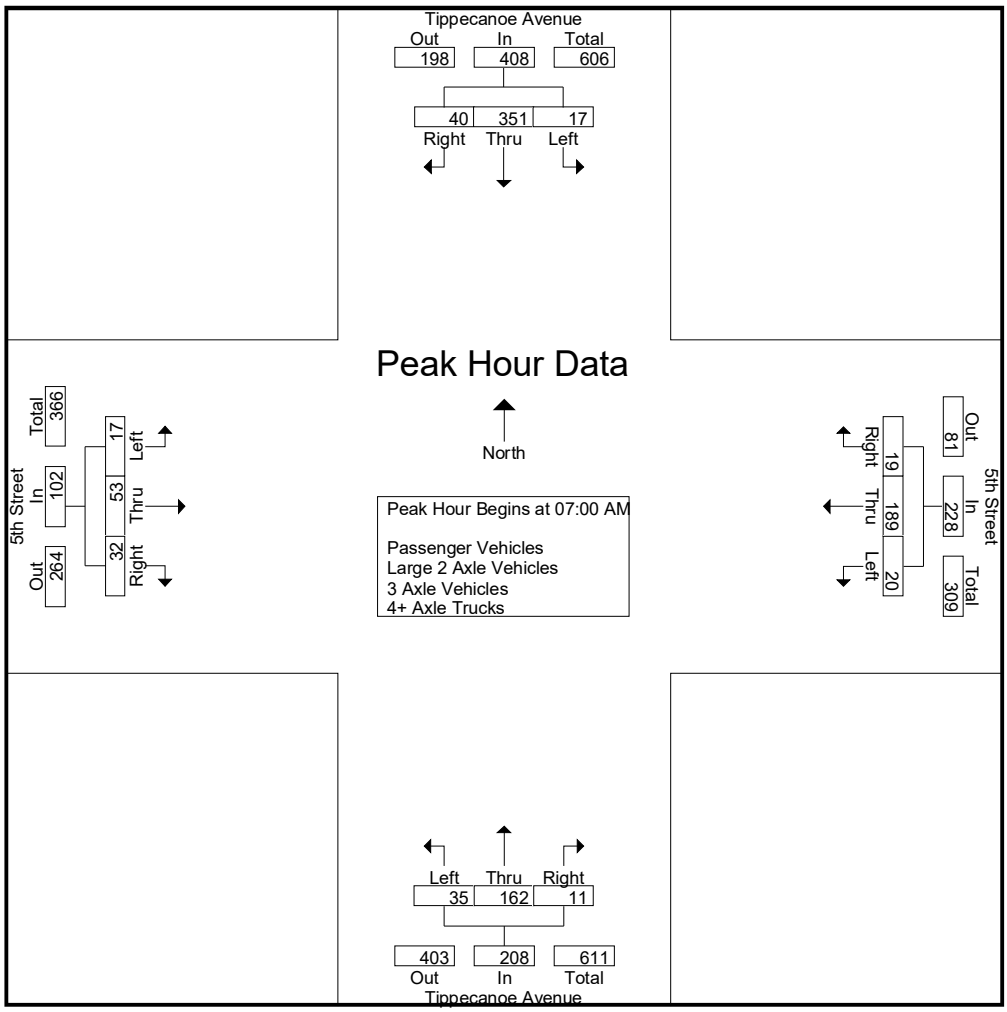

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:00 AM				06:30 AM			
+0 mins.	1	83	9	93	**5**	**54**	8	**67**	**14**	35	2	51	2	19	12	33
+15 mins.	4	86	10	100	5	47	5	57	8	**44**	2	54	**6**	**24**	**19**	**49**
+30 mins.	5	90	9	104	5	43	3	51	4	39	3	46	6	11	7	24
+45 mins.	**7**	**92**	**12**	**111**	4	51	**9**	64	9	44	**4**	**57**	4	16	10	30
Total Volume	17	351	40	408	19	195	25	239	35	162	11	208	18	70	48	136
% App. Total	4.2	86	9.8		7.9	81.6	10.5		16.8	77.9	5.3		13.2	51.5	35.3	
PHF	.607	.954	.833	.919	.950	.903	.694	.892	.625	.920	.688	.912	.750	.729	.632	.694

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City of San Bernardino
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E/W: 5th Street
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File Name : 23_SBC_Tippecanoe_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	46	1	49	1	8	1	10	3	19	0	22	0	12	6	18	99
06:15 AM	1	52	4	57	1	21	2	24	2	20	2	24	2	6	9	17	122
06:30 AM	1	61	5	67	3	19	1	23	3	17	6	26	2	19	12	33	149
06:45 AM	1	95	4	100	3	30	5	38	6	28	0	34	5	22	18	45	217
Total	5	254	14	273	8	78	9	95	14	84	8	106	9	59	45	113	587
07:00 AM	1	82	9	92	5	44	3	52	14	34	2	50	6	11	7	24	218
07:15 AM	4	84	10	98	5	54	8	67	8	42	2	52	4	15	10	29	246
07:30 AM	5	88	9	102	5	47	5	57	3	37	3	43	2	13	8	23	225
07:45 AM	7	91	11	109	5	41	3	49	9	39	4	52	5	12	7	24	234
Total	17	345	39	401	20	186	19	225	34	152	11	197	17	51	32	100	923
08:00 AM	2	61	7	70	4	50	8	62	4	34	5	43	4	18	10	32	207
08:15 AM	8	68	2	78	3	42	4	49	5	32	6	43	3	16	4	23	193
08:30 AM	7	59	8	74	3	22	8	33	8	27	4	39	5	17	3	25	171
08:45 AM	7	52	5	64	4	27	2	33	8	51	3	62	3	21	6	30	189
Total	24	240	22	286	14	141	22	177	25	144	18	187	15	72	23	110	760
Grand Total	46	839	75	960	42	405	50	497	73	380	37	490	41	182	100	323	2270
Apprch %	4.8	87.4	7.8		8.5	81.5	10.1		14.9	77.6	7.6		12.7	56.3	31		
Total %	2	37	3.3	42.3	1.9	17.8	2.2	21.9	3.2	16.7	1.6	21.6	1.8	8	4.4	14.2	

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	82	9	92	**5**	44	3	52	**14**	34	2	50	**6**	11	7	24	218
07:15 AM	4	84	10	98	5	**54**	**8**	**67**	8	**42**	2	**52**	4	**15**	**10**	**29**	**246**
07:30 AM	5	88	9	102	5	47	5	57	3	37	3	43	2	13	8	23	225
07:45 AM	**7**	**91**	**11**	**109**	5	41	3	49	9	39	**4**	52	5	12	7	24	234
Total Volume	17	345	39	401	20	186	19	225	34	152	11	197	17	51	32	100	923
% App. Total	4.2	86	9.7		8.9	82.7	8.4		17.3	77.2	5.6		17	51	32		
PHF	.607	.948	.886	.920	1.00	.861	.594	.840	.607	.905	.688	.947	.708	.850	.800	.862	.938

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File Name : 23_SBC_Tippecanoe_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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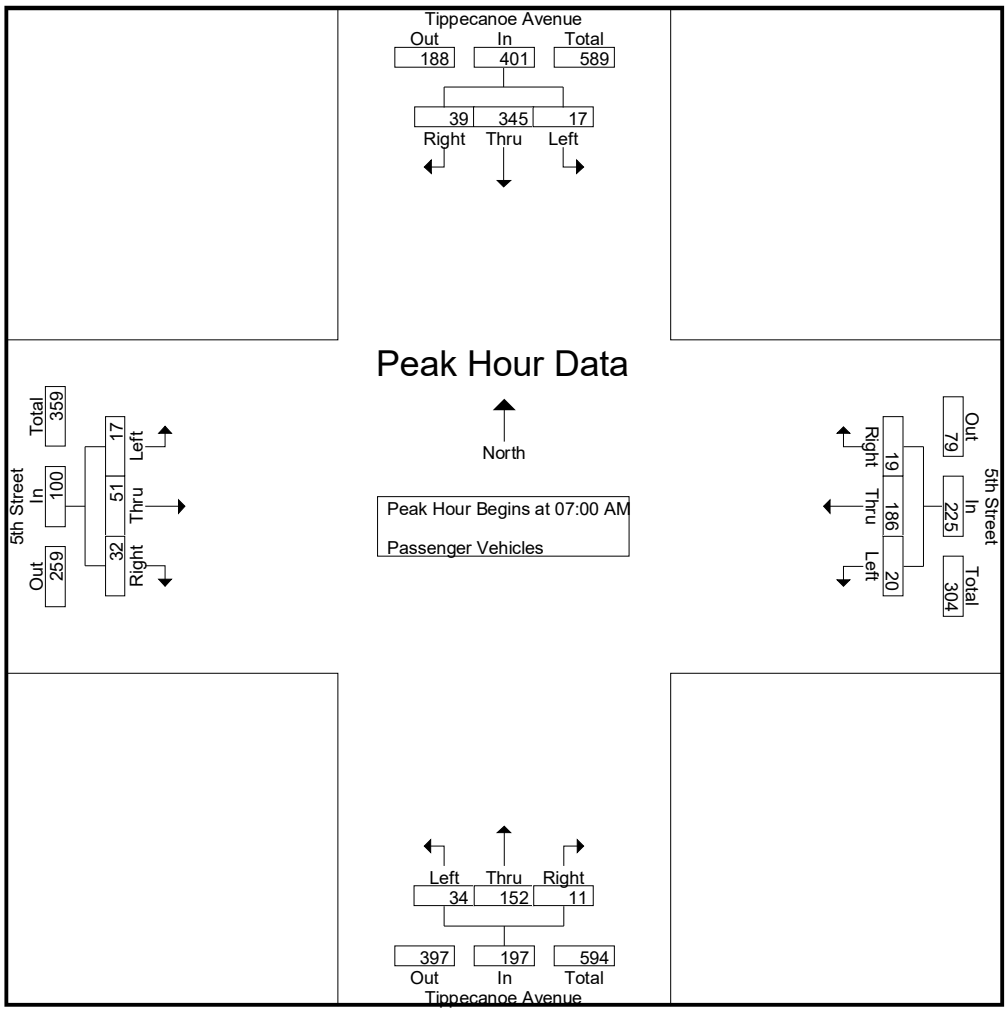

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	1	82	9	92	**5**	44	3	52	**14**	34	2	50	**6**	11	7	24
+15 mins.	4	84	10	98	5	**54**	**8**	**67**	8	**42**	2	**52**	4	**15**	**10**	**29**
+30 mins.	5	88	9	102	5	47	5	57	3	37	3	43	2	13	8	23
+45 mins.	**7**	**91**	**11**	**109**	5	41	3	49	9	39	**4**	52	5	12	7	24
Total Volume	17	345	39	401	20	186	19	225	34	152	11	197	17	51	32	100
% App. Total	4.2	86	9.7		8.9	82.7	8.4		17.3	77.2	5.6		17	51	32	
PHF	.607	.948	.886	.920	1.000	.861	.594	.840	.607	.905	.688	.947	.708	.850	.800	.862

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File Name : 23_SBC_Tippecanoe_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
06:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
06:30 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:45 AM	0	2	0	2	0	0	0	0	0	1	0	1	1	2	1	4	7
Total	1	4	0	5	0	0	0	0	1	1	0	2	1	4	1	6	13
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
07:30 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	1	0	1	3
07:45 AM	0	1	1	2	0	2	0	2	0	4	0	4	0	0	0	0	8
Total	0	3	1	4	0	2	0	2	1	5	0	6	0	2	0	2	14
08:00 AM	0	2	0	2	0	1	1	2	0	2	0	2	1	0	0	1	7
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
08:30 AM	0	1	1	2	1	0	0	1	0	2	0	2	0	1	0	1	6
08:45 AM	0	0	1	1	0	3	1	4	0	2	0	2	0	0	0	0	7
Total	0	4	2	6	1	4	2	7	0	7	0	7	1	1	1	3	23
Grand Total	1	11	3	15	1	6	2	9	2	13	0	15	2	7	2	11	50
Apprch %	6.7	73.3	20		11.1	66.7	22.2		13.3	86.7	0		18.2	63.6	18.2		
Total %	2	22	6	30	2	12	4	18	4	26	0	30	4	14	4	22	

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	**1**	0	**1**	2
07:30 AM	0	1	0	1	0	0	0	0	**1**	0	0	1	0	1	0	1	3
07:45 AM	0	1	**1**	**2**	0	**2**	0	**2**	0	**4**	0	**4**	0	0	0	0	**8**
Total Volume	0	3	1	4	0	2	0	2	1	5	0	6	0	2	0	2	14
% App. Total	0	75	25		0	100	0		16.7	83.3	0		0	100	0		
PHF	.000	.750	.250	.500	.000	.250	.000	.250	.250	.313	.000	.375	.000	.500	.000	.500	.438

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Site Code : 99918385
Start Date : 5/16/2018
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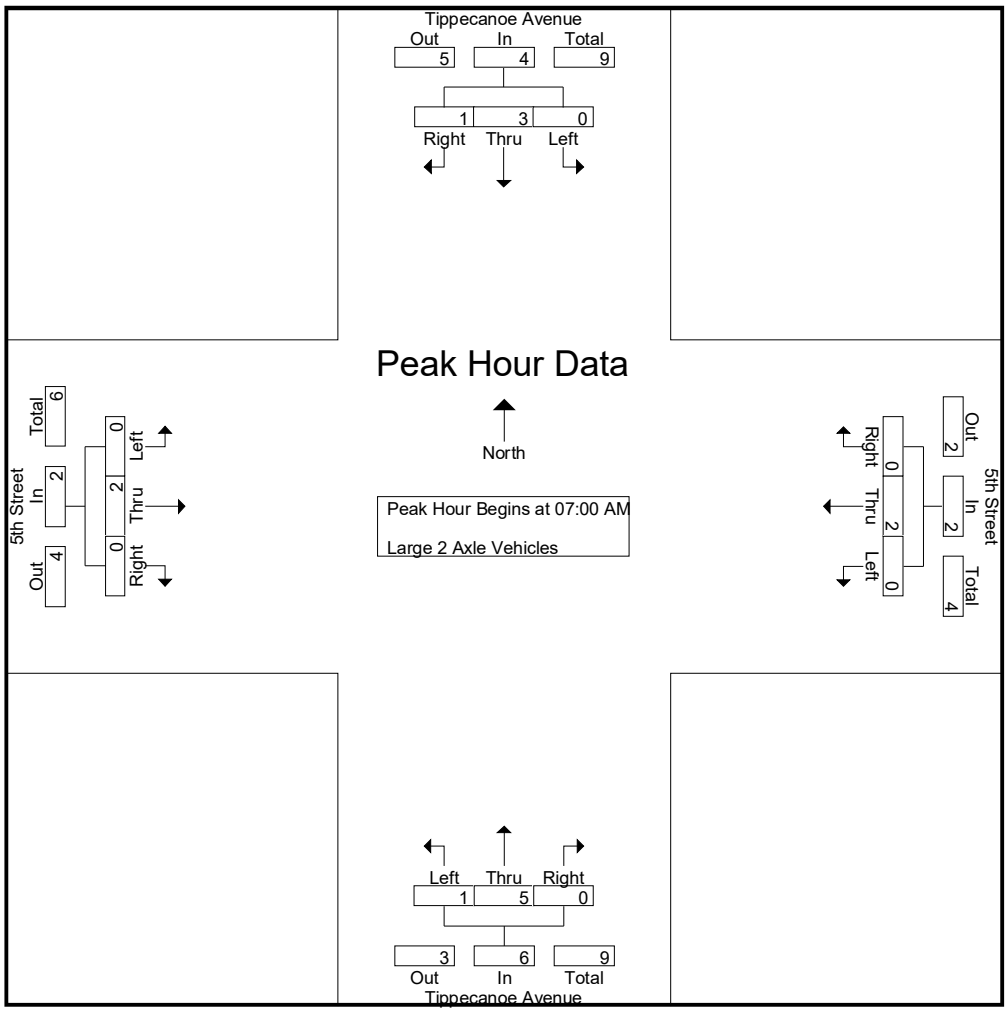

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	**1**	0	**1**
+30 mins.	0	1	0	1	0	0	0	0	**1**	0	0	1	0	1	0	1
+45 mins.	0	1	**1**	**2**	0	**2**	0	**2**	0	**4**	0	**4**	0	0	0	0
Total Volume	0	3	1	4	0	2	0	2	1	5	0	6	0	2	0	2
% App. Total	0	75	25		0	100	0		16.7	83.3	0		0	100	0	
PHF	.000	.750	.250	.500	.000	.250	.000	.250	.250	.313	.000	.375	.000	.500	.000	.500

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Weather: Clear

File Name : 23_SBC_Tippecanoe_5th AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
06:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	1	0	1	0	2	0	2	1	0	0	1	0	1	0	1	5
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
08:00 AM	0	1	1	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Total	0	2	1	3	0	0	1	1	0	4	0	4	0	1	1	2	10
Grand Total	0	4	1	5	0	2	1	3	1	7	0	8	0	2	1	3	19
Apprch %	0	80	20		0	66.7	33.3		12.5	87.5	0		0	66.7	33.3		
Total %	0	21.1	5.3	26.3	0	10.5	5.3	15.8	5.3	36.8	0	42.1	0	10.5	5.3	15.8	

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	1	0	1	0	0	0	0	**2**
07:30 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.500

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Weather: Clear

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Site Code : 99918385
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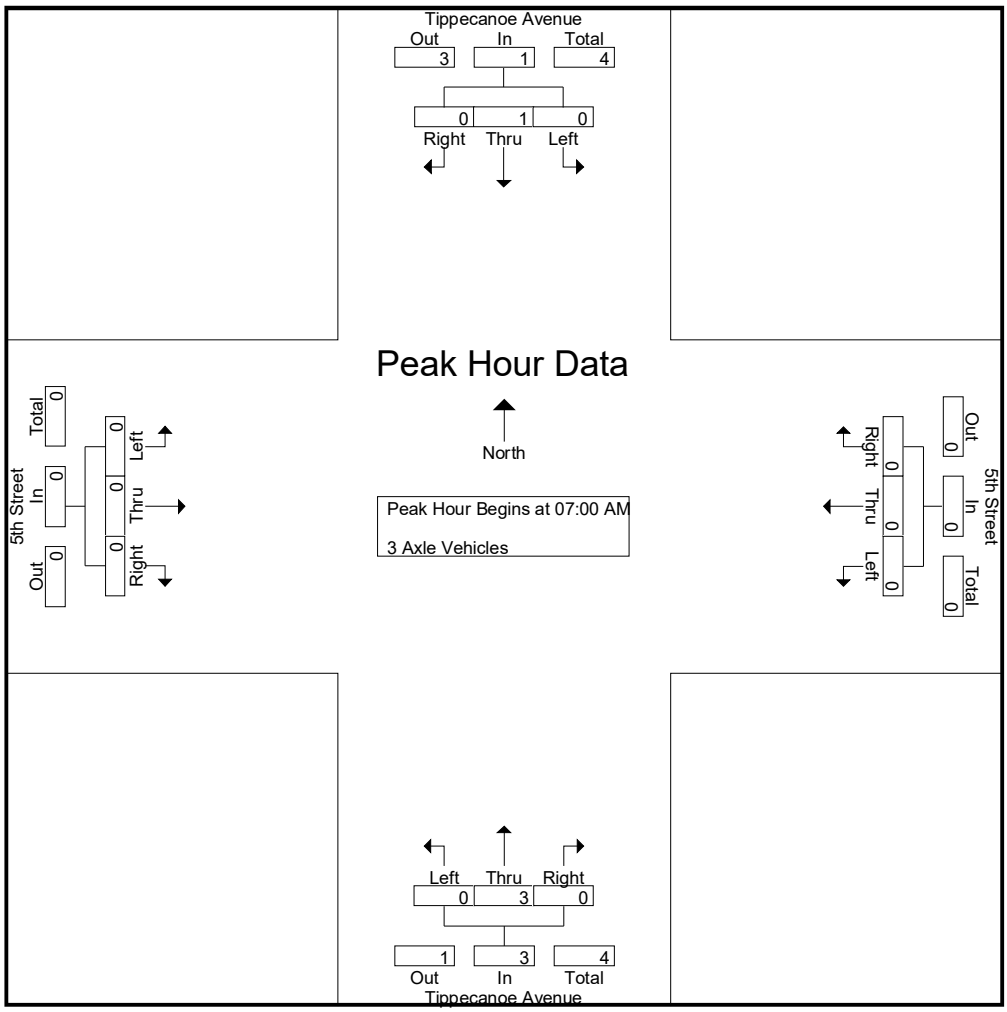

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000

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File Name : 23_SBC_Tippecanoe_5th AM
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Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
06:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
06:45 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total	0	0	0	0	0	3	0	3	0	1	0	1	0	3	0	3	7
07:00 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	2	0	2	0	1	0	1	0	2	0	2	0	0	0	0	5
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	0	1	0	1	0	1	0	1	5
Grand Total	0	5	0	5	0	4	0	4	0	4	0	4	0	4	0	4	17
Apprch %	0	100	0		0	100	0		0	100	0		0	100	0		
Total %	0	29.4	0	29.4	0	23.5	0	23.5	0	23.5	0	23.5	0	23.5	0	23.5	

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0	**2**
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	2	0	2	0	1	0	1	0	2	0	2	0	0	0	0	5
% App. Total	0	100	0		0	100	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.000	.000	.625

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File Name : 23_SBC_Tippecanoe_5th AM
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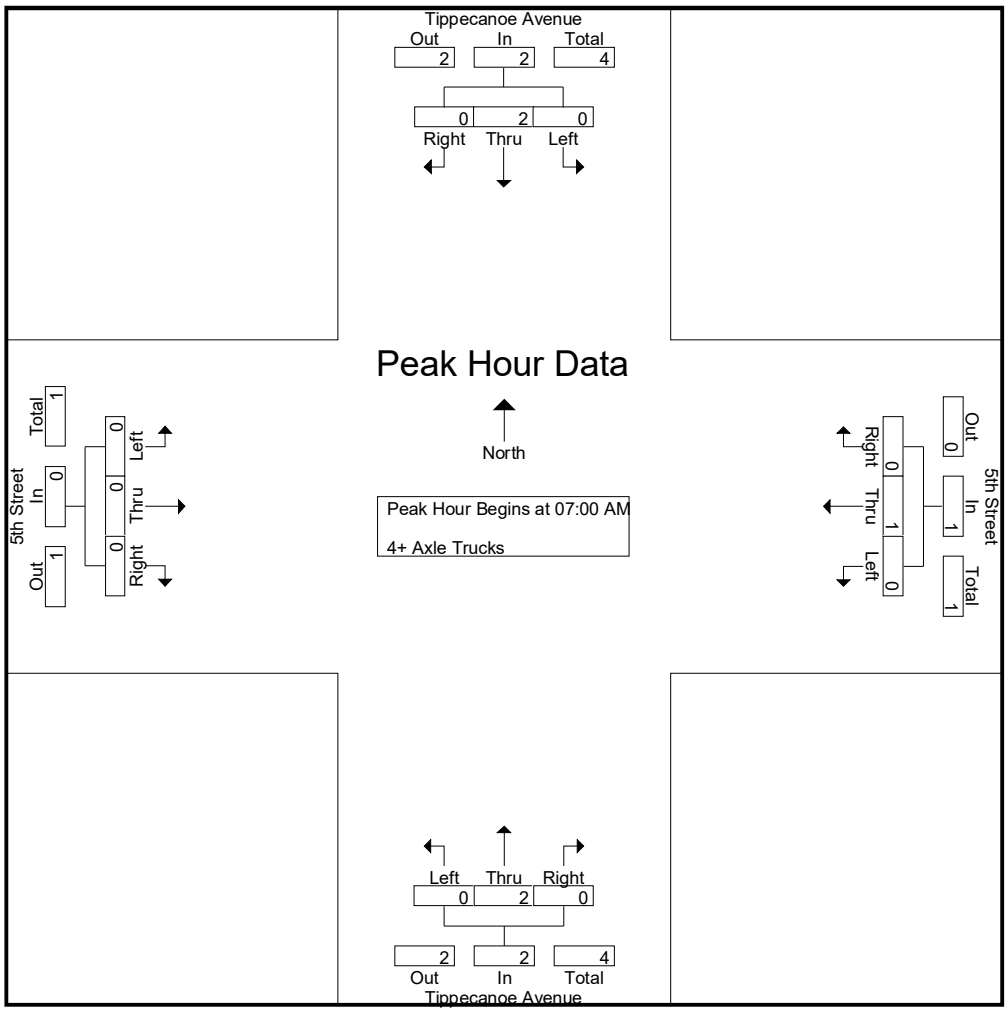

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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File Name : 23_SBC_Tippecanoe_5th PM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	6	61	8	75	4	32	10	46	11	111	4	126	8	58	12	78	325
03:15 PM	10	70	6	86	3	26	5	34	14	87	6	107	9	41	14	64	291
03:30 PM	9	69	8	86	9	31	7	47	25	108	5	138	5	60	13	78	349
03:45 PM	7	74	5	86	5	34	9	48	27	122	12	161	13	51	18	82	377
Total	32	274	27	333	21	123	31	175	77	428	27	532	35	210	57	302	1342
04:00 PM	12	54	9	75	4	34	7	45	18	104	9	131	6	54	10	70	321
04:15 PM	4	69	3	76	5	31	5	41	13	121	10	144	16	91	4	111	372
04:30 PM	7	61	8	76	5	27	7	39	11	126	6	143	13	77	18	108	366
04:45 PM	11	86	9	106	5	28	10	43	13	107	6	126	14	72	10	96	371
Total	34	270	29	333	19	120	29	168	55	458	31	544	49	294	42	385	1430
05:00 PM	8	59	8	75	7	26	5	38	8	120	13	141	20	116	12	148	402
05:15 PM	12	60	2	74	7	35	9	51	18	131	6	155	14	121	20	155	435
05:30 PM	3	78	3	84	5	32	3	40	18	108	9	135	11	95	6	112	371
05:45 PM	3	69	7	79	3	42	4	49	11	96	3	110	8	60	10	78	316
Total	26	266	20	312	22	135	21	178	55	455	31	541	53	392	48	493	1524
Grand Total	92	810	76	978	62	378	81	521	187	1341	89	1617	137	896	147	1180	4296
Apprch %	9.4	82.8	7.8		11.9	72.6	15.5		11.6	82.9	5.5		11.6	75.9	12.5		
Total %	2.1	18.9	1.8	22.8	1.4	8.8	1.9	12.1	4.4	31.2	2.1	37.6	3.2	20.9	3.4	27.5	
Passenger Vehicles	89	789	74	952	60	367	79	506	183	1320	88	1591	137	876	142	1155	4204
% Passenger Vehicles	96.7	97.4	97.4	97.3	96.8	97.1	97.5	97.1	97.9	98.4	98.9	98.4	100	97.8	96.6	97.9	97.9
Large 2 Axle Vehicles	2	11	1	14	1	9	2	12	1	14	1	16	0	10	3	13	55
% Large 2 Axle Vehicles	2.2	1.4	1.3	1.4	1.6	2.4	2.5	2.3	0.5	1	1.1	1	0	1.1	2	1.1	1.3
3 Axle Vehicles	0	3	0	3	1	0	0	1	1	1	0	2	0	4	2	6	12
% 3 Axle Vehicles	0	0.4	0	0.3	1.6	0	0	0.2	0.5	0.1	0	0.1	0	0.4	1.4	0.5	0.3
4+ Axle Trucks	1	7	1	9	0	2	0	2	2	6	0	8	0	6	0	6	25
% 4+ Axle Trucks	1.1	0.9	1.3	0.9	0	0.5	0	0.4	1.1	0.4	0	0.5	0	0.7	0	0.5	0.6

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	11	**86**	**9**	**106**	5	28	**10**	43	13	107	6	126	14	72	10	96	371
05:00 PM	8	59	8	75	**7**	26	5	38	8	120	**13**	141	**20**	116	12	148	402
05:15 PM	**12**	60	2	74	7	**35**	9	**51**	**18**	**131**	6	**155**	14	**121**	**20**	**155**	**435**
05:30 PM	3	78	3	84	5	32	3	40	18	108	9	135	11	95	6	112	371
Total Volume	34	283	22	339	24	121	27	172	57	466	34	557	59	404	48	511	1579
% App. Total	10	83.5	6.5		14	70.3	15.7		10.2	83.7	6.1		11.5	79.1	9.4		
PHF	.708	.823	.611	.800	.857	.864	.675	.843	.792	.889	.654	.898	.738	.835	.600	.824	.907

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Weather: Clear

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Site Code : 99918385
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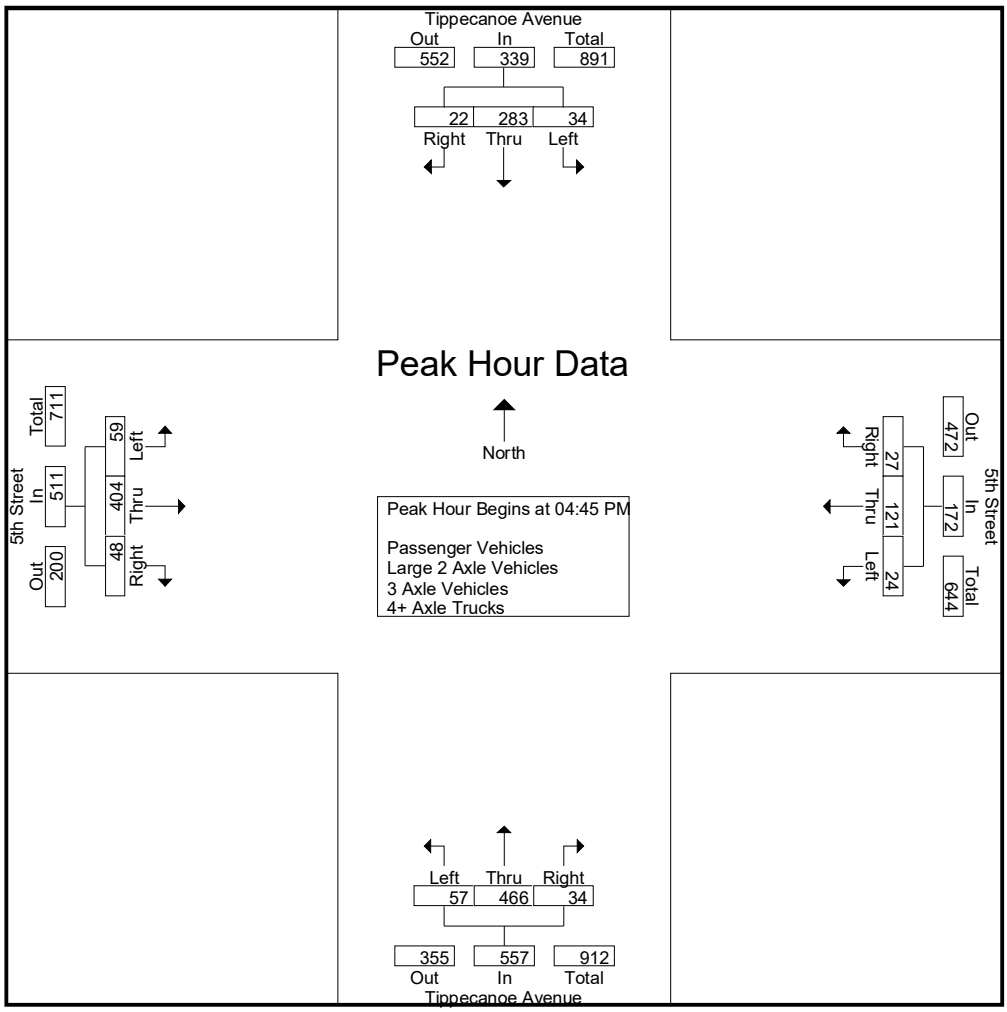

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				03:30 PM				03:45 PM				04:45 PM			
+0 mins.	11	**86**	**9**	**106**	**9**	31	7	47	**27**	122	**12**	**161**	14	72	10	96
+15 mins.	8	59	8	75	5	**34**	**9**	**48**	18	104	9	131	**20**	116	12	148
+30 mins.	**12**	60	2	74	4	34	7	45	13	121	10	144	14	**121**	**20**	**155**
+45 mins.	3	78	3	84	5	31	5	41	11	**126**	6	143	11	95	6	112
Total Volume	34	283	22	339	23	130	28	181	69	473	37	579	59	404	48	511
% App. Total	10	83.5	6.5		12.7	71.8	15.5		11.9	81.7	6.4		11.5	79.1	9.4	
PHF	.708	.823	.611	.800	.639	.956	.778	.943	.639	.938	.771	.899	.738	.835	.600	.824

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E/W: 5th Street
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Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	6	60	8	74	3	32	10	45	10	109	4	123	8	55	12	75	317
03:15 PM	10	66	6	82	3	25	4	32	14	85	5	104	9	39	11	59	277
03:30 PM	8	67	8	83	9	28	7	44	24	106	5	135	5	60	12	77	339
03:45 PM	7	73	5	85	5	33	9	47	27	119	12	158	13	49	18	80	370
Total	31	266	27	324	20	118	30	168	75	419	26	520	35	203	53	291	1303
04:00 PM	12	52	8	72	4	31	7	42	18	101	9	128	6	52	10	68	310
04:15 PM	3	68	3	74	5	30	5	40	13	117	10	140	16	88	4	108	362
04:30 PM	7	61	8	76	5	26	7	38	9	124	6	139	13	77	17	107	360
04:45 PM	10	82	9	101	5	28	10	43	13	107	6	126	14	72	10	96	366
Total	32	263	28	323	19	115	29	163	53	449	31	533	49	289	41	379	1398
05:00 PM	8	56	7	71	7	26	5	38	8	120	13	141	20	115	12	147	397
05:15 PM	12	60	2	74	7	34	8	49	18	131	6	155	14	119	20	153	431
05:30 PM	3	75	3	81	4	32	3	39	18	107	9	134	11	91	6	108	362
05:45 PM	3	69	7	79	3	42	4	49	11	94	3	108	8	59	10	77	313
Total	26	260	19	305	21	134	20	175	55	452	31	538	53	384	48	485	1503
Grand Total	89	789	74	952	60	367	79	506	183	1320	88	1591	137	876	142	1155	4204
Apprch %	9.3	82.9	7.8		11.9	72.5	15.6		11.5	83	5.5		11.9	75.8	12.3		
Total %	2.1	18.8	1.8	22.6	1.4	8.7	1.9	12	4.4	31.4	2.1	37.8	3.3	20.8	3.4	27.5	

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	10	**82**	**9**	**101**	5	28	**10**	43	13	107	6	126	14	72	10	96	366
05:00 PM	8	56	7	71	**7**	26	5	38	8	120	**13**	141	**20**	115	12	147	397
05:15 PM	**12**	60	2	74	7	**34**	8	**49**	**18**	**131**	6	**155**	14	**119**	**20**	**153**	**431**
05:30 PM	3	75	3	81	4	32	3	39	18	107	9	134	11	91	6	108	362
Total Volume	33	273	21	327	23	120	26	169	57	465	34	556	59	397	48	504	1556
% App. Total	10.1	83.5	6.4		13.6	71	15.4		10.3	83.6	6.1		11.7	78.8	9.5		
PHF	.688	.832	.583	.809	.821	.882	.650	.862	.792	.887	.654	.897	.738	.834	.600	.824	.903

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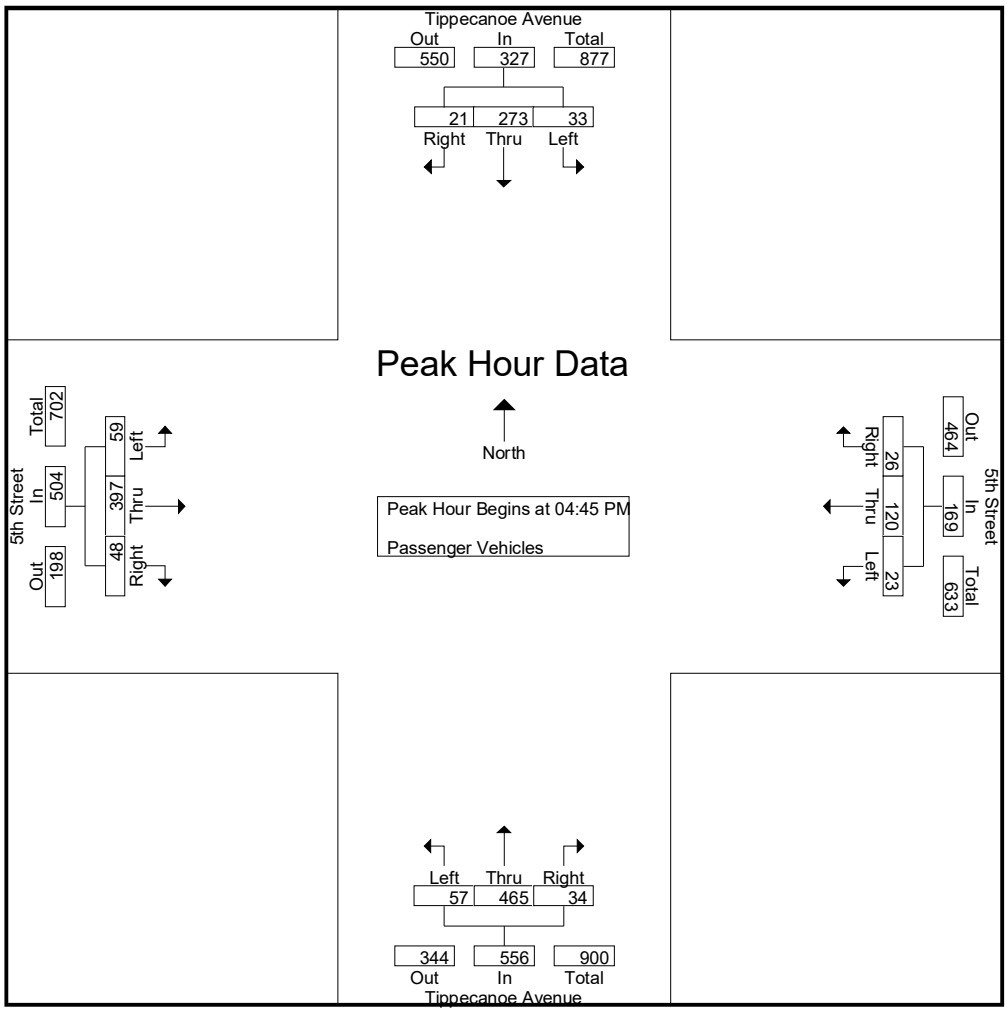

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	10	**82**	**9**	**101**	5	28	**10**	43	13	107	6	126	14	72	10	96
+15 mins.	8	56	7	71	**7**	26	5	38	8	120	**13**	141	**20**	115	12	147
+30 mins.	**12**	60	2	74	7	**34**	8	**49**	**18**	**131**	6	**155**	14	**119**	**20**	**153**
+45 mins.	3	75	3	81	4	32	3	39	18	107	9	134	11	91	6	108
Total Volume	33	273	21	327	23	120	26	169	57	465	34	556	59	397	48	504
% App. Total	10.1	83.5	6.4		13.6	71	15.4		10.3	83.6	6.1		11.7	78.8	9.5	
PHF	.688	.832	.583	.809	.821	.882	.650	.862	.792	.887	.654	.897	.738	.834	.600	.824

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Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	1	0	0	1	0	2	0	2	0	0	0	0	3
03:15 PM	0	2	0	2	0	1	1	2	0	2	1	3	0	1	2	3	10
03:30 PM	0	1	0	1	0	2	0	2	0	2	0	2	0	0	1	1	6
03:45 PM	0	0	0	0	0	1	0	1	0	2	0	2	0	2	0	2	5
Total	0	3	0	3	1	4	1	6	0	8	1	9	0	3	3	6	24
04:00 PM	0	2	1	3	0	2	0	2	0	2	0	2	0	2	0	2	9
04:15 PM	1	0	0	1	0	1	0	1	0	2	0	2	0	1	0	1	5
04:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
04:45 PM	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	2	4	1	7	0	4	0	4	1	4	0	5	0	3	0	3	19
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
05:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	3	0	3	6
05:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
Total	0	4	0	4	0	1	1	2	0	2	0	2	0	4	0	4	12
Grand Total	2	11	1	14	1	9	2	12	1	14	1	16	0	10	3	13	55
Apprch %	14.3	78.6	7.1		8.3	75	16.7		6.2	87.5	6.2		0	76.9	23.1		
Total %	3.6	20	1.8	25.5	1.8	16.4	3.6	21.8	1.8	25.5	1.8	29.1	0	18.2	5.5	23.6	

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	2	0	**3**	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	0	0	0	0	2
05:30 PM	0	**3**	0	3	0	0	0	0	0	0	0	0	0	**3**	0	**3**	**6**
Total Volume	1	6	0	7	0	1	1	2	0	0	0	0	0	3	0	3	12
% App. Total	14.3	85.7	0		0	50	50		0	0	0		0	100	0		
PHF	.250	.500	.000	.583	.000	.250	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250	.500

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Start Date : 5/16/2018
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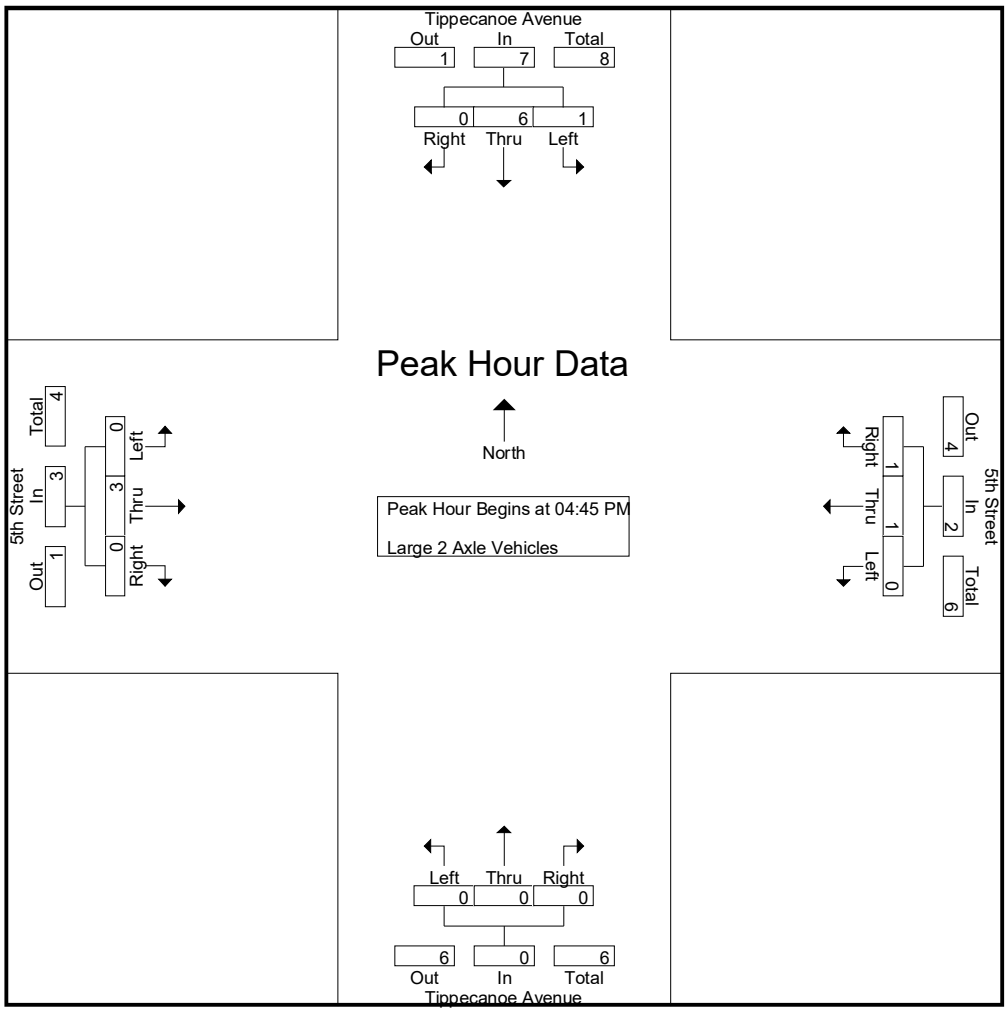

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
03:30 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
03:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	1	0	0	1	0	2	1	3	7
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	2	3
Grand Total	0	3	0	3	1	0	0	1	1	1	0	2	0	4	2	6	12
Apprch %	0	100	0		100	0	0		50	50	0		0	66.7	33.3		
Total %	0	25	0	25	8.3	0	0	8.3	8.3	8.3	0	16.7	0	33.3	16.7	50	

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
05:30 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	1	0	1	**2**
Total Volume	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	2	3
% App. Total	0	0	0		100	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.375

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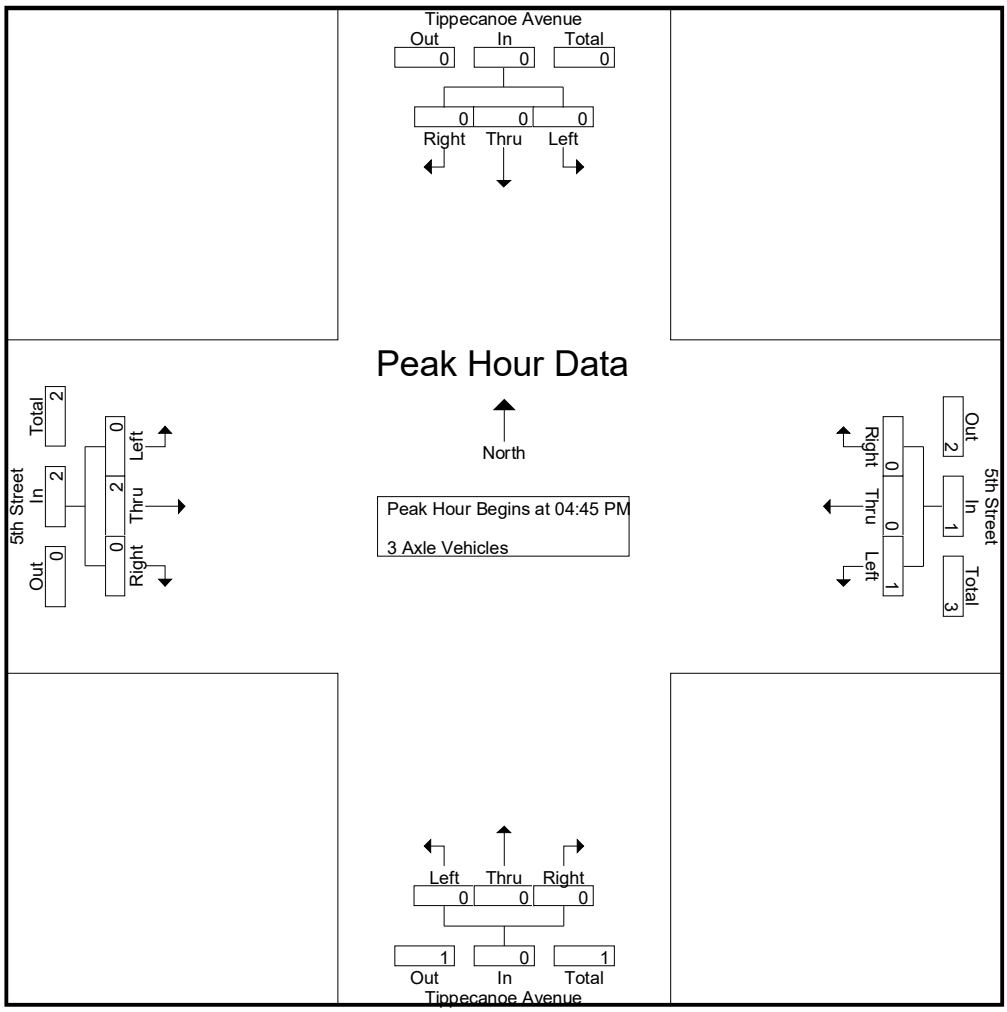

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
03:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
03:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	1	2	0	3	0	1	0	1	1	1	0	2	0	2	0	2	8
04:00 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	2	0	2	4
04:30 PM	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	3
04:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	0	3	0	1	0	1	1	4	0	5	0	2	0	2	11
05:00 PM	0	2	1	3	0	0	0	0	0	0	0	0	0	1	0	1	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	1	3	0	0	0	0	0	1	0	1	0	2	0	2	6
Grand Total	1	7	1	9	0	2	0	2	2	6	0	8	0	6	0	6	25
Apprch %	11.1	77.8	11.1		0	100	0		25	75	0		0	100	0		
Total %	4	28	4	36	0	8	0	8	8	24	0	32	0	24	0	24	

	Tippecanoe Avenue Southbound				5th Street Westbound				Tippecanoe Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**2**	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	2	**1**	**3**	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**4**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
Total Volume	0	4	1	5	0	0	0	0	0	1	0	1	0	2	0	2	8
% App. Total	0	80	20		0	0	0		0	100	0		0	100	0		
PHF	.000	.500	.250	.417	.000	.000	.000	.000	.000	.250	.000	.250	.000	.500	.000	.500	.500

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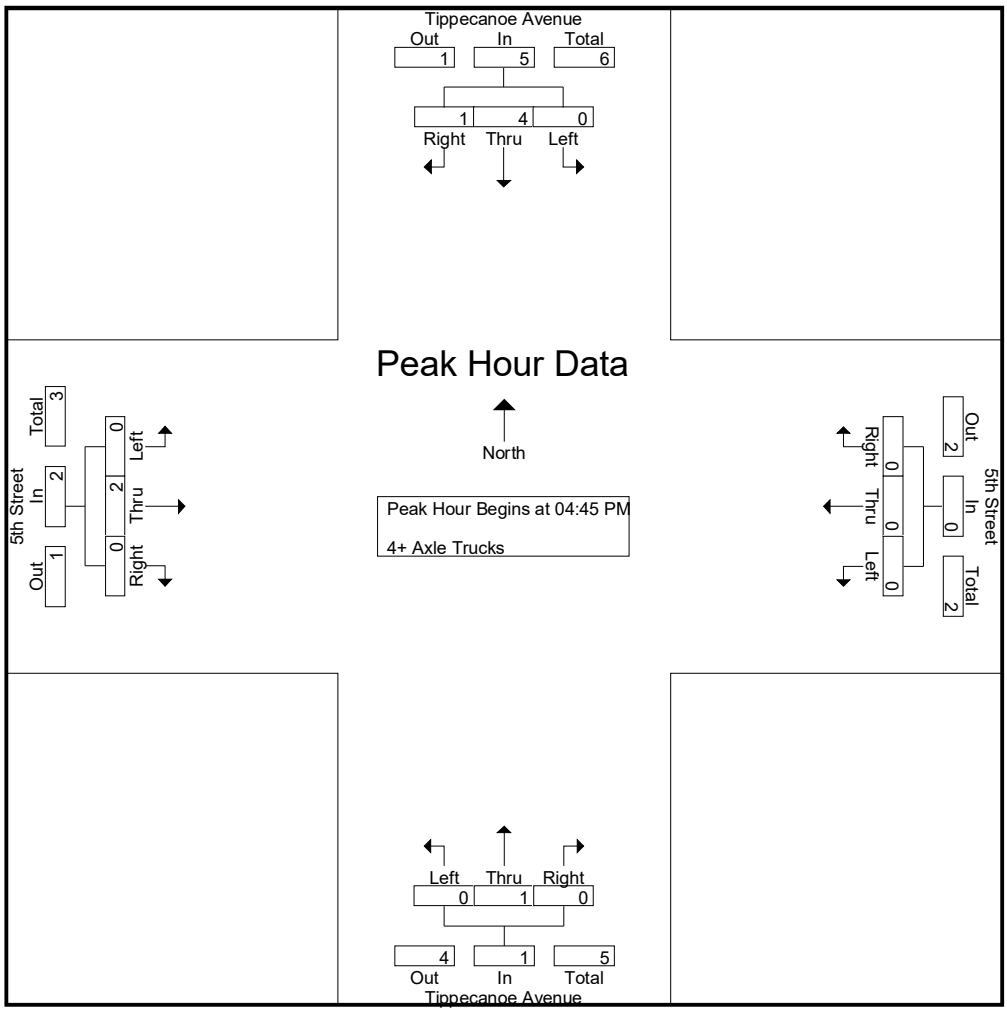
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: 5th Street
Weather: Clear

File Name : 23_SBC_Tippecanoe_5th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**2**	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	2	**1**	**3**	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
Total Volume	0	4	1	5	0	0	0	0	0	1	0	1	0	2	0	2
% App. Total	0	80	20		0	0	0		0	100	0		0	100	0	
PHF	.000	.500	.250	.417	.000	.000	.000	.000	.000	.250	.000	.250	.000	.500	.000	.500

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City of San Bernardino
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E/W: 5th Street
Weather: Clear

File Name : 24_SBC_Del Rosa Dr_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	29	1	30	3	10	0	13	3	20	0	23	3	11	2	16	82
06:15 AM	1	37	1	39	2	17	3	22	0	11	2	13	1	4	6	11	85
06:30 AM	0	56	2	58	3	24	0	27	1	17	0	18	2	13	4	19	122
06:45 AM	2	88	3	93	3	42	8	53	1	22	0	23	7	12	17	36	205
Total	3	210	7	220	11	93	11	115	5	70	2	77	13	40	29	82	494
07:00 AM	5	54	5	64	6	51	20	77	0	48	2	50	15	11	4	30	221
07:15 AM	8	92	15	115	7	83	14	104	2	53	1	56	23	19	5	47	322
07:30 AM	11	68	17	96	6	65	7	78	4	48	2	54	9	18	4	31	259
07:45 AM	5	94	8	107	7	80	3	90	1	37	1	39	13	18	3	34	270
Total	29	308	45	382	26	279	44	349	7	186	6	199	60	66	16	142	1072
08:00 AM	4	45	6	55	2	57	5	64	7	29	2	38	8	16	6	30	187
08:15 AM	1	51	4	56	3	45	6	54	3	44	1	48	8	22	7	37	195
08:30 AM	2	52	6	60	3	36	11	50	1	25	5	31	7	22	4	33	174
08:45 AM	2	39	7	48	6	31	3	40	4	26	3	33	4	34	7	45	166
Total	9	187	23	219	14	169	25	208	15	124	11	150	27	94	24	145	722
Grand Total	41	705	75	821	51	541	80	672	27	380	19	426	100	200	69	369	2288
Apprch %	5	85.9	9.1		7.6	80.5	11.9		6.3	89.2	4.5		27.1	54.2	18.7		
Total %	1.8	30.8	3.3	35.9	2.2	23.6	3.5	29.4	1.2	16.6	0.8	18.6	4.4	8.7	3	16.1	
Passenger Vehicles	39	690	71	800	49	529	77	655	21	362	18	401	96	190	66	352	2208
% Passenger Vehicles	95.1	97.9	94.7	97.4	96.1	97.8	96.2	97.5	77.8	95.3	94.7	94.1	96	95	95.7	95.4	96.5
Large 2 Axle Vehicles	1	12	3	16	2	7	1	10	2	17	1	20	1	5	2	8	54
% Large 2 Axle Vehicles	2.4	1.7	4	1.9	3.9	1.3	1.2	1.5	7.4	4.5	5.3	4.7	1	2.5	2.9	2.2	2.4
3 Axle Vehicles	0	1	0	1	0	1	0	1	4	0	0	4	0	1	1	2	8
% 3 Axle Vehicles	0	0.1	0	0.1	0	0.2	0	0.1	14.8	0	0	0.9	0	0.5	1.4	0.5	0.3
4+ Axle Trucks	1	2	1	4	0	4	2	6	0	1	0	1	3	4	0	7	18
% 4+ Axle Trucks	2.4	0.3	1.3	0.5	0	0.7	2.5	0.9	0	0.3	0	0.2	3	2	0	1.9	0.8

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	54	5	64	6	51	**20**	77	0	48	**2**	50	15	11	4	30	221
07:15 AM	8	92	15	**115**	**7**	**83**	14	**104**	2	**53**	1	**56**	**23**	**19**	**5**	**47**	**322**
07:30 AM	**11**	68	**17**	96	6	65	7	78	**4**	48	2	54	9	18	4	31	259
07:45 AM	5	**94**	8	107	7	80	3	90	1	37	1	39	13	18	3	34	270
Total Volume	29	308	45	382	26	279	44	349	7	186	6	199	60	66	16	142	1072
% App. Total	7.6	80.6	11.8		7.4	79.9	12.6		3.5	93.5	3		42.3	46.5	11.3		
PHF	.659	.819	.662	.830	.929	.840	.550	.839	.438	.877	.750	.888	.652	.868	.800	.755	.832

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Site Code : 99918385
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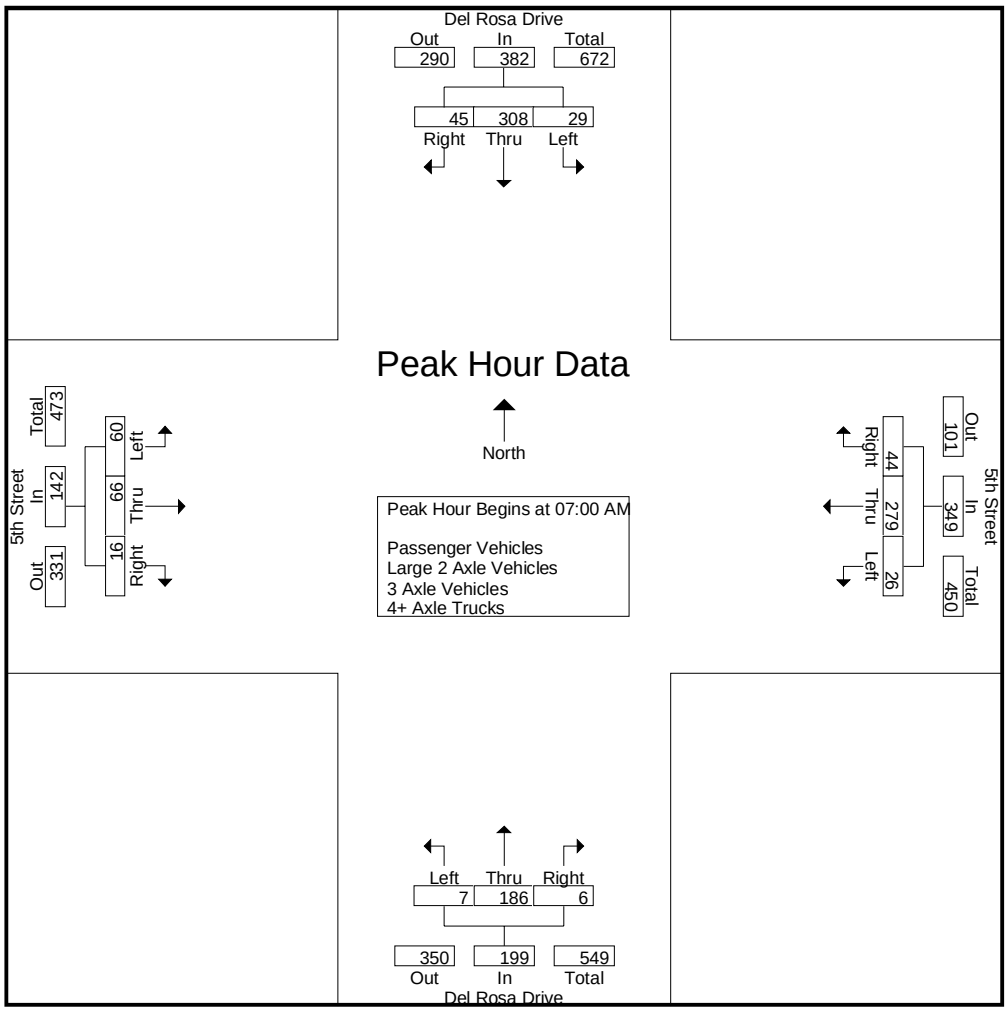

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				08:00 AM			
+0 mins.	5	54	5	64	6	51	**20**	77	0	48	**2**	50	**8**	16	6	30
+15 mins.	8	92	15	**115**	**7**	**83**	14	**104**	2	**53**	1	**56**	8	22	**7**	37
+30 mins.	**11**	68	**17**	96	6	65	7	78	**4**	48	2	54	7	22	4	33
+45 mins.	5	**94**	8	107	7	80	3	90	1	37	1	39	4	**34**	7	**45**
Total Volume	29	308	45	382	26	279	44	349	7	186	6	199	27	94	24	145
% App. Total	7.6	80.6	11.8		7.4	79.9	12.6		3.5	93.5	3		18.6	64.8	16.6	
PHF	.659	.819	.662	.830	.929	.840	.550	.839	.438	.877	.750	.888	.844	.691	.857	.806

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City of San Bernardino
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Groups Printed- Passenger Vehicles

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	29	1	30	3	10	0	13	1	19	0	20	3	9	2	14	77
06:15 AM	1	37	1	39	2	16	3	21	0	10	2	12	1	4	6	11	83
06:30 AM	0	55	2	57	3	23	0	26	1	14	0	15	2	13	3	18	116
06:45 AM	2	86	3	91	3	42	8	53	1	22	0	23	6	12	16	34	201
Total	3	207	7	217	11	91	11	113	3	65	2	70	12	38	27	77	477
07:00 AM	4	53	5	62	6	50	19	75	0	45	1	46	15	11	4	30	213
07:15 AM	7	89	14	110	7	83	13	103	2	52	1	55	22	19	5	46	314
07:30 AM	11	66	15	92	6	64	7	77	3	47	2	52	9	16	4	29	250
07:45 AM	5	93	8	106	6	79	3	88	1	36	1	38	12	18	3	33	265
Total	27	301	42	370	25	276	42	343	6	180	5	191	58	64	16	138	1042
08:00 AM	4	44	5	53	2	54	4	60	6	26	2	34	8	14	5	27	174
08:15 AM	1	49	4	54	3	43	6	52	3	42	1	46	7	20	7	34	186
08:30 AM	2	52	6	60	2	34	11	47	1	24	5	30	7	22	4	33	170
08:45 AM	2	37	7	46	6	31	3	40	2	25	3	30	4	32	7	43	159
Total	9	182	22	213	13	162	24	199	12	117	11	140	26	88	23	137	689
Grand Total	39	690	71	800	49	529	77	655	21	362	18	401	96	190	66	352	2208
Apprch %	4.9	86.2	8.9		7.5	80.8	11.8		5.2	90.3	4.5		27.3	54	18.8		
Total %	1.8	31.2	3.2	36.2	2.2	24	3.5	29.7	1	16.4	0.8	18.2	4.3	8.6	3	15.9	

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	4	53	5	62	6	50	**19**	75	0	45	1	46	15	11	4	30	213
07:15 AM	7	89	14	**110**	**7**	**83**	13	**103**	2	**52**	1	**55**	**22**	**19**	**5**	**46**	**314**
07:30 AM	**11**	66	**15**	92	6	64	7	77	**3**	47	**2**	52	9	16	4	29	250
07:45 AM	5	**93**	8	106	6	79	3	88	1	36	1	38	12	18	3	33	265
Total Volume	27	301	42	370	25	276	42	343	6	180	5	191	58	64	16	138	1042
% App. Total	7.3	81.4	11.4		7.3	80.5	12.2		3.1	94.2	2.6		42	46.4	11.6		
PHF	.614	.809	.700	.841	.893	.831	.553	.833	.500	.865	.625	.868	.659	.842	.800	.750	.830

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File Name : 24_SBC_Del Rosa Dr_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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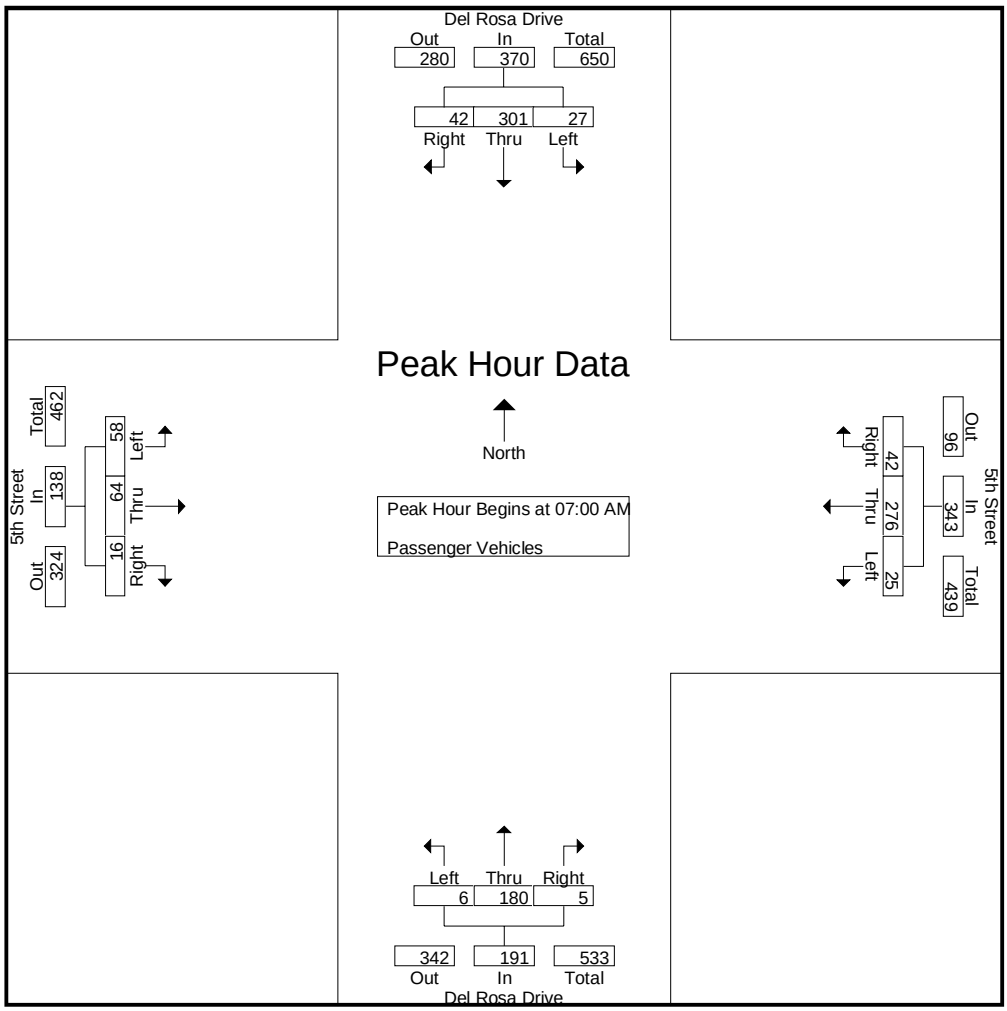

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	4	53	5	62	6	50	**19**	75	0	45	1	46	15	11	4	30
+15 mins.	7	89	14	**110**	**7**	**83**	13	**103**	2	**52**	1	**55**	**22**	**19**	**5**	**46**
+30 mins.	**11**	66	**15**	92	6	64	7	77	**3**	47	**2**	52	9	16	4	29
+45 mins.	5	**93**	8	106	6	79	3	88	1	36	1	38	12	18	3	33
Total Volume	27	301	42	370	25	276	42	343	6	180	5	191	58	64	16	138
% App. Total	7.3	81.4	11.4		7.3	80.5	12.2		3.1	94.2	2.6		42	46.4	11.6	
PHF	.614	.809	.700	.841	.893	.831	.553	.833	.500	.865	.625	.868	.659	.842	.800	.750

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City of San Bernardino
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Weather: Clear

File Name : 24_SBC_Del Rosa Dr_5th AM
Site Code : 99918385
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Groups Printed- Large 2 Axle Vehicles

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
06:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
06:30 AM	0	1	0	1	0	1	0	1	0	3	0	3	0	0	1	1	6
06:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	2	0	2	0	1	0	1	0	5	0	5	1	0	1	2	10
07:00 AM	1	1	0	2	0	0	1	1	0	3	1	4	0	0	0	0	7
07:15 AM	0	3	1	4	0	0	0	0	0	1	0	1	0	0	0	0	5
07:30 AM	0	1	1	2	0	1	0	1	1	1	0	2	0	1	0	1	6
07:45 AM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	3
Total	1	6	2	9	1	1	1	3	1	6	1	8	0	1	0	1	21
08:00 AM	0	1	1	2	0	3	0	3	1	2	0	3	0	2	1	3	11
08:15 AM	0	1	0	1	0	1	0	1	0	2	0	2	0	1	0	1	5
08:30 AM	0	0	0	0	1	1	0	2	0	1	0	1	0	0	0	0	3
08:45 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	1	0	1	4
Total	0	4	1	5	1	5	0	6	1	6	0	7	0	4	1	5	23
Grand Total	1	12	3	16	2	7	1	10	2	17	1	20	1	5	2	8	54
Apprch %	6.2	75	18.8		20	70	10		10	85	5		12.5	62.5	25		
Total %	1.9	22.2	5.6	29.6	3.7	13	1.9	18.5	3.7	31.5	1.9	37	1.9	9.3	3.7	14.8	

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	1	0	2	0	0	**1**	**1**	0	**3**	**1**	**4**	0	0	0	0	**7**
07:15 AM	0	**3**	**1**	**4**	0	0	0	0	0	1	0	1	0	0	0	0	5
07:30 AM	0	1	1	2	0	**1**	0	1	**1**	1	0	2	0	**1**	0	**1**	6
07:45 AM	0	1	0	1	**1**	0	0	1	0	1	0	1	0	0	0	0	3
Total Volume	1	6	2	9	1	1	1	3	1	6	1	8	0	1	0	1	21
% App. Total	11.1	66.7	22.2		33.3	33.3	33.3		12.5	75	12.5		0	100	0		
PHF	.250	.500	.500	.563	.250	.250	.250	.750	.250	.500	.250	.500	.000	.250	.000	.250	.750

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Weather: Clear

File Name : 24_SBC_Del Rosa Dr_5th AM
Site Code : 99918385
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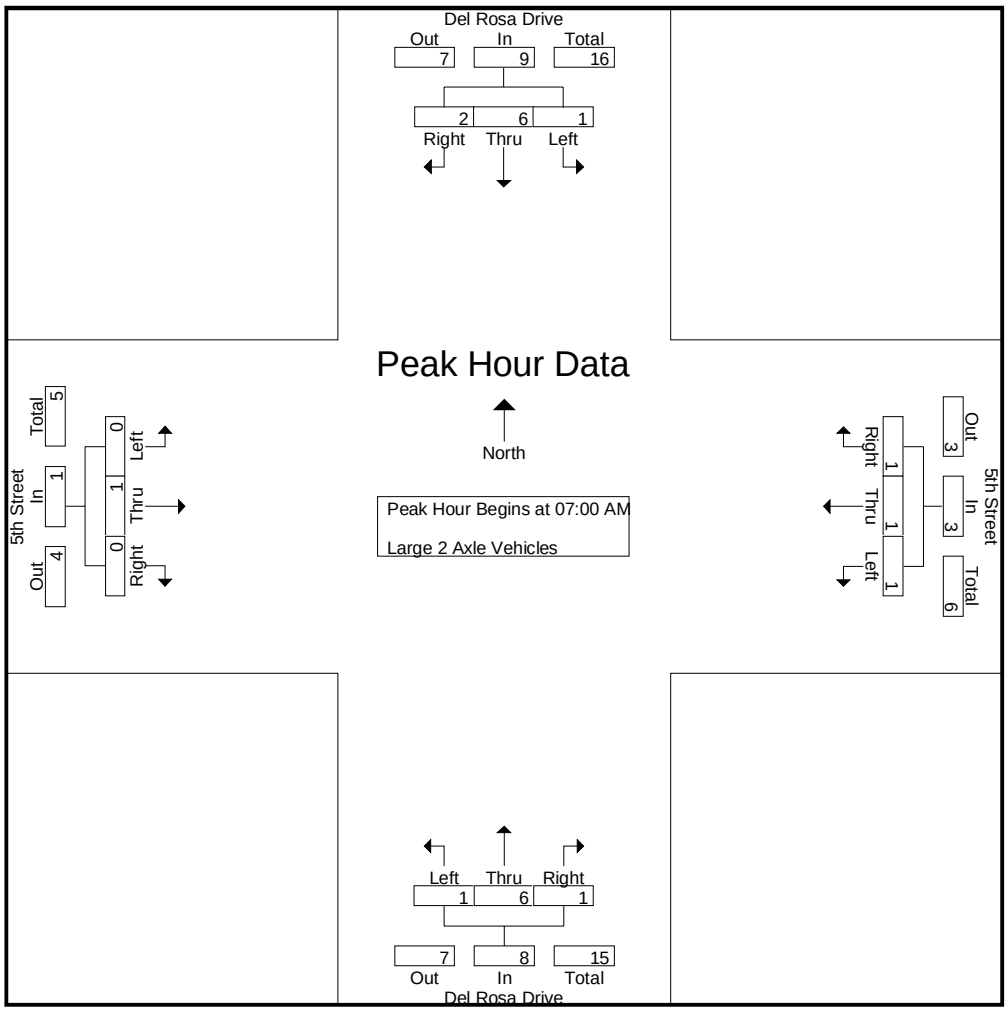

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**1**	1	0	2	0	0	**1**	**1**	0	**3**	**1**	**4**	0	0	0	0
+15 mins.	0	**3**	**1**	**4**	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	1	1	2	0	**1**	0	1	**1**	1	0	2	0	**1**	0	**1**
+45 mins.	0	1	0	1	**1**	0	0	1	0	1	0	1	0	0	0	0
Total Volume	1	6	2	9	1	1	1	3	1	6	1	8	0	1	0	1
% App. Total	11.1	66.7	22.2		33.3	33.3	33.3		12.5	75	12.5		0	100	0	
PHF	.250	.500	.500	.563	.250	.250	.250	.750	.250	.500	.250	.500	.000	.250	.000	.250

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Weather: Clear

File Name : 24_SBC_Del Rosa Dr_5th AM
Site Code : 99918385
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Groups Printed- 3 Axle Vehicles

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
06:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	0	1	0	1	0	1	0	1	2	0	0	2	0	0	1	1	5
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	3
Grand Total	0	1	0	1	0	1	0	1	4	0	0	4	0	1	1	2	8
Apprch %	0	100	0		0	100	0		100	0	0		0	50	50		
Total %	0	12.5	0	12.5	0	12.5	0	12.5	50	0	0	50	0	12.5	12.5	25	

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Site Code : 99918385
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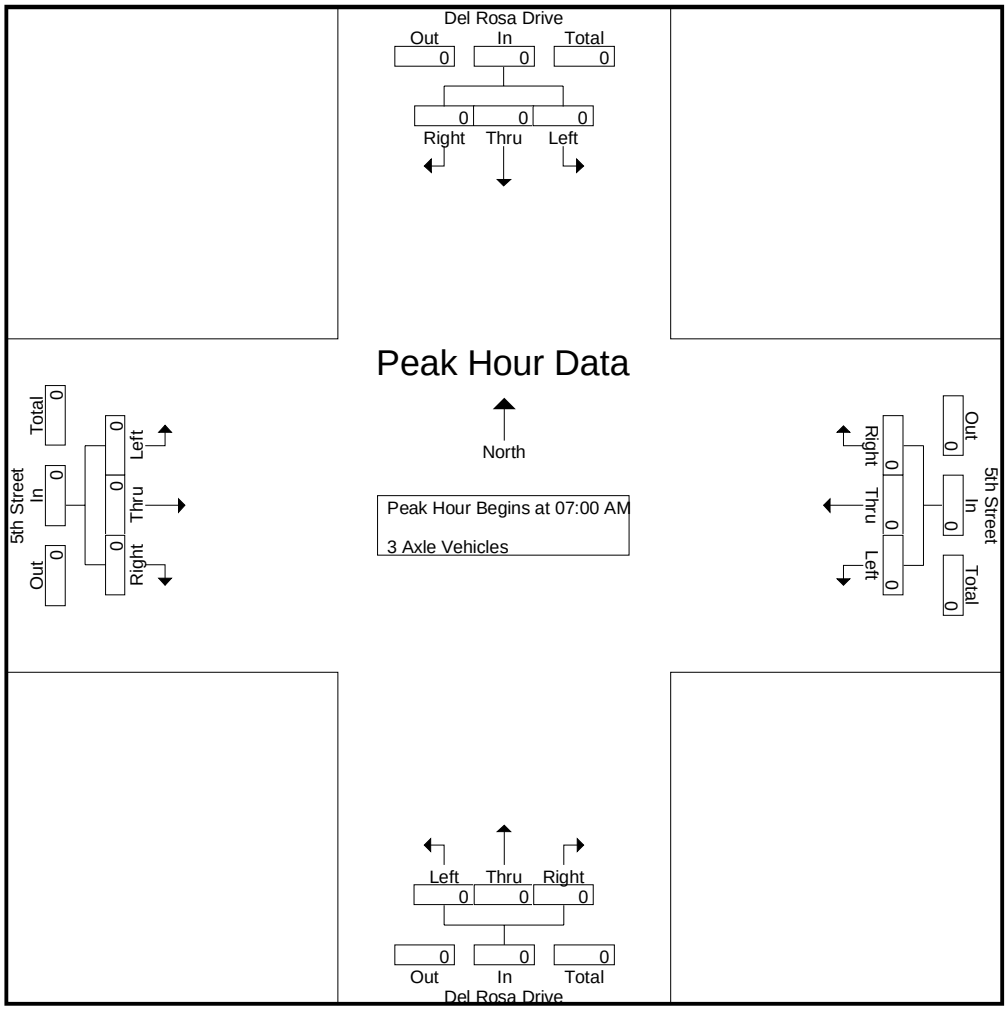

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	1	0	0	1	0	0	1	1	0	0	0	0	1	0	0	1	3
07:30 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
Total	1	1	1	3	0	2	1	3	0	0	0	0	2	1	0	3	9
08:00 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
08:15 AM	0	1	0	1	0	1	0	1	0	0	0	0	1	0	0	1	3
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	1	0	1	0	2	1	3	0	1	0	1	1	1	0	2	7
Grand Total	1	2	1	4	0	4	2	6	0	1	0	1	3	4	0	7	18
Apprch %	25	50	25		0	66.7	33.3		0	100	0		42.9	57.1	0		
Total %	5.6	11.1	5.6	22.2	0	22.2	11.1	33.3	0	5.6	0	5.6	16.7	22.2	0	38.9	

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
07:15 AM	**1**	0	0	1	0	0	**1**	1	0	0	0	0	**1**	0	0	**1**	**3**
07:30 AM	0	**1**	**1**	**2**	0	0	0	0	0	0	0	0	0	**1**	0	1	3
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
Total Volume	1	1	1	3	0	2	1	3	0	0	0	0	2	1	0	3	9
% App. Total	33.3	33.3	33.3		0	66.7	33.3		0	0	0		66.7	33.3	0		
PHF	.250	.250	.250	.375	.000	.500	.250	.750	.000	.000	.000	.000	.500	.250	.000	.750	.750

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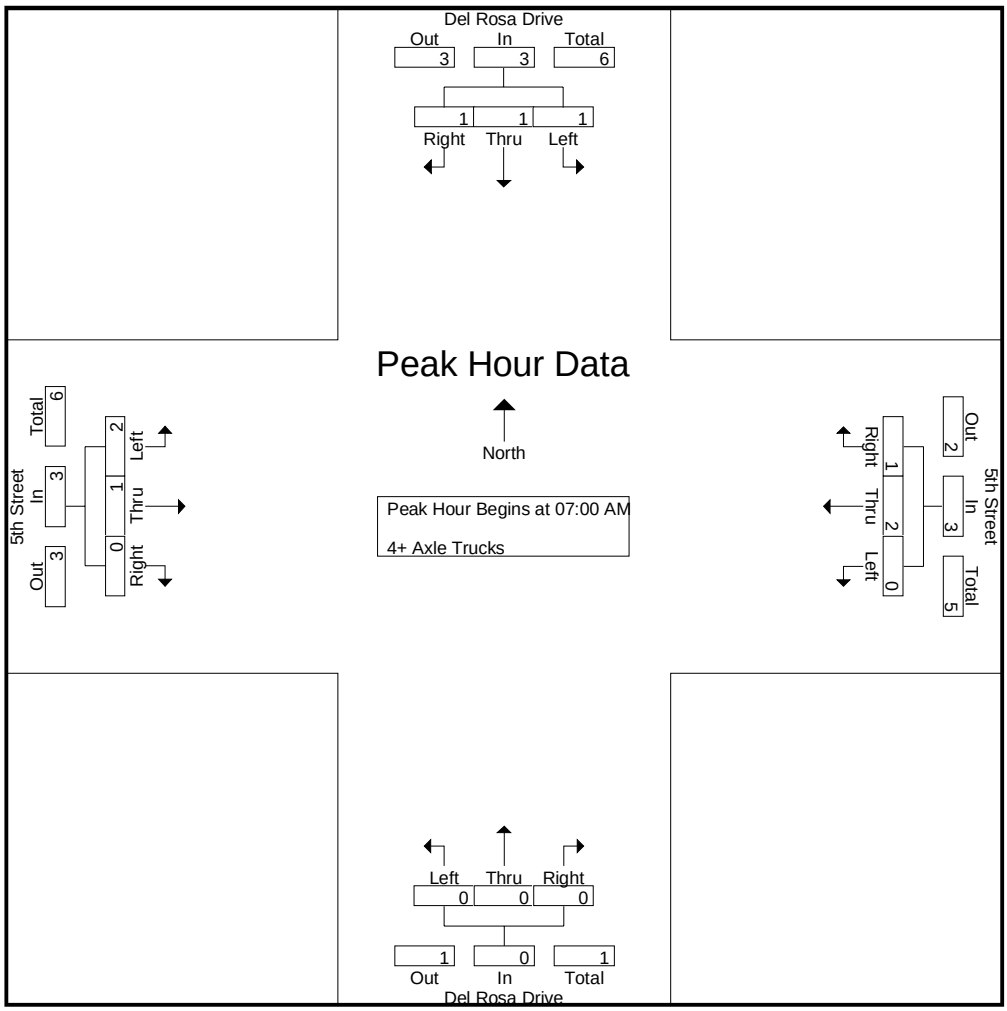

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	**1**	0	0	1	0	0	**1**	1	0	0	0	0	**1**	0	0	**1**
+30 mins.	0	**1**	**1**	**2**	0	0	0	0	0	0	0	0	0	**1**	0	1
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1
Total Volume	1	1	1	3	0	2	1	3	0	0	0	0	2	1	0	3
% App. Total	33.3	33.3	33.3		0	66.7	33.3		0	0	0		66.7	33.3	0	
PHF	.250	.250	.250	.375	.000	.500	.250	.750	.000	.000	.000	.000	.500	.250	.000	.750

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

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	12	38	8	58	5	45	4	54	1	64	2	67	15	56	2	73	252
03:15 PM	11	43	12	66	4	35	9	48	3	55	7	65	16	37	8	61	240
03:30 PM	10	38	8	56	2	41	10	53	4	79	4	87	10	57	8	75	271
03:45 PM	11	66	11	88	5	37	4	46	12	81	8	101	12	76	16	104	339
Total	44	185	39	268	16	158	27	201	20	279	21	320	53	226	34	313	1102
04:00 PM	14	45	5	64	5	38	8	51	9	78	9	96	15	68	10	93	304
04:15 PM	9	41	10	60	3	25	7	35	6	72	8	86	13	72	7	92	273
04:30 PM	18	57	8	83	3	36	4	43	6	50	3	59	10	102	6	118	303
04:45 PM	13	54	5	72	4	22	6	32	5	74	5	84	23	95	6	124	312
Total	54	197	28	279	15	121	25	161	26	274	25	325	61	337	29	427	1192
05:00 PM	11	49	7	67	3	36	13	52	7	85	6	98	17	104	4	125	342
05:15 PM	15	56	11	82	4	30	8	42	3	92	10	105	16	100	0	116	345
05:30 PM	9	52	8	69	5	25	8	38	4	85	3	92	15	88	4	107	306
05:45 PM	6	54	5	65	5	26	8	39	5	69	5	79	10	76	4	90	273
Total	41	211	31	283	17	117	37	171	19	331	24	374	58	368	12	438	1266
Grand Total	139	593	98	830	48	396	89	533	65	884	70	1019	172	931	75	1178	3560
Apprch %	16.7	71.4	11.8		9	74.3	16.7		6.4	86.8	6.9		14.6	79	6.4		
Total %	3.9	16.7	2.8	23.3	1.3	11.1	2.5	15	1.8	24.8	2	28.6	4.8	26.2	2.1	33.1	
Passenger Vehicles	137	571	93	801	47	377	88	512	60	864	69	993	168	914	68	1150	3456
% Passenger Vehicles	98.6	96.3	94.9	96.5	97.9	95.2	98.9	96.1	92.3	97.7	98.6	97.4	97.7	98.2	90.7	97.6	97.1
Large 2 Axle Vehicles	2	19	3	24	1	14	1	16	3	19	1	23	2	10	1	13	76
% Large 2 Axle Vehicles	1.4	3.2	3.1	2.9	2.1	3.5	1.1	3	4.6	2.1	1.4	2.3	1.2	1.1	1.3	1.1	2.1
3 Axle Vehicles	0	3	0	3	0	2	0	2	1	0	0	1	0	4	4	8	14
% 3 Axle Vehicles	0	0.5	0	0.4	0	0.5	0	0.4	1.5	0	0	0.1	0	0.4	5.3	0.7	0.4
4+ Axle Trucks	0	0	2	2	0	3	0	3	1	1	0	2	2	3	2	7	14
% 4+ Axle Trucks	0	0	2	0.2	0	0.8	0	0.6	1.5	0.1	0	0.2	1.2	0.3	2.7	0.6	0.4

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	13	54	5	72	4	22	6	32	5	74	5	84	**23**	95	**6**	124	312
05:00 PM	11	49	7	67	3	**36**	**13**	**52**	**7**	85	6	98	17	**104**	4	**125**	342
05:15 PM	**15**	**56**	**11**	**82**	4	30	8	42	3	**92**	**10**	**105**	16	100	0	116	**345**
05:30 PM	9	52	8	69	**5**	25	8	38	4	85	3	92	15	88	4	107	306
Total Volume	48	211	31	290	16	113	35	164	19	336	24	379	71	387	14	472	1305
% App. Total	16.6	72.8	10.7		9.8	68.9	21.3		5	88.7	6.3		15	82	3		
PHF	.800	.942	.705	.884	.800	.785	.673	.788	.679	.913	.600	.902	.772	.930	.583	.944	.946

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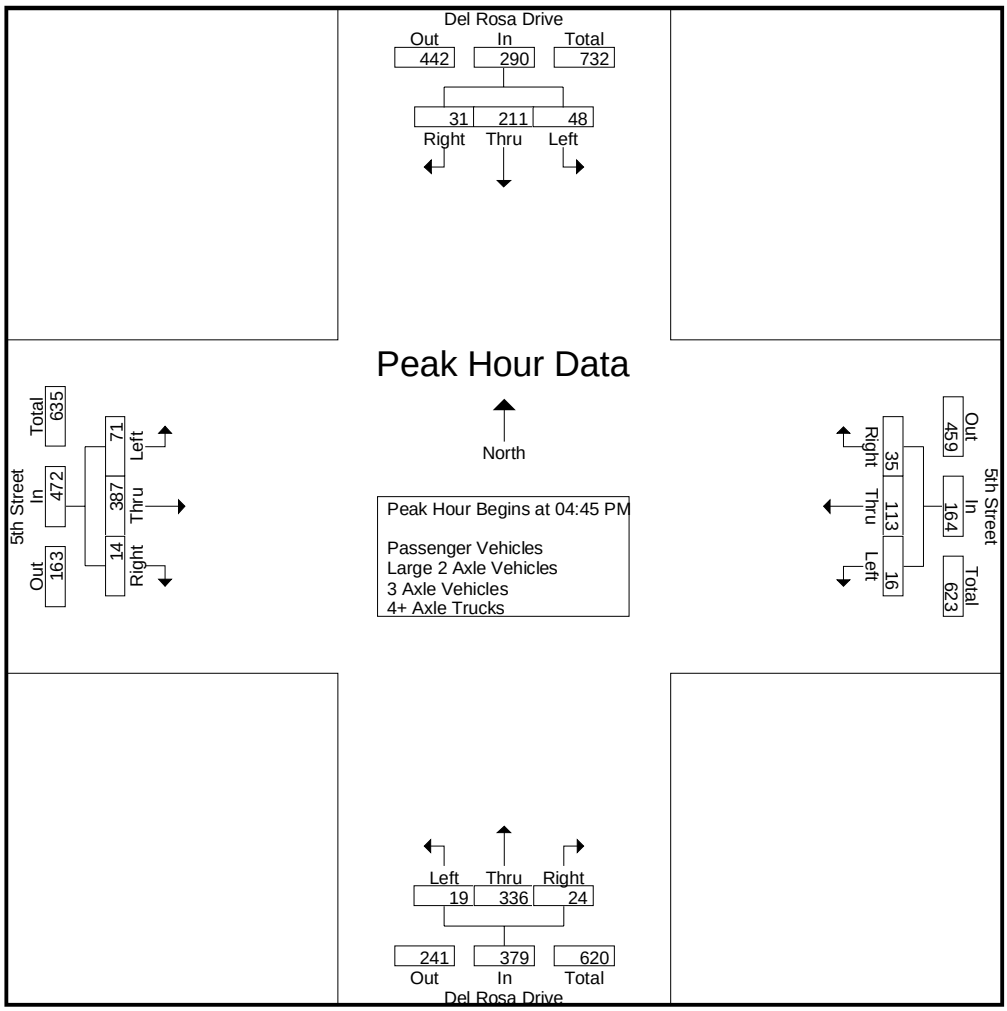

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				03:00 PM				04:45 PM				04:30 PM			
+0 mins.	**18**	**57**	8	**83**	**5**	**45**	4	**54**	5	74	5	84	10	102	**6**	118
+15 mins.	13	54	5	72	4	35	9	48	**7**	85	6	98	**23**	95	6	124
+30 mins.	11	49	7	67	2	41	**10**	53	3	**92**	**10**	**105**	17	**104**	4	**125**
+45 mins.	15	56	**11**	82	5	37	4	46	4	85	3	92	16	100	0	116
Total Volume	57	216	31	304	16	158	27	201	19	336	24	379	66	401	16	483
% App. Total	18.8	71.1	10.2		8	78.6	13.4		5	88.7	6.3		13.7	83	3.3	
PHF	.792	.947	.705	.916	.800	.878	.675	.931	.679	.913	.600	.902	.717	.964	.667	.966

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Groups Printed- Passenger Vehicles

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	12	38	7	57	5	42	4	51	1	63	2	66	15	55	2	72	246
03:15 PM	11	41	12	64	4	35	9	48	3	55	7	65	15	35	7	57	234
03:30 PM	9	37	8	54	2	41	10	53	3	77	4	84	10	57	6	73	264
03:45 PM	11	64	10	85	4	33	4	41	12	79	8	99	11	74	15	100	325
Total	43	180	37	260	15	151	27	193	19	274	21	314	51	221	30	302	1069
04:00 PM	14	39	5	58	5	37	8	50	7	75	9	91	14	68	9	91	290
04:15 PM	9	38	8	55	3	22	7	32	6	72	7	85	13	71	7	91	263
04:30 PM	17	53	8	78	3	34	4	41	5	47	3	55	9	102	6	117	291
04:45 PM	13	52	5	70	4	20	6	30	4	74	5	83	23	93	5	121	304
Total	53	182	26	261	15	113	25	153	22	268	24	314	59	334	27	420	1148
05:00 PM	11	48	7	66	3	36	12	51	7	82	6	95	17	100	3	120	332
05:15 PM	15	56	10	81	4	28	8	40	3	91	10	104	16	100	0	116	341
05:30 PM	9	51	8	68	5	24	8	37	4	82	3	89	15	87	4	106	300
05:45 PM	6	54	5	65	5	25	8	38	5	67	5	77	10	72	4	86	266
Total	41	209	30	280	17	113	36	166	19	322	24	365	58	359	11	428	1239
Grand Total	137	571	93	801	47	377	88	512	60	864	69	993	168	914	68	1150	3456
Apprch %	17.1	71.3	11.6		9.2	73.6	17.2		6	87	6.9		14.6	79.5	5.9		
Total %	4	16.5	2.7	23.2	1.4	10.9	2.5	14.8	1.7	25	2	28.7	4.9	26.4	2	33.3	

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	13	52	5	70	4	20	6	30	4	74	5	83	**23**	93	**5**	**121**	304
05:00 PM	11	48	7	66	3	**36**	**12**	**51**	**7**	82	6	95	17	**100**	3	120	332
05:15 PM	**15**	**56**	**10**	**81**	4	28	8	40	3	**91**	**10**	**104**	16	100	0	116	**341**
05:30 PM	9	51	8	68	**5**	24	8	37	4	82	3	89	15	87	4	106	300
Total Volume	48	207	30	285	16	108	34	158	18	329	24	371	71	380	12	463	1277
% App. Total	16.8	72.6	10.5		10.1	68.4	21.5		4.9	88.7	6.5		15.3	82.1	2.6		
PHF	.800	.924	.750	.880	.800	.750	.708	.775	.643	.904	.600	.892	.772	.950	.600	.957	.936

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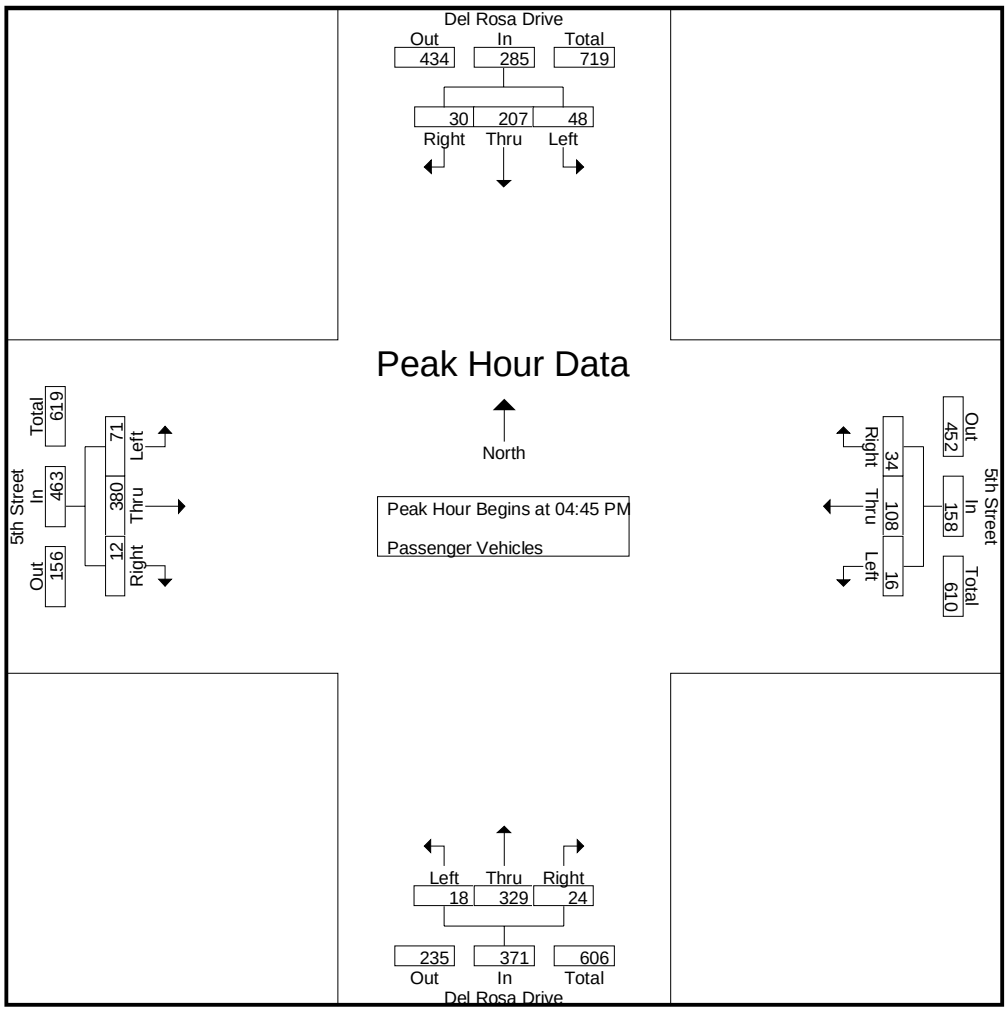

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	13	52	5	70	4	20	6	30	4	74	5	83	**23**	93	**5**	**121**
+15 mins.	11	48	7	66	3	**36**	**12**	**51**	**7**	82	6	95	17	**100**	3	120
+30 mins.	**15**	**56**	**10**	**81**	4	28	8	40	3	**91**	**10**	**104**	16	100	0	116
+45 mins.	9	51	8	68	**5**	24	8	37	4	82	3	89	15	87	4	106
Total Volume	48	207	30	285	16	108	34	158	18	329	24	371	71	380	12	463
% App. Total	16.8	72.6	10.5		10.1	68.4	21.5		4.9	88.7	6.5		15.3	82.1	2.6	
PHF	.800	.924	.750	.880	.800	.750	.708	.775	.643	.904	.600	.892	.772	.950	.600	.957

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City of San Bernardino
N/S: Del Rosa Drive
E/W: 5th Street
Weather: Clear

File Name : 24_SBC_Del Rosa Dr_5th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	0	0	0	3
03:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	2	0	3	4
03:30 PM	1	1	0	2	0	0	0	0	1	2	0	3	0	0	0	0	5
03:45 PM	0	1	1	2	1	4	0	5	0	2	0	2	0	2	1	3	12
Total	1	3	1	5	1	6	0	7	1	5	0	6	1	4	1	6	24
04:00 PM	0	5	0	5	0	1	0	1	1	3	0	4	1	0	0	1	11
04:15 PM	0	3	1	4	0	2	0	2	0	0	1	1	0	1	0	1	8
04:30 PM	1	4	0	5	0	1	0	1	1	2	0	3	0	0	0	0	9
04:45 PM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
Total	1	14	1	16	0	6	0	6	2	5	1	8	1	1	0	2	32
05:00 PM	0	1	0	1	0	0	1	1	0	3	0	3	0	1	0	1	6
05:15 PM	0	0	1	1	0	1	0	1	0	1	0	1	0	0	0	0	3
05:30 PM	0	1	0	1	0	1	0	1	0	3	0	3	0	1	0	1	6
05:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	3	0	3	5
Total	0	2	1	3	0	2	1	3	0	9	0	9	0	5	0	5	20
Grand Total	2	19	3	24	1	14	1	16	3	19	1	23	2	10	1	13	76
Apprch %	8.3	79.2	12.5		6.2	87.5	6.2		13	82.6	4.3		15.4	76.9	7.7		
Total %	2.6	25	3.9	31.6	1.3	18.4	1.3	21.1	3.9	25	1.3	30.3	2.6	13.2	1.3	17.1	

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**2**	0	**2**	0	**2**	0	**2**	0	0	0	0	0	0	0	0	4
05:00 PM	0	1	0	1	0	0	**1**	1	0	**3**	0	**3**	0	**1**	0	**1**	**6**
05:15 PM	0	0	**1**	1	0	1	0	1	0	1	0	1	0	0	0	0	3
05:30 PM	0	1	0	1	0	1	0	1	0	3	0	3	0	1	0	1	6
Total Volume	0	4	1	5	0	4	1	5	0	7	0	7	0	2	0	2	19
% App. Total	0	80	20		0	80	20		0	100	0		0	100	0		
PHF	.000	.500	.250	.625	.000	.500	.250	.625	.000	.583	.000	.583	.000	.500	.000	.500	.792

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Site Code : 99918385
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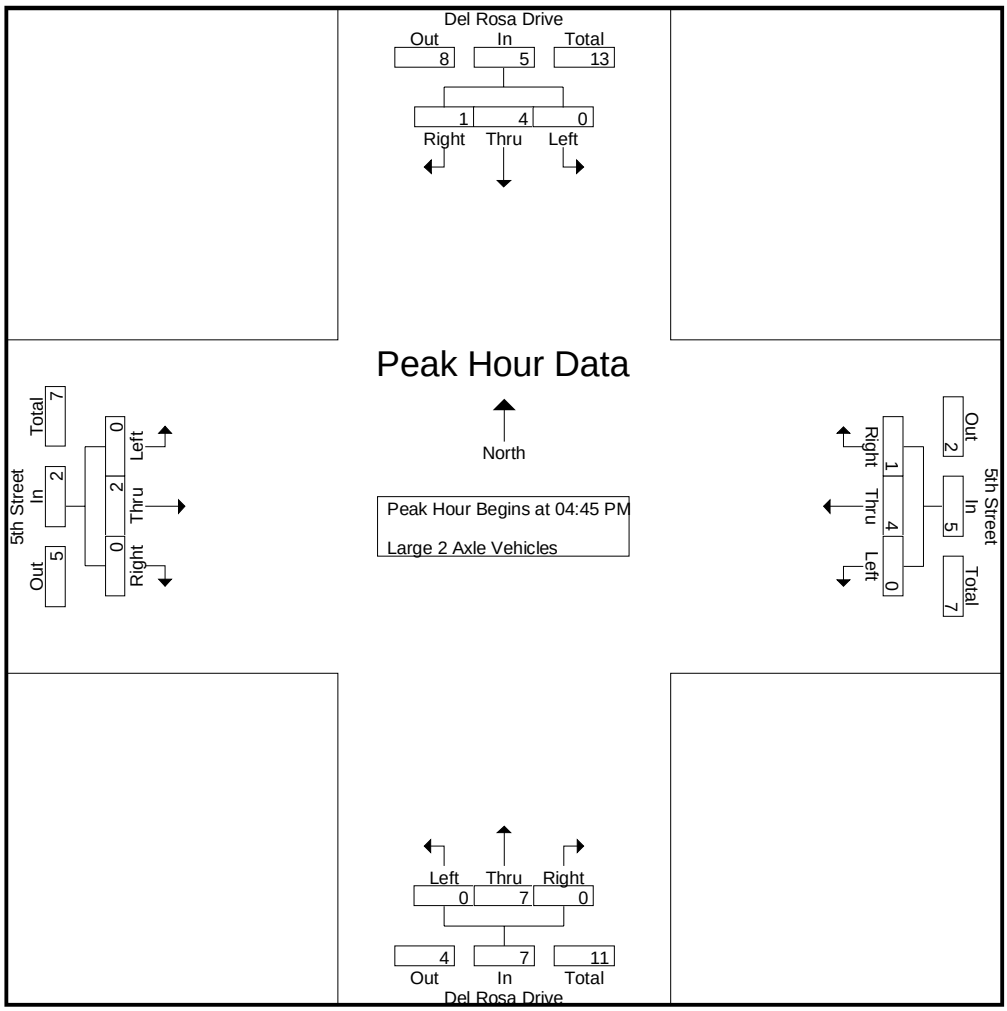

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**2**	0	**2**	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	**1**	1	0	**3**	0	**3**	0	**1**	0	**1**
+30 mins.	0	0	**1**	1	0	1	0	1	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	1	0	1	0	3	0	3	0	1	0	1
Total Volume	0	4	1	5	0	4	1	5	0	7	0	7	0	2	0	2
% App. Total	0	80	20		0	80	20		0	100	0		0	100	0	
PHF	.000	.500	.250	.625	.000	.500	.250	.625	.000	.583	.000	.583	.000	.500	.000	.500

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Groups Printed- 3 Axle Vehicles

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
03:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
03:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	1	0	1	0	0	0	0	0	1	2	3	6
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	3
Total	0	1	0	1	0	0	0	0	1	0	0	1	0	2	1	3	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	3
Grand Total	0	3	0	3	0	2	0	2	1	0	0	1	0	4	4	8	14
Apprch %	0	100	0		0	100	0		100	0	0		0	50	50		
Total %	0	21.4	0	21.4	0	14.3	0	14.3	7.1	0	0	7.1	0	28.6	28.6	57.1	

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	**2**	0	**2**	**3**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	2	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	1	0	0	1	0	3	1	4	5
% App. Total	0	0	0		0	0	0		100	0	0		0	75	25		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.375	.250	.500	.417

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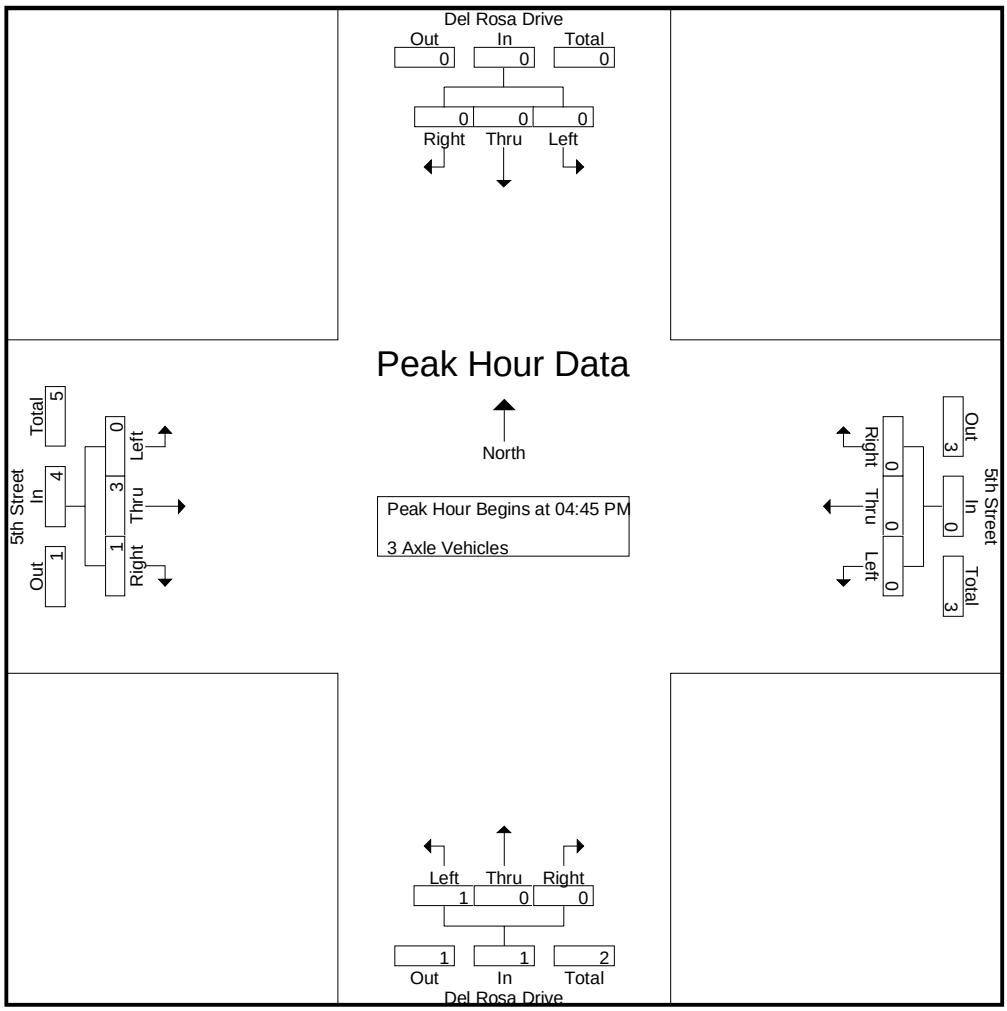

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	1	1	0	0	0	0	0	0	0	0	1	0	1	2	3
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
04:15 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	1	0	1	0	1	0	1	1	0	0	1	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	1	1	0	2	0	2	1	1	0	2	1	0	1	2	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Grand Total	0	0	2	2	0	3	0	3	1	1	0	2	2	3	2	7	14
Apprch %	0	0	100		0	100	0		50	50	0		28.6	42.9	28.6		
Total %	0	0	14.3	14.3	0	21.4	0	21.4	7.1	7.1	0	14.3	14.3	21.4	14.3	50	

	Del Rosa Drive Southbound				5th Street Westbound				Del Rosa Drive Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**2**
05:15 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3	4
% App. Total	0	0	0		0	100	0		0	0	0		0	66.7	33.3		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.250	.375	.500

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File Name : 24_SBC_Del Rosa Dr_5th PM
Site Code : 99918385
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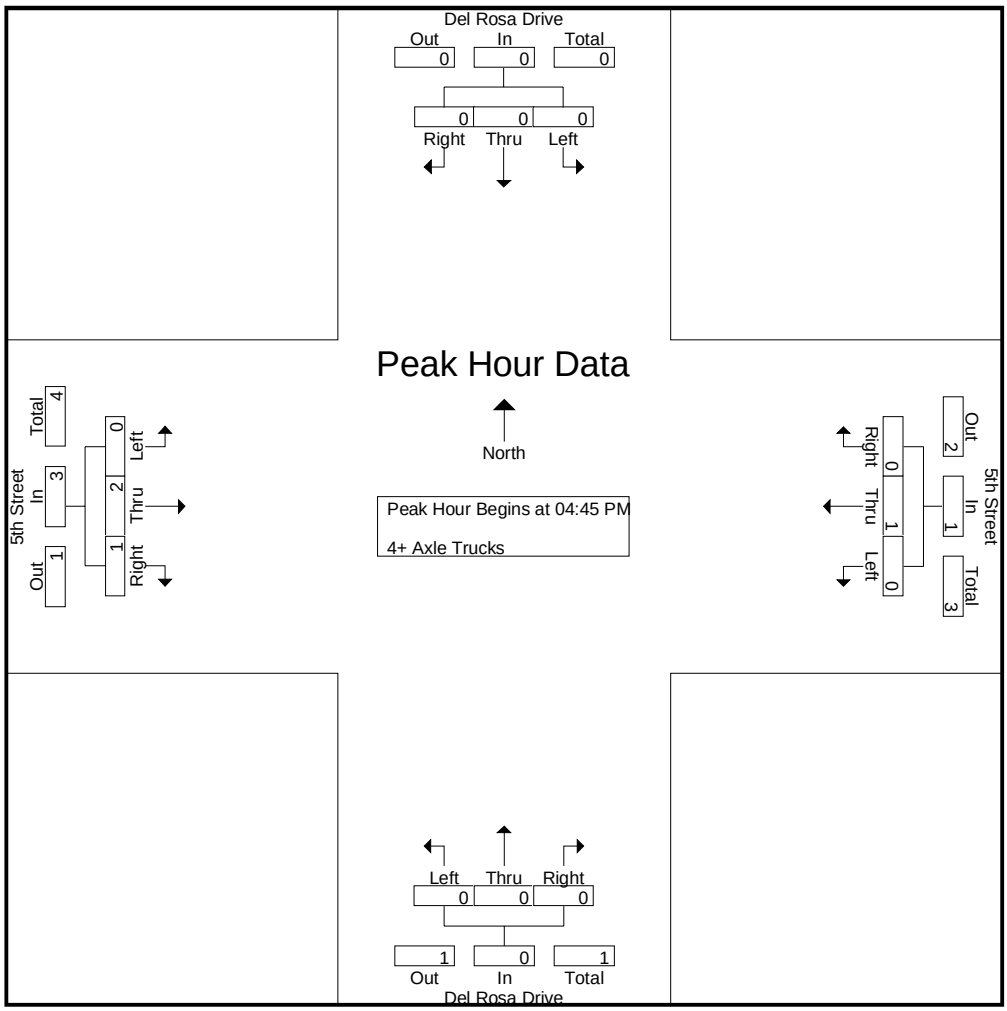

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of San Bernardino
N/S: Sterling Avenue
E/W: 5th Street
Weather: Clear

File Name : 26_SBC_Sterling_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	22	4	26	0	8	0	8	0	11	0	11	0	9	3	12	57
06:15 AM	3	40	1	44	3	20	1	24	0	4	0	4	0	6	0	6	78
06:30 AM	2	42	2	46	4	21	4	29	0	10	1	11	1	12	0	13	99
06:45 AM	3	74	6	83	5	45	0	50	0	17	1	18	4	9	3	16	167
Total	8	178	13	199	12	94	5	111	0	42	2	44	5	36	6	47	401
07:00 AM	3	62	9	74	0	62	1	63	0	16	1	17	4	11	4	19	173
07:15 AM	0	83	17	100	8	82	4	94	4	23	0	27	8	13	2	23	244
07:30 AM	1	86	15	102	6	47	2	55	3	20	0	23	7	15	5	27	207
07:45 AM	4	98	14	116	7	77	1	85	1	24	1	26	1	17	2	20	247
Total	8	329	55	392	21	268	8	297	8	83	2	93	20	56	13	89	871
08:00 AM	3	59	6	68	3	57	3	63	0	26	1	27	6	23	2	31	189
08:15 AM	3	42	12	57	4	40	5	49	2	36	0	38	5	18	2	25	169
08:30 AM	2	45	5	52	5	34	3	42	1	14	1	16	6	17	2	25	135
08:45 AM	3	42	7	52	3	32	3	38	1	22	2	25	8	24	3	35	150
Total	11	188	30	229	15	163	14	192	4	98	4	106	25	82	9	116	643
Grand Total	27	695	98	820	48	525	27	600	12	223	8	243	50	174	28	252	1915
Apprch %	3.3	84.8	12		8	87.5	4.5		4.9	91.8	3.3		19.8	69	11.1		
Total %	1.4	36.3	5.1	42.8	2.5	27.4	1.4	31.3	0.6	11.6	0.4	12.7	2.6	9.1	1.5	13.2	
Passenger Vehicles	23	683	95	801	48	513	23	584	12	210	6	228	49	165	25	239	1852
% Passenger Vehicles	85.2	98.3	96.9	97.7	100	97.7	85.2	97.3	100	94.2	75	93.8	98	94.8	89.3	94.8	96.7
Large 2 Axle Vehicles	4	12	2	18	0	8	4	12	0	13	2	15	1	6	2	9	54
% Large 2 Axle Vehicles	14.8	1.7	2	2.2	0	1.5	14.8	2	0	5.8	25	6.2	2	3.4	7.1	3.6	2.8
3 Axle Vehicles	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% 3 Axle Vehicles	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0	0.6	0	0.4	0.1
4+ Axle Trucks	0	0	1	1	0	3	0	3	0	0	0	0	0	2	1	3	7
% 4+ Axle Trucks	0	0	1	0.1	0	0.6	0	0.5	0	0	0	0	0	1.1	3.6	1.2	0.4

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	83	**17**	100	**8**	**82**	**4**	**94**	**4**	23	0	**27**	**8**	13	2	23	244
07:30 AM	1	86	15	102	6	47	2	55	3	20	0	23	7	15	**5**	27	207
07:45 AM	**4**	**98**	14	**116**	7	77	1	85	1	24	**1**	26	1	17	2	20	**247**
08:00 AM	3	59	6	68	3	57	3	63	0	**26**	1	27	6	**23**	2	**31**	189
Total Volume	8	326	52	386	24	263	10	297	8	93	2	103	22	68	11	101	887
% App. Total	2.1	84.5	13.5		8.1	88.6	3.4		7.8	90.3	1.9		21.8	67.3	10.9		
PHF	.500	.832	.765	.832	.750	.802	.625	.790	.500	.894	.500	.954	.688	.739	.550	.815	.898

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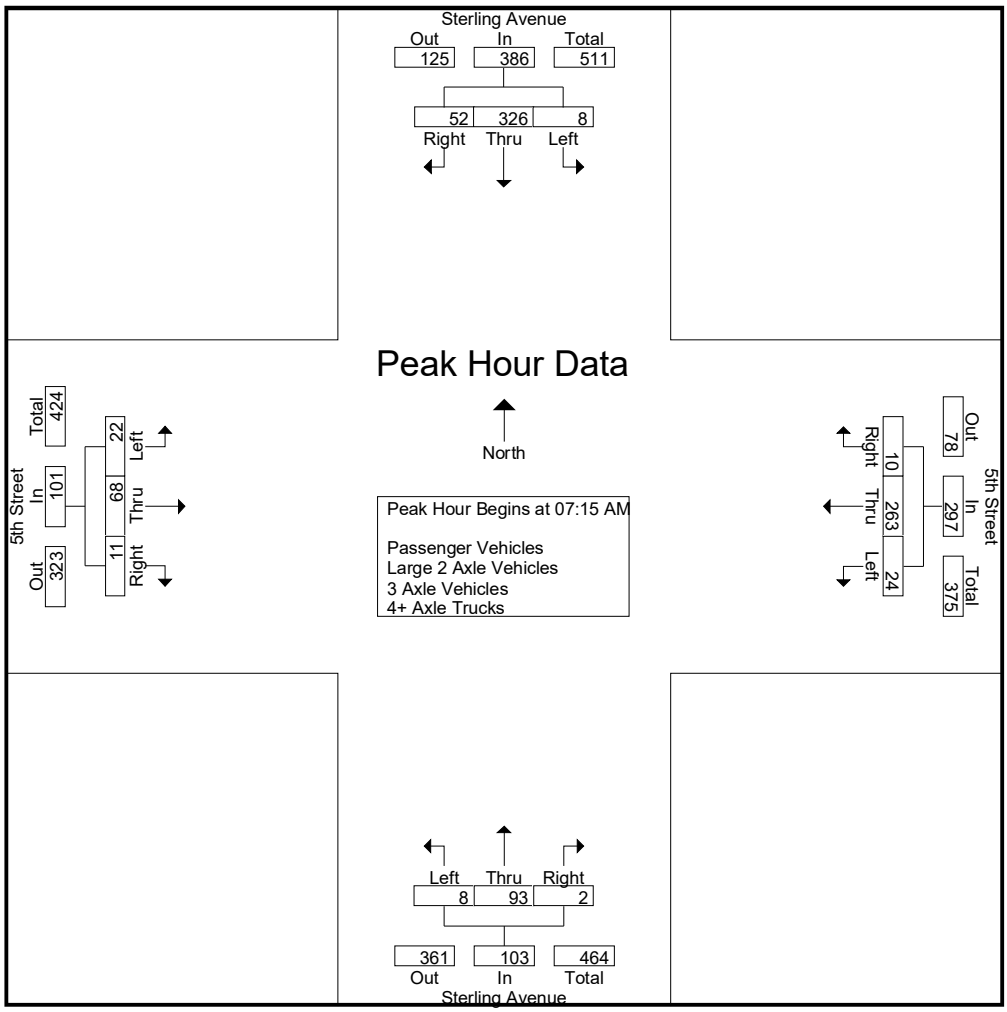

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:30 AM				08:00 AM			
+0 mins.	3	62	9	74	0	62	1	63	**3**	20	0	23	6	23	2	31
+15 mins.	0	83	**17**	100	**8**	**82**	**4**	**94**	1	24	**1**	26	5	18	2	25
+30 mins.	1	86	15	102	6	47	2	55	0	26	1	27	6	17	2	25
+45 mins.	**4**	**98**	14	**116**	7	77	1	85	2	**36**	0	**38**	**8**	**24**	**3**	**35**
Total Volume	8	329	55	392	21	268	8	297	6	106	2	114	25	82	9	116
% App. Total	2	83.9	14		7.1	90.2	2.7		5.3	93	1.8		21.6	70.7	7.8	
PHF	.500	.839	.809	.845	.656	.817	.500	.790	.500	.736	.500	.750	.781	.854	.750	.829

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City of San Bernardino
N/S: Sterling Avenue
E/W: 5th Street
Weather: Clear

File Name : 26_SBC_Sterling_5th AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	22	4	26	0	8	0	8	0	10	0	10	0	8	1	9	53
06:15 AM	2	39	1	42	3	19	1	23	0	3	0	3	0	6	0	6	74
06:30 AM	2	41	2	45	4	21	3	28	0	9	1	10	1	12	0	13	96
06:45 AM	3	72	5	80	5	45	0	50	0	17	0	17	4	9	3	16	163
Total	7	174	12	193	12	93	4	109	0	39	1	40	5	35	4	44	386
07:00 AM	3	62	9	74	0	61	0	61	0	12	0	12	3	11	3	17	164
07:15 AM	0	83	17	100	8	82	4	94	4	22	0	26	8	13	2	23	243
07:30 AM	1	84	15	100	6	46	2	54	3	18	0	21	7	13	5	25	200
07:45 AM	3	98	13	114	7	76	1	84	1	23	1	25	1	17	2	20	243
Total	7	327	54	388	21	265	7	293	8	75	1	84	19	54	12	85	850
08:00 AM	3	57	5	65	3	54	3	60	0	26	1	27	6	21	2	29	181
08:15 AM	1	42	12	55	4	38	4	46	2	36	0	38	5	16	2	23	162
08:30 AM	2	43	5	50	5	32	3	40	1	14	1	16	6	16	2	24	130
08:45 AM	3	40	7	50	3	31	2	36	1	20	2	23	8	23	3	34	143
Total	9	182	29	220	15	155	12	182	4	96	4	104	25	76	9	110	616
Grand Total	23	683	95	801	48	513	23	584	12	210	6	228	49	165	25	239	1852
Apprch %	2.9	85.3	11.9		8.2	87.8	3.9		5.3	92.1	2.6		20.5	69	10.5		
Total %	1.2	36.9	5.1	43.3	2.6	27.7	1.2	31.5	0.6	11.3	0.3	12.3	2.6	8.9	1.3	12.9	

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	83	**17**	100	**8**	**82**	**4**	**94**	**4**	22	0	26	**8**	13	2	23	**243**
07:30 AM	1	84	15	100	6	46	2	54	3	18	0	21	7	13	**5**	25	200
07:45 AM	**3**	**98**	13	**114**	7	76	1	84	1	23	**1**	25	1	17	2	20	243
08:00 AM	3	57	5	65	3	54	3	60	0	**26**	1	**27**	6	**21**	2	**29**	181
Total Volume	7	322	50	379	24	258	10	292	8	89	2	99	22	64	11	97	867
% App. Total	1.8	85	13.2		8.2	88.4	3.4		8.1	89.9	2		22.7	66	11.3		
PHF	.583	.821	.735	.831	.750	.787	.625	.777	.500	.856	.500	.917	.688	.762	.550	.836	.892

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City of San Bernardino
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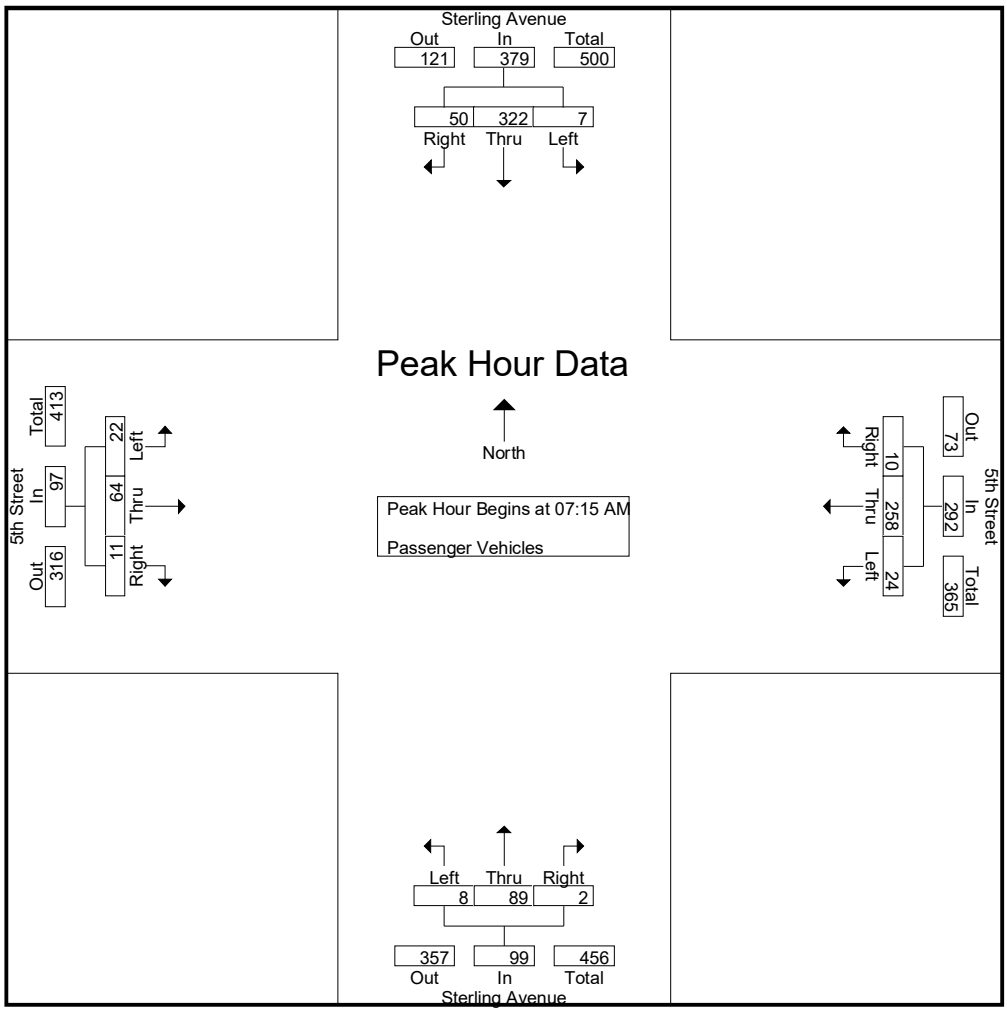
Weather: Clear

File Name : 26_SBC_Sterling_5th AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	83	**17**	100	**8**	**82**	**4**	**94**	**4**	22	0	26	**8**	13	2	23
+15 mins.	1	84	15	100	6	46	2	54	3	18	0	21	7	13	**5**	25
+30 mins.	**3**	**98**	13	**114**	7	76	1	84	1	23	**1**	25	1	17	2	20
+45 mins.	3	57	5	65	3	54	3	60	0	**26**	1	**27**	6	**21**	2	**29**
Total Volume	7	322	50	379	24	258	10	292	8	89	2	99	22	64	11	97
% App. Total	1.8	85	13.2		8.2	88.4	3.4		8.1	89.9	2		22.7	66	11.3	
PHF	.583	.821	.735	.831	.750	.787	.625	.777	.500	.856	.500	.917	.688	.762	.550	.836

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City of San Bernardino
N/S: Sterling Avenue
E/W: 5th Street
Weather: Clear

File Name : 26_SBC_Sterling_5th AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
06:15 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
06:30 AM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
06:45 AM	0	2	1	3	0	0	0	0	0	0	1	1	0	0	0	0	4
Total	1	4	1	6	0	0	1	1	0	3	1	4	0	0	1	1	12
07:00 AM	0	0	0	0	0	0	1	1	0	4	1	5	1	0	1	2	8
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	2	0	2	0	1	0	1	0	2	0	2	0	1	0	1	6
07:45 AM	1	0	1	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	1	2	1	4	0	1	1	2	0	8	1	9	1	1	1	3	18
08:00 AM	0	2	0	2	0	3	0	3	0	0	0	0	0	2	0	2	7
08:15 AM	2	0	0	2	0	2	1	3	0	0	0	0	0	2	0	2	7
08:30 AM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
08:45 AM	0	2	0	2	0	0	1	1	0	2	0	2	0	1	0	1	6
Total	2	6	0	8	0	7	2	9	0	2	0	2	0	5	0	5	24
Grand Total	4	12	2	18	0	8	4	12	0	13	2	15	1	6	2	9	54
Apprch %	22.2	66.7	11.1		0	66.7	33.3		0	86.7	13.3		11.1	66.7	22.2		
Total %	7.4	22.2	3.7	33.3	0	14.8	7.4	22.2	0	24.1	3.7	27.8	1.9	11.1	3.7	16.7	

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	**2**	0	**2**	0	1	0	1	0	**2**	0	**2**	0	1	0	1	6
07:45 AM	**1**	0	**1**	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:00 AM	0	2	0	2	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**	**7**
Total Volume	1	4	1	6	0	4	0	4	0	4	0	4	0	3	0	3	17
% App. Total	16.7	66.7	16.7		0	100	0		0	100	0		0	100	0		
PHF	.250	.500	.250	.750	.000	.333	.000	.333	.000	.500	.000	.500	.000	.375	.000	.375	.607

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City of San Bernardino
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Site Code : 99918385
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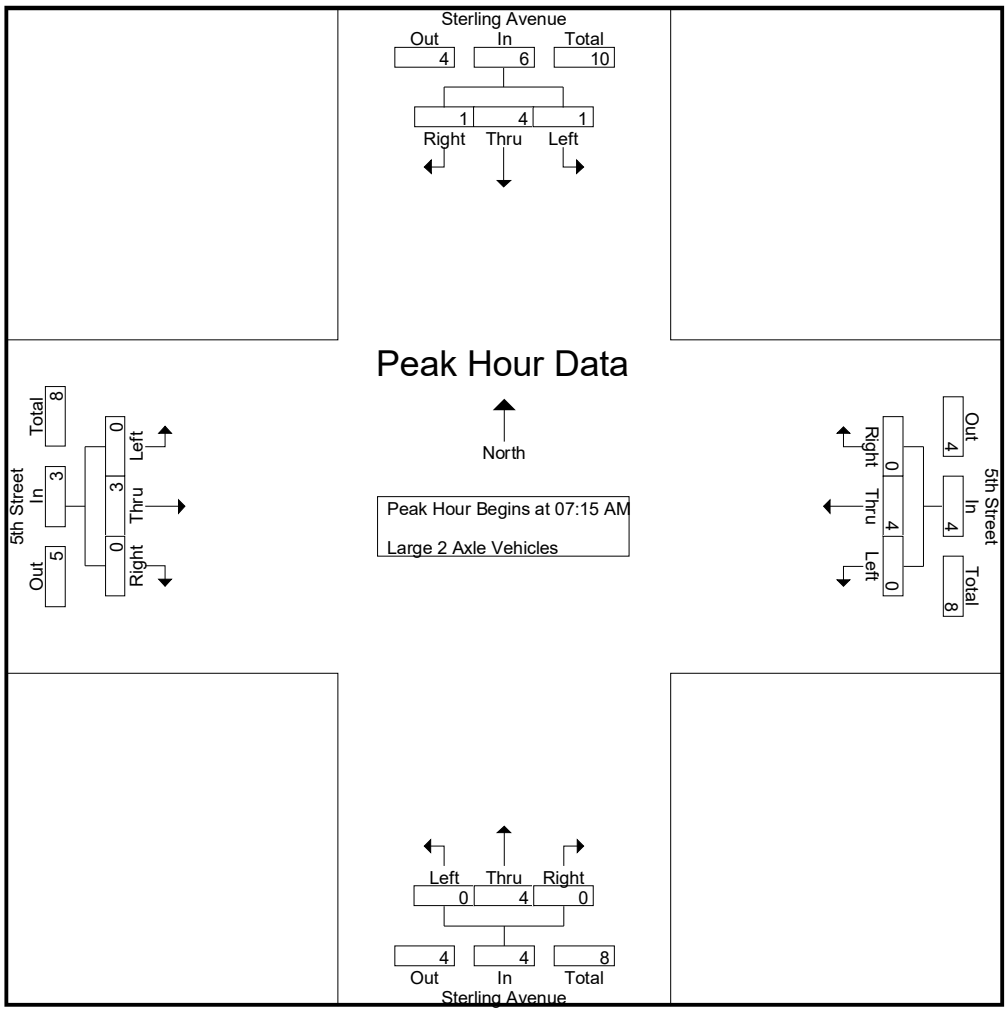

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	**2**	0	**2**	0	1	0	1	0	**2**	0	**2**	0	1	0	1
+30 mins.	**1**	0	**1**	2	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	2	0	2	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**
Total Volume	1	4	1	6	0	4	0	4	0	4	0	4	0	3	0	3
% App. Total	16.7	66.7	16.7		0	100	0		0	100	0		0	100	0	
PHF	.250	.500	.250	.750	.000	.333	.000	.333	.000	.500	.000	.500	.000	.375	.000	.375

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E/W: 5th Street
Weather: Clear

File Name : 26_SBC_Sterling_5th AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of San Bernardino
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Weather: Clear

File Name : 26_SBC_Sterling_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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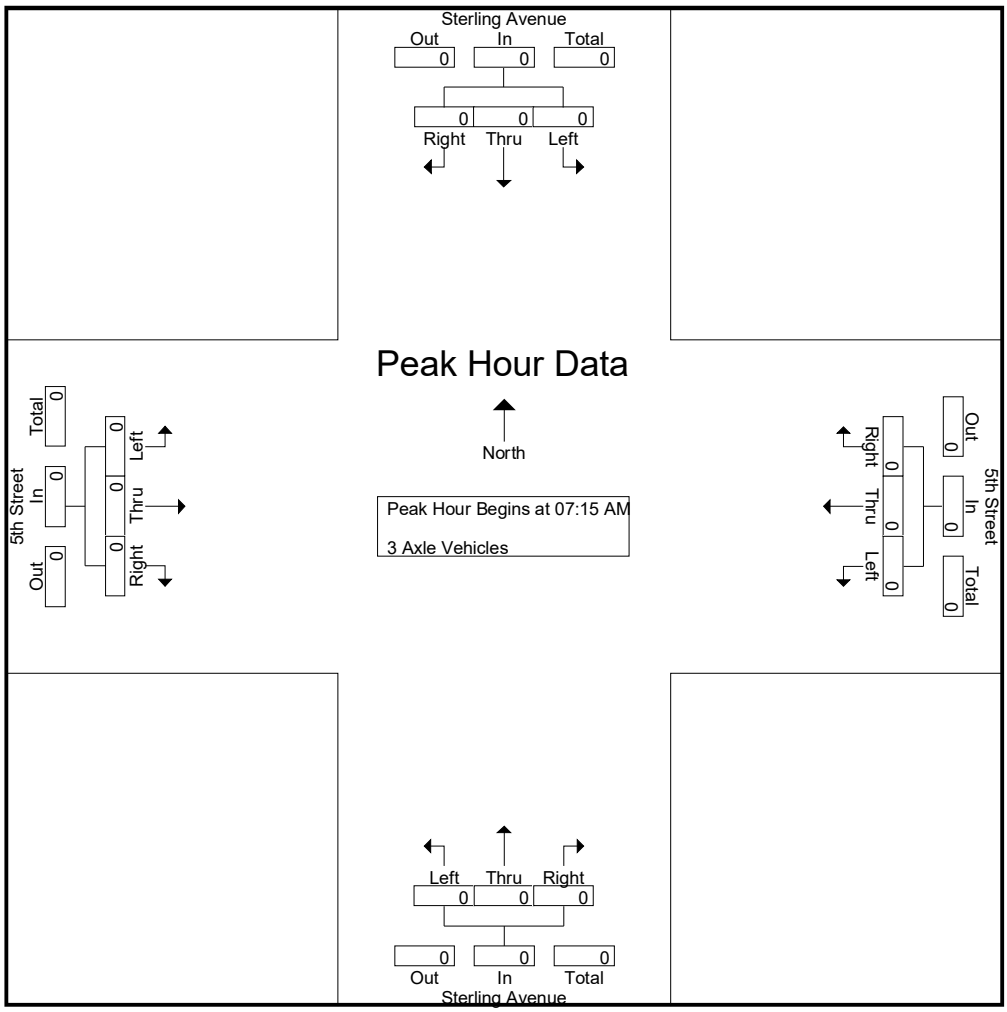

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Weather: Clear

File Name : 26_SBC_Sterling_5th AM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- 4+ Axle Trucks

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Grand Total	0	0	1	1	0	3	0	3	0	0	0	0	0	2	1	3	7
Apprch %	0	0	100		0	100	0		0	0	0		0	66.7	33.3		
Total %	0	0	14.3	14.3	0	42.9	0	42.9	0	0	0	0	0	28.6	14.3	42.9	

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**1**
07:45 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.750

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City of San Bernardino
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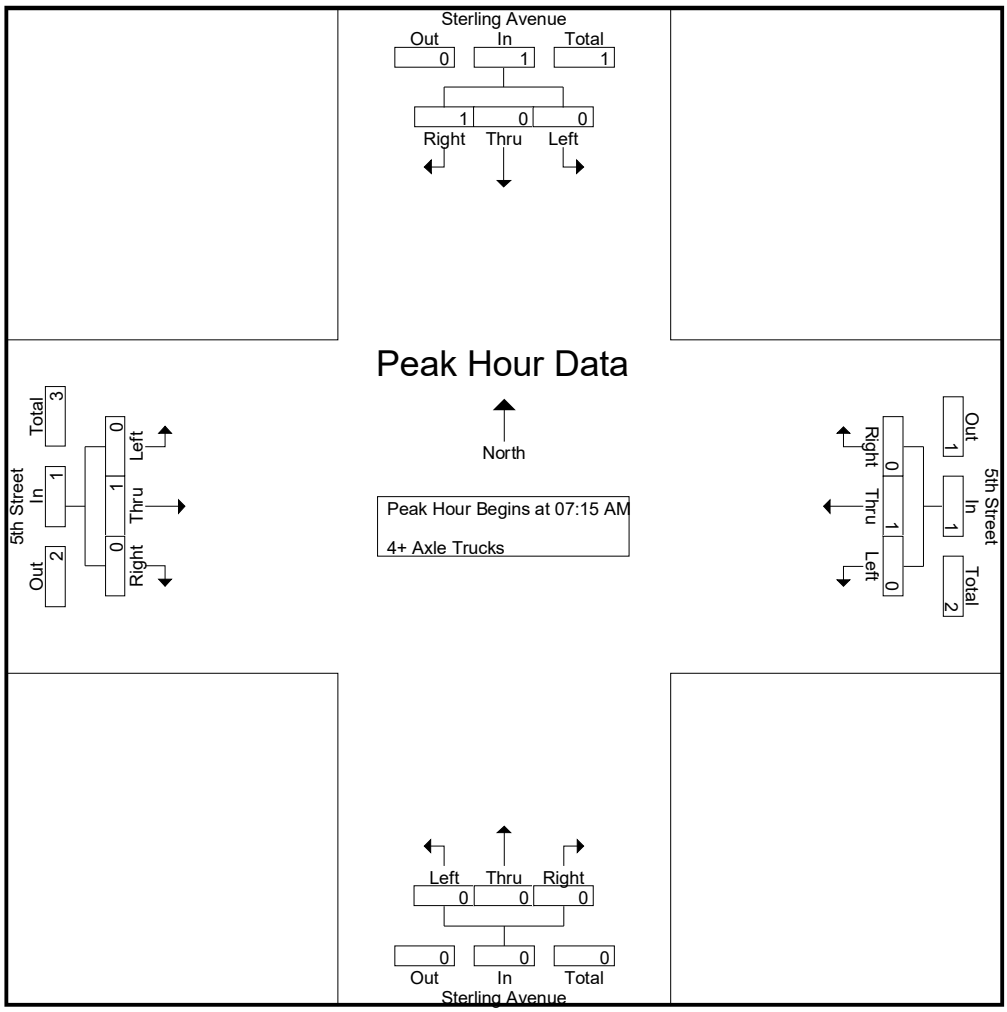
E/W: 5th Street
Weather: Clear

File Name : 26_SBC_Sterling_5th AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

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

Counts Unlimited
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City of San Bernardino
N/S: Sterling Avenue
E/W: 5th Street
Weather: Clear

File Name : 26_SBC_Sterling_5th PM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	5	33	11	49	6	35	7	48	3	64	1	68	16	40	2	58	223
03:15 PM	11	43	9	63	5	33	8	46	1	62	3	66	12	53	4	69	244
03:30 PM	4	50	6	60	3	37	10	50	8	49	1	58	13	40	1	54	222
03:45 PM	9	59	12	80	4	32	10	46	1	74	1	76	28	56	9	93	295
Total	29	185	38	252	18	137	35	190	13	249	6	268	69	189	16	274	984
04:00 PM	6	46	12	64	1	31	9	41	4	56	4	64	14	71	7	92	261
04:15 PM	5	32	5	42	2	24	4	30	1	65	4	70	20	65	5	90	232
04:30 PM	7	38	19	64	1	27	8	36	1	83	3	87	17	72	5	94	281
04:45 PM	6	57	6	69	5	25	4	34	1	63	3	67	29	94	3	126	296
Total	24	173	42	239	9	107	25	141	7	267	14	288	80	302	20	402	1070
05:00 PM	12	41	5	58	2	41	6	49	2	71	4	77	20	77	10	107	291
05:15 PM	8	41	11	60	1	25	11	37	2	86	4	92	16	117	8	141	330
05:30 PM	14	39	13	66	1	23	8	32	2	87	0	89	15	72	5	92	279
05:45 PM	7	38	7	52	4	27	7	38	3	69	1	73	15	78	6	99	262
Total	41	159	36	236	8	116	32	156	9	313	9	331	66	344	29	439	1162
Grand Total	94	517	116	727	35	360	92	487	29	829	29	887	215	835	65	1115	3216
Apprch %	12.9	71.1	16		7.2	73.9	18.9		3.3	93.5	3.3		19.3	74.9	5.8		
Total %	2.9	16.1	3.6	22.6	1.1	11.2	2.9	15.1	0.9	25.8	0.9	27.6	6.7	26	2	34.7	
Passenger Vehicles	89	501	113	703	32	346	88	466	29	815	29	873	212	822	63	1097	3139
% Passenger Vehicles	94.7	96.9	97.4	96.7	91.4	96.1	95.7	95.7	100	98.3	100	98.4	98.6	98.4	96.9	98.4	97.6
Large 2 Axle Vehicles	4	13	3	20	2	9	3	14	0	10	0	10	3	10	0	13	57
% Large 2 Axle Vehicles	4.3	2.5	2.6	2.8	5.7	2.5	3.3	2.9	0	1.2	0	1.1	1.4	1.2	0	1.2	1.8
3 Axle Vehicles	0	3	0	3	0	2	1	3	0	4	0	4	0	2	2	4	14
% 3 Axle Vehicles	0	0.6	0	0.4	0	0.6	1.1	0.6	0	0.5	0	0.5	0	0.2	3.1	0.4	0.4
4+ Axle Trucks	1	0	0	1	1	3	0	4	0	0	0	0	0	1	0	1	6
% 4+ Axle Trucks	1.1	0	0	0.1	2.9	0.8	0	0.8	0	0	0	0	0	0.1	0	0.1	0.2

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	7	38	**19**	64	1	27	8	36	1	83	3	87	17	72	5	94	281
04:45 PM	6	**57**	6	**69**	**5**	25	4	34	1	63	3	67	**29**	94	3	126	296
05:00 PM	**12**	41	5	58	2	**41**	6	**49**	**2**	71	**4**	77	20	77	**10**	107	291
05:15 PM	8	41	11	60	1	25	**11**	37	2	**86**	4	**92**	16	**117**	8	**141**	**330**
Total Volume	33	177	41	251	9	118	29	156	6	303	14	323	82	360	26	468	1198
% App. Total	13.1	70.5	16.3		5.8	75.6	18.6		1.9	93.8	4.3		17.5	76.9	5.6		
PHF	.688	.776	.539	.909	.450	.720	.659	.796	.750	.881	.875	.878	.707	.769	.650	.830	.908

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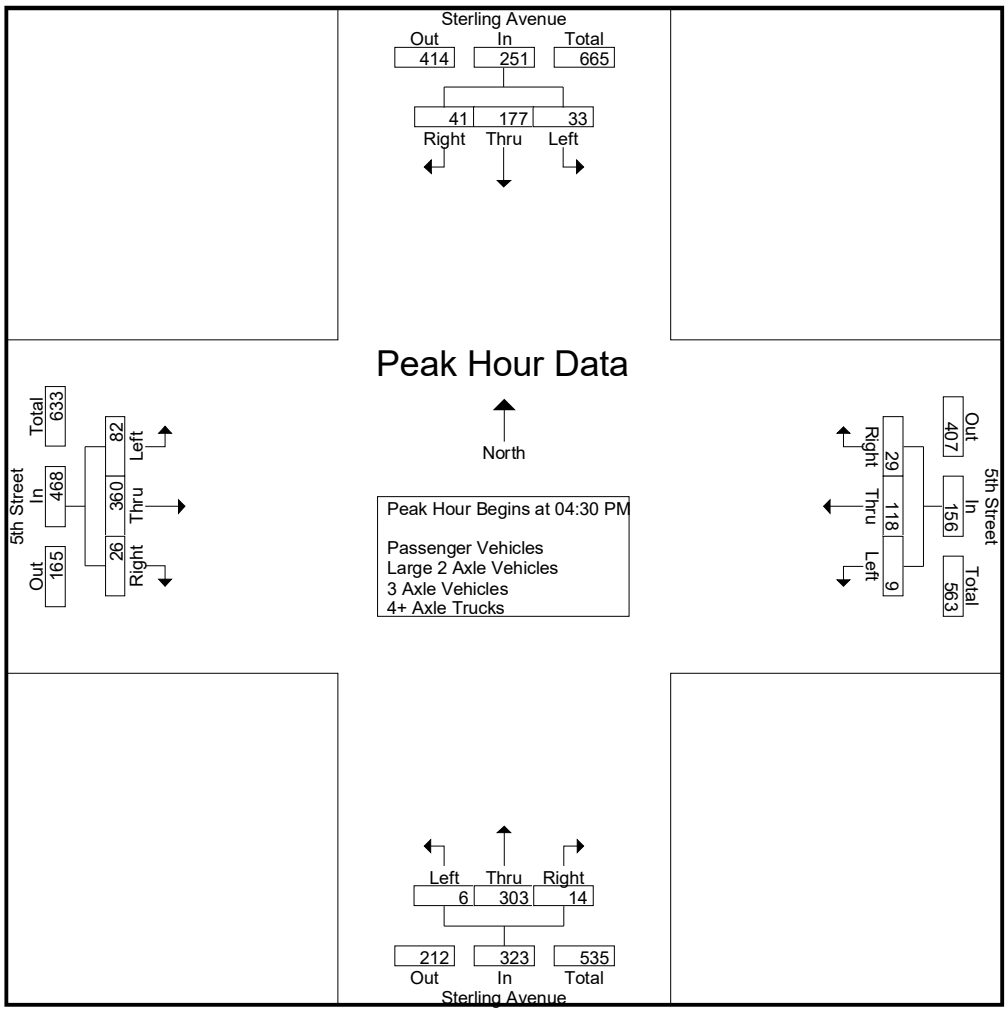

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:15 PM				03:00 PM				05:00 PM				04:30 PM			
+0 mins.	**11**	43	9	63	**6**	35	7	48	2	71	**4**	77	17	72	5	94
+15 mins.	4	50	6	60	5	33	8	46	2	86	4	**92**	**29**	94	3	126
+30 mins.	9	**59**	**12**	**80**	3	**37**	**10**	**50**	2	**87**	0	89	20	77	**10**	107
+45 mins.	6	46	12	64	4	32	10	46	**3**	69	1	73	16	**117**	8	**141**
Total Volume	30	198	39	267	18	137	35	190	9	313	9	331	82	360	26	468
% App. Total	11.2	74.2	14.6		9.5	72.1	18.4		2.7	94.6	2.7		17.5	76.9	5.6	
PHF	.682	.839	.813	.834	.750	.926	.875	.950	.750	.899	.563	.899	.707	.769	.650	.830

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Groups Printed- Passenger Vehicles

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	5	33	11	49	5	34	6	45	3	64	1	68	16	40	2	58	220
03:15 PM	11	42	9	62	5	33	8	46	1	61	3	65	12	50	4	66	239
03:30 PM	3	49	6	58	3	37	9	49	8	48	1	57	13	39	1	53	217
03:45 PM	8	56	12	76	4	29	10	43	1	72	1	74	28	55	9	92	285
Total	27	180	38	245	17	133	33	183	13	245	6	264	69	184	16	269	961
04:00 PM	6	42	11	59	1	30	8	39	4	56	4	64	13	71	7	91	253
04:15 PM	4	31	5	40	2	21	4	27	1	64	4	69	20	65	5	90	226
04:30 PM	6	37	18	61	1	26	8	35	1	81	3	85	16	71	5	92	273
04:45 PM	6	54	6	66	4	24	4	32	1	62	3	66	29	94	2	125	289
Total	22	164	40	226	8	101	24	133	7	263	14	284	78	301	19	398	1041
05:00 PM	12	40	5	57	1	40	6	47	2	69	4	75	20	75	9	104	283
05:15 PM	7	41	11	59	1	24	10	35	2	85	4	91	16	116	8	140	325
05:30 PM	14	38	12	64	1	22	8	31	2	87	0	89	15	71	5	91	275
05:45 PM	7	38	7	52	4	26	7	37	3	66	1	70	14	75	6	95	254
Total	40	157	35	232	7	112	31	150	9	307	9	325	65	337	28	430	1137
Grand Total	89	501	113	703	32	346	88	466	29	815	29	873	212	822	63	1097	3139
Apprch %	12.7	71.3	16.1		6.9	74.2	18.9		3.3	93.4	3.3		19.3	74.9	5.7		
Total %	2.8	16	3.6	22.4	1	11	2.8	14.8	0.9	26	0.9	27.8	6.8	26.2	2	34.9	

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	6	37	**18**	61	1	26	8	35	1	81	3	85	16	71	5	92	273
04:45 PM	6	**54**	6	**66**	**4**	24	4	32	1	62	3	66	**29**	94	2	125	289
05:00 PM	**12**	40	5	57	1	**40**	6	**47**	**2**	69	**4**	75	20	75	**9**	104	283
05:15 PM	7	41	11	59	1	24	**10**	35	2	**85**	4	**91**	16	**116**	8	**140**	**325**
Total Volume	31	172	40	243	7	114	28	149	6	297	14	317	81	356	24	461	1170
% App. Total	12.8	70.8	16.5		4.7	76.5	18.8		1.9	93.7	4.4		17.6	77.2	5.2		
PHF	.646	.796	.556	.920	.438	.713	.700	.793	.750	.874	.875	.871	.698	.767	.667	.823	.900

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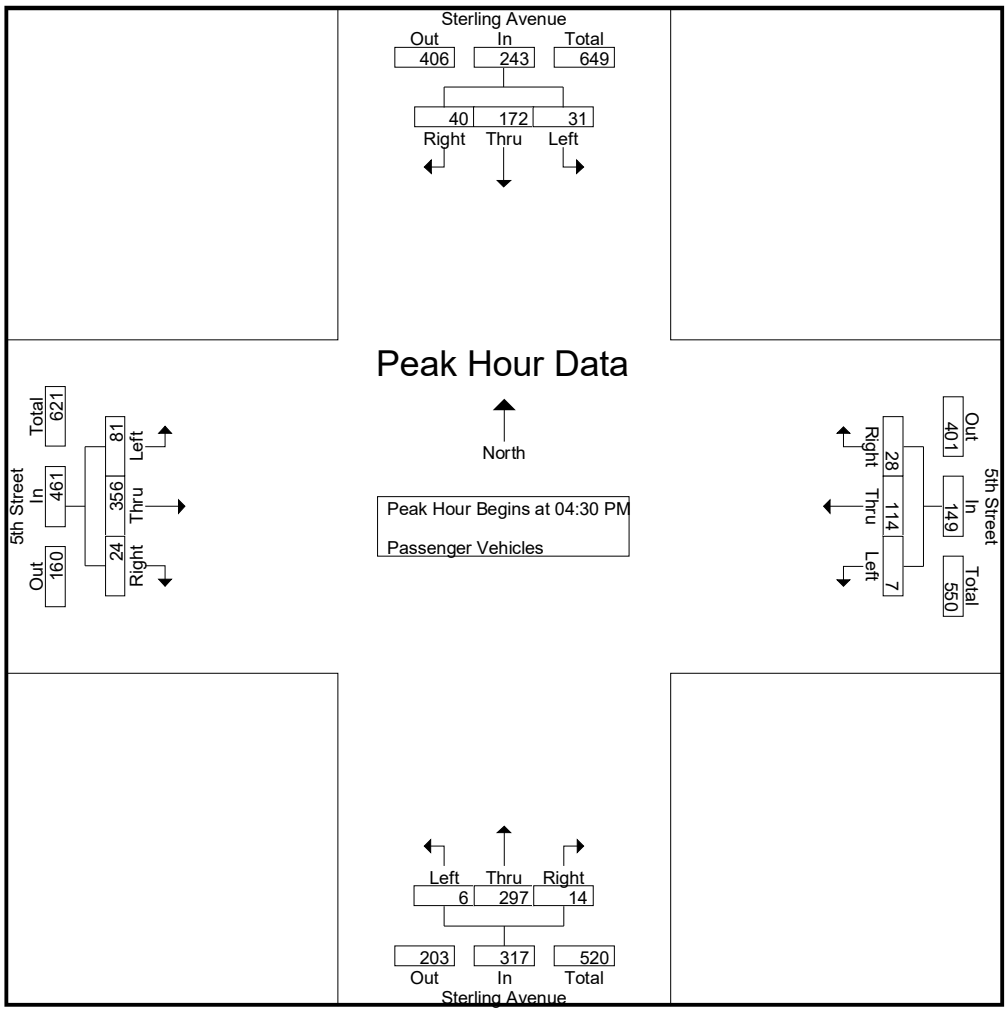

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	6	37	**18**	61	1	26	8	35	1	81	3	85	16	71	5	92
+15 mins.	6	**54**	6	**66**	**4**	24	4	32	1	62	3	66	**29**	94	2	125
+30 mins.	**12**	40	5	57	1	**40**	6	**47**	**2**	69	**4**	75	20	75	**9**	104
+45 mins.	7	41	11	59	1	24	**10**	35	2	**85**	4	**91**	16	**116**	8	**140**
Total Volume	31	172	40	243	7	114	28	149	6	297	14	317	81	356	24	461
% App. Total	12.8	70.8	16.5		4.7	76.5	18.8		1.9	93.7	4.4		17.6	77.2	5.2	
PHF	.646	.796	.556	.920	.438	.713	.700	.793	.750	.874	.875	.871	.698	.767	.667	.823

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File Name : 26_SBC_Sterling_5th PM
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Groups Printed- Large 2 Axle Vehicles

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
03:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
03:45 PM	1	2	0	3	0	3	0	3	0	1	0	1	0	1	0	1	8
Total	1	3	0	4	0	3	1	4	0	2	0	2	0	4	0	4	14
04:00 PM	0	3	1	4	0	1	1	2	0	0	0	0	1	0	0	1	7
04:15 PM	1	1	0	2	0	2	0	2	0	1	0	1	0	0	0	0	5
04:30 PM	1	1	1	3	0	0	0	0	0	2	0	2	1	1	0	2	7
04:45 PM	0	3	0	3	1	1	0	2	0	0	0	0	0	0	0	0	5
Total	2	8	2	12	1	4	1	6	0	3	0	3	2	1	0	3	24
05:00 PM	0	1	0	1	1	1	0	2	0	2	0	2	0	1	0	1	6
05:15 PM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	1	2	0	1	0	1	0	0	0	0	0	1	0	1	4
05:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	1	3	0	4	7
Total	1	2	1	4	1	2	1	4	0	5	0	5	1	5	0	6	19
Grand Total	4	13	3	20	2	9	3	14	0	10	0	10	3	10	0	13	57
Apprch %	20	65	15		14.3	64.3	21.4		0	100	0		23.1	76.9	0		
Total %	7	22.8	5.3	35.1	3.5	15.8	5.3	24.6	0	17.5	0	17.5	5.3	17.5	0	22.8	

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**1**	1	**1**	**3**	0	0	0	0	0	**2**	0	**2**	**1**	**1**	0	**2**	**7**
04:45 PM	0	**3**	0	3	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0	5
05:00 PM	0	1	0	1	1	1	0	2	0	2	0	2	0	1	0	1	6
05:15 PM	1	0	0	1	0	0	**1**	1	0	0	0	0	0	0	0	0	2
Total Volume	2	5	1	8	2	2	1	5	0	4	0	4	1	2	0	3	20
% App. Total	25	62.5	12.5		40	40	20		0	100	0		33.3	66.7	0		
PHF	.500	.417	.250	.667	.500	.500	.250	.625	.000	.500	.000	.500	.250	.500	.000	.375	.714

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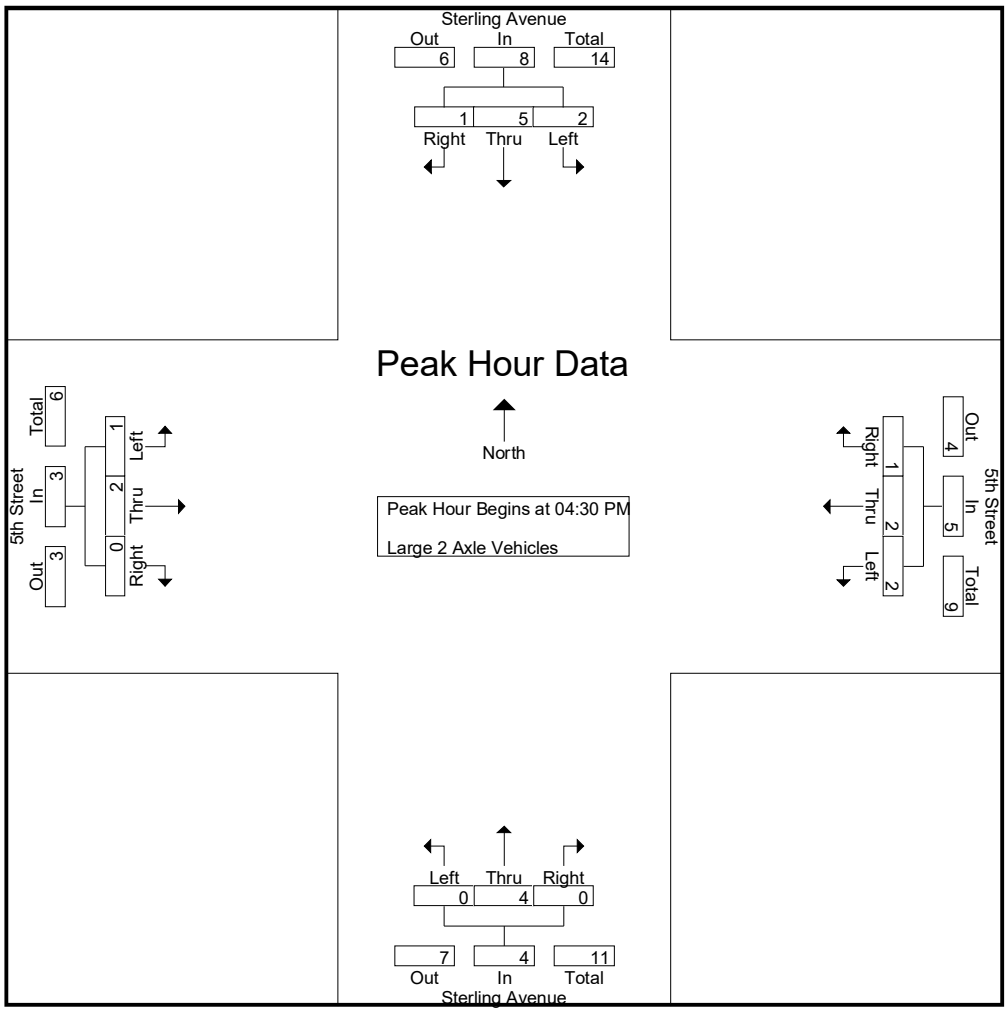

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**1**	1	**1**	**3**	0	0	0	0	0	**2**	0	**2**	**1**	**1**	0	**2**
+15 mins.	0	**3**	0	3	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	1	1	0	2	0	2	0	2	0	1	0	1
+45 mins.	1	0	0	1	0	0	**1**	1	0	0	0	0	0	0	0	0
Total Volume	2	5	1	8	2	2	1	5	0	4	0	4	1	2	0	3
% App. Total	25	62.5	12.5		40	40	20		0	100	0		33.3	66.7	0	
PHF	.500	.417	.250	.667	.500	.500	.250	.625	.000	.500	.000	.500	.250	.500	.000	.375

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Groups Printed- 3 Axle Vehicles

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
03:30 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
03:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	2	0	2	0	1	1	2	0	2	0	2	0	1	0	1	7
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	2	4
Grand Total	0	3	0	3	0	2	1	3	0	4	0	4	0	2	2	4	14
Apprch %	0	100	0		0	66.7	33.3		0	100	0		0	50	50		
Total %	0	21.4	0	21.4	0	14.3	7.1	21.4	0	28.6	0	28.6	0	14.3	14.3	28.6	

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	**1**	**1**	**2**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	**1**	0	1	2
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	1	2	3	5
% App. Total	0	0	0		0	0	0		0	100	0		0	33.3	66.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.500	.750	.625

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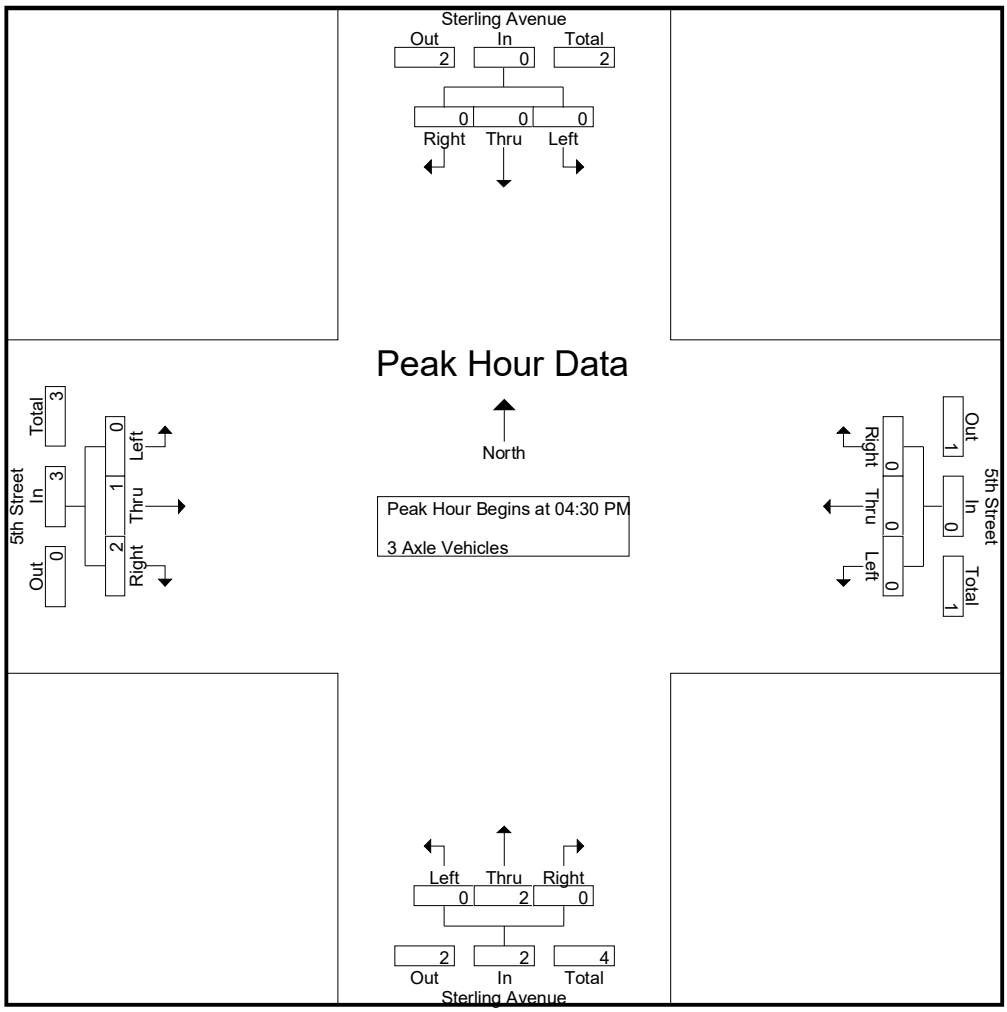

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of San Bernardino
N/S: Sterling Avenue
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Weather: Clear

File Name : 26_SBC_Sterling_5th PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	1	0	0	1	1	3	0	4	0	0	0	0	0	1	0	1	6
Apprch %	100	0	0		25	75	0		0	0	0		0	100	0		
Total %	16.7	0	0	16.7	16.7	50	0	66.7	0	0	0	0	0	16.7	0	16.7	

	Sterling Avenue Southbound				5th Street Westbound				Sterling Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.750

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Weather: Clear

File Name : 26_SBC_Sterling_5th PM
Site Code : 99918385
Start Date : 5/16/2018
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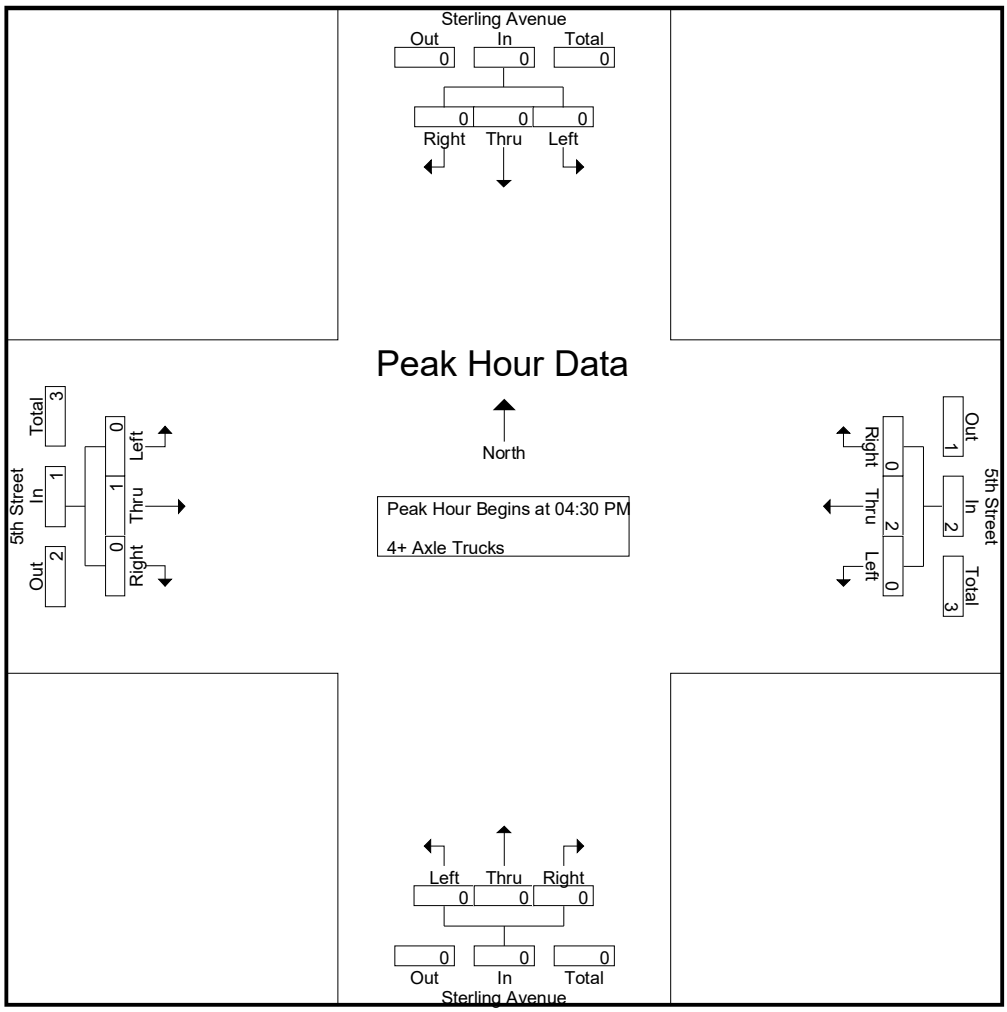

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of San Bernardino
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E/W: 5th Street
Weather: Clear

File Name : 28_SBC_Victoria_5th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

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

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	14	21	0	35	11	6	7	24	0	5	1	6	0	9	0	9	74
06:15 AM	11	23	0	34	24	18	9	51	0	7	1	8	4	7	0	11	104
06:30 AM	19	36	2	57	35	27	8	70	0	8	4	12	5	8	0	13	152
06:45 AM	8	50	5	63	55	43	12	110	1	5	2	8	2	7	0	9	190
Total	52	130	7	189	125	94	36	255	1	25	8	34	11	31	0	42	520
07:00 AM	24	54	2	80	35	58	10	103	1	11	2	14	2	20	1	23	220
07:15 AM	10	55	12	77	70	83	21	174	0	19	1	20	1	11	1	13	284
07:30 AM	28	61	6	95	74	55	17	146	0	14	4	18	1	10	0	11	270
07:45 AM	18	61	9	88	65	73	18	156	0	19	2	21	2	17	1	20	285
Total	80	231	29	340	244	269	66	579	1	63	9	73	6	58	3	67	1059
08:00 AM	19	50	2	71	44	53	17	114	1	15	6	22	5	21	1	27	234
08:15 AM	19	26	2	47	27	46	20	93	0	19	4	23	3	16	0	19	182
08:30 AM	24	33	2	59	17	38	13	68	0	15	5	20	2	16	2	20	167
08:45 AM	20	24	5	49	17	33	7	57	0	19	0	19	3	26	2	31	156
Total	82	133	11	226	105	170	57	332	1	68	15	84	13	79	5	97	739
Grand Total	214	494	47	755	474	533	159	1166	3	156	32	191	30	168	8	206	2318
Apprch %	28.3	65.4	6.2		40.7	45.7	13.6		1.6	81.7	16.8		14.6	81.6	3.9		
Total %	9.2	21.3	2	32.6	20.4	23	6.9	50.3	0.1	6.7	1.4	8.2	1.3	7.2	0.3	8.9	
Passenger Vehicles	204	485	45	734	468	527	150	1145	2	147	26	175	27	162	6	195	2249
% Passenger Vehicles	95.3	98.2	95.7	97.2	98.7	98.9	94.3	98.2	66.7	94.2	81.2	91.6	90	96.4	75	94.7	97
Large 2 Axle Vehicles	8	7	2	17	4	5	4	13	0	7	1	8	3	5	1	9	47
% Large 2 Axle Vehicles	3.7	1.4	4.3	2.3	0.8	0.9	2.5	1.1	0	4.5	3.1	4.2	10	3	12.5	4.4	2
3 Axle Vehicles	1	1	0	2	1	1	3	5	0	0	1	1	0	0	1	1	9
% 3 Axle Vehicles	0.5	0.2	0	0.3	0.2	0.2	1.9	0.4	0	0	3.1	0.5	0	0	12.5	0.5	0.4
4+ Axle Trucks	1	1	0	2	1	0	2	3	1	2	4	7	0	1	0	1	13
% 4+ Axle Trucks	0.5	0.2	0	0.3	0.2	0	1.3	0.3	33.3	1.3	12.5	3.7	0	0.6	0	0.5	0.6

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	10	55	**12**	77	70	**83**	**21**	**174**	0	**19**	1	20	1	11	**1**	13	284
07:30 AM	**28**	**61**	6	**95**	**74**	55	17	146	0	14	4	18	1	10	0	11	270
07:45 AM	18	61	9	88	65	73	18	156	0	19	2	21	2	17	1	20	**285**
08:00 AM	19	50	2	71	44	53	17	114	**1**	15	**6**	**22**	**5**	**21**	1	**27**	234
Total Volume	75	227	29	331	253	264	73	590	1	67	13	81	9	59	3	71	1073
% App. Total	22.7	68.6	8.8		42.9	44.7	12.4		1.2	82.7	16		12.7	83.1	4.2		
PHF	.670	.930	.604	.871	.855	.795	.869	.848	.250	.882	.542	.920	.450	.702	.750	.657	.941

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File Name : 28_SBC_Victoria_5th AM
Site Code : 99918352
Start Date : 5/17/2018
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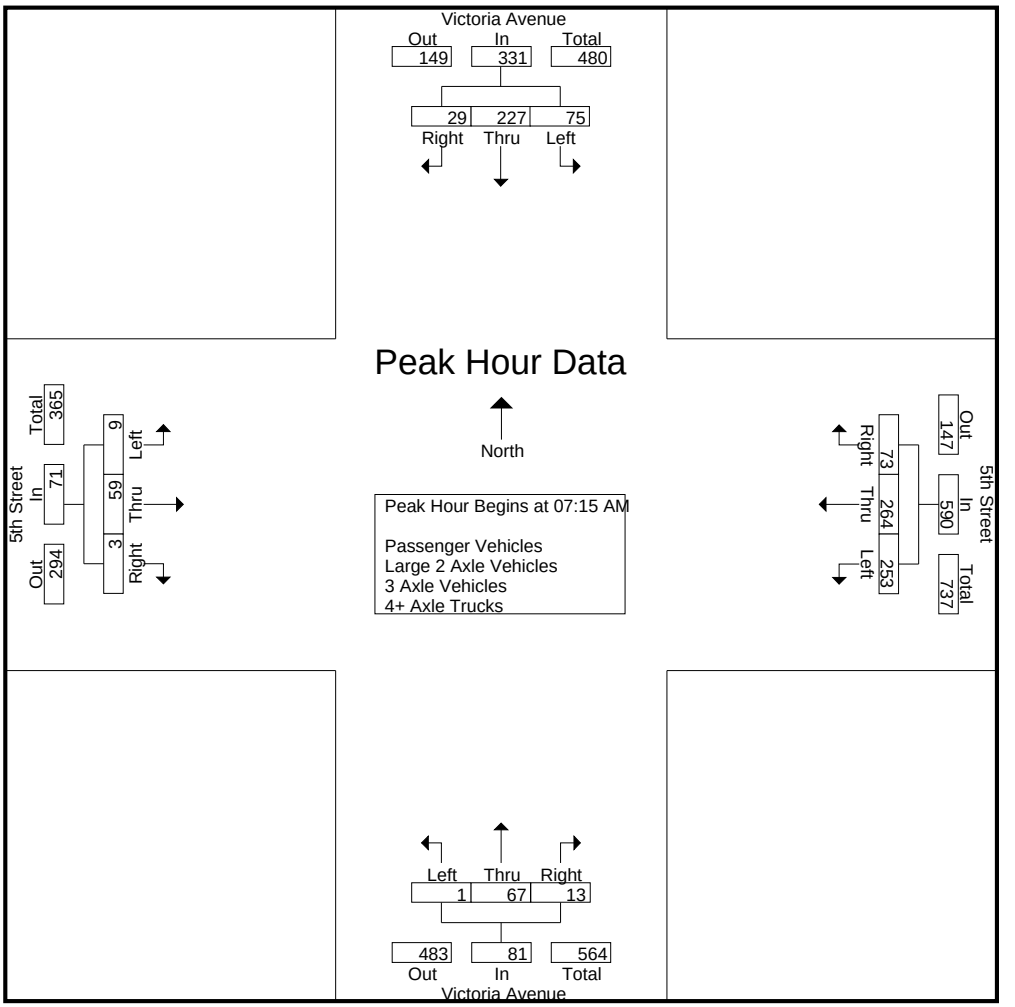

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:45 AM				08:00 AM			
+0 mins.	24	54	2	80	70	**83**	**21**	**174**	0	**19**	2	21	**5**	21	1	27
+15 mins.	10	55	**12**	77	**74**	55	17	146	**1**	15	**6**	22	3	16	0	19
+30 mins.	**28**	**61**	6	**95**	65	73	18	156	0	19	4	**23**	2	16	**2**	20
+45 mins.	18	61	9	88	44	53	17	114	0	15	5	20	3	**26**	2	**31**
Total Volume	80	231	29	340	253	264	73	590	1	68	17	86	13	79	5	97
% App. Total	23.5	67.9	8.5		42.9	44.7	12.4		1.2	79.1	19.8		13.4	81.4	5.2	
PHF	.714	.947	.604	.895	.855	.795	.869	.848	.250	.895	.708	.935	.650	.760	.625	.782

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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	13	21	0	34	11	5	6	22	0	4	0	4	0	6	0	6	66
06:15 AM	9	23	0	32	24	18	9	51	0	7	0	7	4	7	0	11	101
06:30 AM	17	35	2	54	35	27	7	69	0	8	2	10	5	8	0	13	146
06:45 AM	8	50	5	63	53	43	10	106	1	5	2	8	2	7	0	9	186
Total	47	129	7	183	123	93	32	248	1	24	4	29	11	28	0	39	499
07:00 AM	24	53	1	78	34	58	10	102	0	9	1	10	2	19	1	22	212
07:15 AM	10	55	12	77	70	83	21	174	0	18	1	19	1	11	1	13	283
07:30 AM	28	60	6	94	73	55	17	145	0	11	4	15	1	10	0	11	265
07:45 AM	18	60	9	87	65	73	16	154	0	18	2	20	2	17	1	20	281
Total	80	228	28	336	242	269	64	575	0	56	8	64	6	57	3	66	1041
08:00 AM	18	49	1	68	43	51	16	110	1	15	6	22	5	20	1	26	226
08:15 AM	17	26	2	45	27	43	20	90	0	18	4	22	1	15	0	16	173
08:30 AM	22	31	2	55	17	38	12	67	0	15	4	19	2	16	0	18	159
08:45 AM	20	22	5	47	16	33	6	55	0	19	0	19	2	26	2	30	151
Total	77	128	10	215	103	165	54	322	1	67	14	82	10	77	3	90	709
Grand Total	204	485	45	734	468	527	150	1145	2	147	26	175	27	162	6	195	2249
Apprch %	27.8	66.1	6.1		40.9	46	13.1		1.1	84	14.9		13.8	83.1	3.1		
Total %	9.1	21.6	2	32.6	20.8	23.4	6.7	50.9	0.1	6.5	1.2	7.8	1.2	7.2	0.3	8.7	

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	10	55	**12**	77	70	**83**	**21**	**174**	0	**18**	1	19	1	11	**1**	13	**283**
07:30 AM	**28**	**60**	6	**94**	**73**	55	17	145	0	11	4	15	1	10	0	11	265
07:45 AM	18	60	9	87	65	73	16	154	0	18	2	20	2	17	1	20	281
08:00 AM	18	49	1	68	43	51	16	110	**1**	15	**6**	**22**	**5**	**20**	1	**26**	226
Total Volume	74	224	28	326	251	262	70	583	1	62	13	76	9	58	3	70	1055
% App. Total	22.7	68.7	8.6		43.1	44.9	12		1.3	81.6	17.1		12.9	82.9	4.3		
PHF	.661	.933	.583	.867	.860	.789	.833	.838	.250	.861	.542	.864	.450	.725	.750	.673	.932

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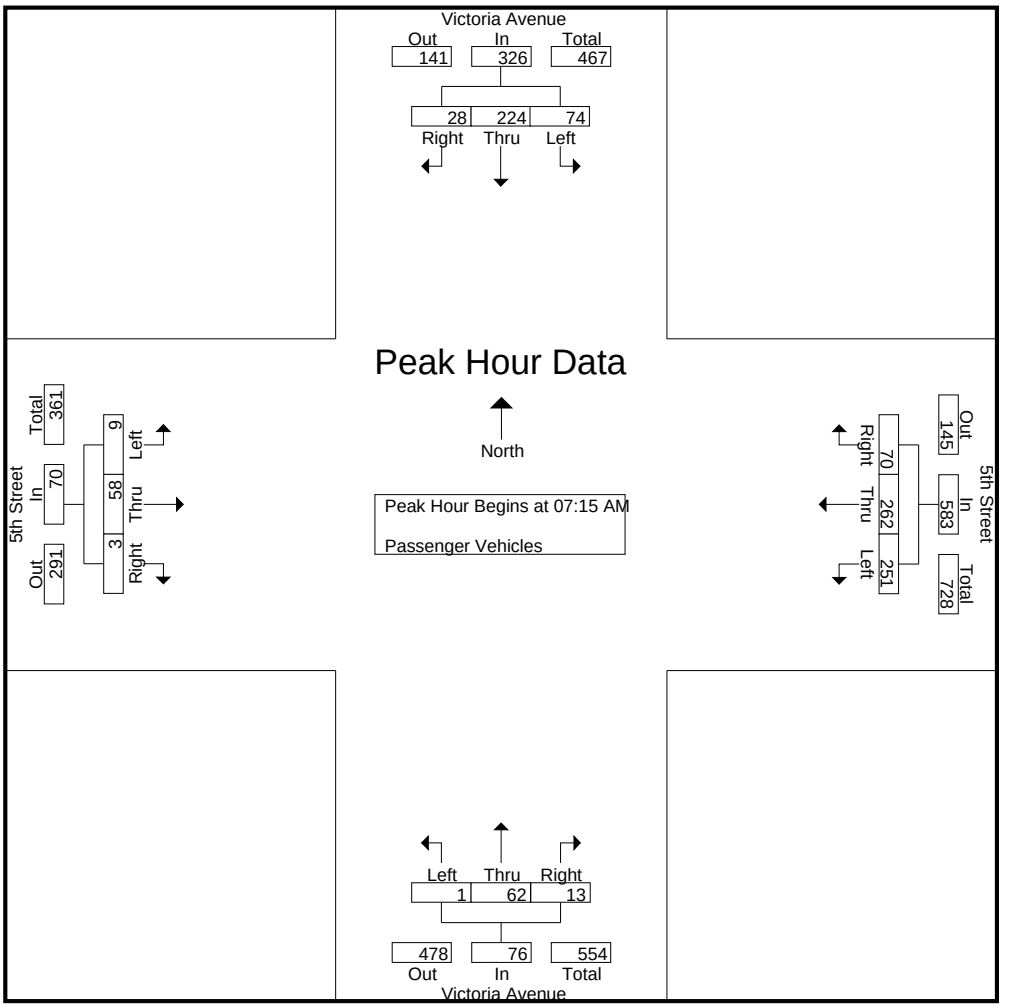

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	10	55	**12**	77	70	**83**	**21**	**174**	0	**18**	1	19	1	11	**1**	13
+15 mins.	**28**	**60**	6	**94**	**73**	55	17	145	0	11	4	15	1	10	0	11
+30 mins.	18	60	9	87	65	73	16	154	0	18	2	20	2	17	1	20
+45 mins.	18	49	1	68	43	51	16	110	**1**	15	**6**	**22**	**5**	**20**	1	**26**
Total Volume	74	224	28	326	251	262	70	583	1	62	13	76	9	58	3	70
% App. Total	22.7	68.7	8.6		43.1	44.9	12		1.3	81.6	17.1		12.9	82.9	4.3	
PHF	.661	.933	.583	.867	.860	.789	.833	.838	.250	.861	.542	.864	.450	.725	.750	.673

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File Name : 28_SBC_Victoria_5th AM
Site Code : 99918352
Start Date : 5/17/2018
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Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	2	0	2	4
06:15 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:30 AM	2	1	0	3	0	0	0	0	0	0	1	1	0	0	0	0	4
06:45 AM	0	0	0	0	2	0	1	3	0	0	0	0	0	0	0	0	3
Total	4	1	0	5	2	0	2	4	0	1	1	2	0	2	0	2	13
07:00 AM	0	0	1	1	1	0	0	1	0	2	0	2	0	1	0	1	5
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:45 AM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
Total	0	2	1	3	1	0	1	2	0	5	0	5	0	1	0	1	11
08:00 AM	1	1	1	3	0	2	0	2	0	0	0	0	0	1	0	1	6
08:15 AM	1	0	0	1	0	3	0	3	0	1	0	1	2	1	0	3	8
08:30 AM	2	1	0	3	0	0	1	1	0	0	0	0	0	0	1	1	5
08:45 AM	0	2	0	2	1	0	0	1	0	0	0	0	1	0	0	1	4
Total	4	4	1	9	1	5	1	7	0	1	0	1	3	2	1	6	23
Grand Total	8	7	2	17	4	5	4	13	0	7	1	8	3	5	1	9	47
Apprch %	47.1	41.2	11.8		30.8	38.5	30.8		0	87.5	12.5		33.3	55.6	11.1		
Total %	17	14.9	4.3	36.2	8.5	10.6	8.5	27.7	0	14.9	2.1	17	6.4	10.6	2.1	19.1	

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	**1**	0	1	0	0	0	0	0	**2**	0	**2**	0	0	0	0	3
07:45 AM	0	1	0	1	0	0	**1**	1	0	1	0	1	0	0	0	0	3
08:00 AM	**1**	1	**1**	**3**	0	**2**	0	**2**	0	0	0	0	0	**1**	0	**1**	**6**
Total Volume	1	3	1	5	0	2	1	3	0	3	0	3	0	1	0	1	12
% App. Total	20	60	20		0	66.7	33.3		0	100	0		0	100	0		
PHF	.250	.750	.250	.417	.000	.250	.250	.375	.000	.375	.000	.375	.000	.250	.000	.250	.500

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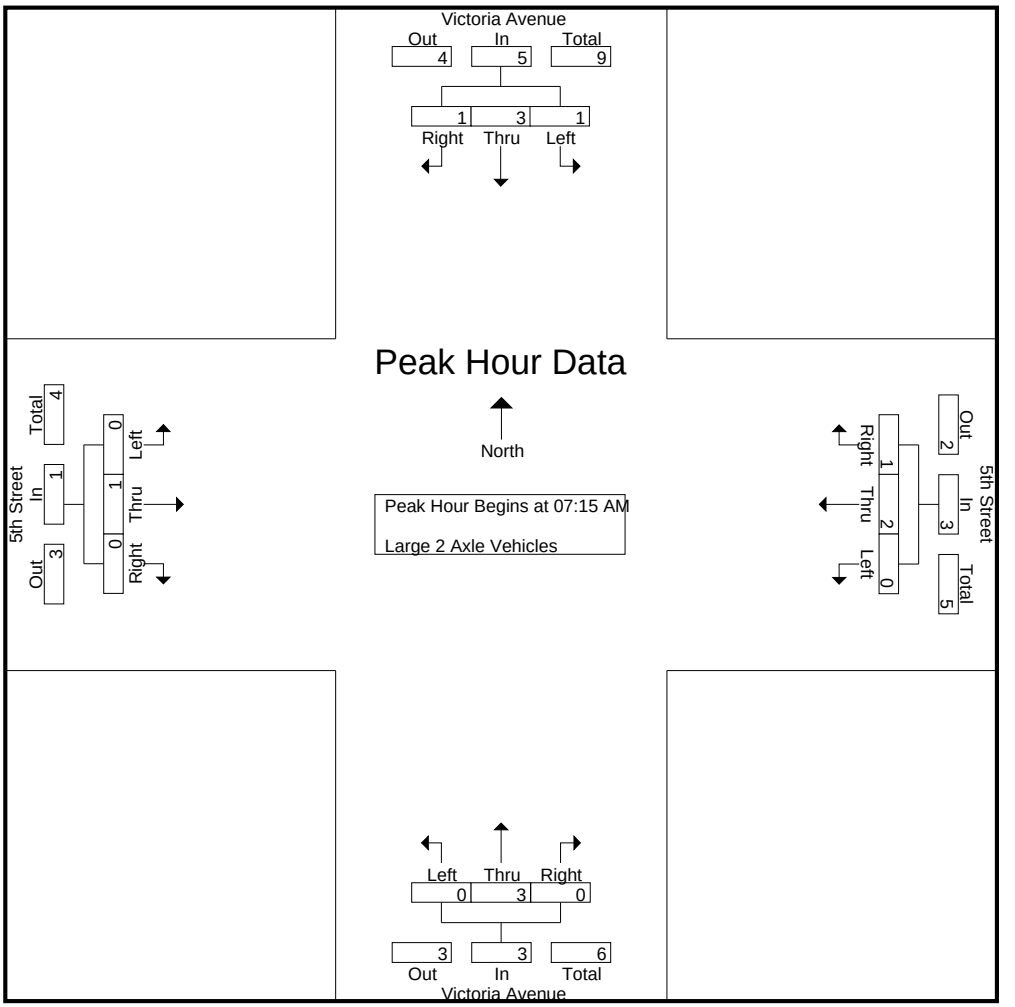
City of San Bernardino
N/S: Victoria Avenue
E/W: 5th Street
Weather: Clear

File Name : 28_SBC_Victoria_5th AM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	1	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	1	0	1	0	0	**1**	1	0	1	0	1	0	0	0	0
+45 mins.	**1**	1	**1**	**3**	0	**2**	0	**2**	0	0	0	0	0	**1**	0	**1**
Total Volume	1	3	1	5	0	2	1	3	0	3	0	3	0	1	0	1
% App. Total	20	60	20		0	66.7	33.3		0	100	0		0	100	0	
PHF	.250	.750	.250	.417	.000	.250	.250	.375	.000	.375	.000	.375	.000	.250	.000	.250

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City of San Bernardino
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Site Code : 99918352
Start Date : 5/17/2018
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Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	1	1	3
08:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	1	1	0	2	0	0	1	1	0	0	1	1	0	0	1	1	5
Grand Total	1	1	0	2	1	1	3	5	0	0	1	1	0	0	1	1	9
Apprch %	50	50	0		20	20	60		0	0	100		0	0	100		
Total %	11.1	11.1	0	22.2	11.1	11.1	33.3	55.6	0	0	11.1	11.1	0	0	11.1	11.1	

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		50	0	50		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

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City of San Bernardino
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Weather: Clear

File Name : 28_SBC_Victoria_5th AM
Site Code : 99918352
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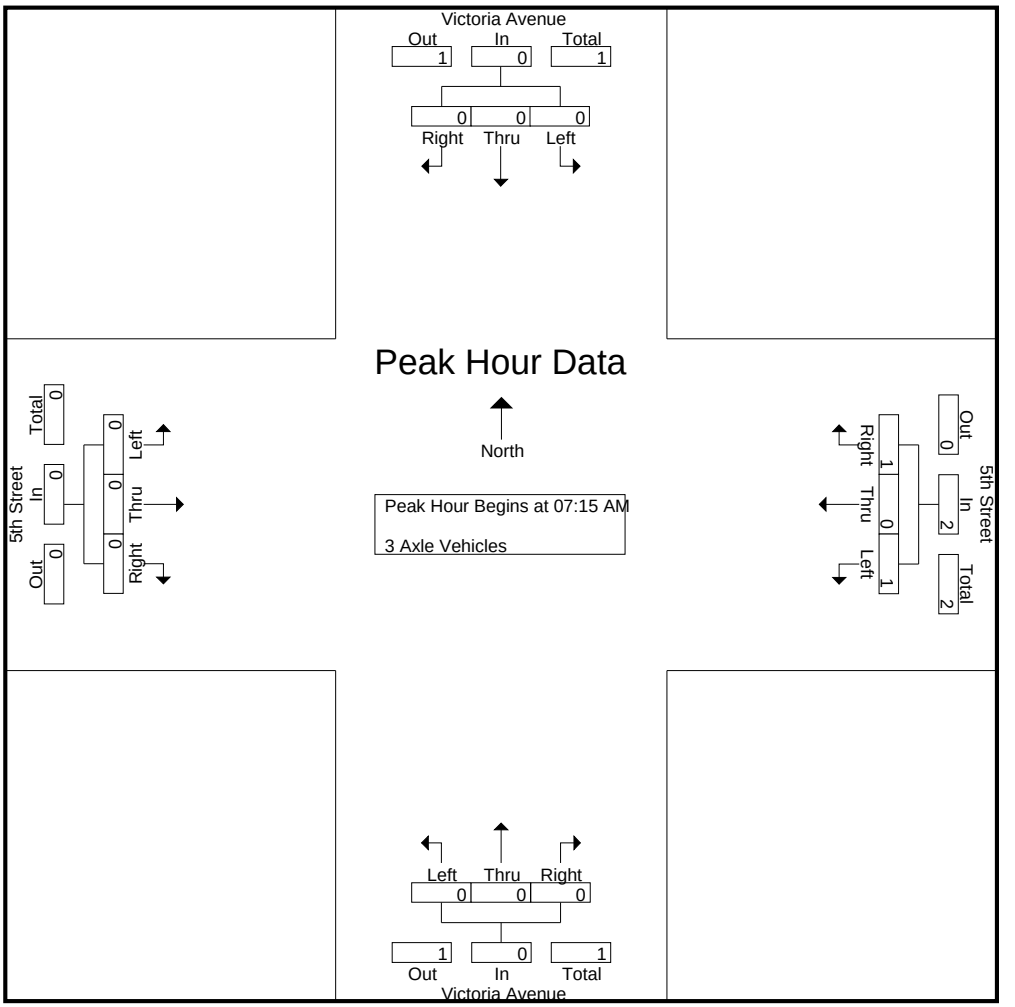

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
% App. Total	0	0	0		50	0	50		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000

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Site Code : 99918352
Start Date : 5/17/2018
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Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	0	0	1	0	0	0	0	0	0	1	1	0	1	0	1	3
06:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
06:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	1	1	0	0	3	3	0	1	0	1	6
07:00 AM	0	1	0	1	0	0	0	0	1	0	1	2	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	1	2	1	4	0	0	0	0	5
08:00 AM	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	2
Grand Total	1	1	0	2	1	0	2	3	1	2	4	7	0	1	0	1	13
Apprch %	50	50	0		33.3	0	66.7		14.3	28.6	57.1		0	100	0		
Total %	7.7	7.7	0	15.4	7.7	0	15.4	23.1	7.7	15.4	30.8	53.8	0	7.7	0	7.7	

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	**1**	0	**1**	**2**	0	0	0	0	0	0	0	0	**2**
Total Volume	0	0	0	0	1	0	1	2	0	2	0	2	0	0	0	0	4
% App. Total	0	0	0		50	0	50		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.250	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.500

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City of San Bernardino
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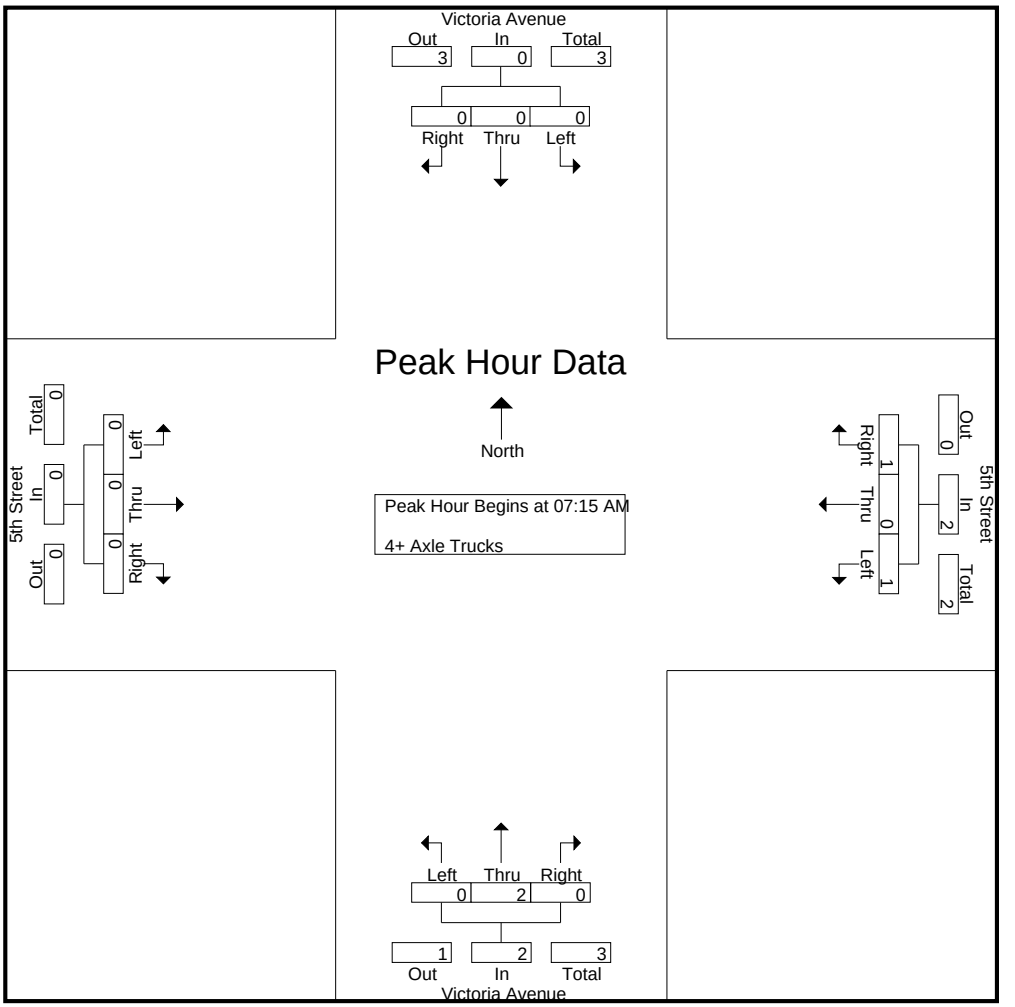
Weather: Clear

File Name : 28_SBC_Victoria_5th AM
Site Code : 99918352
Start Date : 5/17/2018



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	**1**	0	**1**	**2**	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	1	2	0	2	0	2	0	0	0	0
% App. Total	0	0	0		50	0	50		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.250	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000

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City of San Bernardino
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File Name : 28_SBC_Victoria_5th PM
Site Code : 99918352
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	6	23	3	32	22	43	27	92	0	46	10	56	5	44	2	51	231
03:15 PM	12	27	7	46	5	30	21	56	0	42	5	47	5	46	2	53	202
03:30 PM	11	34	3	48	14	46	22	82	1	38	13	52	6	40	1	47	229
03:45 PM	20	30	9	59	16	33	24	73	2	52	7	61	10	64	3	77	270
Total	49	114	22	185	57	152	94	303	3	178	35	216	26	194	8	228	932
04:00 PM	28	38	4	70	8	33	19	60	2	46	9	57	13	69	0	82	269
04:15 PM	21	25	7	53	12	22	20	54	0	55	11	66	7	63	0	70	243
04:30 PM	26	26	2	54	3	29	28	60	1	54	17	72	7	67	0	74	260
04:45 PM	31	42	1	74	14	29	28	71	0	58	25	83	15	78	5	98	326
Total	106	131	14	251	37	113	95	245	3	213	62	278	42	277	5	324	1098
05:00 PM	13	30	6	49	3	43	29	75	0	43	41	84	10	79	2	91	299
05:15 PM	19	25	2	46	5	36	24	65	2	80	30	112	11	124	1	136	359
05:30 PM	10	34	5	49	5	25	27	57	0	60	14	74	12	80	3	95	275
05:45 PM	16	28	5	49	8	34	18	60	0	55	17	72	11	73	1	85	266
Total	58	117	18	193	21	138	98	257	2	238	102	342	44	356	7	407	1199
Grand Total	213	362	54	629	115	403	287	805	8	629	199	836	112	827	20	959	3229
Apprch %	33.9	57.6	8.6		14.3	50.1	35.7		1	75.2	23.8		11.7	86.2	2.1		
Total %	6.6	11.2	1.7	19.5	3.6	12.5	8.9	24.9	0.2	19.5	6.2	25.9	3.5	25.6	0.6	29.7	
Passenger Vehicles	209	352	53	614	101	393	281	775	8	615	191	814	111	817	20	948	3151
% Passenger Vehicles	98.1	97.2	98.1	97.6	87.8	97.5	97.9	96.3	100	97.8	96	97.4	99.1	98.8	100	98.9	97.6
Large 2 Axle Vehicles	2	8	1	11	3	5	6	14	0	8	1	9	1	7	0	8	42
% Large 2 Axle Vehicles	0.9	2.2	1.9	1.7	2.6	1.2	2.1	1.7	0	1.3	0.5	1.1	0.9	0.8	0	0.8	1.3
3 Axle Vehicles	2	2	0	4	6	1	0	7	0	1	0	1	0	1	0	1	13
% 3 Axle Vehicles	0.9	0.6	0	0.6	5.2	0.2	0	0.9	0	0.2	0	0.1	0	0.1	0	0.1	0.4
4+ Axle Trucks	0	0	0	0	5	4	0	9	0	5	7	12	0	2	0	2	23
% 4+ Axle Trucks	0	0	0	0	4.3	1	0	1.1	0	0.8	3.5	1.4	0	0.2	0	0.2	0.7

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**31**	**42**	1	**74**	**14**	29	28	71	0	58	25	83	**15**	78	**5**	98	326
05:00 PM	13	30	**6**	49	3	**43**	**29**	**75**	0	43	**41**	84	10	79	2	91	299
05:15 PM	19	25	2	46	5	36	24	65	**2**	**80**	30	**112**	11	**124**	1	**136**	**359**
05:30 PM	10	34	5	49	5	25	27	57	0	60	14	74	12	80	3	95	275
Total Volume	73	131	14	218	27	133	108	268	2	241	110	353	48	361	11	420	1259
% App. Total	33.5	60.1	6.4		10.1	49.6	40.3		0.6	68.3	31.2		11.4	86	2.6		
PHF	.589	.780	.583	.736	.482	.773	.931	.893	.250	.753	.671	.788	.800	.728	.550	.772	.877

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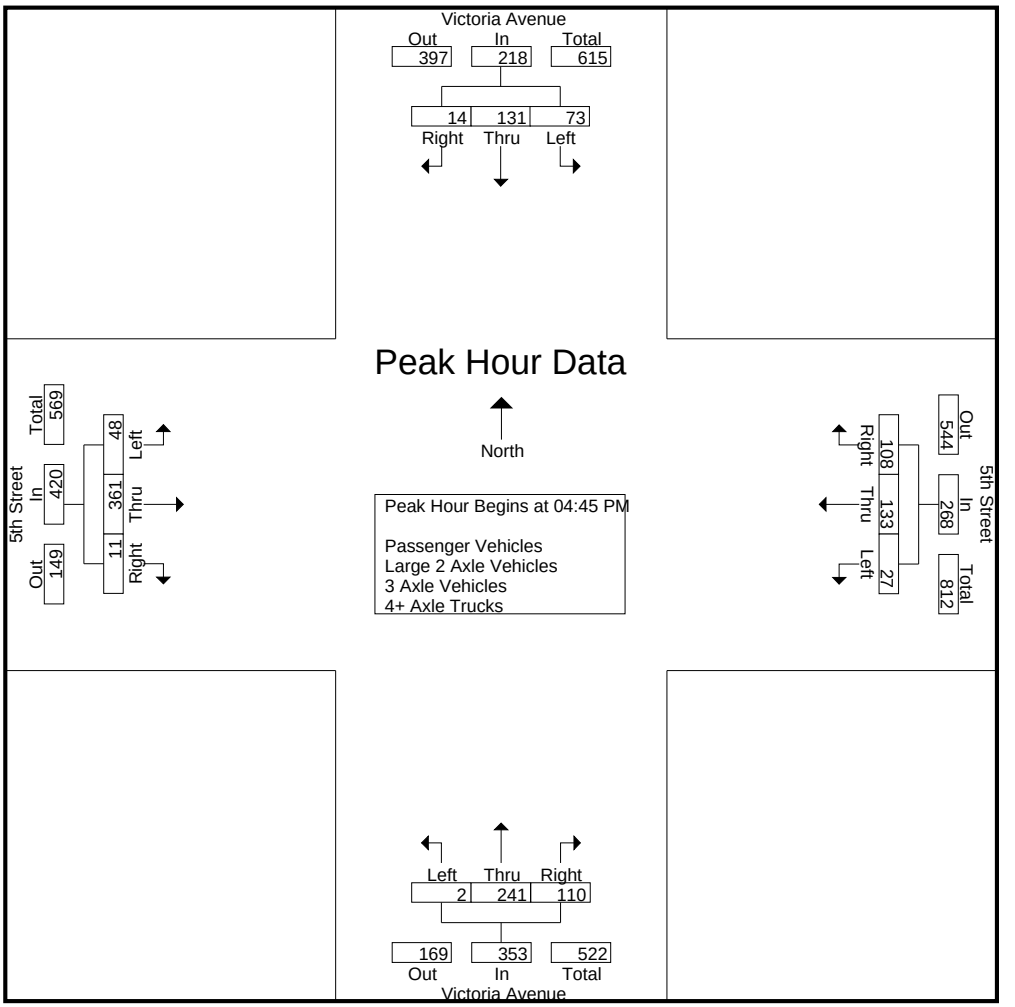

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				03:00 PM				04:45 PM				04:45 PM			
+0 mins.	28	38	4	70	**22**	43	**27**	**92**	0	58	25	83	**15**	78	**5**	98
+15 mins.	21	25	**7**	53	5	30	21	56	0	43	**41**	84	10	79	2	91
+30 mins.	26	26	2	54	14	**46**	22	82	**2**	**80**	30	**112**	11	**124**	1	**136**
+45 mins.	**31**	**42**	1	**74**	16	33	24	73	0	60	14	74	12	80	3	95
Total Volume	106	131	14	251	57	152	94	303	2	241	110	353	48	361	11	420
% App. Total	42.2	52.2	5.6		18.8	50.2	31		0.6	68.3	31.2		11.4	86	2.6	
PHF	.855	.780	.500	.848	.648	.826	.870	.823	.250	.753	.671	.788	.800	.728	.550	.772

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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	6	22	3	31	17	41	26	84	0	45	9	54	5	43	2	50	219
03:15 PM	11	26	7	44	3	30	19	52	0	42	5	47	5	43	2	50	193
03:30 PM	11	33	3	47	12	45	22	79	1	38	11	50	6	39	1	46	222
03:45 PM	20	30	8	58	15	32	22	69	2	50	7	59	9	64	3	76	262
Total	48	111	21	180	47	148	89	284	3	175	32	210	25	189	8	222	896
04:00 PM	28	37	4	69	8	33	19	60	2	41	9	52	13	69	0	82	263
04:15 PM	20	25	7	52	11	21	20	52	0	55	10	65	7	62	0	69	238
04:30 PM	26	25	2	53	3	28	28	59	1	53	17	71	7	66	0	73	256
04:45 PM	30	41	1	72	13	27	28	68	0	57	25	82	15	78	5	98	320
Total	104	128	14	246	35	109	95	239	3	206	61	270	42	275	5	322	1077
05:00 PM	13	28	6	47	3	43	29	75	0	42	38	80	10	78	2	90	292
05:15 PM	19	25	2	46	5	34	24	63	2	78	30	110	11	124	1	136	355
05:30 PM	9	32	5	46	4	25	26	55	0	59	14	73	12	80	3	95	269
05:45 PM	16	28	5	49	7	34	18	59	0	55	16	71	11	71	1	83	262
Total	57	113	18	188	19	136	97	252	2	234	98	334	44	353	7	404	1178
Grand Total	209	352	53	614	101	393	281	775	8	615	191	814	111	817	20	948	3151
Apprch %	34	57.3	8.6		13	50.7	36.3		1	75.6	23.5		11.7	86.2	2.1		
Total %	6.6	11.2	1.7	19.5	3.2	12.5	8.9	24.6	0.3	19.5	6.1	25.8	3.5	25.9	0.6	30.1	

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**30**	**41**	1	**72**	**13**	27	28	68	0	57	25	82	**15**	78	**5**	98	320
05:00 PM	13	28	**6**	47	3	**43**	**29**	**75**	0	42	**38**	80	10	78	2	90	292
05:15 PM	19	25	2	46	5	34	24	63	**2**	**78**	30	**110**	11	**124**	1	**136**	**355**
05:30 PM	9	32	5	46	4	25	26	55	0	59	14	73	12	80	3	95	269
Total Volume	71	126	14	211	25	129	107	261	2	236	107	345	48	360	11	419	1236
% App. Total	33.6	59.7	6.6		9.6	49.4	41		0.6	68.4	31		11.5	85.9	2.6		
PHF	.592	.768	.583	.733	.481	.750	.922	.870	.250	.756	.704	.784	.800	.726	.550	.770	.870

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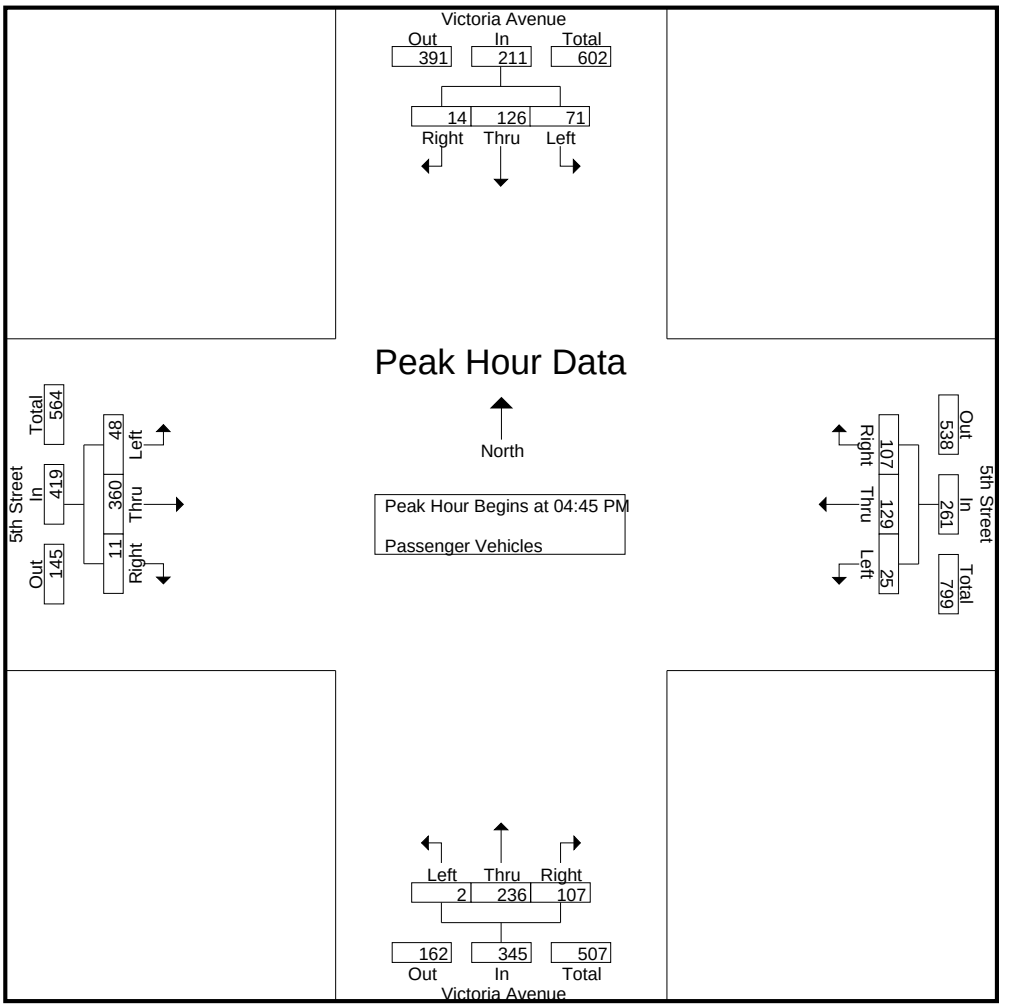
City of San Bernardino
N/S: Victoria Avenue
E/W: 5th Street
Weather: Clear

File Name : 28_SBC_Victoria_5th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**30**	**41**	1	**72**	**13**	27	28	68	0	57	25	82	**15**	78	**5**	98
+15 mins.	13	28	**6**	47	3	**43**	**29**	**75**	0	42	**38**	80	10	78	2	90
+30 mins.	19	25	2	46	5	34	24	63	**2**	**78**	30	**110**	11	**124**	1	**136**
+45 mins.	9	32	5	46	4	25	26	55	0	59	14	73	12	80	3	95
Total Volume	71	126	14	211	25	129	107	261	2	236	107	345	48	360	11	419
% App. Total	33.6	59.7	6.6		9.6	49.4	41		0.6	68.4	31		11.5	85.9	2.6	
PHF	.592	.768	.583	.733	.481	.750	.922	.870	.250	.756	.704	.784	.800	.726	.550	.770

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City of San Bernardino
N/S: Victoria Avenue
E/W: 5th Street
Weather: Clear

File Name : 28_SBC_Victoria_5th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	1	1	1	3	0	1	1	2	0	0	0	0	6
03:15 PM	0	1	0	1	0	0	2	2	0	0	0	0	0	2	0	2	5
03:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	1	1	1	1	2	4	0	2	0	2	1	0	0	1	8
Total	0	2	1	3	3	2	5	10	0	3	1	4	1	2	0	3	20
04:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
04:45 PM	1	1	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
Total	1	3	0	4	0	2	0	2	0	2	0	2	0	2	0	2	10
05:00 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	1	0	1	4
05:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
05:30 PM	1	1	0	2	0	0	1	1	0	1	0	1	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	1	3	0	4	0	1	1	2	0	3	0	3	0	3	0	3	12
Grand Total	2	8	1	11	3	5	6	14	0	8	1	9	1	7	0	8	42
Apprch %	18.2	72.7	9.1		21.4	35.7	42.9		0	88.9	11.1		12.5	87.5	0		
Total %	4.8	19	2.4	26.2	7.1	11.9	14.3	33.3	0	19	2.4	21.4	2.4	16.7	0	19	

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	1	0	**2**	0	**2**	0	**2**	0	0	0	0	0	0	0	0	**4**
05:00 PM	0	**2**	0	2	0	0	0	0	0	**1**	0	**1**	0	**1**	0	**1**	4
05:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
05:30 PM	1	1	0	2	0	0	**1**	1	0	1	0	1	0	0	0	0	4
Total Volume	2	4	0	6	0	3	1	4	0	3	0	3	0	1	0	1	14
% App. Total	33.3	66.7	0		0	75	25		0	100	0		0	100	0		
PHF	.500	.500	.000	.750	.000	.375	.250	.500	.000	.750	.000	.750	.000	.250	.000	.250	.875

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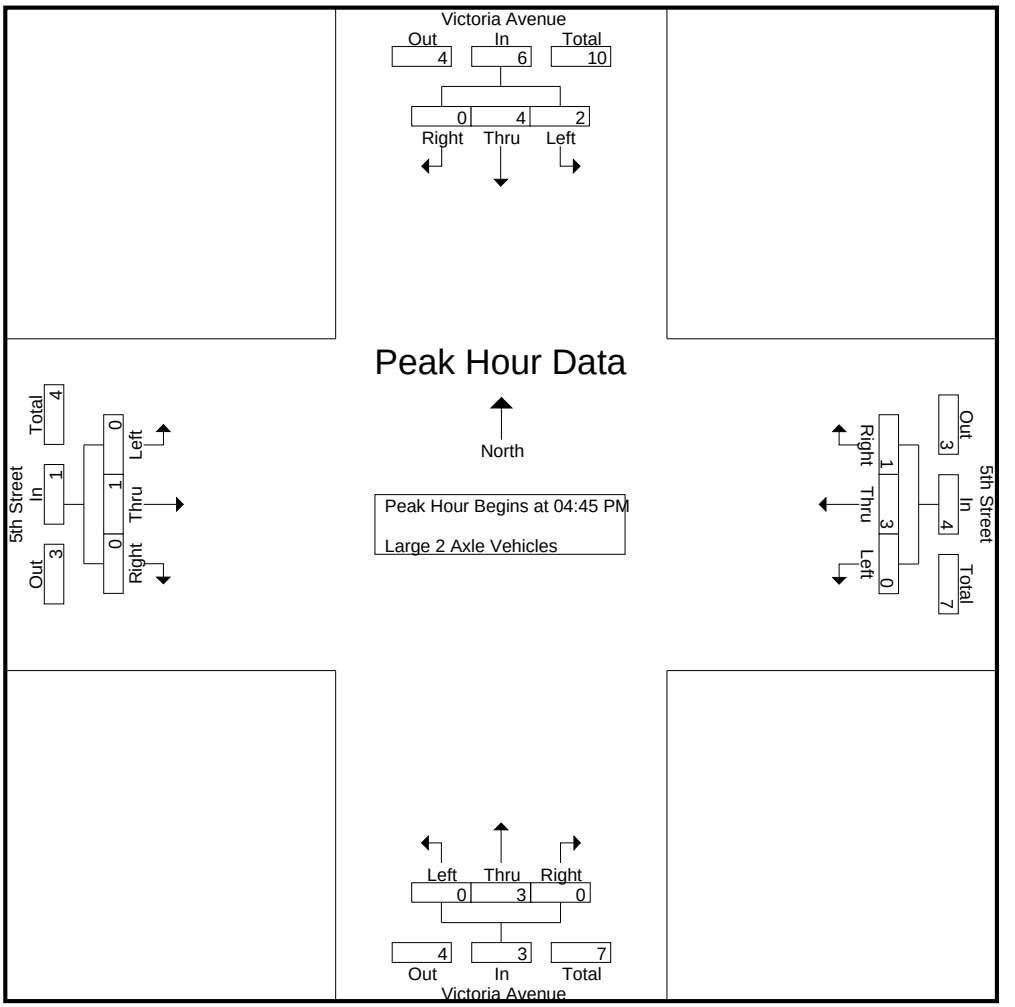
City of San Bernardino
N/S: Victoria Avenue
E/W: 5th Street
Weather: Clear

File Name : 28_SBC_Victoria_5th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	1	0	**2**	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+15 mins.	0	**2**	0	2	0	0	0	0	0	**1**	0	**1**	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0
+45 mins.	1	1	0	2	0	0	**1**	1	0	1	0	1	0	0	0	0
Total Volume	2	4	0	6	0	3	1	4	0	3	0	3	0	1	0	1
% App. Total	33.3	66.7	0		0	75	25		0	100	0		0	100	0	
PHF	.500	.500	.000	.750	.000	.375	.250	.500	.000	.750	.000	.750	.000	.250	.000	.250

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City of San Bernardino
N/S: Victoria Avenue
E/W: 5th Street
Weather: Clear

File Name : 28_SBC_Victoria_5th PM
Site Code : 99918352
Start Date : 5/17/2018

Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
03:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
03:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	2	2	1	0	3	0	0	0	0	0	1	0	1	6
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
Total	1	0	0	1	2	0	0	2	0	1	0	1	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3
Grand Total	2	2	0	4	6	1	0	7	0	1	0	1	0	1	0	1	13
Apprch %	50	50	0		85.7	14.3	0		0	100	0		0	100	0		
Total %	15.4	15.4	0	30.8	46.2	7.7	0	53.8	0	7.7	0	7.7	0	7.7	0	7.7	

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	**1**	0	0	**1**	0	**1**	0	**1**	0	0	0	0	**2**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	**1**	0	**1**	1	0	0	1	0	0	0	0	0	0	0	0	2
Total Volume	0	1	0	1	2	0	0	2	0	1	0	1	0	0	0	0	4
% App. Total	0	100	0		100	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.500	.000	.000	.500	.000	.250	.000	.250	.000	.000	.000	.000	.500

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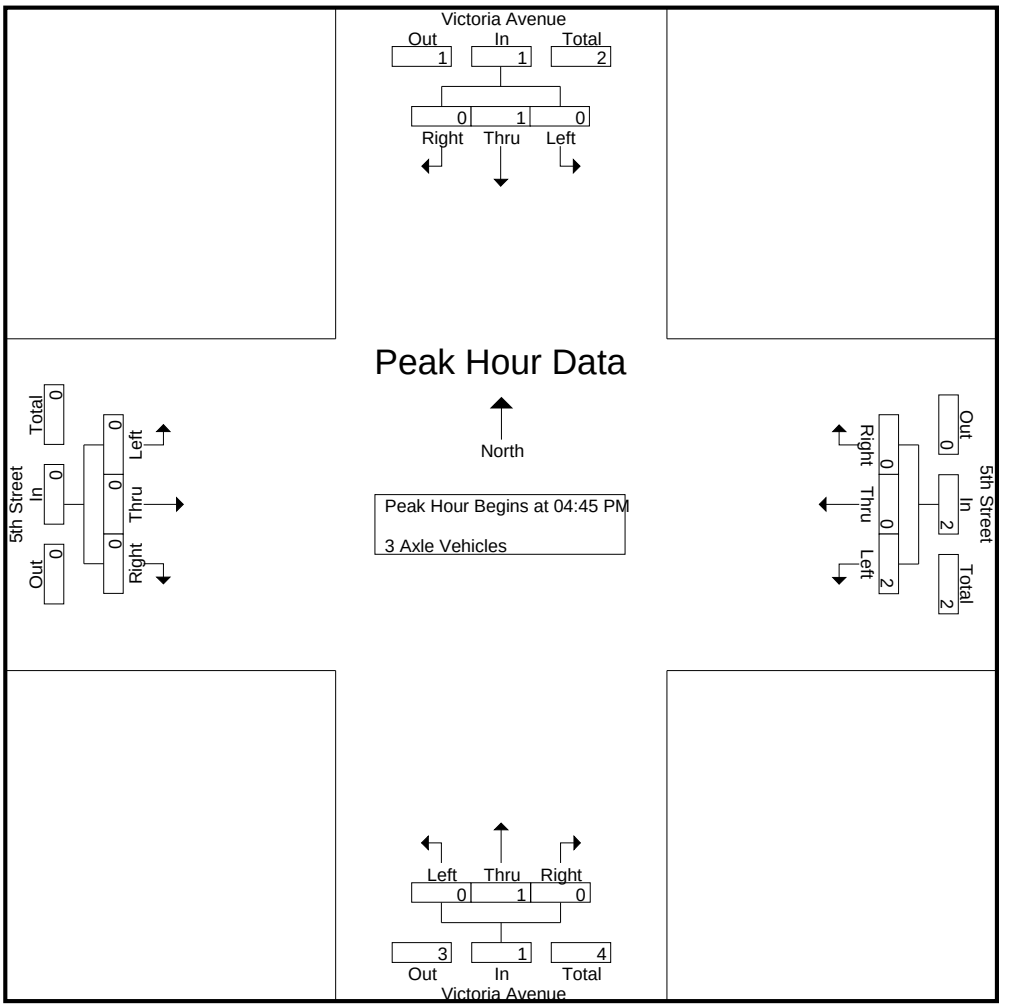
City of San Bernardino
N/S: Victoria Avenue
E/W: 5th Street
Weather: Clear

File Name : 28_SBC_Victoria_5th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

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

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City of San Bernardino
N/S: Victoria Avenue
E/W: 5th Street
Weather: Clear

File Name : 28_SBC_Victoria_5th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	2	1	0	3	0	0	0	0	0	1	0	1	4
03:15 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
03:30 PM	0	0	0	0	1	0	0	1	0	0	2	2	0	1	0	1	4
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	5	1	0	6	0	0	2	2	0	2	0	2	10
04:00 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:15 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	0	4	1	5	0	0	0	0	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3
05:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	1	4	5	0	0	0	0	6
Grand Total	0	0	0	0	5	4	0	9	0	5	7	12	0	2	0	2	23
Apprch %	0	0	0		55.6	44.4	0		0	41.7	58.3		0	100	0		
Total %	0	0	0	0	21.7	17.4	0	39.1	0	21.7	30.4	52.2	0	8.7	0	8.7	

	Victoria Avenue Southbound				5th Street Westbound				Victoria Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	**3**	**3**	0	0	0	0	**3**
05:15 PM	0	0	0	0	0	**1**	0	**1**	0	**1**	0	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	1	3	4	0	0	0	0	5
% App. Total	0	0	0		0	100	0		0	25	75		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.250	.333	.000	.000	.000	.000	.417

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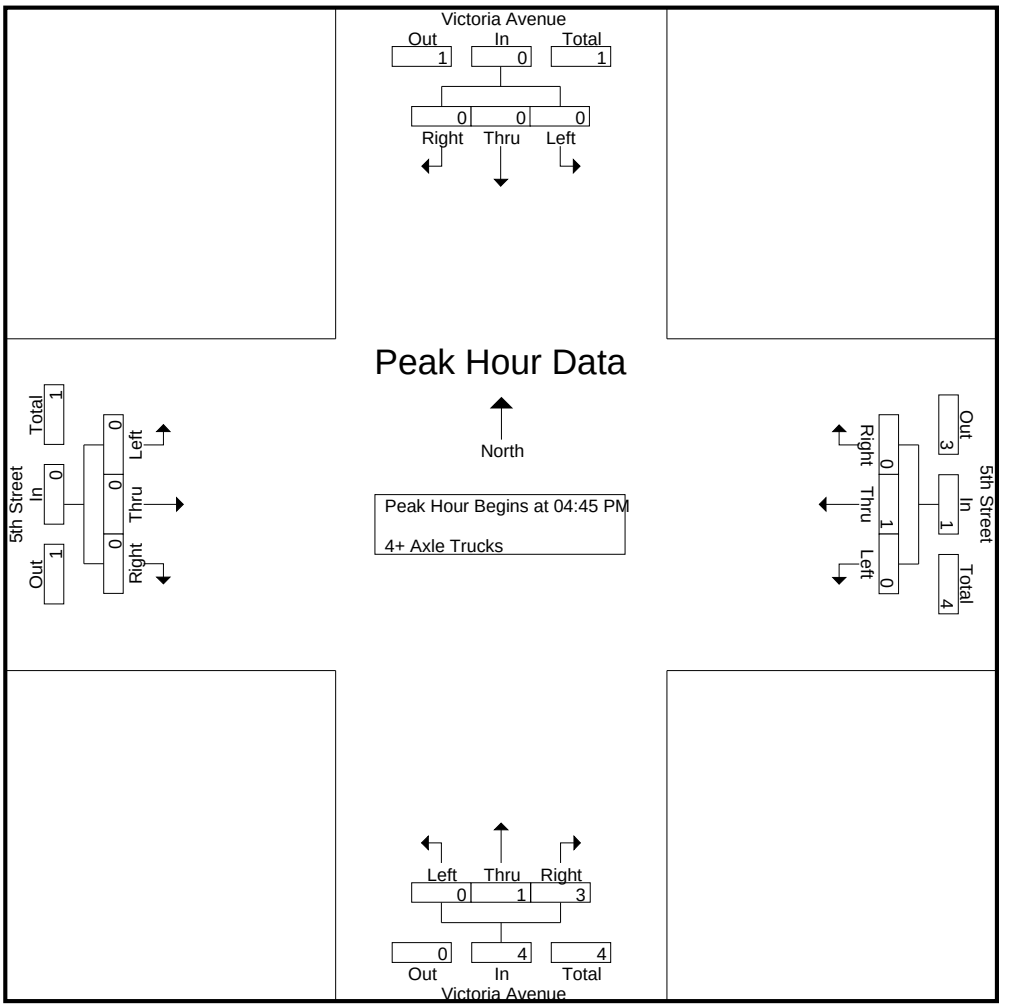
City of San Bernardino
N/S: Victoria Avenue
E/W: 5th Street
Weather: Clear

File Name : 28_SBC_Victoria_5th PM
Site Code : 99918352
Start Date : 5/17/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	**3**	**3**	0	0	0	0
+30 mins.	0	0	0	0	0	**1**	0	**1**	0	**1**	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	1	3	4	0	0	0	0
% App. Total	0	0	0		0	100	0		0	25	75		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.250	.333	.000	.000	.000	.000

Location: San Bernardino
N/S: Victoria Avenue
E/W: 5th Street

Date: 5/17/2018
Day: Thursday

PEDESTRIANS

	North Leg Victoria Avenue	East Leg 5th Street	South Leg Victoria Avenue	West Leg 5th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
6:00 AM	0	0	0	0	0
6:15 AM	0	0	0	0	0
6:30 AM	0	0	0	0	0
6:45 AM	1	0	0	1	2
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	2	0	0	1	3

	North Leg Victoria Avenue	East Leg 5th Street	South Leg Victoria Avenue	West Leg 5th Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	0	0	0	0	0
3:15 PM	1	0	0	0	1
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	1	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	2	0	0	0	2
TOTAL VOLUMES:	4	0	0	1	5

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Location: San Bernardino
N/S: Victoria Avenue
E/W: 5th Street

Date: 5/17/2018
Day: Thursday

BICYCLES

	Southbound Victoria Avenue			Westbound 5th Street			Northbound Victoria Avenue			Eastbound 5th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	1	0	0	0	0	0	0	1	0	0	1	3
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
TOTAL VOLUMES:	1	1	0	1	1	3	0	0	1	0	0	1	9

	Southbound Victoria Avenue			Westbound 5th Street			Northbound Victoria Avenue			Eastbound 5th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	1	0	0	0	0	0	0	1

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

Prepared by National Data & Surveying Services

Central Ave & 5th St

Peak Hour Turning Movement Count

ID: 18-06027-002
City: Highland

Day: Thursday
Date: 03/08/2018

PEAK HOURS	
AM	07:15 AM - 08:15 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS	
AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Central Ave — SOUTHBOUND

AM	33	54	42	0	76	AM
NOON	0	0	0	0	0	NOON
PM	14	29	50	0	176	PM

EASTBOUND — 5th St

AM	NOON	PM		
701	0	301	⇦	
0	0	0	↶	0
14	0	21	↱	1
185	0	589	→	2
14	0	5	↴	0
AM	NOON	PM		

WESTBOUND — 5th St

PM	NOON	AM		
73	0	44	↰	1
285	0	663	←	2
6	0	33	↰	1
0	0	0	↶	0
749	0	231	⇨	
PM	NOON	AM		

	0	1	1	0

CONTROL

1-Way Stop(NB)

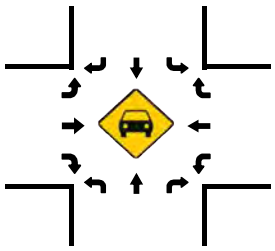
TEV	1109	0	1266
	AM	NOON	PM
PHF	0.95		0.85

	0	1	1	0

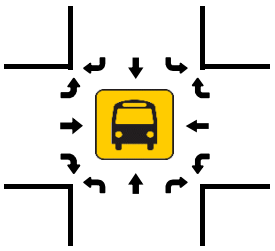
Central Ave — NORTHBOUND

PM	40	0	2	82	110	PM
NOON	0	0	0	0	0	NOON
AM	101	0	5	18	4	AM

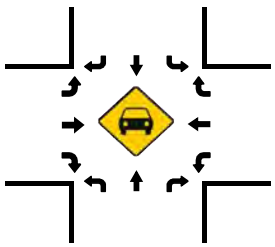
Total Vehicles (AM)



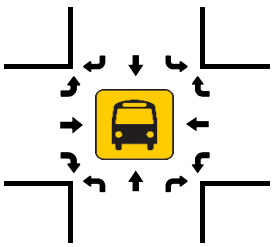
Total Vehicles (AM)



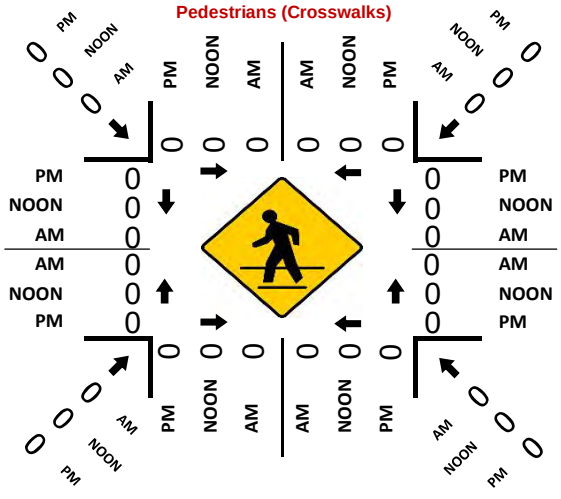
Total Vehicles (NOON)



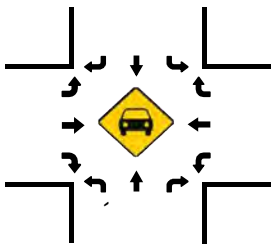
Total Vehicles (NOON)



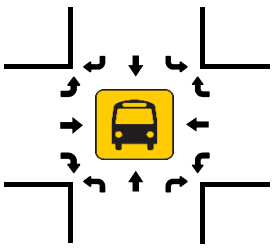
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Central Ave & 5th St
City: Highland
Control: 1-Way Stop(NB)

Project ID: 18-06027-002
Date: 3/8/2018

Total

NS/EW Streets:	Central Ave				Central Ave				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	2	1	0	10	11	3	0	0	52	3	0	6	141	7	0	236
7:15 AM	0	4	0	0	12	13	6	0	1	42	2	0	9	181	8	0	278
7:30 AM	0	1	0	0	5	17	6	0	4	49	2	0	9	179	12	0	284
7:45 AM	1	5	1	0	14	8	12	0	3	48	2	0	8	179	10	0	291
8:00 AM	4	8	3	0	11	16	9	0	6	46	8	0	7	124	14	0	256
8:15 AM	0	9	3	0	6	14	0	0	6	41	0	0	2	102	9	0	192
8:30 AM	0	5	2	0	14	15	4	0	1	58	1	0	2	78	11	0	191
8:45 AM	1	6	1	0	11	8	5	0	0	50	4	0	0	59	17	0	162
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	6	40	11	0	83	102	45	0	21	386	22	0	43	1043	88	0	1890
APPROACH %'s :	10.53%	70.18%	19.30%	0.00%	36.09%	44.35%	19.57%	0.00%	4.90%	89.98%	5.13%	0.00%	3.66%	88.84%	7.50%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	5	18	4	0	42	54	33	0	14	185	14	0	33	663	44	0	1109
PEAK HR FACTOR :	0.313	0.563	0.333	0.000	0.750	0.794	0.688	0.000	0.583	0.944	0.438	0.000	0.917	0.916	0.786	0.000	0.953
	0.450				0.896				0.888				0.925				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	17	8	0	13	8	3	0	5	95	0	0	1	66	22	0	238
4:15 PM	0	16	10	0	12	4	1	0	7	109	1	0	3	72	18	0	253
4:30 PM	1	16	38	0	12	9	5	0	5	114	0	0	1	73	21	0	295
4:45 PM	1	22	11	0	13	6	4	0	4	125	1	0	0	76	12	0	275
5:00 PM	0	21	31	0	13	9	2	0	7	159	2	0	1	61	19	0	325
5:15 PM	0	23	30	0	12	5	3	0	5	191	2	0	4	75	21	0	371
5:30 PM	0	23	14	0	11	11	1	0	10	111	1	0	3	76	15	0	276
5:45 PM	1	9	11	0	12	10	2	0	4	103	0	0	4	74	19	0	249
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	147	153	0	98	62	21	0	47	1007	7	0	17	573	147	0	2282
APPROACH %'s :	0.99%	48.51%	50.50%	0.00%	54.14%	34.25%	11.60%	0.00%	4.43%	94.91%	0.66%	0.00%	2.31%	77.75%	19.95%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	2	82	110	0	50	29	14	0	21	589	5	0	6	285	73	0	1266
PEAK HR FACTOR :	0.500	0.891	0.724	0.000	0.962	0.806	0.700	0.000	0.750	0.771	0.625	0.000	0.375	0.938	0.869	0.000	0.853
	0.882				0.894				0.777				0.910				

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

City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 77_HLD_Palm_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

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

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	20	20	0	40	24	27	12	63	5	17	22	44	0	26	3	29	176
06:15 AM	18	22	3	43	24	50	14	88	1	8	23	32	2	34	5	41	204
06:30 AM	22	43	3	68	33	63	12	108	2	19	22	43	1	27	9	37	256
06:45 AM	31	58	3	92	49	105	13	167	4	9	22	35	0	44	5	49	343
Total	91	143	9	243	130	245	51	426	12	53	89	154	3	131	22	156	979
07:00 AM	42	71	6	119	54	124	15	193	7	18	34	59	0	45	6	51	422
07:15 AM	40	90	14	144	65	154	18	237	9	33	32	74	1	36	6	43	498
07:30 AM	42	115	11	168	63	140	25	228	8	27	28	63	1	37	12	50	509
07:45 AM	30	179	23	232	78	161	19	258	6	29	34	69	1	59	13	73	632
Total	154	455	54	663	260	579	77	916	30	107	128	265	3	177	37	217	2061
08:00 AM	32	140	19	191	94	138	23	255	6	42	46	94	1	47	18	66	606
08:15 AM	17	135	18	170	72	122	22	216	9	49	44	102	6	53	15	74	562
08:30 AM	53	87	12	152	56	84	29	169	9	68	47	124	2	49	10	61	506
08:45 AM	28	63	9	100	68	76	27	171	4	38	40	82	4	46	18	68	421
Total	130	425	58	613	290	420	101	811	28	197	177	402	13	195	61	269	2095
Grand Total	375	1023	121	1519	680	1244	229	2153	70	357	394	821	19	503	120	642	5135
Apprch %	24.7	67.3	8		31.6	57.8	10.6		8.5	43.5	48		3	78.3	18.7		
Total %	7.3	19.9	2.4	29.6	13.2	24.2	4.5	41.9	1.4	7	7.7	16	0.4	9.8	2.3	12.5	
Passenger Vehicles	359	1002	114	1475	601	1224	226	2051	63	346	225	634	13	477	117	607	4767
% Passenger Vehicles	95.7	97.9	94.2	97.1	88.4	98.4	98.7	95.3	90	96.9	57.1	77.2	68.4	94.8	97.5	94.5	92.8
Large 2 Axle Vehicles	13	17	7	37	11	10	2	23	5	10	22	37	6	14	1	21	118
% Large 2 Axle Vehicles	3.5	1.7	5.8	2.4	1.6	0.8	0.9	1.1	7.1	2.8	5.6	4.5	31.6	2.8	0.8	3.3	2.3
3 Axle Vehicles	0	2	0	2	24	3	1	28	2	1	84	87	0	5	1	6	123
% 3 Axle Vehicles	0	0.2	0	0.1	3.5	0.2	0.4	1.3	2.9	0.3	21.3	10.6	0	1	0.8	0.9	2.4
4+ Axle Trucks	3	2	0	5	44	7	0	51	0	0	63	63	0	7	1	8	127
% 4+ Axle Trucks	0.8	0.2	0	0.3	6.5	0.6	0	2.4	0	0	16	7.7	0	1.4	0.8	1.2	2.5

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**42**	115	11	168	63	140	**25**	228	8	27	28	63	1	37	12	50	509
07:45 AM	30	**179**	**23**	**232**	78	**161**	19	**258**	6	29	34	69	1	**59**	13	73	**632**
08:00 AM	32	140	19	191	**94**	138	23	255	6	42	**46**	94	1	47	**18**	66	606
08:15 AM	17	135	18	170	72	122	22	216	**9**	**49**	44	**102**	**6**	53	15	**74**	562
Total Volume	121	569	71	761	307	561	89	957	29	147	152	328	9	196	58	263	2309
% App. Total	15.9	74.8	9.3		32.1	58.6	9.3		8.8	44.8	46.3		3.4	74.5	22.1		
PHF	.720	.795	.772	.820	.816	.871	.890	.927	.806	.750	.826	.804	.375	.831	.806	.889	.913

Counts Unlimited
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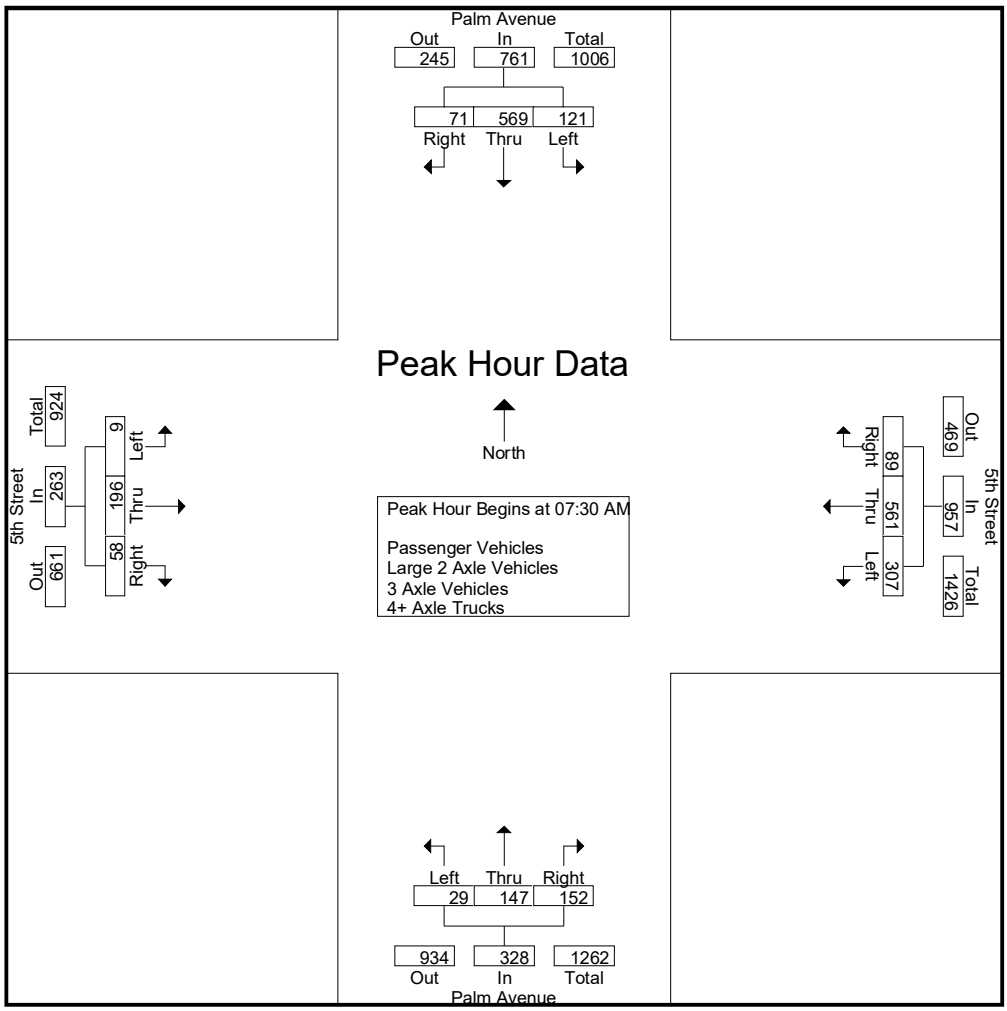
City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 77_HLD_Palm_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				08:00 AM				07:45 AM			
+0 mins.	**42**	115	11	168	65	154	18	237	6	42	46	94	1	**59**	13	73
+15 mins.	30	**179**	**23**	**232**	63	140	**25**	228	**9**	49	44	102	1	47	**18**	66
+30 mins.	32	140	19	191	78	**161**	19	**258**	9	**68**	**47**	**124**	**6**	53	15	**74**
+45 mins.	17	135	18	170	**94**	138	23	255	4	38	40	82	2	49	10	61
Total Volume	121	569	71	761	300	593	85	978	28	197	177	402	10	208	56	274
% App. Total	15.9	74.8	9.3		30.7	60.6	8.7		7	49	44		3.6	75.9	20.4	
PHF	.720	.795	.772	.820	.798	.921	.850	.948	.778	.724	.941	.810	.417	.881	.778	.926

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N/S: Palm Avenue
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File Name : 77_HLD_Palm_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	20	19	0	39	20	26	12	58	5	17	12	34	0	23	3	26	157
06:15 AM	16	22	3	41	21	49	14	84	1	8	11	20	1	33	5	39	184
06:30 AM	20	42	2	64	31	62	11	104	1	19	13	33	0	23	9	32	233
06:45 AM	29	57	3	89	43	102	13	158	4	7	12	23	0	41	5	46	316
Total	85	140	8	233	115	239	50	404	11	51	48	110	1	120	22	143	890
07:00 AM	42	71	5	118	47	122	15	184	6	16	21	43	0	43	6	49	394
07:15 AM	38	90	13	141	62	153	18	233	9	31	13	53	0	33	6	39	466
07:30 AM	41	112	10	163	55	140	25	220	7	27	12	46	1	36	12	49	478
07:45 AM	30	174	23	227	71	160	17	248	5	29	15	49	0	57	11	68	592
Total	151	447	51	649	235	575	75	885	27	103	61	191	1	169	35	205	1930
08:00 AM	29	139	19	187	90	136	23	249	6	41	28	75	1	46	17	64	575
08:15 AM	17	131	17	165	62	120	22	204	7	47	31	85	5	52	15	72	526
08:30 AM	51	85	11	147	42	81	29	152	9	66	35	110	2	47	10	59	468
08:45 AM	26	60	8	94	57	73	27	157	3	38	22	63	3	43	18	64	378
Total	123	415	55	593	251	410	101	762	25	192	116	333	11	188	60	259	1947
Grand Total	359	1002	114	1475	601	1224	226	2051	63	346	225	634	13	477	117	607	4767
Apprch %	24.3	67.9	7.7		29.3	59.7	11		9.9	54.6	35.5		2.1	78.6	19.3		
Total %	7.5	21	2.4	30.9	12.6	25.7	4.7	43	1.3	7.3	4.7	13.3	0.3	10	2.5	12.7	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**41**	112	10	163	55	140	**25**	220	**7**	27	12	46	1	36	12	49	478
07:45 AM	30	**174**	**23**	**227**	71	**160**	17	248	5	29	15	49	0	**57**	11	68	**592**
08:00 AM	29	139	19	187	**90**	136	23	**249**	6	41	28	75	1	46	**17**	64	575
08:15 AM	17	131	17	165	62	120	22	204	7	**47**	**31**	**85**	**5**	52	15	**72**	526
Total Volume	117	556	69	742	278	556	87	921	25	144	86	255	7	191	55	253	2171
% App. Total	15.8	74.9	9.3		30.2	60.4	9.4		9.8	56.5	33.7		2.8	75.5	21.7		
PHF	.713	.799	.750	.817	.772	.869	.870	.925	.893	.766	.694	.750	.350	.838	.809	.878	.917

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City of Highland
N/S: Palm Avenue
E/W: 5th Street
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File Name : 77_HLD_Palm_5th AM
Site Code : 99918385
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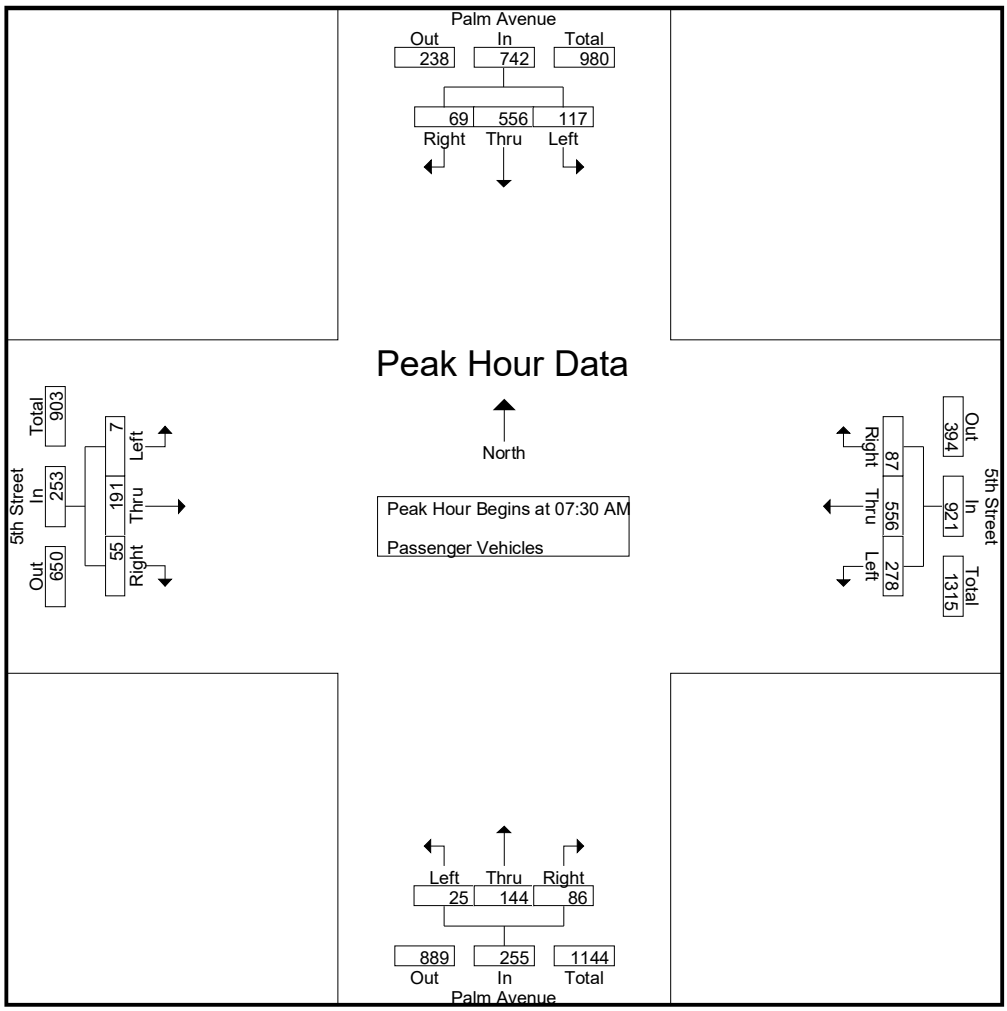

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**41**	112	10	163	55	140	**25**	220	**7**	27	12	46	1	36	12	49
+15 mins.	30	**174**	**23**	**227**	71	**160**	17	248	5	29	15	49	0	**57**	11	68
+30 mins.	29	139	19	187	**90**	136	23	**249**	6	41	28	75	1	46	**17**	64
+45 mins.	17	131	17	165	62	120	22	204	7	**47**	**31**	**85**	**5**	52	15	**72**
Total Volume	117	556	69	742	278	556	87	921	25	144	86	255	7	191	55	253
% App. Total	15.8	74.9	9.3		30.2	60.4	9.4		9.8	56.5	33.7		2.8	75.5	21.7	
PHF	.713	.799	.750	.817	.772	.869	.870	.925	.893	.766	.694	.750	.350	.838	.809	.878

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N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 77_HLD_Palm_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:15 AM	2	0	0	2	0	1	0	1	0	0	1	1	1	1	0	2	6
06:30 AM	2	1	1	4	1	0	1	2	1	0	3	4	1	3	0	4	14
06:45 AM	0	1	0	1	1	0	0	1	0	2	3	5	0	3	0	3	10
Total	4	3	1	8	2	1	1	4	1	2	7	10	2	7	0	9	31
07:00 AM	0	0	1	1	3	2	0	5	0	2	0	2	0	1	0	1	9
07:15 AM	2	0	1	3	0	1	0	1	0	2	2	4	1	1	0	2	10
07:30 AM	1	3	1	5	0	0	0	0	1	0	1	2	0	0	0	0	7
07:45 AM	0	3	0	3	1	0	1	2	1	0	1	2	1	1	1	3	10
Total	3	6	3	12	4	3	1	8	2	4	4	10	2	3	1	6	36
08:00 AM	3	1	0	4	1	1	0	2	0	1	3	4	0	0	0	0	10
08:15 AM	0	3	1	4	2	2	0	4	2	2	3	7	1	1	0	2	17
08:30 AM	2	1	1	4	1	1	0	2	0	1	2	3	0	1	0	1	10
08:45 AM	1	3	1	5	1	2	0	3	0	0	3	3	1	2	0	3	14
Total	6	8	3	17	5	6	0	11	2	4	11	17	2	4	0	6	51
Grand Total	13	17	7	37	11	10	2	23	5	10	22	37	6	14	1	21	118
Apprch %	35.1	45.9	18.9		47.8	43.5	8.7		13.5	27	59.5		28.6	66.7	4.8		
Total %	11	14.4	5.9	31.4	9.3	8.5	1.7	19.5	4.2	8.5	18.6	31.4	5.1	11.9	0.8	17.8	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	**3**	**1**	**5**	0	0	0	0	1	0	1	2	0	0	0	0	7
07:45 AM	0	3	0	3	1	0	**1**	2	1	0	1	2	**1**	**1**	**1**	**3**	10
08:00 AM	**3**	1	0	4	1	1	0	2	0	1	**3**	4	0	0	0	0	10
08:15 AM	0	3	1	4	**2**	**2**	0	**4**	**2**	**2**	3	**7**	1	1	0	2	**17**
Total Volume	4	10	2	16	4	3	1	8	4	3	8	15	2	2	1	5	44
% App. Total	25	62.5	12.5		50	37.5	12.5		26.7	20	53.3		40	40	20		
PHF	.333	.833	.500	.800	.500	.375	.250	.500	.500	.375	.667	.536	.500	.500	.250	.417	.647

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City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 77_HLD_Palm_5th AM
Site Code : 99918385
Start Date : 5/1/2018
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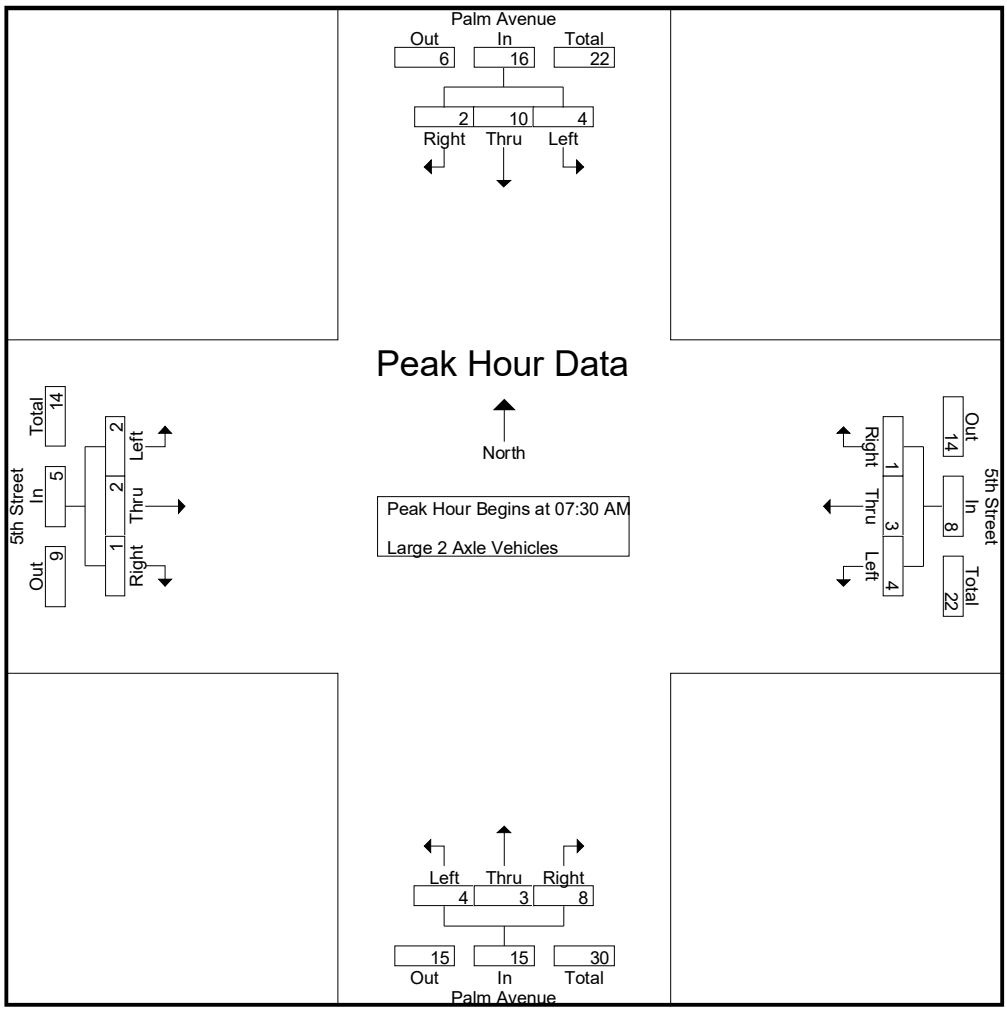

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	1	**3**	**1**	**5**	0	0	0	0	1	0	1	2	0	0	0	0
+15 mins.	0	3	0	3	1	0	**1**	2	1	0	1	2	**1**	**1**	**1**	**3**
+30 mins.	**3**	1	0	4	1	1	0	2	0	1	**3**	4	0	0	0	0
+45 mins.	0	3	1	4	**2**	**2**	0	**4**	**2**	**2**	3	**7**	1	1	0	2
Total Volume	4	10	2	16	4	3	1	8	4	3	8	15	2	2	1	5
% App. Total	25	62.5	12.5		50	37.5	12.5		26.7	20	53.3		40	40	20	
PHF	.333	.833	.500	.800	.500	.375	.250	.500	.500	.375	.667	.536	.500	.500	.250	.417

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Weather: Clear

File Name : 77_HLD_Palm_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	2	1	0	3	0	0	3	3	0	0	0	0	6
06:15 AM	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	5
06:30 AM	0	0	0	0	1	0	0	1	0	0	2	2	0	0	0	0	3
06:45 AM	0	0	0	0	2	1	0	3	0	0	4	4	0	0	0	0	7
Total	0	0	0	0	5	2	0	7	0	0	14	14	0	0	0	0	21
07:00 AM	0	0	0	0	1	0	0	1	1	0	9	10	0	1	0	1	12
07:15 AM	0	0	0	0	1	0	0	1	0	0	11	11	0	2	0	2	14
07:30 AM	0	0	0	0	3	0	0	3	0	0	10	10	0	1	0	1	14
07:45 AM	0	2	0	2	0	1	1	2	0	0	11	11	0	0	0	0	15
Total	0	2	0	2	5	1	1	7	1	0	41	42	0	4	0	4	55
08:00 AM	0	0	0	0	2	0	0	2	0	0	9	9	0	1	1	2	13
08:15 AM	0	0	0	0	2	0	0	2	0	0	6	6	0	0	0	0	8
08:30 AM	0	0	0	0	7	0	0	7	0	1	7	8	0	0	0	0	15
08:45 AM	0	0	0	0	3	0	0	3	1	0	7	8	0	0	0	0	11
Total	0	0	0	0	14	0	0	14	1	1	29	31	0	1	1	2	47
Grand Total	0	2	0	2	24	3	1	28	2	1	84	87	0	5	1	6	123
Apprch %	0	100	0		85.7	10.7	3.6		2.3	1.1	96.6		0	83.3	16.7		
Total %	0	1.6	0	1.6	19.5	2.4	0.8	22.8	1.6	0.8	68.3	70.7	0	4.1	0.8	4.9	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	**3**	0	0	**3**	0	0	10	10	0	**1**	0	1	14
07:45 AM	0	**2**	0	**2**	0	**1**	**1**	2	0	0	**11**	**11**	0	0	0	0	**15**
08:00 AM	0	0	0	0	2	0	0	2	0	0	9	9	0	1	**1**	**2**	13
08:15 AM	0	0	0	0	2	0	0	2	0	0	6	6	0	0	0	0	8
Total Volume	0	2	0	2	7	1	1	9	0	0	36	36	0	2	1	3	50
% App. Total	0	100	0		77.8	11.1	11.1		0	0	100		0	66.7	33.3		
PHF	.000	.250	.000	.250	.583	.250	.250	.750	.000	.000	.818	.818	.000	.500	.250	.375	.833

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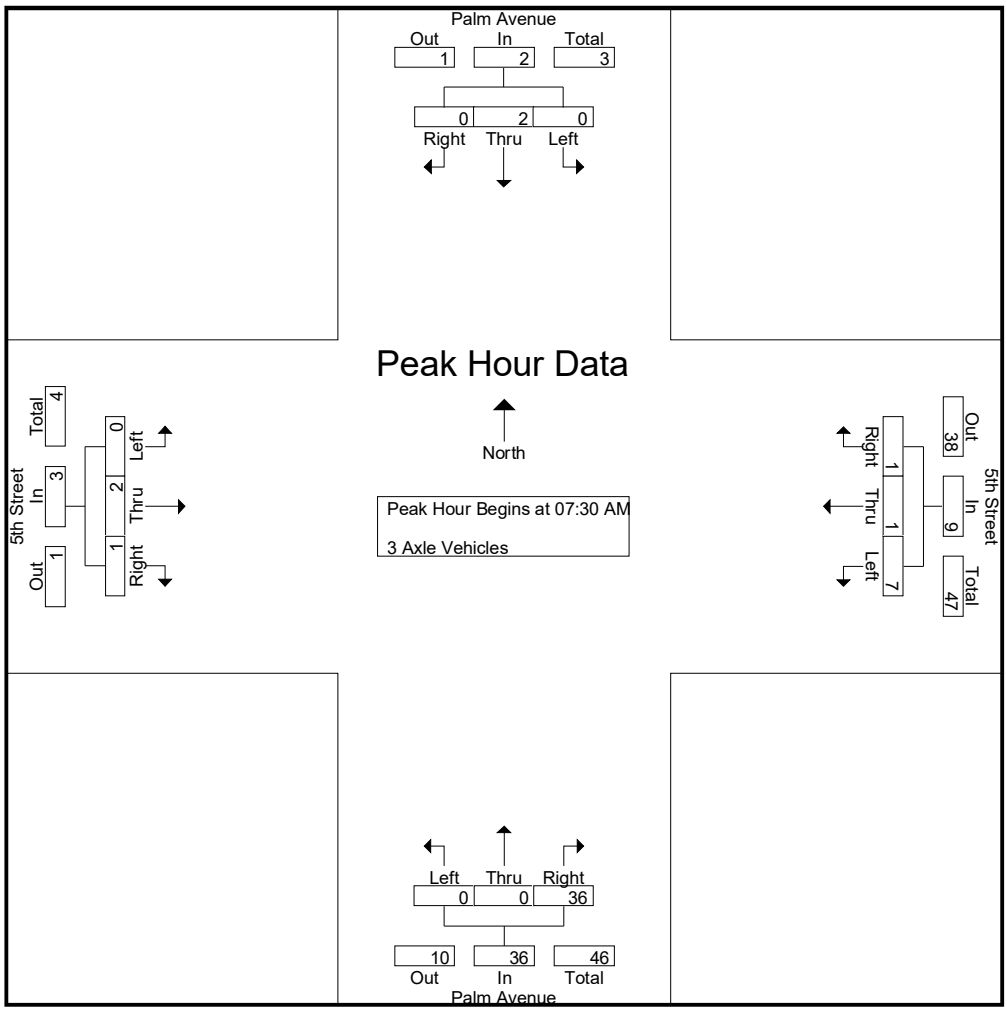

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	**3**	0	0	**3**	0	0	10	10	0	**1**	0	1
+15 mins.	0	**2**	0	**2**	0	**1**	**1**	2	0	0	**11**	**11**	0	0	0	0
+30 mins.	0	0	0	0	2	0	0	2	0	0	9	9	0	1	**1**	**2**
+45 mins.	0	0	0	0	2	0	0	2	0	0	6	6	0	0	0	0
Total Volume	0	2	0	2	7	1	1	9	0	0	36	36	0	2	1	3
% App. Total	0	100	0		77.8	11.1	11.1		0	0	100		0	66.7	33.3	
PHF	.000	.250	.000	.250	.583	.250	.250	.750	.000	.000	.818	.818	.000	.500	.250	.375

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Groups Printed- 4+ Axle Trucks

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	2	0	0	2	0	0	7	7	0	3	0	3	12
06:15 AM	0	0	0	0	3	0	0	3	0	0	6	6	0	0	0	0	9
06:30 AM	0	0	0	0	0	1	0	1	0	0	4	4	0	1	0	1	6
06:45 AM	2	0	0	2	3	2	0	5	0	0	3	3	0	0	0	0	10
Total	2	0	0	2	8	3	0	11	0	0	20	20	0	4	0	4	37
07:00 AM	0	0	0	0	3	0	0	3	0	0	4	4	0	0	0	0	7
07:15 AM	0	0	0	0	2	0	0	2	0	0	6	6	0	0	0	0	8
07:30 AM	0	0	0	0	5	0	0	5	0	0	5	5	0	0	0	0	10
07:45 AM	0	0	0	0	6	0	0	6	0	0	7	7	0	1	1	2	15
Total	0	0	0	0	16	0	0	16	0	0	22	22	0	1	1	2	40
08:00 AM	0	0	0	0	1	1	0	2	0	0	6	6	0	0	0	0	8
08:15 AM	0	1	0	1	6	0	0	6	0	0	4	4	0	0	0	0	11
08:30 AM	0	1	0	1	6	2	0	8	0	0	3	3	0	1	0	1	13
08:45 AM	1	0	0	1	7	1	0	8	0	0	8	8	0	1	0	1	18
Total	1	2	0	3	20	4	0	24	0	0	21	21	0	2	0	2	50
Grand Total	3	2	0	5	44	7	0	51	0	0	63	63	0	7	1	8	127
Apprch %	60	40	0		86.3	13.7	0		0	0	100		0	87.5	12.5		
Total %	2.4	1.6	0	3.9	34.6	5.5	0	40.2	0	0	49.6	49.6	0	5.5	0.8	6.3	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	5	0	0	5	0	0	5	5	0	0	0	0	10
07:45 AM	0	0	0	0	**6**	0	0	**6**	0	0	**7**	**7**	0	**1**	**1**	**2**	**15**
08:00 AM	0	0	0	0	1	**1**	0	2	0	0	6	6	0	0	0	0	8
08:15 AM	0	**1**	0	**1**	6	0	0	6	0	0	4	4	0	0	0	0	11
Total Volume	0	1	0	1	18	1	0	19	0	0	22	22	0	1	1	2	44
% App. Total	0	100	0		94.7	5.3	0		0	0	100		0	50	50		
PHF	.000	.250	.000	.250	.750	.250	.000	.792	.000	.000	.786	.786	.000	.250	.250	.250	.733

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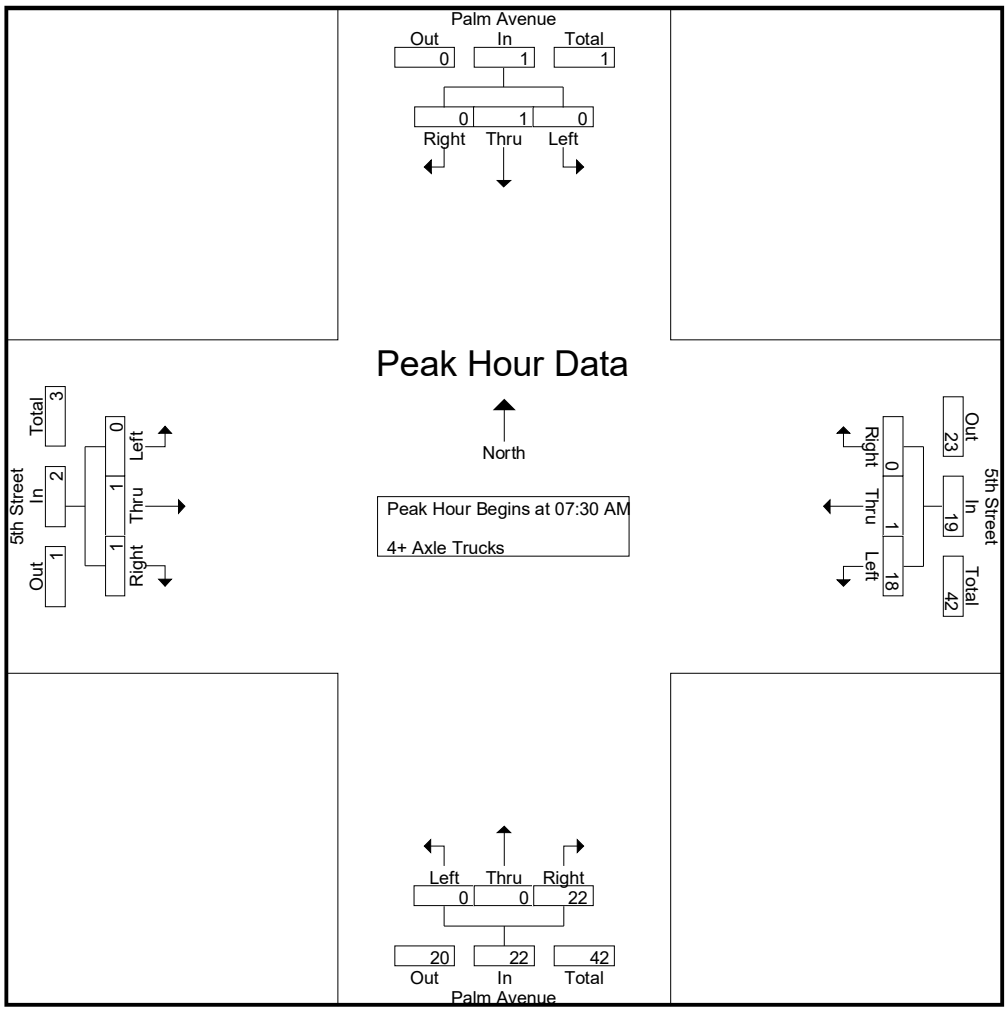

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	5	0	0	5	0	0	5	5	0	0	0	0
+15 mins.	0	0	0	0	**6**	0	0	**6**	0	0	**7**	**7**	0	**1**	**1**	**2**
+30 mins.	0	0	0	0	1	**1**	0	2	0	0	6	6	0	0	0	0
+45 mins.	0	**1**	0	**1**	6	0	0	6	0	0	4	4	0	0	0	0
Total Volume	0	1	0	1	18	1	0	19	0	0	22	22	0	1	1	2
% App. Total	0	100	0		94.7	5.3	0		0	0	100		0	50	50	
PHF	.000	.250	.000	.250	.750	.250	.000	.792	.000	.000	.786	.786	.000	.250	.250	.250

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City of Highland
N/S: Palm Avenue
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File Name : 77_HLD_Palm_5th PM
Site Code : 99918385
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	27	49	4	80	34	55	39	128	18	78	52	148	3	87	17	107	463
03:15 PM	30	37	8	75	31	64	31	126	13	92	77	182	6	60	6	72	455
03:30 PM	27	40	3	70	44	56	31	131	15	68	62	145	2	67	6	75	421
03:45 PM	32	47	7	86	37	70	34	141	16	85	84	185	10	93	18	121	533
Total	116	173	22	311	146	245	135	526	62	323	275	660	21	307	47	375	1872
04:00 PM	38	57	7	102	44	57	48	149	31	134	93	258	16	106	16	138	647
04:15 PM	57	51	14	122	40	61	32	133	23	104	91	218	12	128	12	152	625
04:30 PM	40	55	5	100	40	57	23	120	20	132	112	264	14	125	13	152	636
04:45 PM	39	71	10	120	47	50	42	139	22	133	120	275	20	187	17	224	758
Total	174	234	36	444	171	225	145	541	96	503	416	1015	62	546	58	666	2666
05:00 PM	40	68	2	110	31	60	39	130	18	154	106	278	18	132	11	161	679
05:15 PM	48	46	8	102	47	57	23	127	20	145	138	303	21	223	19	263	795
05:30 PM	45	60	8	113	36	70	27	133	25	130	141	296	9	147	13	169	711
05:45 PM	36	57	6	99	38	58	57	153	26	118	99	243	10	110	16	136	631
Total	169	231	24	424	152	245	146	543	89	547	484	1120	58	612	59	729	2816
Grand Total	459	638	82	1179	469	715	426	1610	247	1373	1175	2795	141	1465	164	1770	7354
Apprch %	38.9	54.1	7		29.1	44.4	26.5		8.8	49.1	42		8	82.8	9.3		
Total %	6.2	8.7	1.1	16	6.4	9.7	5.8	21.9	3.4	18.7	16	38	1.9	19.9	2.2	24.1	
Passenger Vehicles	452	633	76	1161	407	690	420	1517	240	1363	1113	2716	133	1437	160	1730	7124
% Passenger Vehicles	98.5	99.2	92.7	98.5	86.8	96.5	98.6	94.2	97.2	99.3	94.7	97.2	94.3	98.1	97.6	97.7	96.9
Large 2 Axle Vehicles	6	4	6	16	14	17	2	33	3	5	15	23	7	20	1	28	100
% Large 2 Axle Vehicles	1.3	0.6	7.3	1.4	3	2.4	0.5	2	1.2	0.4	1.3	0.8	5	1.4	0.6	1.6	1.4
3 Axle Vehicles	0	0	0	0	16	1	0	17	1	2	7	10	1	2	1	4	31
% 3 Axle Vehicles	0	0	0	0	3.4	0.1	0	1.1	0.4	0.1	0.6	0.4	0.7	0.1	0.6	0.2	0.4
4+ Axle Trucks	1	1	0	2	32	7	4	43	3	3	40	46	0	6	2	8	99
% 4+ Axle Trucks	0.2	0.2	0	0.2	6.8	1	0.9	2.7	1.2	0.2	3.4	1.6	0	0.4	1.2	0.5	1.3

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	39	**71**	**10**	**120**	**47**	50	**42**	**139**	22	133	120	275	20	187	17	224	758
05:00 PM	40	68	2	110	31	60	39	130	18	**154**	106	278	18	132	11	161	679
05:15 PM	**48**	46	8	102	47	57	23	127	20	145	138	**303**	**21**	**223**	**19**	**263**	**795**
05:30 PM	45	60	8	113	36	**70**	27	133	**25**	130	**141**	296	9	147	13	169	711
Total Volume	172	245	28	445	161	237	131	529	85	562	505	1152	68	689	60	817	2943
% App. Total	38.7	55.1	6.3		30.4	44.8	24.8		7.4	48.8	43.8		8.3	84.3	7.3		
PHF	.896	.863	.700	.927	.856	.846	.780	.951	.850	.912	.895	.950	.810	.772	.789	.777	.925

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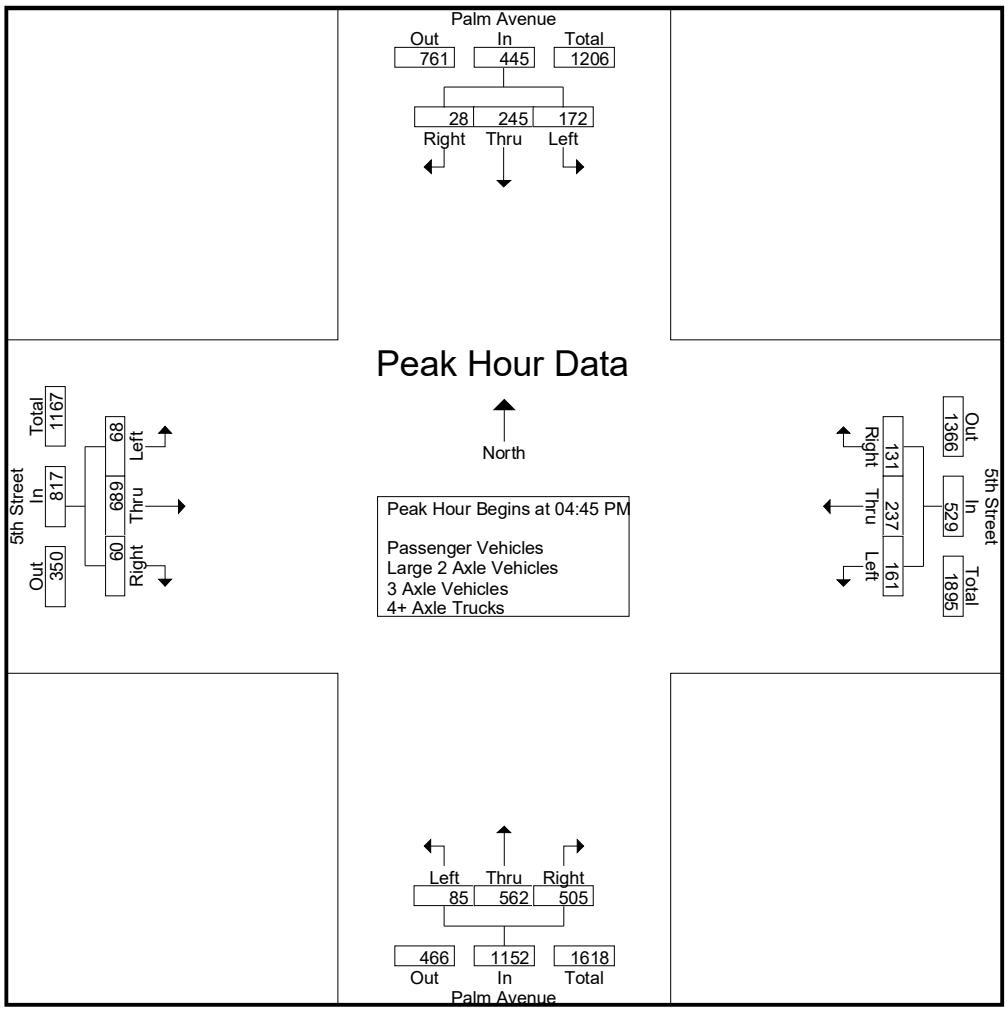

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				03:30 PM				04:45 PM				04:45 PM			
+0 mins.	**57**	51	**14**	**122**	**44**	56	31	131	22	133	120	275	20	187	17	224
+15 mins.	40	55	5	100	37	**70**	34	141	18	**154**	106	278	18	132	11	161
+30 mins.	39	**71**	10	120	44	57	**48**	**149**	20	145	138	**303**	**21**	**223**	**19**	**263**
+45 mins.	40	68	2	110	40	61	32	133	**25**	130	**141**	296	9	147	13	169
Total Volume	176	245	31	452	165	244	145	554	85	562	505	1152	68	689	60	817
% App. Total	38.9	54.2	6.9		29.8	44	26.2		7.4	48.8	43.8		8.3	84.3	7.3	
PHF	.772	.863	.554	.926	.938	.871	.755	.930	.850	.912	.895	.950	.810	.772	.789	.777

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City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 77_HLD_Palm_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	25	49	4	78	29	54	37	120	18	78	45	141	3	84	17	104	443
03:15 PM	30	35	7	72	21	62	30	113	12	91	72	175	5	60	6	71	431
03:30 PM	27	40	3	70	39	53	30	122	15	68	57	140	1	63	6	70	402
03:45 PM	31	47	6	84	30	67	34	131	16	85	79	180	9	92	18	119	514
Total	113	171	20	304	119	236	131	486	61	322	253	636	18	299	47	364	1790
04:00 PM	38	57	7	102	39	56	47	142	29	134	88	251	16	103	15	134	629
04:15 PM	56	51	13	120	35	59	32	126	22	104	85	211	12	127	11	150	607
04:30 PM	40	54	5	99	35	54	23	112	20	128	103	251	12	122	12	146	608
04:45 PM	38	70	9	117	41	50	42	133	22	132	115	269	19	187	17	223	742
Total	172	232	34	438	150	219	144	513	93	498	391	982	59	539	55	653	2586
05:00 PM	40	68	2	110	26	57	38	121	17	152	101	270	18	128	11	157	658
05:15 PM	47	46	7	100	44	55	23	122	19	144	134	297	20	219	19	258	777
05:30 PM	45	60	8	113	33	66	27	126	25	129	138	292	9	146	13	168	699
05:45 PM	35	56	5	96	35	57	57	149	25	118	96	239	9	106	15	130	614
Total	167	230	22	419	138	235	145	518	86	543	469	1098	56	599	58	713	2748
Grand Total	452	633	76	1161	407	690	420	1517	240	1363	1113	2716	133	1437	160	1730	7124
Apprch %	38.9	54.5	6.5		26.8	45.5	27.7		8.8	50.2	41		7.7	83.1	9.2		
Total %	6.3	8.9	1.1	16.3	5.7	9.7	5.9	21.3	3.4	19.1	15.6	38.1	1.9	20.2	2.2	24.3	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	38	**70**	**9**	**117**	41	50	**42**	**133**	22	132	115	269	19	187	17	223	742
05:00 PM	40	68	2	110	26	57	38	121	17	**152**	101	270	18	128	11	157	658
05:15 PM	**47**	46	7	100	**44**	55	23	122	19	144	134	**297**	**20**	**219**	**19**	**258**	**777**
05:30 PM	45	60	8	113	33	**66**	27	126	**25**	129	**138**	292	9	146	13	168	699
Total Volume	170	244	26	440	144	228	130	502	83	557	488	1128	66	680	60	806	2876
% App. Total	38.6	55.5	5.9		28.7	45.4	25.9		7.4	49.4	43.3		8.2	84.4	7.4		
PHF	.904	.871	.722	.940	.818	.864	.774	.944	.830	.916	.884	.949	.825	.776	.789	.781	.925

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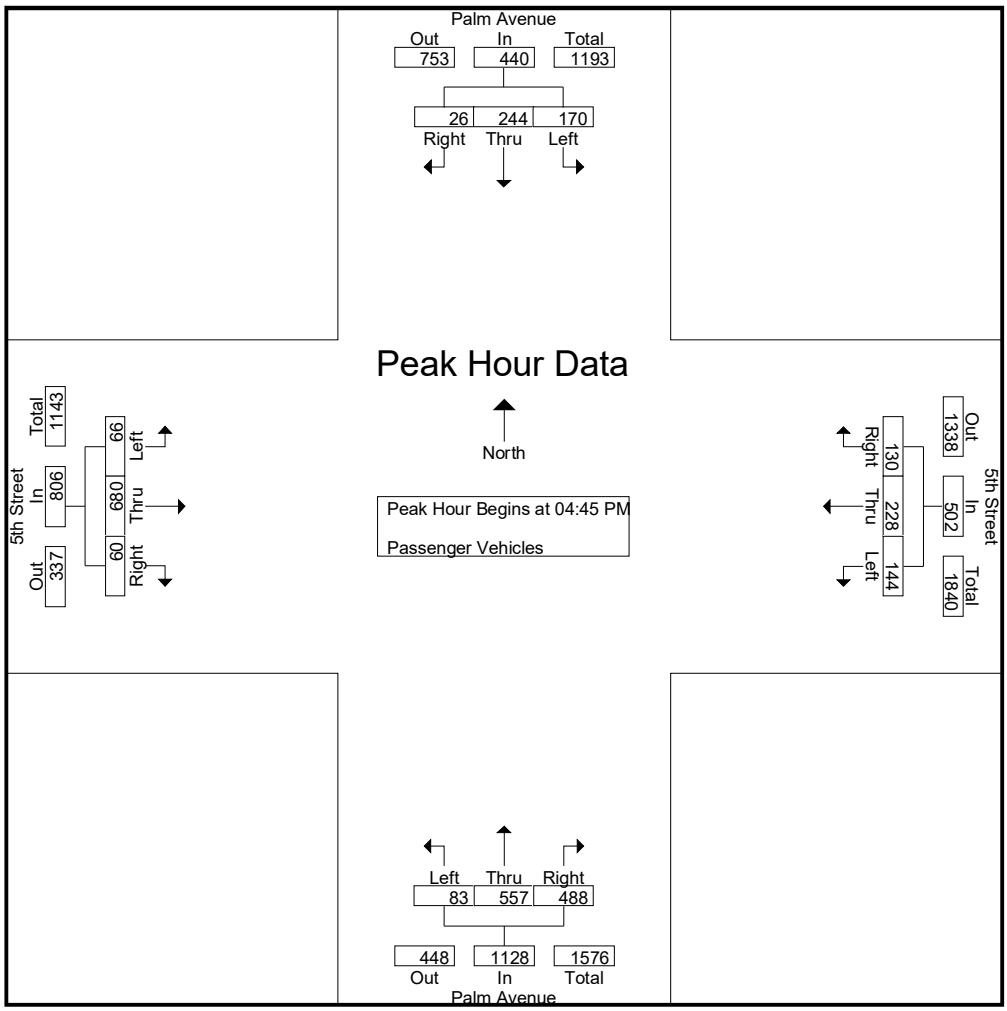
File Name : 77_HLD_Palm_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	38	**70**	**9**	**117**	41	50	**42**	**133**	22	132	115	269	19	187	17	223
+15 mins.	40	68	2	110	26	57	38	121	17	**152**	101	270	18	128	11	157
+30 mins.	**47**	46	7	100	**44**	55	23	122	19	144	134	**297**	**20**	**219**	**19**	**258**
+45 mins.	45	60	8	113	33	**66**	27	126	**25**	129	**138**	292	9	146	13	168
Total Volume	170	244	26	440	144	228	130	502	83	557	488	1128	66	680	60	806
% App. Total	38.6	55.5	5.9		28.7	45.4	25.9		7.4	49.4	43.3		8.2	84.4	7.4	
PHF	.904	.871	.722	.940	.818	.864	.774	.944	.830	.916	.884	.949	.825	.776	.789	.781

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City of Highland
N/S: Palm Avenue
E/W: 5th Street
Weather: Clear

File Name : 77_HLD_Palm_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	2	0	0	2	3	1	0	4	0	0	1	1	0	2	0	2	9
03:15 PM	0	2	1	3	3	1	0	4	0	0	3	3	0	0	0	0	10
03:30 PM	0	0	0	0	0	3	1	4	0	0	1	1	1	4	0	5	10
03:45 PM	1	0	1	2	1	2	0	3	0	0	3	3	1	1	0	2	10
Total	3	2	2	7	7	7	1	15	0	0	8	8	2	7	0	9	39
04:00 PM	0	0	0	0	2	1	0	3	1	0	0	1	0	1	0	1	5
04:15 PM	0	0	1	1	1	1	0	2	0	0	1	1	0	1	0	1	5
04:30 PM	0	0	0	0	1	3	0	4	0	3	2	5	2	1	1	4	13
04:45 PM	1	1	1	3	1	0	0	1	0	0	0	0	1	0	0	1	5
Total	1	1	2	4	5	5	0	10	1	3	3	7	3	3	1	7	28
05:00 PM	0	0	0	0	0	1	1	2	0	1	2	3	0	2	0	2	7
05:15 PM	1	0	1	2	1	1	0	2	1	0	1	2	1	4	0	5	11
05:30 PM	0	0	0	0	0	3	0	3	0	1	1	2	0	1	0	1	6
05:45 PM	1	1	1	3	1	0	0	1	1	0	0	1	1	3	0	4	9
Total	2	1	2	5	2	5	1	8	2	2	4	8	2	10	0	12	33
Grand Total	6	4	6	16	14	17	2	33	3	5	15	23	7	20	1	28	100
Apprch %	37.5	25	37.5		42.4	51.5	6.1		13	21.7	65.2		25	71.4	3.6		
Total %	6	4	6	16	14	17	2	33	3	5	15	23	7	20	1	28	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	**1**	**1**	**3**	**1**	0	0	1	0	0	0	0	**1**	0	0	1	5
05:00 PM	0	0	0	0	0	1	**1**	2	0	**1**	**2**	**3**	0	2	0	2	7
05:15 PM	1	0	1	2	1	1	0	2	**1**	0	1	2	1	**4**	0	**5**	**11**
05:30 PM	0	0	0	0	0	**3**	0	**3**	0	1	1	2	0	1	0	1	6
Total Volume	2	1	2	5	2	5	1	8	1	2	4	7	2	7	0	9	29
% App. Total	40	20	40		25	62.5	12.5		14.3	28.6	57.1		22.2	77.8	0		
PHF	.500	.250	.500	.417	.500	.417	.250	.667	.250	.500	.500	.583	.500	.438	.000	.450	.659

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Site Code : 99918385
Start Date : 5/1/2018
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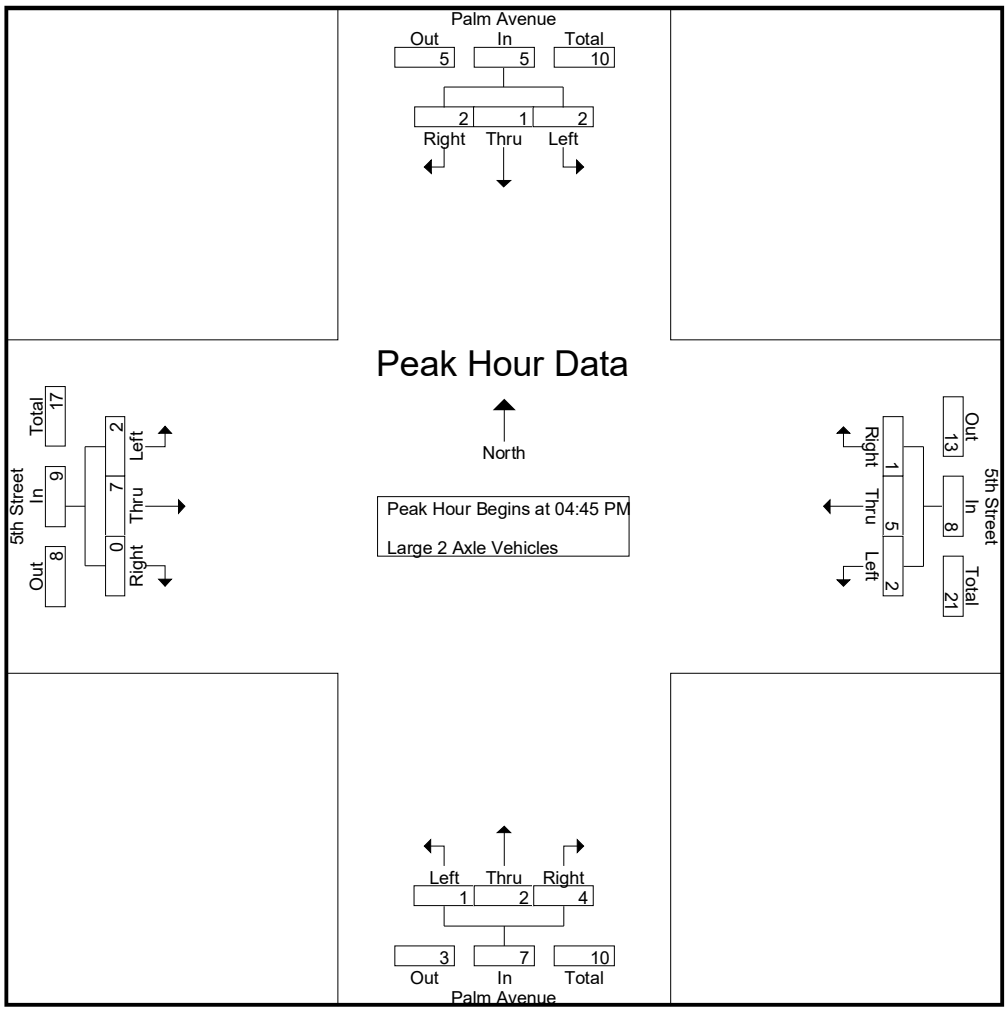

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	**1**	**1**	**3**	**1**	0	0	1	0	0	0	0	**1**	0	0	1
+15 mins.	0	0	0	0	0	1	**1**	2	0	**1**	**2**	**3**	0	2	0	2
+30 mins.	1	0	1	2	1	1	0	2	**1**	0	1	2	1	**4**	0	**5**
+45 mins.	0	0	0	0	0	**3**	0	**3**	0	1	1	2	0	1	0	1
Total Volume	2	1	2	5	2	5	1	8	1	2	4	7	2	7	0	9
% App. Total	40	20	40		25	62.5	12.5		14.3	28.6	57.1		22.2	77.8	0	
PHF	.500	.250	.500	.417	.500	.417	.250	.667	.250	.500	.500	.583	.500	.438	.000	.450

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File Name : 77_HLD_Palm_5th PM
Site Code : 99918385
Start Date : 5/1/2018

Groups Printed- 3 Axle Vehicles

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
03:30 PM	0	0	0	0	2	0	0	2	0	0	2	2	0	0	0	0	4
03:45 PM	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	6	0	0	6	0	0	3	3	1	0	0	1	10
04:00 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	1	1	2	4
04:15 PM	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	2
04:30 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
04:45 PM	0	0	0	0	2	0	0	2	0	1	0	1	0	0	0	0	3
Total	0	0	0	0	6	0	0	6	1	1	1	3	0	1	1	2	11
05:00 PM	0	0	0	0	3	1	0	4	0	1	2	3	0	0	0	0	7
05:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	4	1	0	5	0	1	3	4	0	1	0	1	10
Grand Total	0	0	0	0	16	1	0	17	1	2	7	10	1	2	1	4	31
Apprch %	0	0	0		94.1	5.9	0		10	20	70		25	50	25		
Total %	0	0	0	0	51.6	3.2	0	54.8	3.2	6.5	22.6	32.3	3.2	6.5	3.2	12.9	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	2	0	0	2	0	**1**	0	1	0	0	0	0	3
05:00 PM	0	0	0	0	**3**	**1**	0	**4**	0	1	**2**	**3**	0	0	0	0	**7**
05:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	6	1	0	7	0	2	3	5	0	0	0	0	12
% App. Total	0	0	0		85.7	14.3	0		0	40	60		0	0	0		
PHF	.000	.000	.000	.000	.500	.250	.000	.438	.000	.500	.375	.417	.000	.000	.000	.000	.429

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City of Highland
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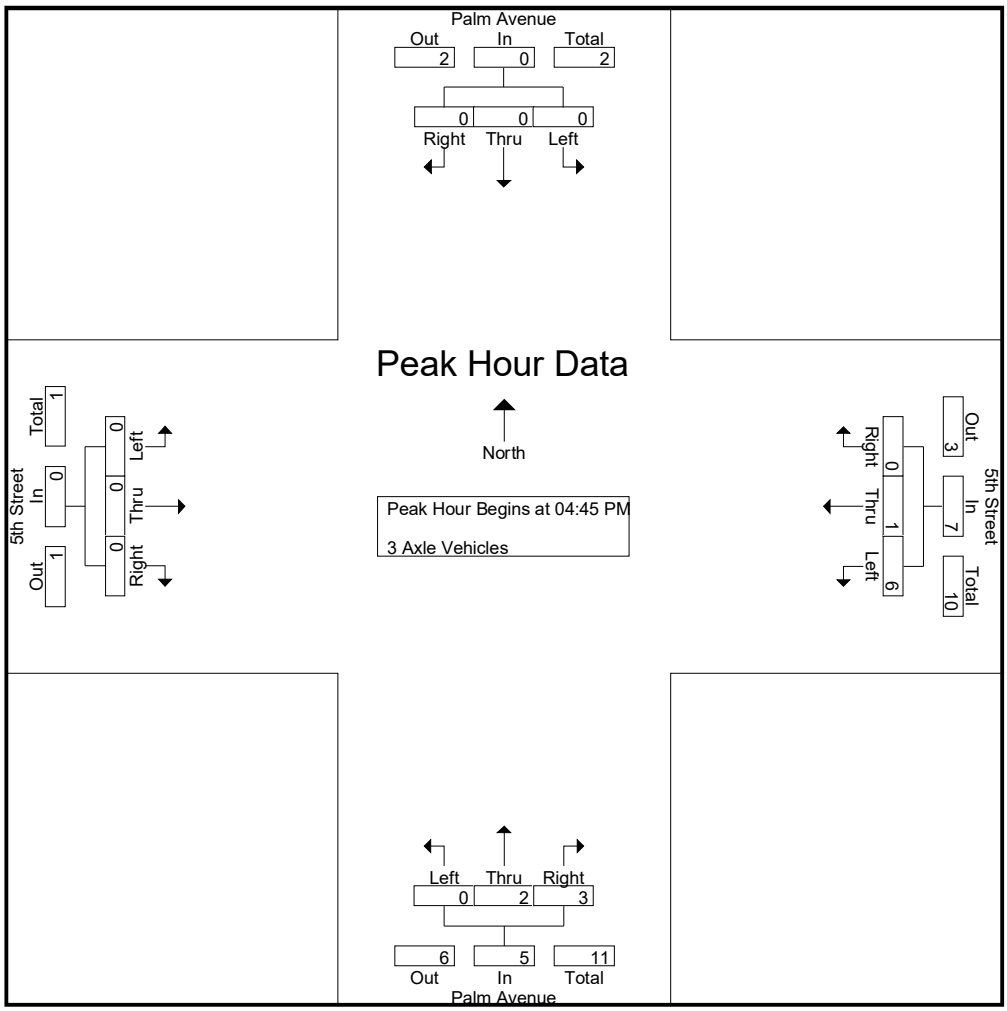
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	2	0	0	2	0	**1**	0	1	0	0	0	0
+15 mins.	0	0	0	0	**3**	**1**	0	**4**	0	1	**2**	**3**	0	0	0	0
+30 mins.	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	6	1	0	7	0	2	3	5	0	0	0	0
% App. Total	0	0	0		85.7	14.3	0		0	40	60		0	0	0	
PHF	.000	.000	.000	.000	.500	.250	.000	.438	.000	.500	.375	.417	.000	.000	.000	.000

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File Name : 77_HLD_Palm_5th PM
Site Code : 99918385
Start Date : 5/1/2018

Groups Printed- 4+ Axle Trucks

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	1	0	2	3	0	0	5	5	0	1	0	1	9
03:15 PM	0	0	0	0	7	1	1	9	1	1	2	4	0	0	0	0	13
03:30 PM	0	0	0	0	3	0	0	3	0	0	2	2	0	0	0	0	5
03:45 PM	0	0	0	0	3	1	0	4	0	0	2	2	0	0	0	0	6
Total	0	0	0	0	14	2	3	19	1	1	11	13	0	1	0	1	33
04:00 PM	0	0	0	0	1	0	1	2	1	0	5	6	0	1	0	1	9
04:15 PM	1	0	0	1	3	1	0	4	0	0	5	5	0	0	1	1	11
04:30 PM	0	1	0	1	3	0	0	3	0	1	6	7	0	2	0	2	13
04:45 PM	0	0	0	0	3	0	0	3	0	0	5	5	0	0	0	0	8
Total	1	1	0	2	10	1	1	12	1	1	21	23	0	3	1	4	41
05:00 PM	0	0	0	0	2	1	0	3	1	0	1	2	0	2	0	2	7
05:15 PM	0	0	0	0	1	1	0	2	0	1	2	3	0	0	0	0	5
05:30 PM	0	0	0	0	3	1	0	4	0	0	2	2	0	0	0	0	6
05:45 PM	0	0	0	0	2	1	0	3	0	0	3	3	0	0	1	1	7
Total	0	0	0	0	8	4	0	12	1	1	8	10	0	2	1	3	25
Grand Total	1	1	0	2	32	7	4	43	3	3	40	46	0	6	2	8	99
Apprch %	50	50	0		74.4	16.3	9.3		6.5	6.5	87		0	75	25		
Total %	1	1	0	2	32.3	7.1	4	43.4	3	3	40.4	46.5	0	6.1	2	8.1	

	Palm Avenue Southbound				5th Street Westbound				Palm Avenue Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	**3**	0	0	3	0	0	**5**	**5**	0	0	0	0	**8**
05:00 PM	0	0	0	0	2	**1**	0	3	**1**	0	1	2	0	**2**	0	**2**	7
05:15 PM	0	0	0	0	1	1	0	2	0	**1**	2	3	0	0	0	0	5
05:30 PM	0	0	0	0	3	1	0	**4**	0	0	2	2	0	0	0	0	6
Total Volume	0	0	0	0	9	3	0	12	1	1	10	12	0	2	0	2	26
% App. Total	0	0	0		75	25	0		8.3	8.3	83.3		0	100	0		
PHF	.000	.000	.000	.000	.750	.750	.000	.750	.250	.250	.500	.600	.000	.250	.000	.250	.813

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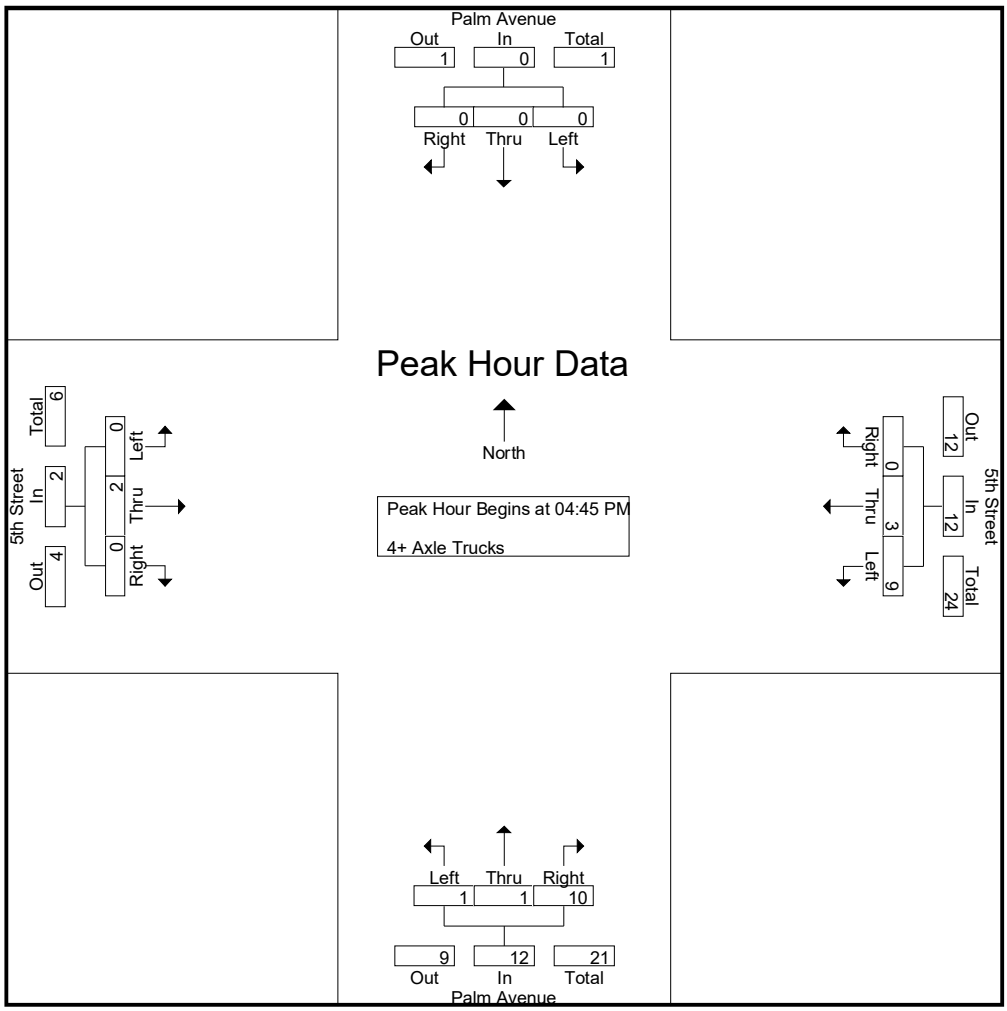

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	**3**	0	0	3	0	0	**5**	**5**	0	0	0	0
+15 mins.	0	0	0	0	2	**1**	0	3	**1**	0	1	2	0	**2**	0	**2**
+30 mins.	0	0	0	0	1	1	0	2	0	**1**	2	3	0	0	0	0
+45 mins.	0	0	0	0	3	1	0	**4**	0	0	2	2	0	0	0	0
Total Volume	0	0	0	0	9	3	0	12	1	1	10	12	0	2	0	2
% App. Total	0	0	0		75	25	0		8.3	8.3	83.3		0	100	0	
PHF	.000	.000	.000	.000	.750	.750	.000	.750	.250	.250	.500	.600	.000	.250	.000	.250

Counts Unlimited
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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

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

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	19	6	25	101	3	104	1	67	68	197
06:15 AM	10	9	19	97	4	101	1	56	57	177
06:30 AM	19	6	25	124	5	129	1	129	130	284
06:45 AM	28	10	38	182	7	189	4	88	92	319
Total	76	31	107	504	19	523	7	340	347	977
07:00 AM	20	8	28	203	12	215	3	125	128	371
07:15 AM	33	21	54	230	7	237	7	103	110	401
07:30 AM	37	23	60	224	16	240	6	102	108	408
07:45 AM	38	12	50	266	26	292	4	117	121	463
Total	128	64	192	923	61	984	20	447	467	1643
08:00 AM	43	27	70	213	20	233	5	113	118	421
08:15 AM	27	15	42	206	25	231	6	111	117	390
08:30 AM	28	15	43	167	30	197	10	127	137	377
08:45 AM	23	14	37	145	26	171	2	126	128	336
Total	121	71	192	731	101	832	23	477	500	1524
Grand Total	325	166	491	2158	181	2339	50	1264	1314	4144
Apprch %	66.2	33.8		92.3	7.7		3.8	96.2		
Total %	7.8	4	11.8	52.1	4.4	56.4	1.2	30.5	31.7	
Passenger Vehicles	320	165	485	2041	172	2213	48	1047	1095	3793
% Passenger Vehicles	98.5	99.4	98.8	94.6	95	94.6	96	82.8	83.3	91.5
Large 2 Axle Vehicles	5	1	6	40	4	44	1	50	51	101
% Large 2 Axle Vehicles										
3 Axle Vehicles	0	0	0	26	3	29	1	94	95	124
% 3 Axle Vehicles	0	0	0	1.2	1.7	1.2	2	7.4	7.2	3
4+ Axle Trucks	0	0	0	51	2	53	0	73	73	126
% 4+ Axle Trucks	0	0	0	2.4	1.1	2.3	0	5.8	5.6	3

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	33	21	54	230	7	237	**7**	103	110	401
07:30 AM	37	23	60	224	16	240	6	102	108	408
07:45 AM	38	12	50	**266**	**26**	**292**	4	**117**	**121**	**463**
08:00 AM	**43**	**27**	**70**	213	20	233	5	113	118	421
Total Volume	151	83	234	933	69	1002	22	435	457	1693
% App. Total	64.5	35.5		93.1	6.9		4.8	95.2		
PHF	.878	.769	.836	.877	.663	.858	.786	.929	.944	.914

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th AM
Site Code : 99918385
Start Date : 5/1/2018
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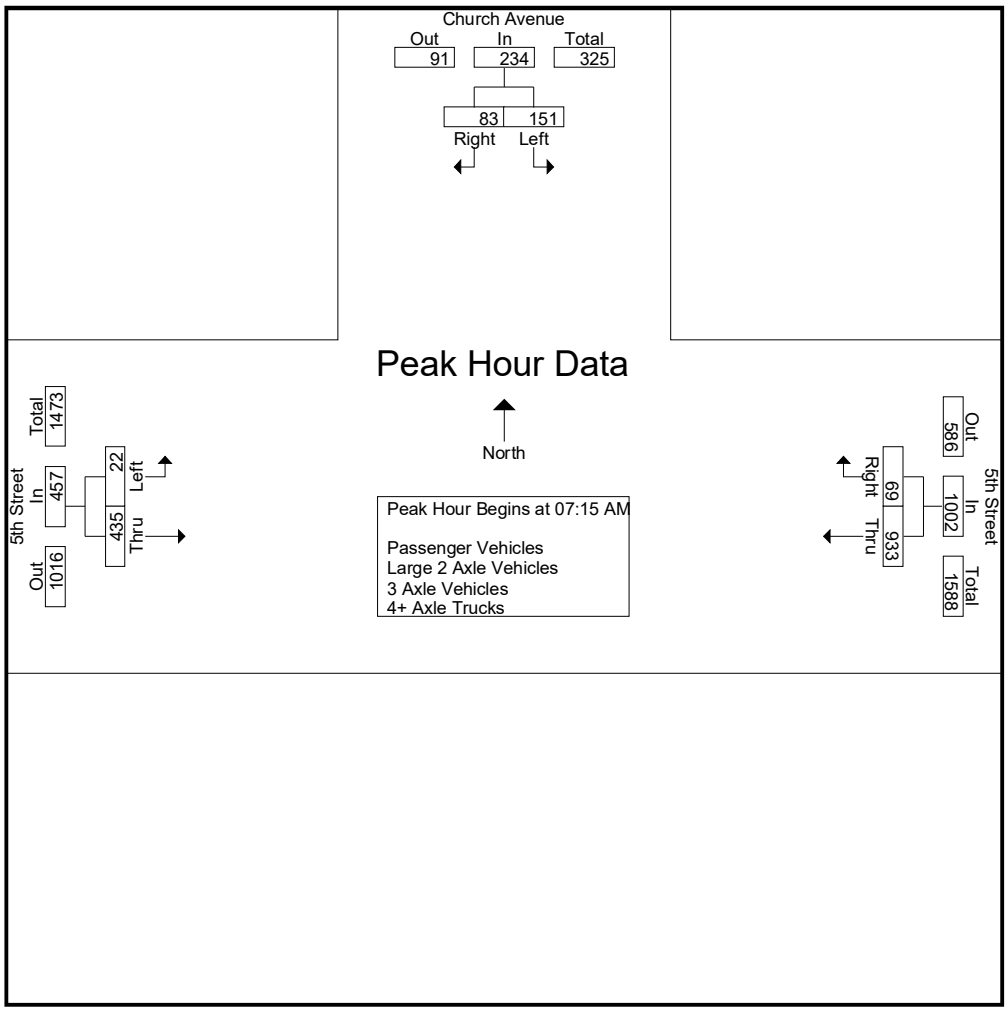

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			08:00 AM		
+0 mins.	33	21	54	230	7	237	5	113	118
+15 mins.	37	23	60	224	16	240	6	111	117
+30 mins.	38	12	50	**266**	**26**	**292**	**10**	**127**	**137**
+45 mins.	**43**	**27**	**70**	213	20	233	2	126	128
Total Volume	151	83	234	933	69	1002	23	477	500
% App. Total	64.5	35.5		93.1	6.9		4.6	95.4	
PHF	.878	.769	.836	.877	.663	.858	.575	.939	.912

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	19	6	25	96	3	99	1	61	62	186
06:15 AM	10	9	19	95	4	99	1	43	44	162
06:30 AM	19	6	25	120	3	123	1	100	101	249
06:45 AM	28	10	38	170	6	176	4	74	78	292
Total	76	31	107	481	16	497	7	278	285	889
07:00 AM	20	8	28	193	10	203	3	109	112	343
07:15 AM	32	21	53	223	6	229	5	81	86	368
07:30 AM	36	23	59	214	16	230	6	82	88	377
07:45 AM	38	12	50	255	26	281	4	93	97	428
Total	126	64	190	885	58	943	18	365	383	1516
08:00 AM	42	26	68	208	20	228	5	96	101	397
08:15 AM	26	15	41	185	23	208	6	93	99	348
08:30 AM	28	15	43	154	30	184	10	112	122	349
08:45 AM	22	14	36	128	25	153	2	103	105	294
Total	118	70	188	675	98	773	23	404	427	1388
Grand Total	320	165	485	2041	172	2213	48	1047	1095	3793
Apprch %	66	34		92.2	7.8		4.4	95.6		
Total %	8.4	4.4	12.8	53.8	4.5	58.3	1.3	27.6	28.9	

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	32	21	53	223	6	229	5	81	86	368
07:30 AM	36	23	59	214	16	230	**6**	82	88	377
07:45 AM	38	12	50	**255**	**26**	**281**	4	93	97	**428**
08:00 AM	**42**	**26**	**68**	208	20	228	5	**96**	**101**	397
Total Volume	148	82	230	900	68	968	20	352	372	1570
% App. Total	64.3	35.7		93	7		5.4	94.6		
PHF	.881	.788	.846	.882	.654	.861	.833	.917	.921	.917

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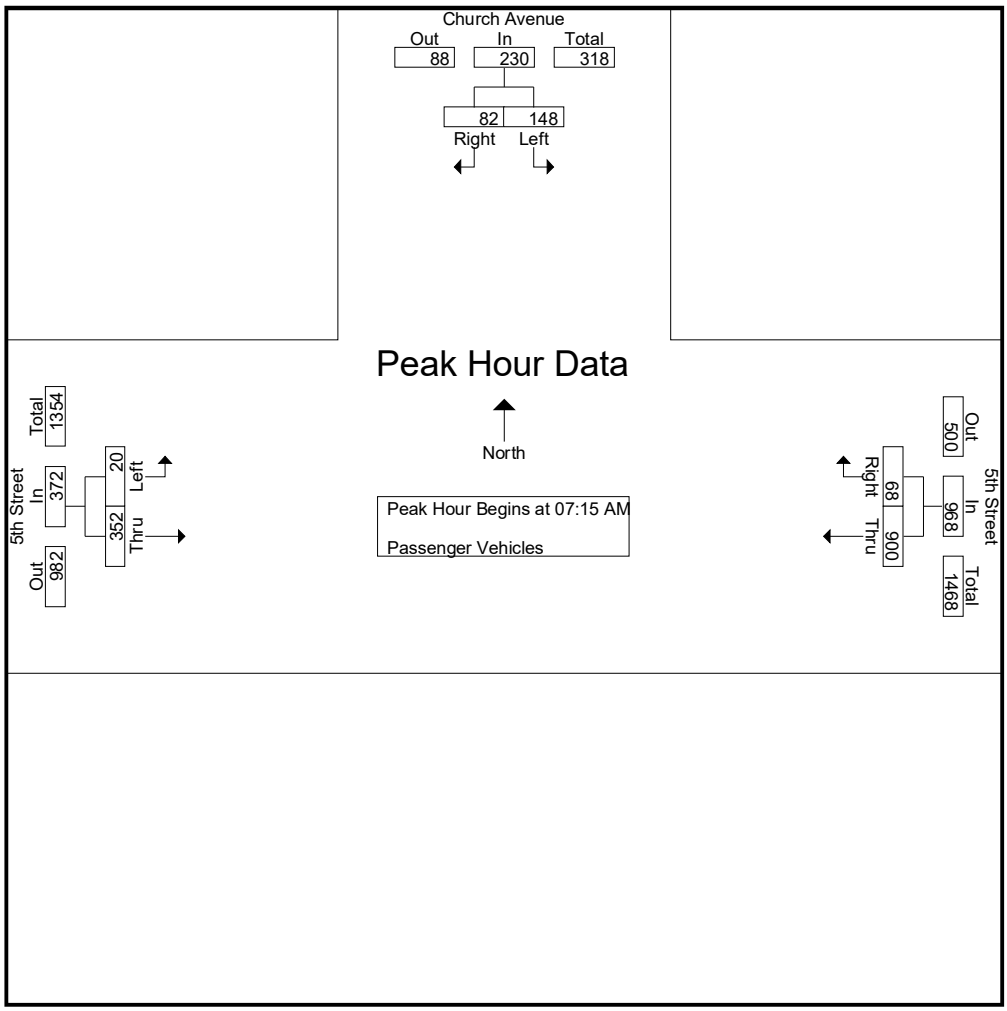
City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th AM
Site Code : 99918385
Start Date : 5/1/2018



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	32	21	53	223	6	229	5	81	86
+15 mins.	36	23	59	214	16	230	**6**	82	88
+30 mins.	38	12	50	**255**	**26**	**281**	4	93	97
+45 mins.	**42**	**26**	**68**	208	20	228	5	**96**	**101**
Total Volume	148	82	230	900	68	968	20	352	372
% App. Total	64.3	35.7		93	7		5.4	94.6	
PHF	.881	.788	.846	.882	.654	.861	.833	.917	.921

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	0	0	0	4	0	4	0	1	1	5
06:15 AM	0	0	0	0	0	0	0	7	7	7
06:30 AM	0	0	0	2	1	3	0	6	6	9
06:45 AM	0	0	0	9	0	9	0	3	3	12
Total	0	0	0	15	1	16	0	17	17	33
07:00 AM	0	0	0	4	1	5	0	2	2	7
07:15 AM	1	0	1	3	1	4	1	3	4	9
07:30 AM	1	0	1	3	0	3	0	2	2	6
07:45 AM	0	0	0	5	0	5	0	6	6	11
Total	2	0	2	15	2	17	1	13	14	33
08:00 AM	1	1	2	1	0	1	0	4	4	7
08:15 AM	1	0	1	4	1	5	0	5	5	11
08:30 AM	0	0	0	2	0	2	0	4	4	6
08:45 AM	1	0	1	3	0	3	0	7	7	11
Total	3	1	4	10	1	11	0	20	20	35
Grand Total	5	1	6	40	4	44	1	50	51	101
Apprch %	83.3	16.7		90.9	9.1		2	98		
Total %	5	1	5.9	39.6	4	43.6	1	49.5	50.5	

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**1**	0	1	3	**1**	4	**1**	3	4	9
07:30 AM	1	0	1	3	0	3	0	2	2	6
07:45 AM	0	0	0	**5**	0	**5**	0	**6**	**6**	**11**
08:00 AM	1	**1**	**2**	1	0	1	0	4	4	7
Total Volume	3	1	4	12	1	13	1	15	16	33
% App. Total	75	25		92.3	7.7		6.2	93.8		
PHF	.750	.250	.500	.600	.250	.650	.250	.625	.667	.750

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City of Highland
N/S: Church Avenue
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Weather: Clear

File Name : 79_HLD_Church_5th AM
Site Code : 99918385
Start Date : 5/1/2018
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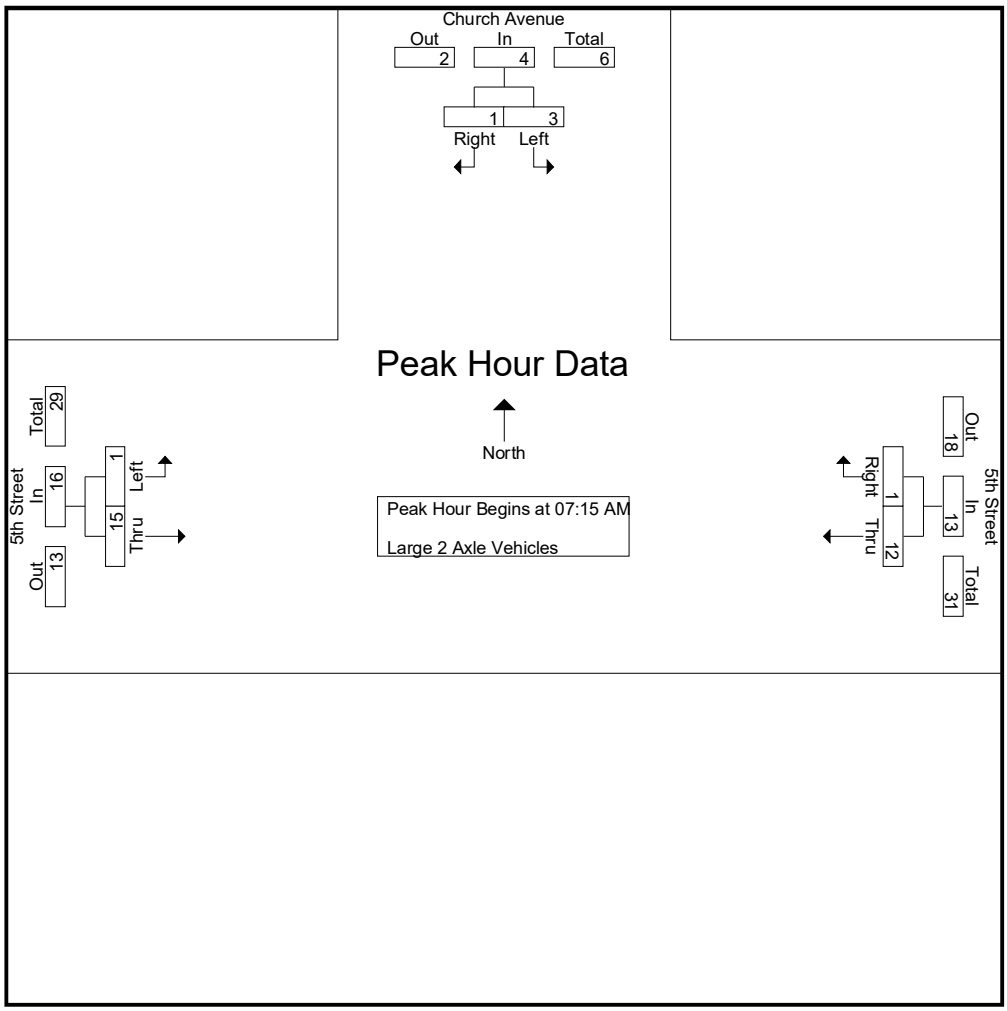

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	**1**	0	1	3	**1**	4	**1**	3	4
+15 mins.	1	0	1	3	0	3	0	2	2
+30 mins.	0	0	0	**5**	0	**5**	0	**6**	**6**
+45 mins.	1	**1**	**2**	1	0	1	0	4	4
Total Volume	3	1	4	12	1	13	1	15	16
% App. Total	75	25		92.3	7.7		6.2	93.8	
PHF	.750	.250	.500	.600	.250	.650	.250	.625	.667

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	0	0	0	1	0	1	0	0	0	1
06:15 AM	0	0	0	0	0	0	0	3	3	3
06:30 AM	0	0	0	1	1	2	0	10	10	12
06:45 AM	0	0	0	2	1	3	0	5	5	8
Total	0	0	0	4	2	6	0	18	18	24
07:00 AM	0	0	0	1	0	1	0	10	10	11
07:15 AM	0	0	0	3	0	3	1	13	14	17
07:30 AM	0	0	0	2	0	2	0	13	13	15
07:45 AM	0	0	0	1	0	1	0	9	9	10
Total	0	0	0	7	0	7	1	45	46	53
08:00 AM	0	0	0	2	0	2	0	10	10	12
08:15 AM	0	0	0	7	0	7	0	8	8	15
08:30 AM	0	0	0	2	0	2	0	6	6	8
08:45 AM	0	0	0	4	1	5	0	7	7	12
Total	0	0	0	15	1	16	0	31	31	47
Grand Total	0	0	0	26	3	29	1	94	95	124
Apprch %	0	0		89.7	10.3		1.1	98.9		
Total %	0	0	0	21	2.4	23.4	0.8	75.8	76.6	

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	**3**	0	**3**	**1**	**13**	**14**	**17**
07:30 AM	0	0	0	2	0	2	0	13	13	15
07:45 AM	0	0	0	1	0	1	0	9	9	10
08:00 AM	0	0	0	2	0	2	0	10	10	12
Total Volume	0	0	0	8	0	8	1	45	46	54
% App. Total	0	0		100	0		2.2	97.8		
PHF	.000	.000	.000	.667	.000	.667	.250	.865	.821	.794

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City of Highland
N/S: Church Avenue
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File Name : 79_HLD_Church_5th AM
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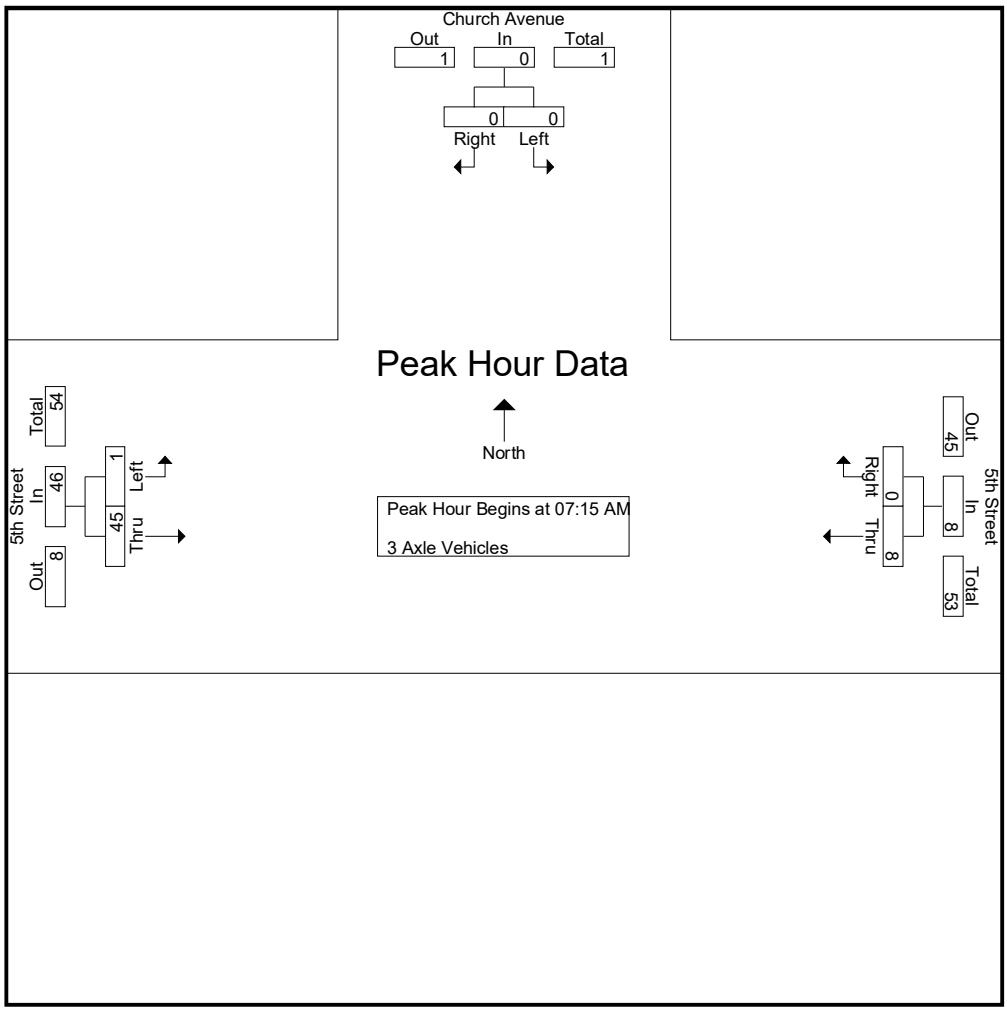

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	**3**	0	**3**	**1**	**13**	**14**
+15 mins.	0	0	0	2	0	2	0	13	13
+30 mins.	0	0	0	1	0	1	0	9	9
+45 mins.	0	0	0	2	0	2	0	10	10
Total Volume	0	0	0	8	0	8	1	45	46
% App. Total	0	0		100	0		2.2	97.8	
PHF	.000	.000	.000	.667	.000	.667	.250	.865	.821

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th AM
Site Code : 99918385
Start Date : 5/1/2018
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Groups Printed- 4+ Axle Trucks

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	5	5	5
06:15 AM	0	0	0	2	0	2	0	3	3	5
06:30 AM	0	0	0	1	0	1	0	13	13	14
06:45 AM	0	0	0	1	0	1	0	6	6	7
Total	0	0	0	4	0	4	0	27	27	31
07:00 AM	0	0	0	5	1	6	0	4	4	10
07:15 AM	0	0	0	1	0	1	0	6	6	7
07:30 AM	0	0	0	5	0	5	0	5	5	10
07:45 AM	0	0	0	5	0	5	0	9	9	14
Total	0	0	0	16	1	17	0	24	24	41
08:00 AM	0	0	0	2	0	2	0	3	3	5
08:15 AM	0	0	0	10	1	11	0	5	5	16
08:30 AM	0	0	0	9	0	9	0	5	5	14
08:45 AM	0	0	0	10	0	10	0	9	9	19
Total	0	0	0	31	1	32	0	22	22	54
Grand Total	0	0	0	51	2	53	0	73	73	126
Apprch %	0	0		96.2	3.8		0	100		
Total %	0	0	0	40.5	1.6	42.1	0	57.9	57.9	

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	1	0	1	0	6	6	7
07:30 AM	0	0	0	**5**	0	**5**	0	5	5	10
07:45 AM	0	0	0	5	0	5	0	**9**	**9**	**14**
08:00 AM	0	0	0	2	0	2	0	3	3	5
Total Volume	0	0	0	13	0	13	0	23	23	36
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.650	.000	.650	.000	.639	.639	.643

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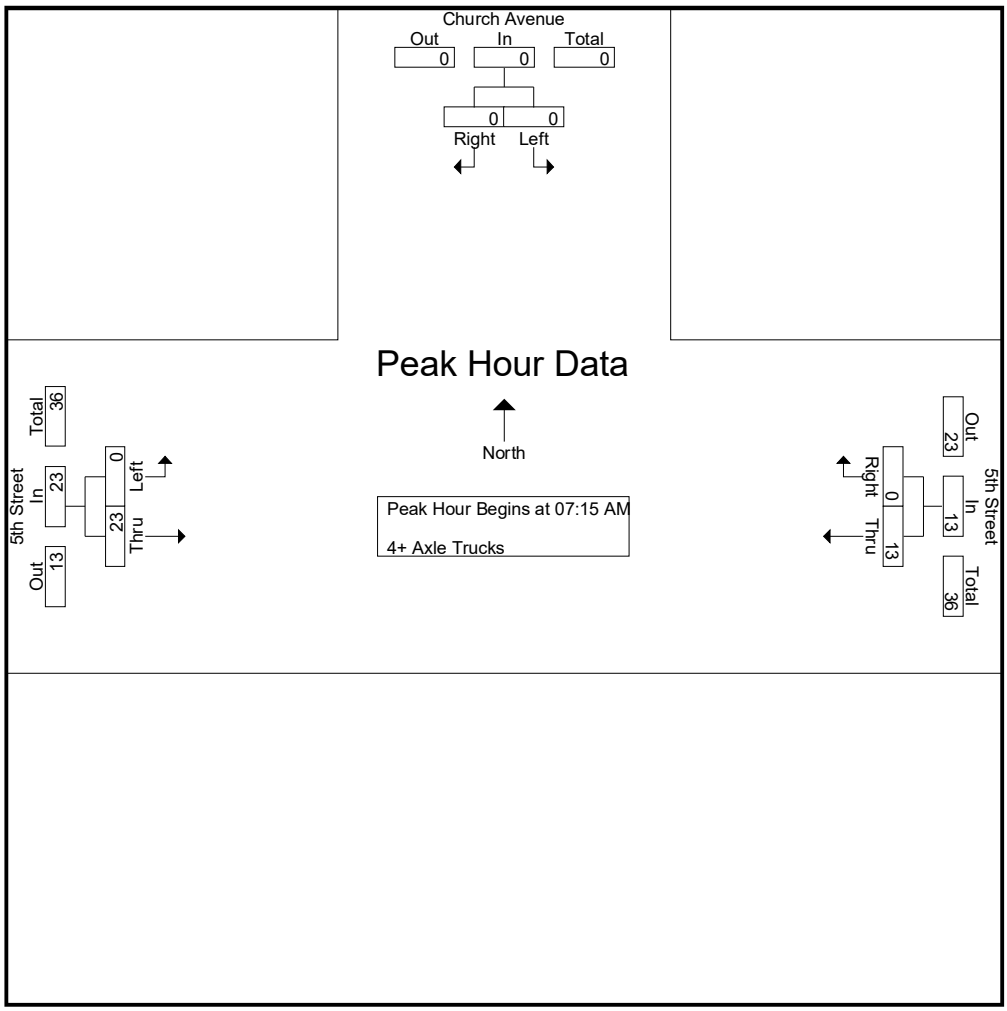
Site Code : 99918385
Start Date : 5/1/2018



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	1	0	1	0	6	6
+15 mins.	0	0	0	**5**	0	**5**	0	5	5
+30 mins.	0	0	0	5	0	5	0	**9**	**9**
+45 mins.	0	0	0	2	0	2	0	3	3
Total Volume	0	0	0	13	0	13	0	23	23
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.650	.000	.650	.000	.639	.639

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

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

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	25	7	32	122	22	144	5	174	179	355
03:15 PM	11	6	17	115	10	125	10	171	181	323
03:30 PM	14	10	24	151	22	173	12	174	186	383
03:45 PM	15	5	20	128	20	148	7	187	194	362
Total	65	28	93	516	74	590	34	706	740	1423
04:00 PM	23	10	33	125	24	149	9	234	243	425
04:15 PM	17	10	27	125	25	150	12	261	273	450
04:30 PM	16	6	22	120	22	142	9	269	278	442
04:45 PM	18	8	26	134	17	151	17	324	341	518
Total	74	34	108	504	88	592	47	1088	1135	1835
05:00 PM	19	7	26	115	19	134	6	280	286	446
05:15 PM	20	7	27	110	15	125	10	382	392	544
05:30 PM	22	8	30	112	24	136	25	288	313	479
05:45 PM	27	12	39	138	20	158	6	228	234	431
Total	88	34	122	475	78	553	47	1178	1225	1900
Grand Total	227	96	323	1495	240	1735	128	2972	3100	5158
Apprch %	70.3	29.7		86.2	13.8		4.1	95.9		
Total %	4.4	1.9	6.3	29	4.7	33.6	2.5	57.6	60.1	
Passenger Vehicles	222	96	318	1385	235	1620	128	2870	2998	4936
% Passenger Vehicles	97.8	100	98.5	92.6	97.9	93.4	100	96.6	96.7	95.7
Large 2 Axle Vehicles	2	0	2	47	1	48	0	42	42	92
% Large 2 Axle Vehicles										
3 Axle Vehicles	2	0	2	24	1	25	0	11	11	38
% 3 Axle Vehicles	0.9	0	0.6	1.6	0.4	1.4	0	0.4	0.4	0.7
4+ Axle Trucks	1	0	1	39	3	42	0	49	49	92
% 4+ Axle Trucks	0.4	0	0.3	2.6	1.2	2.4	0	1.6	1.6	1.8

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	18	**8**	26	**134**	17	**151**	17	324	341	518
05:00 PM	19	7	26	115	19	134	6	280	286	446
05:15 PM	20	7	27	110	15	125	10	**382**	**392**	**544**
05:30 PM	**22**	8	**30**	112	**24**	136	**25**	288	313	479
Total Volume	79	30	109	471	75	546	58	1274	1332	1987
% App. Total	72.5	27.5		86.3	13.7		4.4	95.6		
PHF	.898	.938	.908	.879	.781	.904	.580	.834	.849	.913

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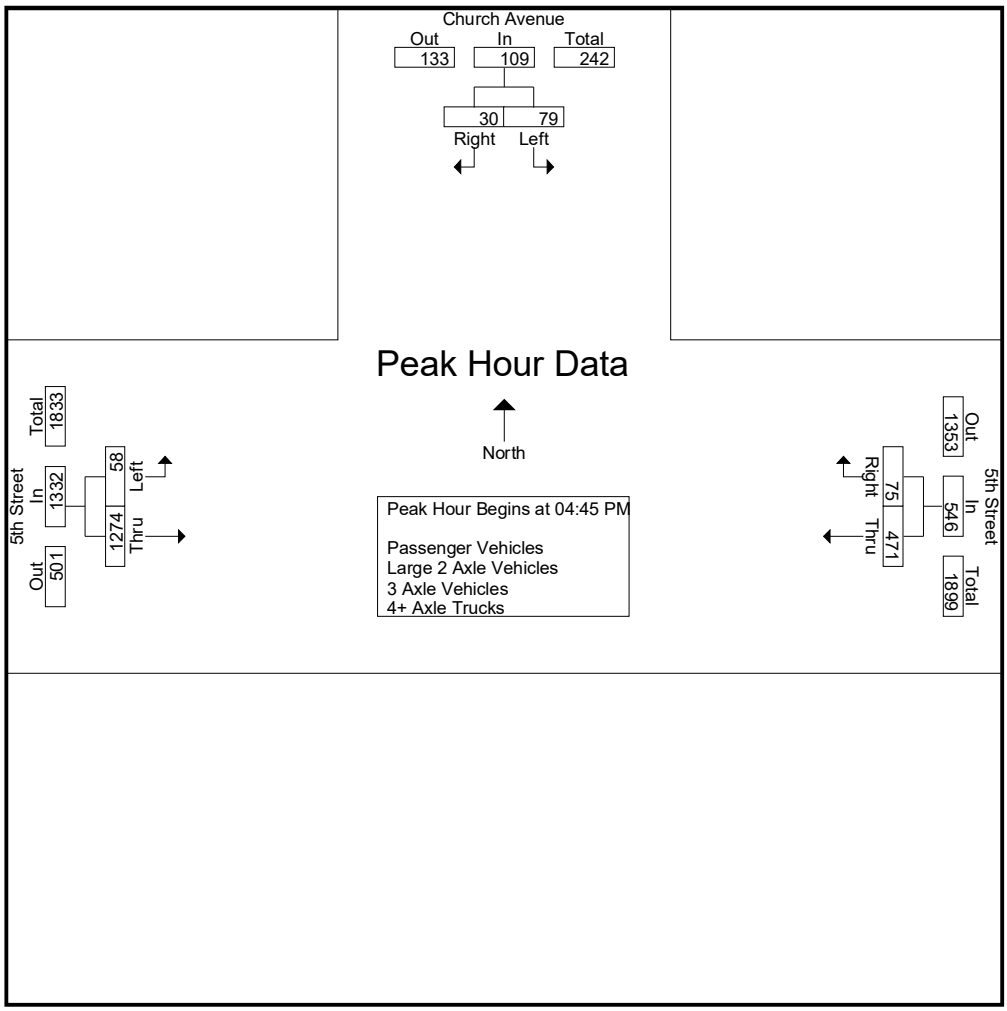
City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th PM
Site Code : 99918385
Start Date : 5/1/2018



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			03:30 PM			04:45 PM		
+0 mins.	19	7	26	**151**	22	**173**	17	324	341
+15 mins.	20	7	27	128	20	148	6	280	286
+30 mins.	22	8	30	125	24	149	10	**382**	**392**
+45 mins.	**27**	**12**	**39**	125	**25**	150	**25**	288	313
Total Volume	88	34	122	529	91	620	58	1274	1332
% App. Total	72.1	27.9		85.3	14.7		4.4	95.6	
PHF	.815	.708	.782	.876	.910	.896	.580	.834	.849

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th PM
Site Code : 99918385
Start Date : 5/1/2018
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Groups Printed- Passenger Vehicles

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	24	7	31	110	21	131	5	159	164	326
03:15 PM	11	6	17	106	9	115	10	165	175	307
03:30 PM	14	10	24	136	22	158	12	164	176	358
03:45 PM	13	5	18	116	19	135	7	182	189	342
Total	62	28	90	468	71	539	34	670	704	1333
04:00 PM	22	10	32	118	23	141	9	226	235	408
04:15 PM	17	10	27	116	25	141	12	249	261	429
04:30 PM	16	6	22	108	22	130	9	259	268	420
04:45 PM	18	8	26	127	17	144	17	317	334	504
Total	73	34	107	469	87	556	47	1051	1098	1761
05:00 PM	19	7	26	105	18	123	6	272	278	427
05:15 PM	20	7	27	102	15	117	10	371	381	525
05:30 PM	22	8	30	110	24	134	25	285	310	474
05:45 PM	26	12	38	131	20	151	6	221	227	416
Total	87	34	121	448	77	525	47	1149	1196	1842
Grand Total	222	96	318	1385	235	1620	128	2870	2998	4936
Apprch %	69.8	30.2		85.5	14.5		4.3	95.7		
Total %	4.5	1.9	6.4	28.1	4.8	32.8	2.6	58.1	60.7	

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	18	**8**	26	**127**	17	**144**	17	317	334	504
05:00 PM	19	7	26	105	18	123	6	272	278	427
05:15 PM	20	7	27	102	15	117	10	**371**	**381**	**525**
05:30 PM	**22**	8	**30**	110	**24**	134	**25**	285	310	474
Total Volume	79	30	109	444	74	518	58	1245	1303	1930
% App. Total	72.5	27.5		85.7	14.3		4.5	95.5		
PHF	.898	.938	.908	.874	.771	.899	.580	.839	.855	.919

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th PM
Site Code : 99918385
Start Date : 5/1/2018
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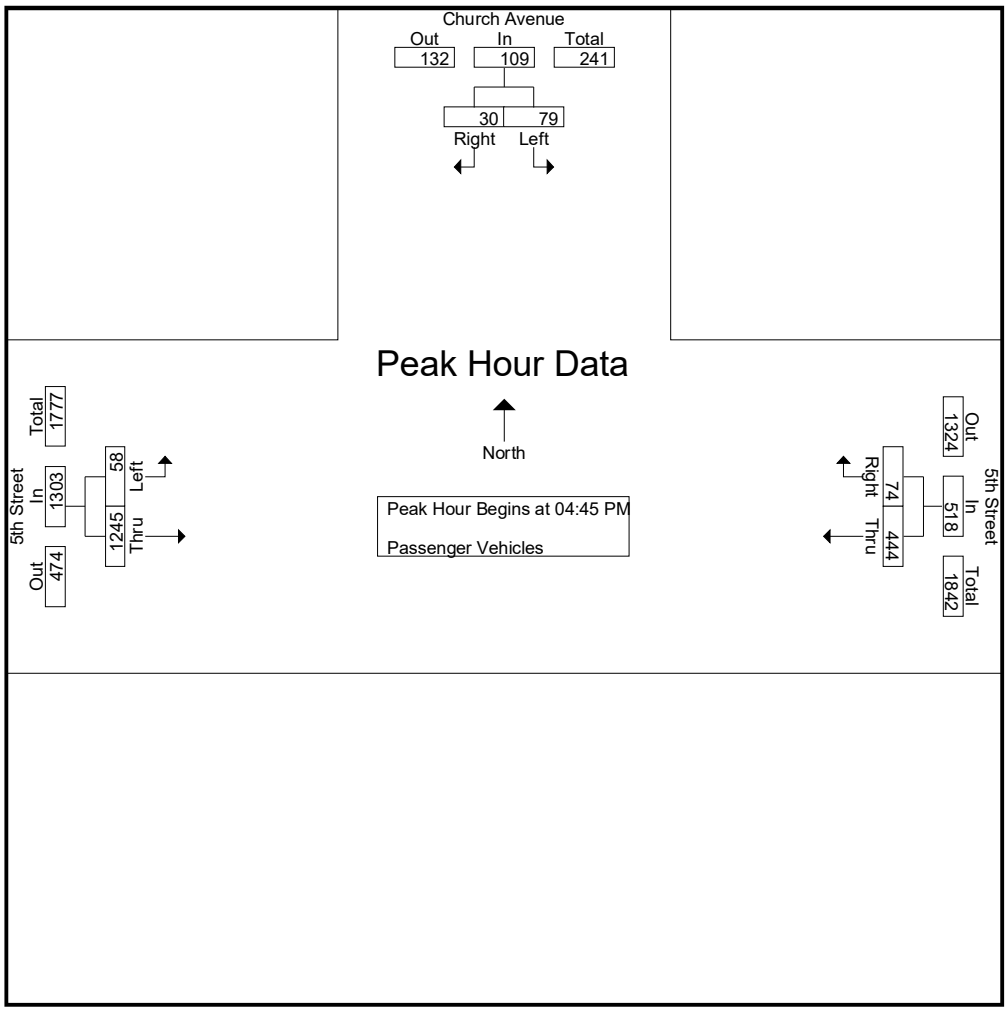

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	18	**8**	26	**127**	17	**144**	17	317	334
+15 mins.	19	7	26	105	18	123	6	272	278
+30 mins.	20	7	27	102	15	117	10	**371**	**381**
+45 mins.	**22**	8	**30**	110	**24**	134	**25**	285	310
Total Volume	79	30	109	444	74	518	58	1245	1303
% App. Total	72.5	27.5		85.7	14.3		4.5	95.5	
PHF	.898	.938	.908	.874	.771	.899	.580	.839	.855

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N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th PM
Site Code : 99918385
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Groups Printed- Large 2 Axle Vehicles

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	0	0	0	6	1	7	0	7	7	14
03:15 PM	0	0	0	4	0	4	0	3	3	7
03:30 PM	0	0	0	8	0	8	0	6	6	14
03:45 PM	1	0	1	1	0	1	0	2	2	4
Total	1	0	1	19	1	20	0	18	18	39
04:00 PM	1	0	1	4	0	4	0	1	1	6
04:15 PM	0	0	0	4	0	4	0	4	4	8
04:30 PM	0	0	0	6	0	6	0	3	3	9
04:45 PM	0	0	0	4	0	4	0	1	1	5
Total	1	0	1	18	0	18	0	9	9	28
05:00 PM	0	0	0	3	0	3	0	5	5	8
05:15 PM	0	0	0	3	0	3	0	7	7	10
05:30 PM	0	0	0	1	0	1	0	1	1	2
05:45 PM	0	0	0	3	0	3	0	2	2	5
Total	0	0	0	10	0	10	0	15	15	25
Grand Total	2	0	2	47	1	48	0	42	42	92
Apprch %	100	0		97.9	2.1		0	100		
Total %	2.2	0	2.2	51.1	1.1	52.2	0	45.7	45.7	

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	**4**	0	**4**	0	1	1	5
05:00 PM	0	0	0	3	0	3	0	5	5	8
05:15 PM	0	0	0	3	0	3	0	**7**	**7**	**10**
05:30 PM	0	0	0	1	0	1	0	1	1	2
Total Volume	0	0	0	11	0	11	0	14	14	25
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.688	.000	.688	.000	.500	.500	.625

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Weather: Clear

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Site Code : 99918385
Start Date : 5/1/2018
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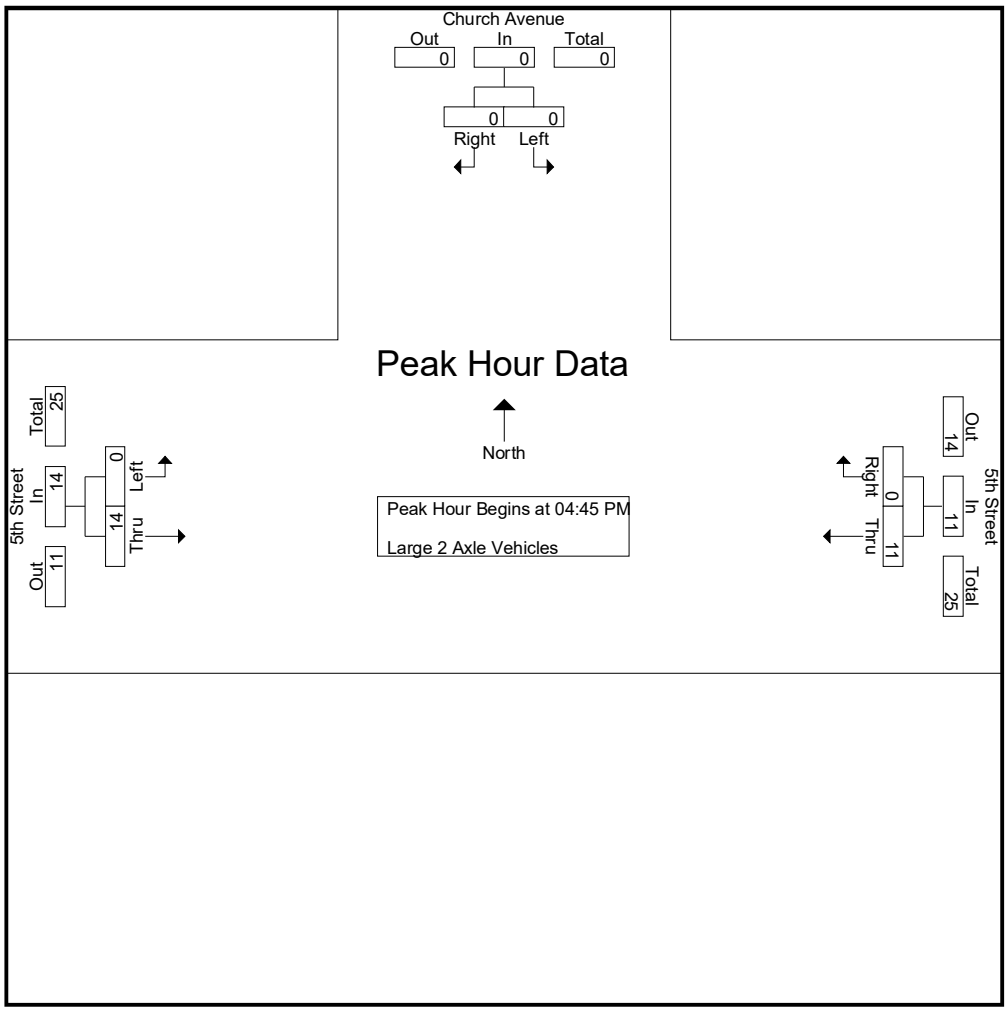

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	**4**	0	**4**	0	1	1
+15 mins.	0	0	0	3	0	3	0	5	5
+30 mins.	0	0	0	3	0	3	0	**7**	**7**
+45 mins.	0	0	0	1	0	1	0	1	1
Total Volume	0	0	0	11	0	11	0	14	14
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.688	.000	.688	.000	.500	.500

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Weather: Clear

File Name : 79_HLD_Church_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	0	0	0	2	0	2	0	2	2	4
03:15 PM	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	4	0	4	0	2	2	6
03:45 PM	1	0	1	6	1	7	0	1	1	9
Total	1	0	1	12	1	13	0	5	5	19
04:00 PM	0	0	0	2	0	2	0	1	1	3
04:15 PM	0	0	0	1	0	1	0	0	0	1
04:30 PM	0	0	0	2	0	2	0	0	0	2
04:45 PM	0	0	0	1	0	1	0	0	0	1
Total	0	0	0	6	0	6	0	1	1	7
05:00 PM	0	0	0	4	0	4	0	2	2	6
05:15 PM	0	0	0	1	0	1	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	1	0	1	1	0	1	0	2	2	4
Total	1	0	1	6	0	6	0	5	5	12
Grand Total	2	0	2	24	1	25	0	11	11	38
Apprch %	100	0		96	4		0	100		
Total %	5.3	0	5.3	63.2	2.6	65.8	0	28.9	28.9	

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	1	0	1	0	0	0	1
05:00 PM	0	0	0	**4**	0	**4**	0	**2**	**2**	**6**
05:15 PM	0	0	0	1	0	1	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	6	0	6	0	3	3	9
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.375	.000	.375	.000	.375	.375	.375

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th PM
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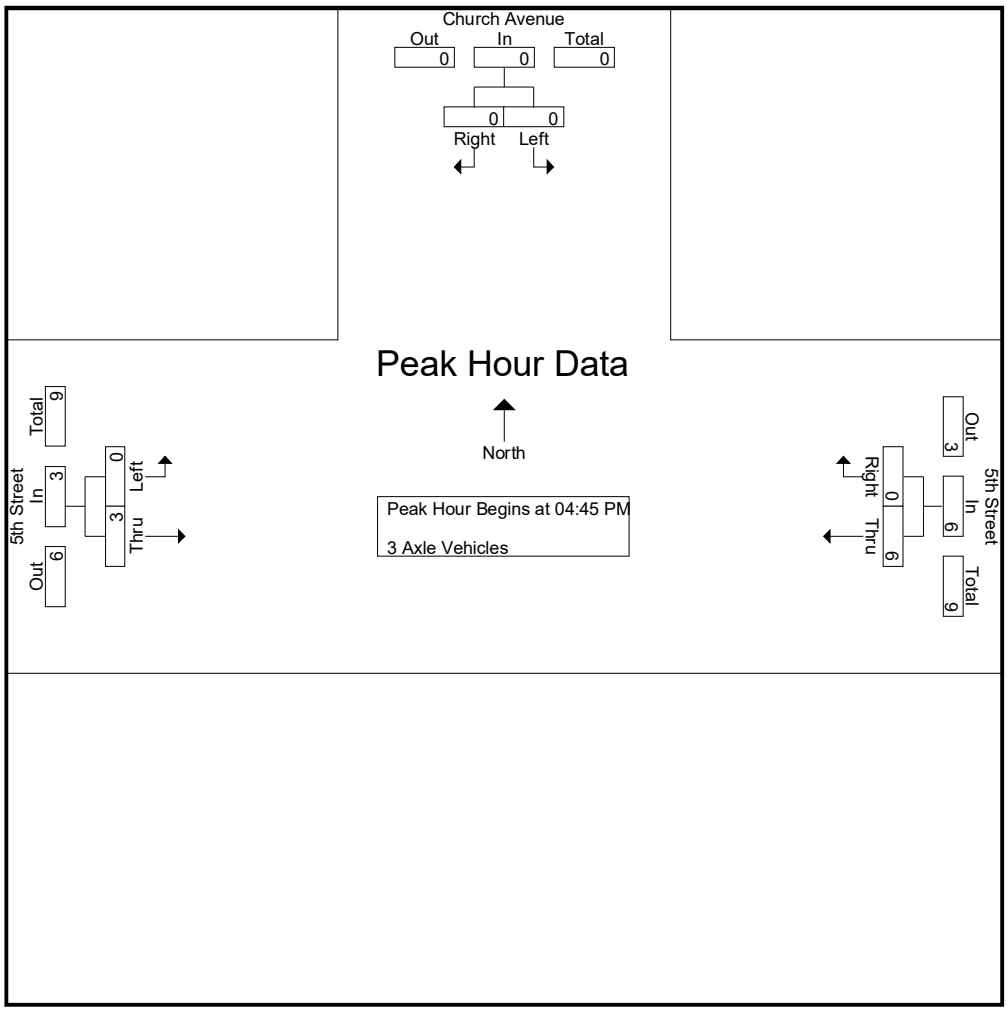

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	1	0	1	0	0	0
+15 mins.	0	0	0	**4**	0	**4**	0	**2**	**2**
+30 mins.	0	0	0	1	0	1	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	6	0	6	0	3	3
% App. Total	0	0		100	0		0	100	
PHF	.000	.000	.000	.375	.000	.375	.000	.375	.375

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City of Highland
N/S: Church Avenue
E/W: 5th Street
Weather: Clear

File Name : 79_HLD_Church_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
03:00 PM	1	0	1	4	0	4	0	6	6	11
03:15 PM	0	0	0	5	1	6	0	3	3	9
03:30 PM	0	0	0	3	0	3	0	2	2	5
03:45 PM	0	0	0	5	0	5	0	2	2	7
Total	1	0	1	17	1	18	0	13	13	32
04:00 PM	0	0	0	1	1	2	0	6	6	8
04:15 PM	0	0	0	4	0	4	0	8	8	12
04:30 PM	0	0	0	4	0	4	0	7	7	11
04:45 PM	0	0	0	2	0	2	0	6	6	8
Total	0	0	0	11	1	12	0	27	27	39
05:00 PM	0	0	0	3	1	4	0	1	1	5
05:15 PM	0	0	0	4	0	4	0	3	3	7
05:30 PM	0	0	0	1	0	1	0	2	2	3
05:45 PM	0	0	0	3	0	3	0	3	3	6
Total	0	0	0	11	1	12	0	9	9	21
Grand Total	1	0	1	39	3	42	0	49	49	92
Apprch %	100	0		92.9	7.1		0	100		
Total %	1.1	0	1.1	42.4	3.3	45.7	0	53.3	53.3	

	Church Avenue Southbound			5th Street Westbound			5th Street Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	2	0	2	0	**6**	**6**	**8**
05:00 PM	0	0	0	3	**1**	**4**	0	1	1	5
05:15 PM	0	0	0	**4**	0	4	0	3	3	7
05:30 PM	0	0	0	1	0	1	0	2	2	3
Total Volume	0	0	0	10	1	11	0	12	12	23
% App. Total	0	0		90.9	9.1		0	100		
PHF	.000	.000	.000	.625	.250	.688	.000	.500	.500	.719

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Site Code : 99918385
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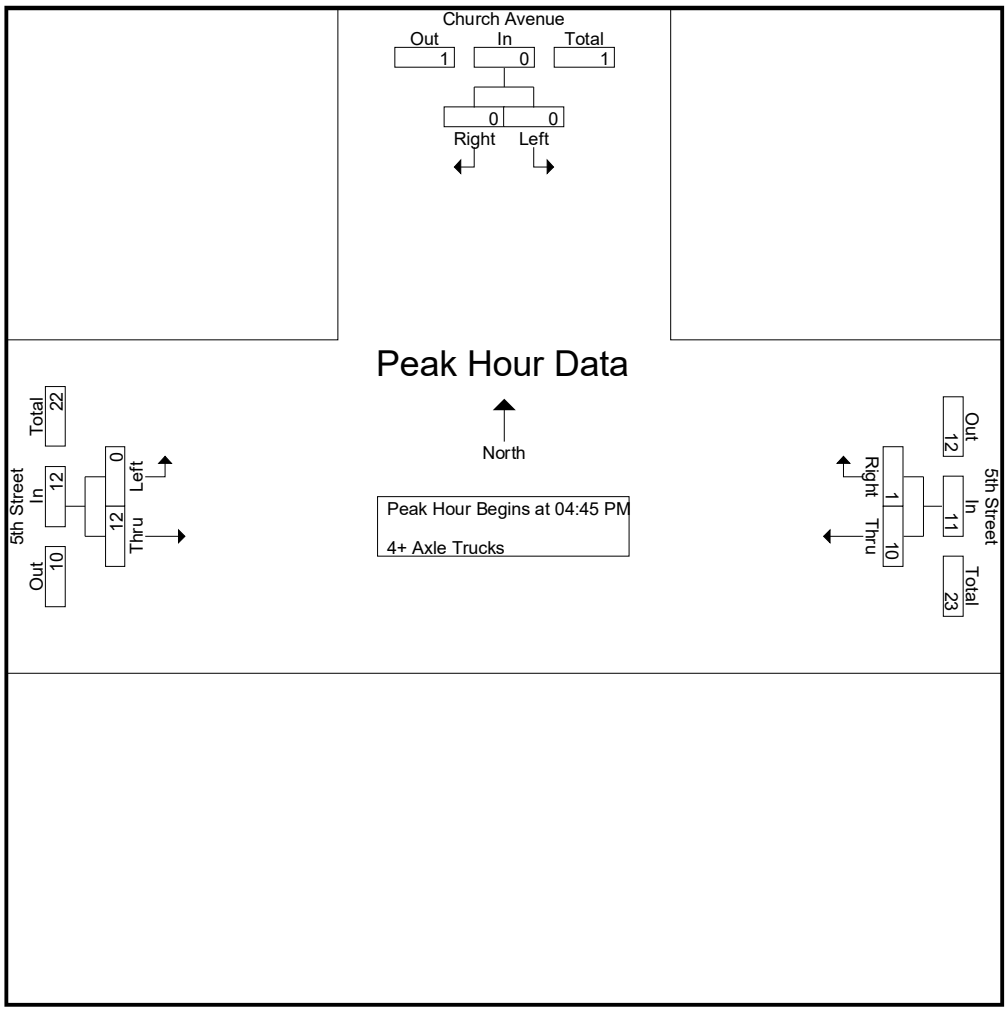

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	2	0	2	0	**6**	**6**
+15 mins.	0	0	0	3	**1**	**4**	0	1	1
+30 mins.	0	0	0	**4**	0	4	0	3	3
+45 mins.	0	0	0	1	0	1	0	2	2
Total Volume	0	0	0	10	1	11	0	12	12
% App. Total	0	0		90.9	9.1		0	100	
PHF	.000	.000	.000	.625	.250	.688	.000	.500	.500

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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	24	0	25	49	73	77	0	150	0	0	0	0	0	18	61	79	278
06:15 AM	23	0	24	47	96	82	0	178	0	0	0	0	0	22	54	76	301
06:30 AM	22	0	24	46	113	90	0	203	0	0	0	0	0	43	92	135	384
06:45 AM	19	0	36	55	130	159	0	289	0	0	0	0	0	33	88	121	465
Total	88	0	109	197	412	408	0	820	0	0	0	0	0	116	295	411	1428
07:00 AM	27	0	47	74	132	170	0	302	0	0	0	0	0	53	84	137	513
07:15 AM	32	1	37	70	167	211	0	378	0	0	0	0	0	60	78	138	586
07:30 AM	31	0	23	54	186	216	0	402	0	0	0	0	0	68	74	142	598
07:45 AM	33	5	26	64	202	267	0	469	0	0	0	0	0	74	84	158	691
Total	123	6	133	262	687	864	0	1551	0	0	0	0	0	255	320	575	2388
08:00 AM	22	1	24	47	167	220	0	387	0	0	0	0	0	70	86	156	590
08:15 AM	27	0	35	62	158	204	0	362	0	0	0	0	0	72	64	136	560
08:30 AM	41	2	36	79	136	166	0	302	0	0	0	0	0	76	79	155	536
08:45 AM	52	0	44	96	125	129	0	254	0	0	0	0	0	67	81	148	498
Total	142	3	139	284	586	719	0	1305	0	0	0	0	0	285	310	595	2184
Grand Total	353	9	381	743	1685	1991	0	3676	0	0	0	0	0	656	925	1581	6000
Apprch %	47.5	1.2	51.3		45.8	54.2	0		0	0	0		0	41.5	58.5		
Total %	5.9	0.2	6.3	12.4	28.1	33.2	0	61.3	0	0	0	0	0	10.9	15.4	26.4	
Passenger Vehicles	337	9	348	694	1653	1896	0	3549	0	0	0	0	0	566	797	1363	5606
% Passenger Vehicles	95.5	100	91.3	93.4	98.1	95.2	0	96.5	0	0	0	0	0	86.3	86.2	86.2	93.4
Large 2 Axle Vehicles	11	0	9	20	14	37	0	51	0	0	0	0	0	25	28	53	124
% Large 2 Axle Vehicles	3.1	0	2.4	2.7	0.8	1.9	0	1.4	0	0	0	0	0	3.8	3	3.4	2.1
3 Axle Vehicles	2	0	9	11	3	18	0	21	0	0	0	0	0	32	51	83	115
% 3 Axle Vehicles	0.6	0	2.4	1.5	0.2	0.9	0	0.6	0	0	0	0	0	4.9	5.5	5.2	1.9
4+ Axle Trucks	3	0	15	18	15	40	0	55	0	0	0	0	0	33	49	82	155
% 4+ Axle Trucks	0.8	0	3.9	2.4	0.9	2	0	1.5	0	0	0	0	0	5	5.3	5.2	2.6

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	32	1	**37**	**70**	167	211	0	378	0	0	0	0	0	60	78	138	586
07:30 AM	31	0	23	54	186	216	0	402	0	0	0	0	0	68	74	142	598
07:45 AM	**33**	**5**	26	64	**202**	**267**	0	**469**	0	0	0	0	0	**74**	84	**158**	**691**
08:00 AM	22	1	24	47	167	220	0	387	0	0	0	0	0	70	**86**	156	590
Total Volume	118	7	110	235	722	914	0	1636	0	0	0	0	0	272	322	594	2465
% App. Total	50.2	3	46.8		44.1	55.9	0		0	0	0		0	45.8	54.2		
PHF	.894	.350	.743	.839	.894	.856	.000	.872	.000	.000	.000	.000	.000	.919	.936	.940	.892

Counts Unlimited
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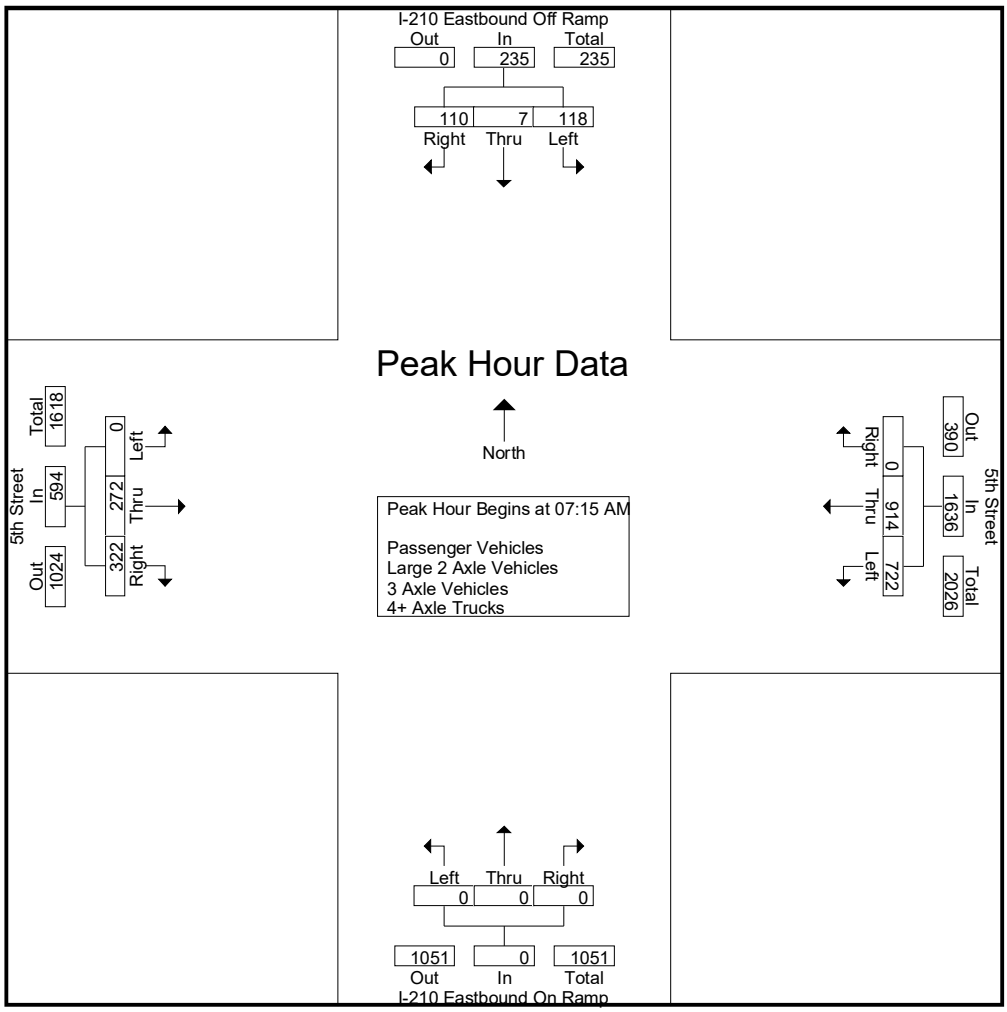
City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:15 AM				06:00 AM				07:45 AM			
+0 mins.	22	1	24	47	167	211	0	378	0	0	0	0	0	74	84	**158**
+15 mins.	27	0	35	62	186	216	0	402	0	0	0	0	0	70	**86**	156
+30 mins.	41	**2**	36	79	**202**	**267**	0	**469**	0	0	0	0	0	72	64	136
+45 mins.	**52**	0	**44**	**96**	167	220	0	387	0	0	0	0	0	**76**	79	155
Total Volume	142	3	139	284	722	914	0	1636	0	0	0	0	0	292	313	605
% App. Total	50	1.1	48.9		44.1	55.9	0		0	0	0		0	48.3	51.7	
PHF	.683	.375	.790	.740	.894	.856	.000	.872	.000	.000	.000	.000	.000	.961	.910	.957

Counts Unlimited
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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	22	0	25	47	68	70	0	138	0	0	0	0	0	17	55	72	257
06:15 AM	20	0	23	43	92	78	0	170	0	0	0	0	0	17	44	61	274
06:30 AM	21	0	21	42	113	87	0	200	0	0	0	0	0	33	70	103	345
06:45 AM	17	0	36	53	129	143	0	272	0	0	0	0	0	31	75	106	431
Total	80	0	105	185	402	378	0	780	0	0	0	0	0	98	244	342	1307
07:00 AM	26	0	43	69	130	163	0	293	0	0	0	0	0	45	75	120	482
07:15 AM	32	1	35	68	165	206	0	371	0	0	0	0	0	54	65	119	558
07:30 AM	29	0	21	50	182	210	0	392	0	0	0	0	0	62	63	125	567
07:45 AM	32	5	24	61	197	259	0	456	0	0	0	0	0	59	74	133	650
Total	119	6	123	248	674	838	0	1512	0	0	0	0	0	220	277	497	2257
08:00 AM	22	1	22	45	164	216	0	380	0	0	0	0	0	63	73	136	561
08:15 AM	24	0	28	52	157	188	0	345	0	0	0	0	0	67	53	120	517
08:30 AM	40	2	32	74	132	158	0	290	0	0	0	0	0	65	78	143	507
08:45 AM	52	0	38	90	124	118	0	242	0	0	0	0	0	53	72	125	457
Total	138	3	120	261	577	680	0	1257	0	0	0	0	0	248	276	524	2042
Grand Total	337	9	348	694	1653	1896	0	3549	0	0	0	0	0	566	797	1363	5606
Apprch %	48.6	1.3	50.1		46.6	53.4	0		0	0	0		0	41.5	58.5		
Total %	6	0.2	6.2	12.4	29.5	33.8	0	63.3	0	0	0	0	0	10.1	14.2	24.3	

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**32**	1	**35**	**68**	165	206	0	371	0	0	0	0	0	54	65	119	558
07:30 AM	29	0	21	50	182	210	0	392	0	0	0	0	0	62	63	125	567
07:45 AM	32	**5**	24	61	**197**	**259**	0	**456**	0	0	0	0	0	59	**74**	133	**650**
08:00 AM	22	1	22	45	164	216	0	380	0	0	0	0	0	**63**	73	**136**	561
Total Volume	115	7	102	224	708	891	0	1599	0	0	0	0	0	238	275	513	2336
% App. Total	51.3	3.1	45.5		44.3	55.7	0		0	0	0		0	46.4	53.6		
PHF	.898	.350	.729	.824	.898	.860	.000	.877	.000	.000	.000	.000	.000	.944	.929	.943	.898

Counts Unlimited
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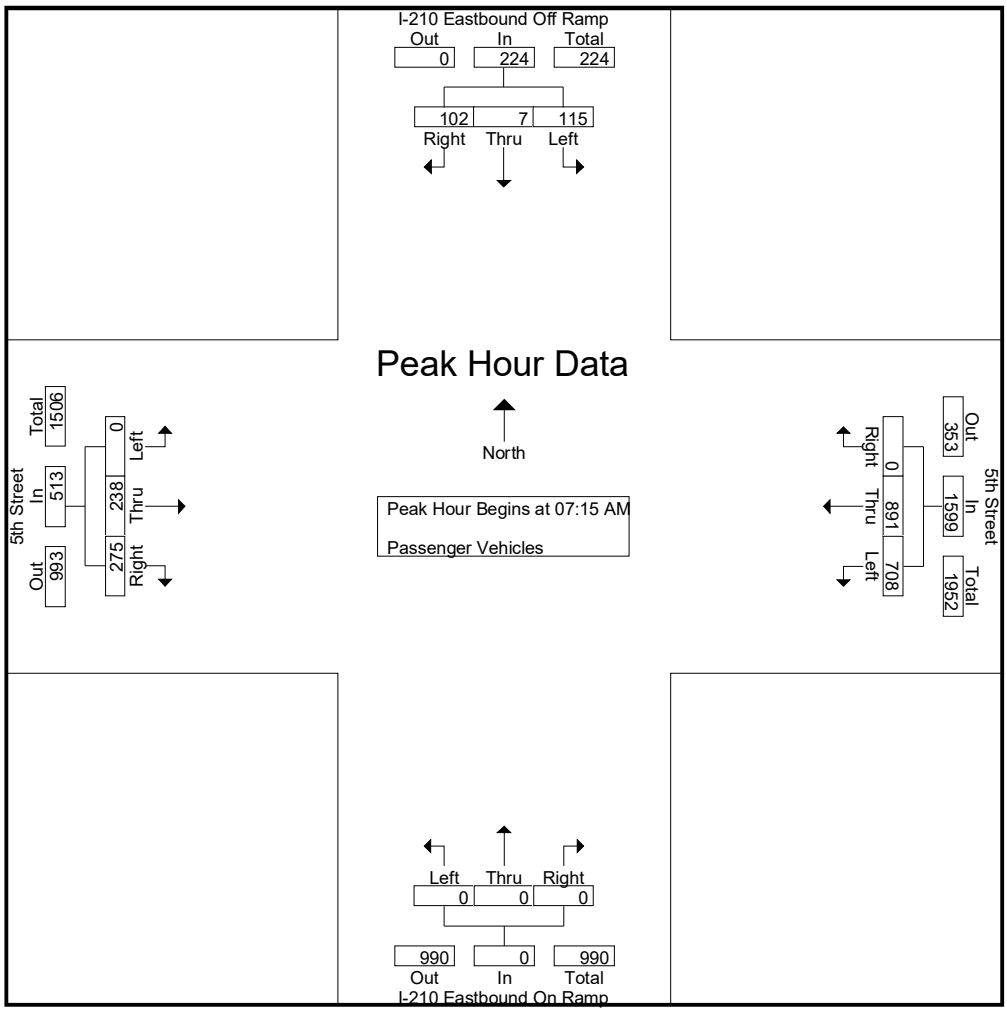
City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**32**	1	**35**	**68**	165	206	0	371	0	0	0	0	0	54	65	119
+15 mins.	29	0	21	50	182	210	0	392	0	0	0	0	0	62	63	125
+30 mins.	32	**5**	24	61	**197**	**259**	0	**456**	0	0	0	0	0	59	**74**	133
+45 mins.	22	1	22	45	164	216	0	380	0	0	0	0	0	**63**	73	**136**
Total Volume	115	7	102	224	708	891	0	1599	0	0	0	0	0	238	275	513
% App. Total	51.3	3.1	45.5		44.3	55.7	0		0	0	0		0	46.4	53.6	
PHF	.898	.350	.729	.824	.898	.860	.000	.877	.000	.000	.000	.000	.000	.944	.929	.943

Counts Unlimited
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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	0	0	2	1	6	0	7	0	0	0	0	0	0	3	3	12
06:15 AM	3	0	1	4	1	2	0	3	0	0	0	0	0	3	5	8	15
06:30 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	5	6	11	14
06:45 AM	2	0	0	2	1	12	0	13	0	0	0	0	0	0	3	3	18
Total	7	0	2	9	3	22	0	25	0	0	0	0	0	8	17	25	59
07:00 AM	1	0	2	3	1	2	0	3	0	0	0	0	0	2	1	3	9
07:15 AM	0	0	1	1	1	1	0	2	0	0	0	0	0	1	1	2	5
07:30 AM	1	0	1	2	0	1	0	1	0	0	0	0	0	0	2	2	5
07:45 AM	1	0	1	2	2	3	0	5	0	0	0	0	0	4	1	5	12
Total	3	0	5	8	4	7	0	11	0	0	0	0	0	7	5	12	31
08:00 AM	0	0	2	2	2	0	0	2	0	0	0	0	0	1	2	3	7
08:15 AM	1	0	0	1	1	3	0	4	0	0	0	0	0	2	2	4	9
08:30 AM	0	0	0	0	3	2	0	5	0	0	0	0	0	3	0	3	8
08:45 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	4	2	6	10
Total	1	0	2	3	7	8	0	15	0	0	0	0	0	10	6	16	34
Grand Total	11	0	9	20	14	37	0	51	0	0	0	0	0	25	28	53	124
Apprch %	55	0	45		27.5	72.5	0		0	0	0		0	47.2	52.8		
Total %	8.9	0	7.3	16.1	11.3	29.8	0	41.1	0	0	0	0	0	20.2	22.6	42.7	

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	1	1	1	1	0	2	0	0	0	0	0	1	1	2	5
07:30 AM	**1**	0	1	**2**	0	1	0	1	0	0	0	0	0	0	**2**	2	5
07:45 AM	1	0	1	2	**2**	**3**	0	**5**	0	0	0	0	0	**4**	1	**5**	**12**
08:00 AM	0	0	**2**	2	2	0	0	2	0	0	0	0	0	1	2	3	7
Total Volume	2	0	5	7	5	5	0	10	0	0	0	0	0	6	6	12	29
% App. Total	28.6	0	71.4		50	50	0		0	0	0		0	50	50		
PHF	.500	.000	.625	.875	.625	.417	.000	.500	.000	.000	.000	.000	.000	.375	.750	.600	.604

Counts Unlimited
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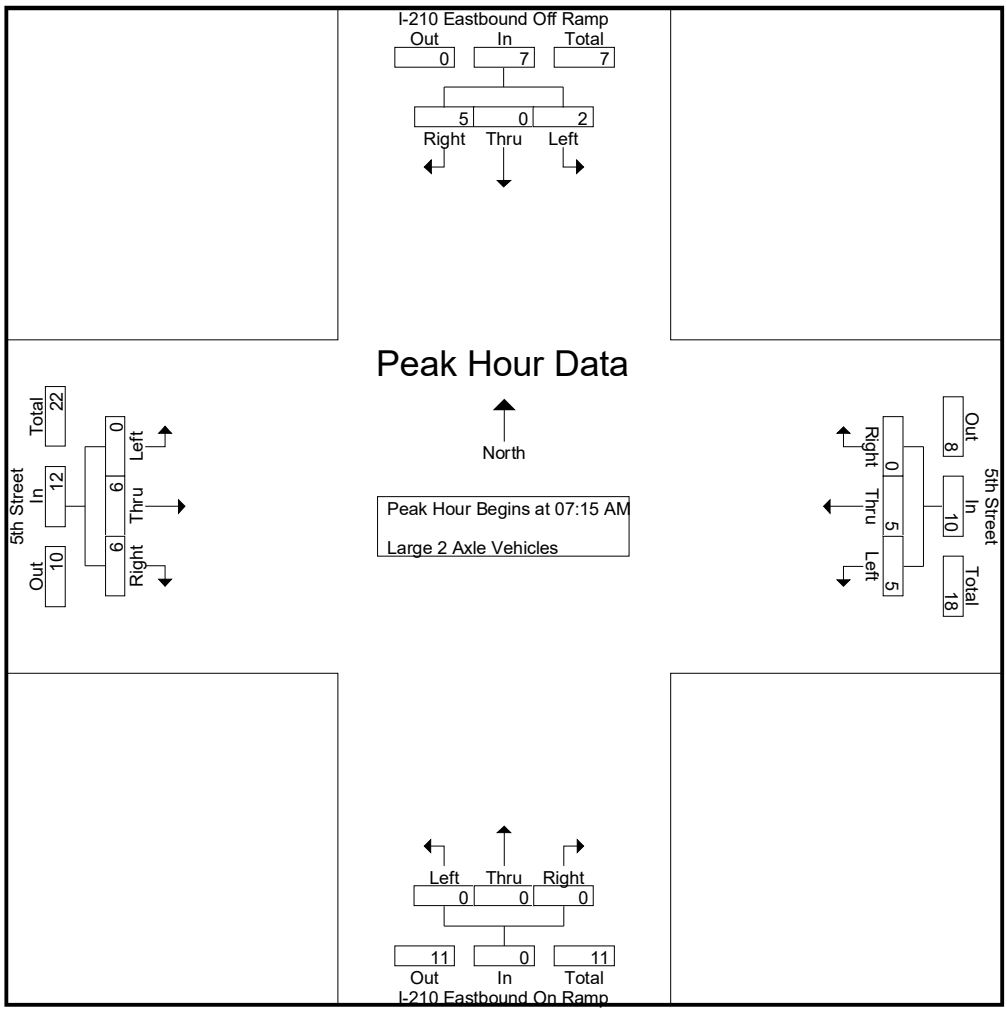
City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	1	1	1	1	0	2	0	0	0	0	0	1	1	2
+15 mins.	**1**	0	1	**2**	0	1	0	1	0	0	0	0	0	0	**2**	2
+30 mins.	1	0	1	2	**2**	**3**	0	**5**	0	0	0	0	0	**4**	1	**5**
+45 mins.	0	0	**2**	2	2	0	0	2	0	0	0	0	0	1	2	3
Total Volume	2	0	5	7	5	5	0	10	0	0	0	0	0	6	6	12
% App. Total	28.6	0	71.4		50	50	0		0	0	0		0	50	50	
PHF	.500	.000	.625	.875	.625	.417	.000	.500	.000	.000	.000	.000	.000	.375	.750	.600

Counts Unlimited
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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	3
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
06:30 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	1	3	4	6
06:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	4	4	6
Total	0	0	2	2	2	3	0	5	0	0	0	0	0	1	8	9	16
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	5	6	11	12
07:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	8	11	14
07:30 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	3	8	11	14
07:45 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	6	5	11	13
Total	1	0	0	1	1	7	0	8	0	0	0	0	0	17	27	44	53
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	7	11	13
08:15 AM	1	0	4	5	0	3	0	3	0	0	0	0	0	1	7	8	16
08:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	5	0	5	7
08:45 AM	0	0	2	2	0	2	0	2	0	0	0	0	0	4	2	6	10
Total	1	0	7	8	0	8	0	8	0	0	0	0	0	14	16	30	46
Grand Total	2	0	9	11	3	18	0	21	0	0	0	0	0	32	51	83	115
Apprch %	18.2	0	81.8		14.3	85.7	0		0	0	0		0	38.6	61.4		
Total %	1.7	0	7.8	9.6	2.6	15.7	0	18.3	0	0	0	0	0	27.8	44.3	72.2	

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	3	**8**	**11**	**14**
07:30 AM	**1**	0	0	**1**	0	2	0	2	0	0	0	0	0	3	8	11	14
07:45 AM	0	0	0	0	**1**	1	0	2	0	0	0	0	0	**6**	5	11	13
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	7	11	13
Total Volume	1	0	0	1	1	8	0	9	0	0	0	0	0	16	28	44	54
% App. Total	100	0	0		11.1	88.9	0		0	0	0		0	36.4	63.6		
PHF	.250	.000	.000	.250	.250	.667	.000	.750	.000	.000	.000	.000	.000	.667	.875	1.00	.964

Counts Unlimited
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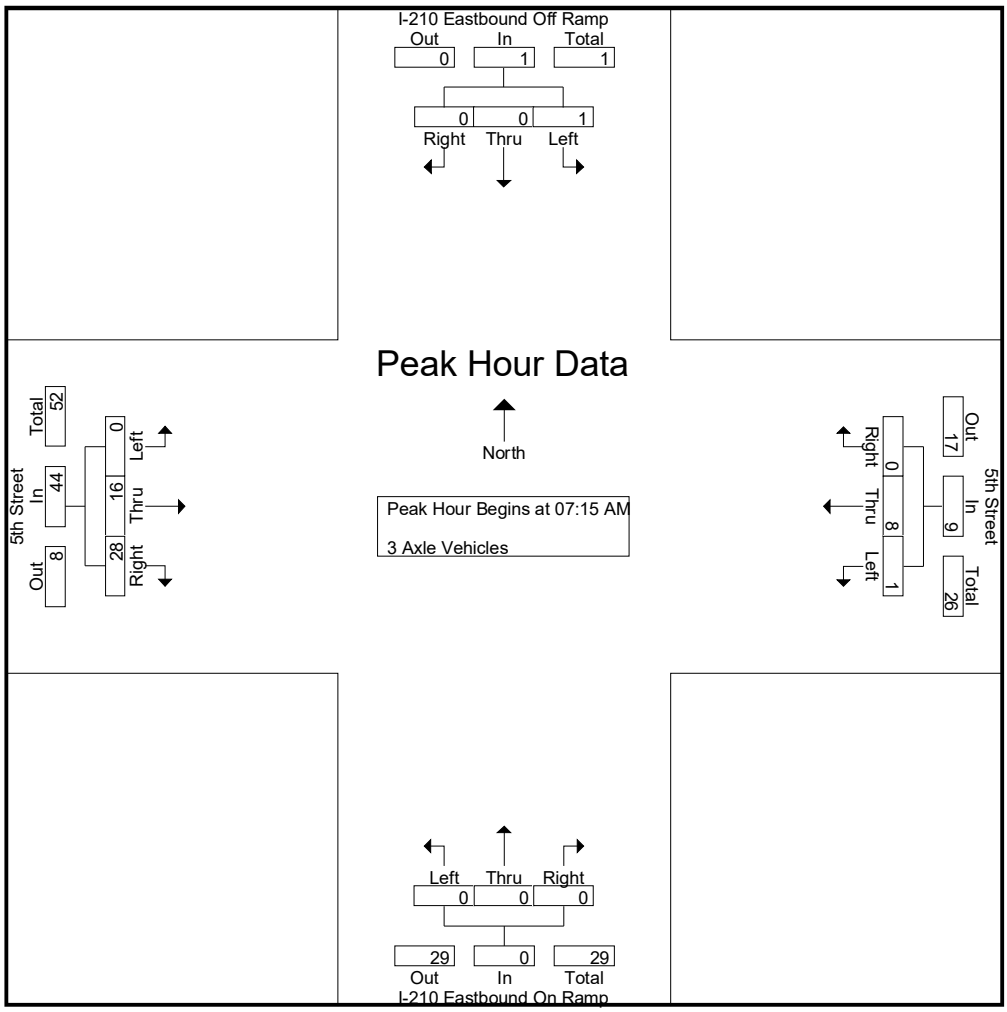
City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	3	**8**	**11**
+15 mins.	**1**	0	0	**1**	0	2	0	2	0	0	0	0	0	3	8	11
+30 mins.	0	0	0	0	**1**	1	0	2	0	0	0	0	0	**6**	5	11
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	4	7	11
Total Volume	1	0	0	1	1	8	0	9	0	0	0	0	0	16	28	44
% App. Total	100	0	0		11.1	88.9	0		0	0	0		0	36.4	63.6	
PHF	.250	.000	.000	.250	.250	.667	.000	.750	.000	.000	.000	.000	.000	.667	.875	1.000

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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	1	3	4	6
06:15 AM	0	0	0	0	3	2	0	5	0	0	0	0	0	2	4	6	11
06:30 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	4	13	17	19
06:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	6	8	10
Total	1	0	0	1	5	5	0	10	0	0	0	0	0	9	26	35	46
07:00 AM	0	0	2	2	1	4	0	5	0	0	0	0	0	1	2	3	10
07:15 AM	0	0	1	1	1	1	0	2	0	0	0	0	0	2	4	6	9
07:30 AM	0	0	1	1	4	3	0	7	0	0	0	0	0	3	1	4	12
07:45 AM	0	0	1	1	2	4	0	6	0	0	0	0	0	5	4	9	16
Total	0	0	5	5	8	12	0	20	0	0	0	0	0	11	11	22	47
08:00 AM	0	0	0	0	1	2	0	3	0	0	0	0	0	2	4	6	9
08:15 AM	1	0	3	4	0	10	0	10	0	0	0	0	0	2	2	4	18
08:30 AM	1	0	3	4	1	5	0	6	0	0	0	0	0	3	1	4	14
08:45 AM	0	0	4	4	0	6	0	6	0	0	0	0	0	6	5	11	21
Total	2	0	10	12	2	23	0	25	0	0	0	0	0	13	12	25	62
Grand Total	3	0	15	18	15	40	0	55	0	0	0	0	0	33	49	82	155
Apprch %	16.7	0	83.3		27.3	72.7	0		0	0	0		0	40.2	59.8		
Total %	1.9	0	9.7	11.6	9.7	25.8	0	35.5	0	0	0	0	0	21.3	31.6	52.9	

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	**1**	**1**	1	1	0	2	0	0	0	0	0	2	**4**	6	9
07:30 AM	0	0	1	1	**4**	3	0	**7**	0	0	0	0	0	3	1	4	12
07:45 AM	0	0	1	1	2	**4**	0	6	0	0	0	0	0	**5**	4	**9**	**16**
08:00 AM	0	0	0	0	1	2	0	3	0	0	0	0	0	2	4	6	9
Total Volume	0	0	3	3	8	10	0	18	0	0	0	0	0	12	13	25	46
% App. Total	0	0	100		44.4	55.6	0		0	0	0		0	48	52		
PHF	.000	.000	.750	.750	.500	.625	.000	.643	.000	.000	.000	.000	.000	.600	.813	.694	.719

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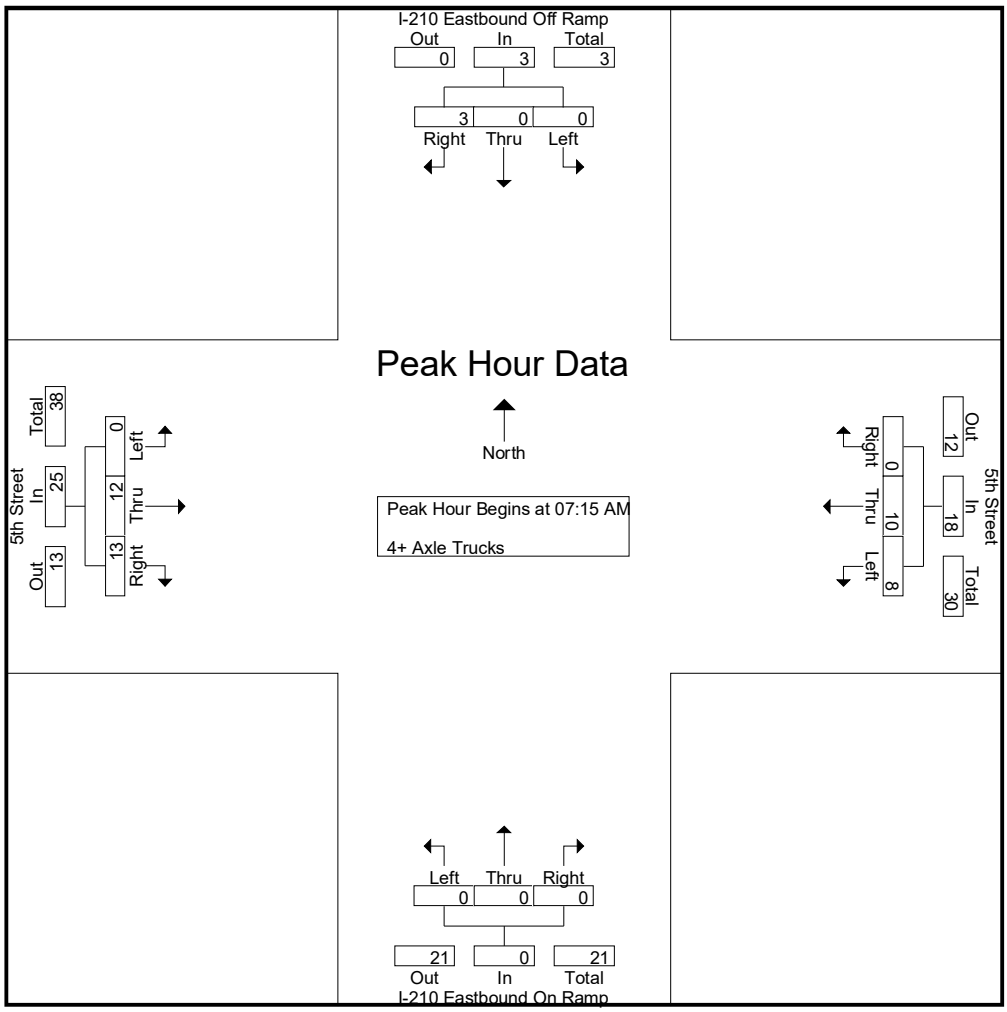
City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	**1**	**1**	1	1	0	2	0	0	0	0	0	2	**4**	6
+15 mins.	0	0	1	1	**4**	3	0	**7**	0	0	0	0	0	3	1	4
+30 mins.	0	0	1	1	2	**4**	0	6	0	0	0	0	0	**5**	4	**9**
+45 mins.	0	0	0	0	1	2	0	3	0	0	0	0	0	2	4	6
Total Volume	0	0	3	3	8	10	0	18	0	0	0	0	0	12	13	25
% App. Total	0	0	100		44.4	55.6	0		0	0	0		0	48	52	
PHF	.000	.000	.750	.750	.500	.625	.000	.643	.000	.000	.000	.000	.000	.600	.813	.694

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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th PM
Site Code : 99918385
Start Date : 5/1/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	65	1	29	95	87	117	0	204	0	0	0	0	0	101	89	190	489
03:15 PM	70	0	22	92	84	103	0	187	0	0	0	0	0	105	85	190	469
03:30 PM	59	0	34	93	78	131	0	209	0	0	0	0	0	94	72	166	468
03:45 PM	68	0	33	101	79	112	0	191	0	0	0	0	0	128	95	223	515
Total	262	1	118	381	328	463	0	791	0	0	0	0	0	428	341	769	1941
04:00 PM	62	0	27	89	78	121	0	199	0	0	0	0	0	163	89	252	540
04:15 PM	72	0	19	91	71	137	0	208	0	0	0	0	0	177	109	286	585
04:30 PM	83	0	25	108	87	120	0	207	0	0	0	0	0	190	86	276	591
04:45 PM	60	3	30	93	74	125	0	199	0	0	0	0	0	224	128	352	644
Total	277	3	101	381	310	503	0	813	0	0	0	0	0	754	412	1166	2360
05:00 PM	74	1	15	90	62	124	0	186	0	0	0	0	0	199	103	302	578
05:15 PM	86	1	30	117	72	96	0	168	0	0	0	0	0	263	146	409	694
05:30 PM	88	1	26	115	68	113	0	181	0	0	0	0	0	218	98	316	612
05:45 PM	90	0	30	120	90	132	0	222	0	0	0	0	0	161	104	265	607
Total	338	3	101	442	292	465	0	757	0	0	0	0	0	841	451	1292	2491
Grand Total	877	7	320	1204	930	1431	0	2361	0	0	0	0	0	2023	1204	3227	6792
Apprch %	72.8	0.6	26.6		39.4	60.6	0		0	0	0		0	62.7	37.3		
Total %	12.9	0.1	4.7	17.7	13.7	21.1	0	34.8	0	0	0	0	0	29.8	17.7	47.5	
Passenger Vehicles	859	7	274	1140	911	1350	0	2261	0	0	0	0	0	1962	1149	3111	6512
% Passenger Vehicles	97.9	100	85.6	94.7	98	94.3	0	95.8	0	0	0	0	0	97	95.4	96.4	95.9
Large 2 Axle Vehicles	17	0	16	33	17	47	0	64	0	0	0	0	0	35	24	59	156
% Large 2 Axle Vehicles	1.9	0	5	2.7	1.8	3.3	0	2.7	0	0	0	0	0	1.7	2	1.8	2.3
3 Axle Vehicles	0	0	7	7	1	13	0	14	0	0	0	0	0	2	8	10	31
% 3 Axle Vehicles	0	0	2.2	0.6	0.1	0.9	0	0.6	0	0	0	0	0	0.1	0.7	0.3	0.5
4+ Axle Trucks	1	0	23	24	1	21	0	22	0	0	0	0	0	24	23	47	93
% 4+ Axle Trucks	0.1	0	7.2	2	0.1	1.5	0	0.9	0	0	0	0	0	1.2	1.9	1.5	1.4

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	60	**3**	**30**	93	**74**	**125**	0	**199**	0	0	0	0	0	224	128	352	644
05:00 PM	74	1	15	90	62	124	0	186	0	0	0	0	0	199	103	302	578
05:15 PM	86	1	30	**117**	72	96	0	168	0	0	0	0	0	**263**	**146**	**409**	**694**
05:30 PM	**88**	1	26	115	68	113	0	181	0	0	0	0	0	218	98	316	612
Total Volume	308	6	101	415	276	458	0	734	0	0	0	0	0	904	475	1379	2528
% App. Total	74.2	1.4	24.3		37.6	62.4	0		0	0	0		0	65.6	34.4		
PHF	.875	.500	.842	.887	.932	.916	.000	.922	.000	.000	.000	.000	.000	.859	.813	.843	.911

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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th PM
Site Code : 99918385
Start Date : 5/1/2018
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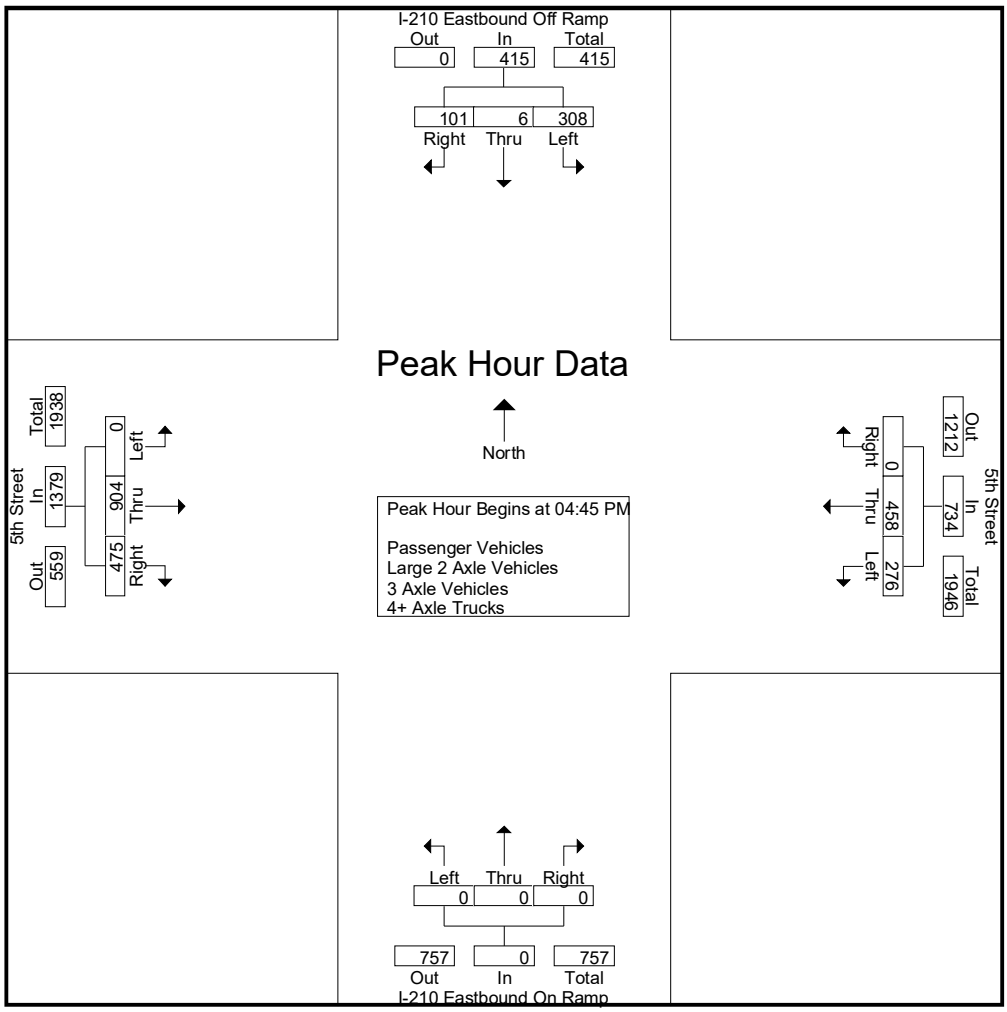

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				03:00 PM				04:45 PM			
+0 mins.	74	**1**	15	90	78	121	0	199	0	0	0	0	0	224	128	352
+15 mins.	86	1	**30**	117	71	**137**	0	**208**	0	0	0	0	0	199	103	302
+30 mins.	88	1	26	115	**87**	120	0	207	0	0	0	0	0	**263**	**146**	**409**
+45 mins.	**90**	0	30	**120**	74	125	0	199	0	0	0	0	0	218	98	316
Total Volume	338	3	101	442	310	503	0	813	0	0	0	0	0	904	475	1379
% App. Total	76.5	0.7	22.9		38.1	61.9	0		0	0	0		0	65.6	34.4	
PHF	.939	.750	.842	.921	.891	.918	.000	.977	.000	.000	.000	.000	.000	.859	.813	.843

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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	60	1	23	84	83	106	0	189	0	0	0	0	0	93	79	172	445
03:15 PM	68	0	19	87	79	90	0	169	0	0	0	0	0	98	78	176	432
03:30 PM	57	0	31	88	77	117	0	194	0	0	0	0	0	90	66	156	438
03:45 PM	65	0	24	89	77	100	0	177	0	0	0	0	0	123	88	211	477
Total	250	1	97	348	316	413	0	729	0	0	0	0	0	404	311	715	1792
04:00 PM	62	0	26	88	77	116	0	193	0	0	0	0	0	155	87	242	523
04:15 PM	70	0	16	86	71	134	0	205	0	0	0	0	0	176	104	280	571
04:30 PM	82	0	18	100	83	115	0	198	0	0	0	0	0	183	80	263	561
04:45 PM	60	3	26	89	73	122	0	195	0	0	0	0	0	218	127	345	629
Total	274	3	86	363	304	487	0	791	0	0	0	0	0	732	398	1130	2284
05:00 PM	74	1	13	88	62	116	0	178	0	0	0	0	0	195	99	294	560
05:15 PM	85	1	28	114	71	91	0	162	0	0	0	0	0	257	144	401	677
05:30 PM	87	1	24	112	68	112	0	180	0	0	0	0	0	215	97	312	604
05:45 PM	89	0	26	115	90	131	0	221	0	0	0	0	0	159	100	259	595
Total	335	3	91	429	291	450	0	741	0	0	0	0	0	826	440	1266	2436
Grand Total	859	7	274	1140	911	1350	0	2261	0	0	0	0	0	1962	1149	3111	6512
Apprch %	75.4	0.6	24		40.3	59.7	0		0	0	0		0	63.1	36.9		
Total %	13.2	0.1	4.2	17.5	14	20.7	0	34.7	0	0	0	0	0	30.1	17.6	47.8	

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	60	**3**	26	89	**73**	**122**	0	**195**	0	0	0	0	0	218	127	345	629
05:00 PM	74	1	13	88	62	116	0	178	0	0	0	0	0	195	99	294	560
05:15 PM	85	1	**28**	**114**	71	91	0	162	0	0	0	0	0	**257**	**144**	**401**	**677**
05:30 PM	**87**	1	24	112	68	112	0	180	0	0	0	0	0	215	97	312	604
Total Volume	306	6	91	403	274	441	0	715	0	0	0	0	0	885	467	1352	2470
% App. Total	75.9	1.5	22.6		38.3	61.7	0		0	0	0		0	65.5	34.5		
PHF	.879	.500	.813	.884	.938	.904	.000	.917	.000	.000	.000	.000	.000	.861	.811	.843	.912

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City of Highland
N/S: I-210 Eastbound Ramps
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Weather: Clear

File Name : 83_HLD_210E_5th PM
Site Code : 99918385
Start Date : 5/1/2018
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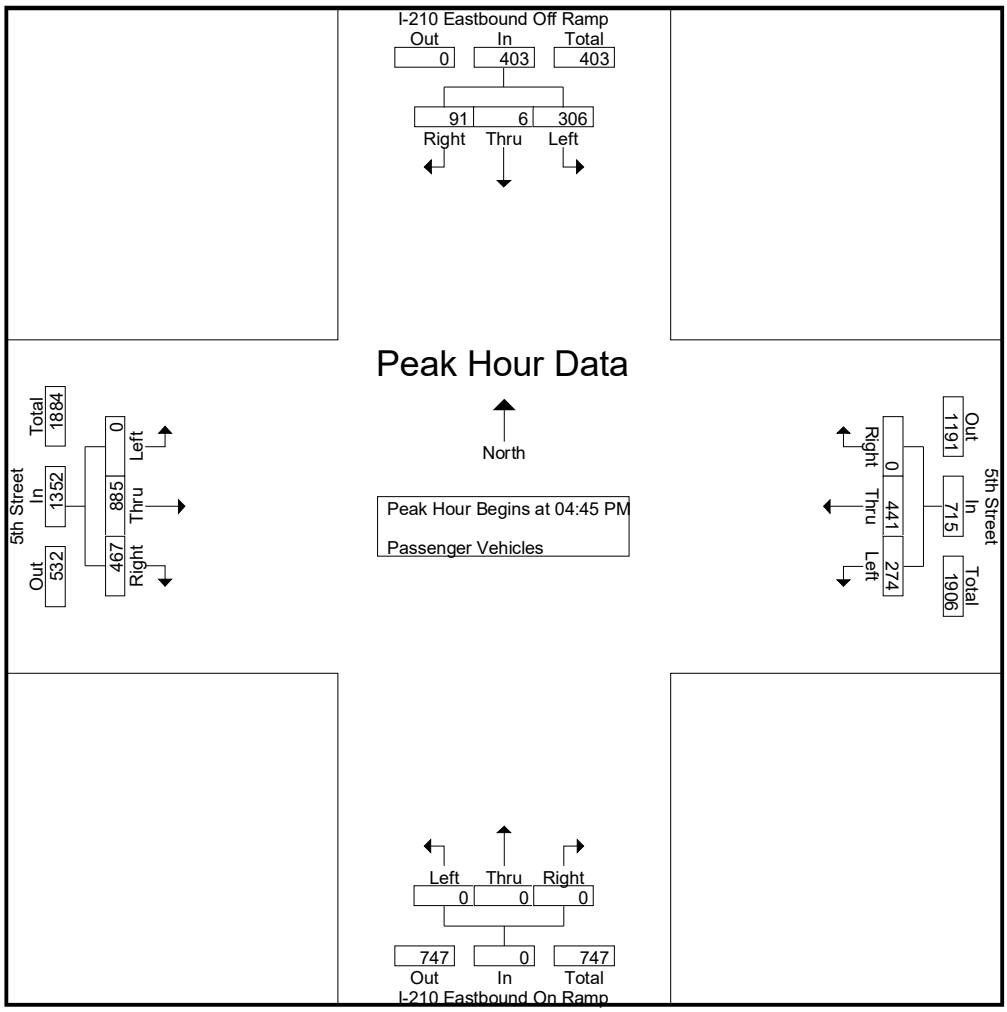

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	60	**3**	26	89	**73**	**122**	0	**195**	0	0	0	0	0	218	127	345
+15 mins.	74	1	13	88	62	116	0	178	0	0	0	0	0	195	99	294
+30 mins.	85	1	**28**	**114**	71	91	0	162	0	0	0	0	0	**257**	**144**	**401**
+45 mins.	**87**	1	24	112	68	112	0	180	0	0	0	0	0	215	97	312
Total Volume	306	6	91	403	274	441	0	715	0	0	0	0	0	885	467	1352
% App. Total	75.9	1.5	22.6		38.3	61.7	0		0	0	0		0	65.5	34.5	
PHF	.879	.500	.813	.884	.938	.904	.000	.917	.000	.000	.000	.000	.000	.861	.811	.843

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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th PM
Site Code : 99918385
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Groups Printed- Large 2 Axle Vehicles

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	5	0	4	9	3	7	0	10	0	0	0	0	0	6	5	11	30
03:15 PM	2	0	2	4	5	7	0	12	0	0	0	0	0	7	5	12	28
03:30 PM	2	0	1	3	1	9	0	10	0	0	0	0	0	3	3	6	19
03:45 PM	2	0	1	3	2	10	0	12	0	0	0	0	0	5	5	10	25
Total	11	0	8	19	11	33	0	44	0	0	0	0	0	21	18	39	102
04:00 PM	0	0	1	1	1	1	0	2	0	0	0	0	0	3	0	3	6
04:15 PM	2	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
04:30 PM	1	0	4	5	4	3	0	7	0	0	0	0	0	2	3	5	17
04:45 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	2	0	2	6
Total	3	0	6	9	5	8	0	13	0	0	0	0	0	7	3	10	32
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	5
05:15 PM	1	0	0	1	1	4	0	5	0	0	0	0	0	2	1	3	9
05:30 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	2	0	2	4
05:45 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	1	1	2	4
Total	3	0	2	5	1	6	0	7	0	0	0	0	0	7	3	10	22
Grand Total	17	0	16	33	17	47	0	64	0	0	0	0	0	35	24	59	156
Apprch %	51.5	0	48.5		26.6	73.4	0		0	0	0		0	59.3	40.7		
Total %	10.9	0	10.3	21.2	10.9	30.1	0	41	0	0	0	0	0	22.4	15.4	37.8	

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	**1**	1	0	3	0	3	0	0	0	0	0	**2**	0	2	6
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	**1**	**3**	5
05:15 PM	**1**	0	0	1	**1**	**4**	0	**5**	0	0	0	0	0	2	1	3	**9**
05:30 PM	1	0	1	**2**	0	0	0	0	0	0	0	0	0	2	0	2	4
Total Volume	2	0	2	4	1	9	0	10	0	0	0	0	0	8	2	10	24
% App. Total	50	0	50		10	90	0		0	0	0		0	80	20		
PHF	.500	.000	.500	.500	.250	.563	.000	.500	.000	.000	.000	.000	.000	1.00	.500	.833	.667

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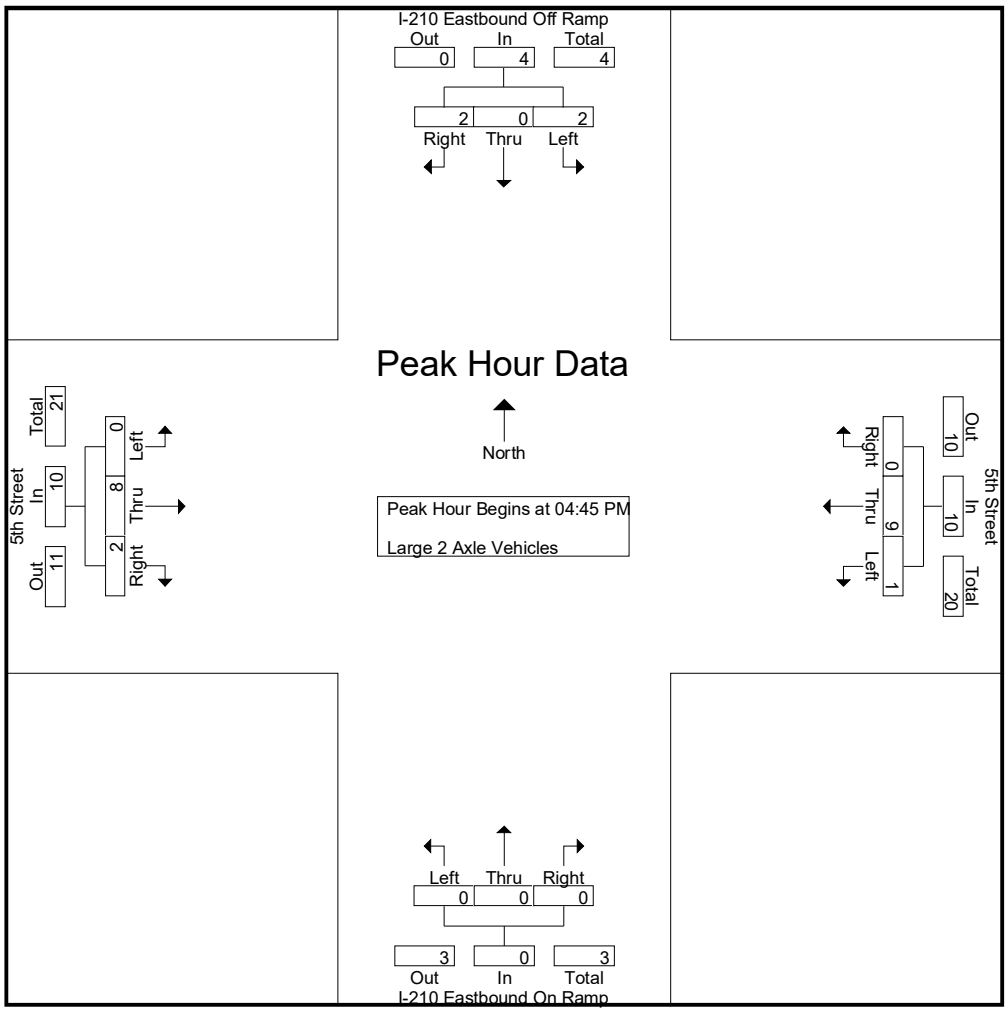

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	**1**	1	0	3	0	3	0	0	0	0	0	**2**	0	2
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	**1**	**3**
+30 mins.	**1**	0	0	1	**1**	**4**	0	**5**	0	0	0	0	0	2	1	3
+45 mins.	1	0	1	**2**	0	0	0	0	0	0	0	0	0	2	0	2
Total Volume	2	0	2	4	1	9	0	10	0	0	0	0	0	8	2	10
% App. Total	50	0	50		10	90	0		0	0	0		0	80	20	
PHF	.500	.000	.500	.500	.250	.563	.000	.500	.000	.000	.000	.000	.000	1.000	.500	.833

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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	2	3
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	2	2	6
03:45 PM	0	0	3	3	0	2	0	2	0	0	0	0	0	0	1	1	6
Total	0	0	3	3	0	7	0	7	0	0	0	0	0	0	5	5	15
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	3
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Total	0	0	2	2	1	3	0	4	0	0	0	0	0	0	1	1	7
05:00 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	1	1	2	6
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	0	0	2	2	0	3	0	3	0	0	0	0	0	2	2	4	9
Grand Total	0	0	7	7	1	13	0	14	0	0	0	0	0	2	8	10	31
Apprch %	0	0	100		7.1	92.9	0		0	0	0		0	20	80		
Total %	0	0	22.6	22.6	3.2	41.9	0	45.2	0	0	0	0	0	6.5	25.8	32.3	

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	**1**	**1**	**1**	0	0	1	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	1	1	0	**3**	0	**3**	0	0	0	0	0	**1**	**1**	**2**	**6**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	2	2	1	3	0	4	0	0	0	0	0	2	1	3	9
% App. Total	0	0	100		25	75	0		0	0	0		0	66.7	33.3		
PHF	.000	.000	.500	.500	.250	.250	.000	.333	.000	.000	.000	.000	.000	.500	.250	.375	.375

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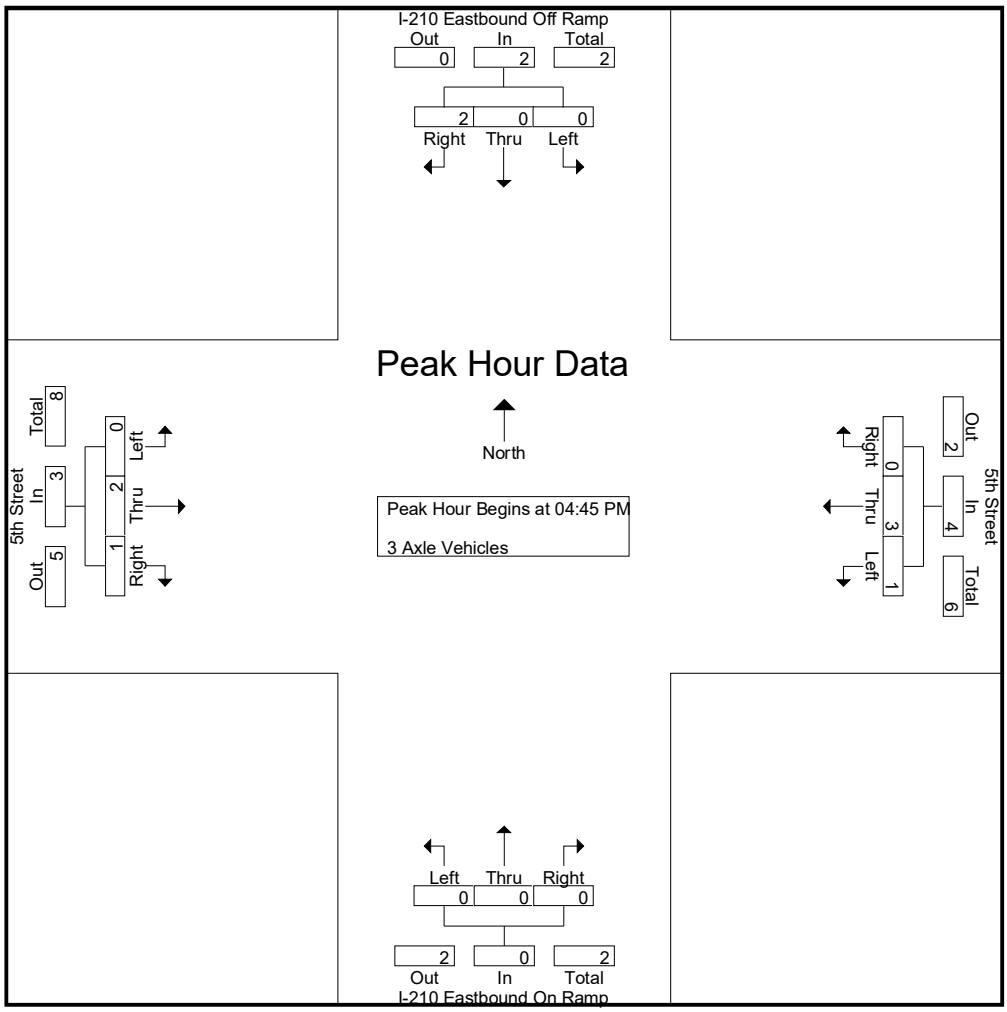
City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	**1**	**1**	**1**	0	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	1	1	0	**3**	0	**3**	0	0	0	0	0	**1**	**1**	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	2	2	1	3	0	4	0	0	0	0	0	2	1	3
% App. Total	0	0	100		25	75	0		0	0	0		0	66.7	33.3	
PHF	.000	.000	.500	.500	.250	.250	.000	.333	.000	.000	.000	.000	.000	.500	.250	.375

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City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	2	2	1	3	0	4	0	0	0	0	0	2	3	5	11
03:15 PM	0	0	1	1	0	6	0	6	0	0	0	0	0	0	2	2	9
03:30 PM	0	0	2	2	0	1	0	1	0	0	0	0	0	1	1	2	5
03:45 PM	1	0	5	6	0	0	0	0	0	0	0	0	0	0	1	1	7
Total	1	0	10	11	1	10	0	11	0	0	0	0	0	3	7	10	32
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	5	1	6	8
04:15 PM	0	0	3	3	0	1	0	1	0	0	0	0	0	1	5	6	10
04:30 PM	0	0	2	2	0	2	0	2	0	0	0	0	0	5	3	8	12
04:45 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	4	1	5	7
Total	0	0	7	7	0	5	0	5	0	0	0	0	0	15	10	25	37
05:00 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	1	2	3	7
05:15 PM	0	0	2	2	0	1	0	1	0	0	0	0	0	3	1	4	7
05:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	1	2	4
05:45 PM	0	0	2	2	0	1	0	1	0	0	0	0	0	1	2	3	6
Total	0	0	6	6	0	6	0	6	0	0	0	0	0	6	6	12	24
Grand Total	1	0	23	24	1	21	0	22	0	0	0	0	0	24	23	47	93
Apprch %	4.2	0	95.8		4.5	95.5	0		0	0	0		0	51.1	48.9		
Total %	1.1	0	24.7	25.8	1.1	22.6	0	23.7	0	0	0	0	0	25.8	24.7	50.5	

	I-210 Eastbound Off Ramp Southbound				5th Street Westbound				I-210 Eastbound On Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	**2**	**2**	0	0	0	0	0	0	0	0	0	**4**	1	**5**	**7**
05:00 PM	0	0	1	1	0	**3**	0	**3**	0	0	0	0	0	1	**2**	3	7
05:15 PM	0	0	2	2	0	1	0	1	0	0	0	0	0	3	1	4	7
05:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	1	2	4
Total Volume	0	0	6	6	0	5	0	5	0	0	0	0	0	9	5	14	25
% App. Total	0	0	100		0	100	0		0	0	0		0	64.3	35.7		
PHF	.000	.000	.750	.750	.000	.417	.000	.417	.000	.000	.000	.000	.000	.563	.625	.700	.893

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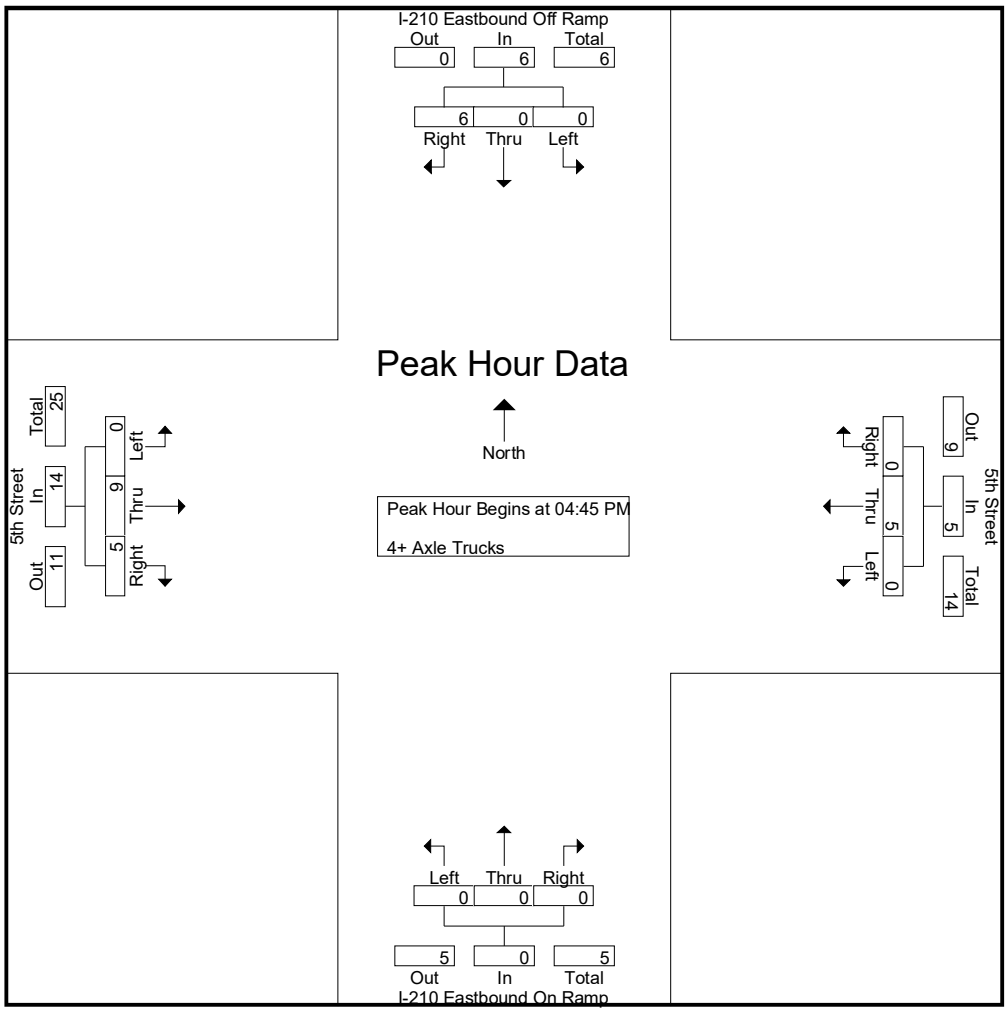
City of Highland
N/S: I-210 Eastbound Ramps
E/W: 5th Street
Weather: Clear

File Name : 83_HLD_210E_5th PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	**2**	**2**	0	0	0	0	0	0	0	0	0	**4**	1	**5**
+15 mins.	0	0	1	1	0	**3**	0	**3**	0	0	0	0	0	1	**2**	3
+30 mins.	0	0	2	2	0	1	0	1	0	0	0	0	0	3	1	4
+45 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	1	1	2
Total Volume	0	0	6	6	0	5	0	5	0	0	0	0	0	9	5	14
% App. Total	0	0	100		0	100	0		0	0	0		0	64.3	35.7	
PHF	.000	.000	.750	.750	.000	.417	.000	.417	.000	.000	.000	.000	.000	.563	.625	.700

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City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018

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

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	106	26	132	50	0	47	97	5	40	0	45	274
06:15 AM	0	0	0	0	0	127	35	162	46	0	33	79	8	38	0	46	287
06:30 AM	0	0	0	0	0	162	51	213	64	0	29	93	17	55	0	72	378
06:45 AM	0	0	0	0	0	190	47	237	73	0	47	120	14	38	0	52	409
Total	0	0	0	0	0	585	159	744	233	0	156	389	44	171	0	215	1348
07:00 AM	0	0	0	0	0	205	77	282	104	0	58	162	20	56	0	76	520
07:15 AM	0	0	0	0	0	282	99	381	91	0	61	152	22	70	0	92	625
07:30 AM	0	0	0	0	0	319	116	435	80	0	73	153	10	89	0	99	687
07:45 AM	0	0	0	0	0	377	91	468	98	0	70	168	16	90	0	106	742
Total	0	0	0	0	0	1183	383	1566	373	0	262	635	68	305	0	373	2574
08:00 AM	0	0	0	0	0	315	78	393	72	0	69	141	12	78	0	90	624
08:15 AM	0	0	0	0	0	285	98	383	72	0	78	150	13	84	0	97	630
08:30 AM	0	0	0	0	0	231	75	306	62	1	96	159	19	110	0	129	594
08:45 AM	0	0	0	0	0	201	62	263	60	0	79	139	23	99	0	122	524
Total	0	0	0	0	0	1032	313	1345	266	1	322	589	67	371	0	438	2372
Grand Total	0	0	0	0	0	2800	855	3655	872	1	740	1613	179	847	0	1026	6294
Apprch %	0	0	0		0	76.6	23.4		54.1	0.1	45.9		17.4	82.6	0		
Total %	0	0	0	0	0	44.5	13.6	58.1	13.9	0	11.8	25.6	2.8	13.5	0	16.3	
Passenger Vehicles	0	0	0	0	0	2738	838	3576	821	0	686	1507	127	801	0	928	6011
% Passenger Vehicles	0	0	0	0	0	97.8	98	97.8	94.2	0	92.7	93.4	70.9	94.6	0	90.4	95.5
Large 2 Axle Vehicles	0	0	0	0	0	24	7	31	11	1	19	31	4	22	0	26	88
% Large 2 Axle Vehicles	0	0	0	0	0	0.9	0.8	0.8	1.3	100	2.6	1.9	2.2	2.6	0	2.5	1.4
3 Axle Vehicles	0	0	0	0	0	12	4	16	10	0	6	16	26	11	0	37	69
% 3 Axle Vehicles	0	0	0	0	0	0.4	0.5	0.4	1.1	0	0.8	1	14.5	1.3	0	3.6	1.1
4+ Axle Trucks	0	0	0	0	0	26	6	32	30	0	29	59	22	13	0	35	126
% 4+ Axle Trucks	0	0	0	0	0	0.9	0.7	0.9	3.4	0	3.9	3.7	12.3	1.5	0	3.4	2

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	319	**116**	435	80	0	73	153	10	89	0	99	687
07:45 AM	0	0	0	0	0	**377**	91	**468**	**98**	0	70	**168**	**16**	**90**	0	**106**	**742**
08:00 AM	0	0	0	0	0	315	78	393	72	0	69	141	12	78	0	90	624
08:15 AM	0	0	0	0	0	285	98	383	72	0	**78**	150	13	84	0	97	630
Total Volume	0	0	0	0	0	1296	383	1679	322	0	290	612	51	341	0	392	2683
% App. Total	0	0	0		0	77.2	22.8		52.6	0	47.4		13	87	0		
PHF	.000	.000	.000	.000	.000	.859	.825	.897	.821	.000	.929	.911	.797	.947	.000	.925	.904

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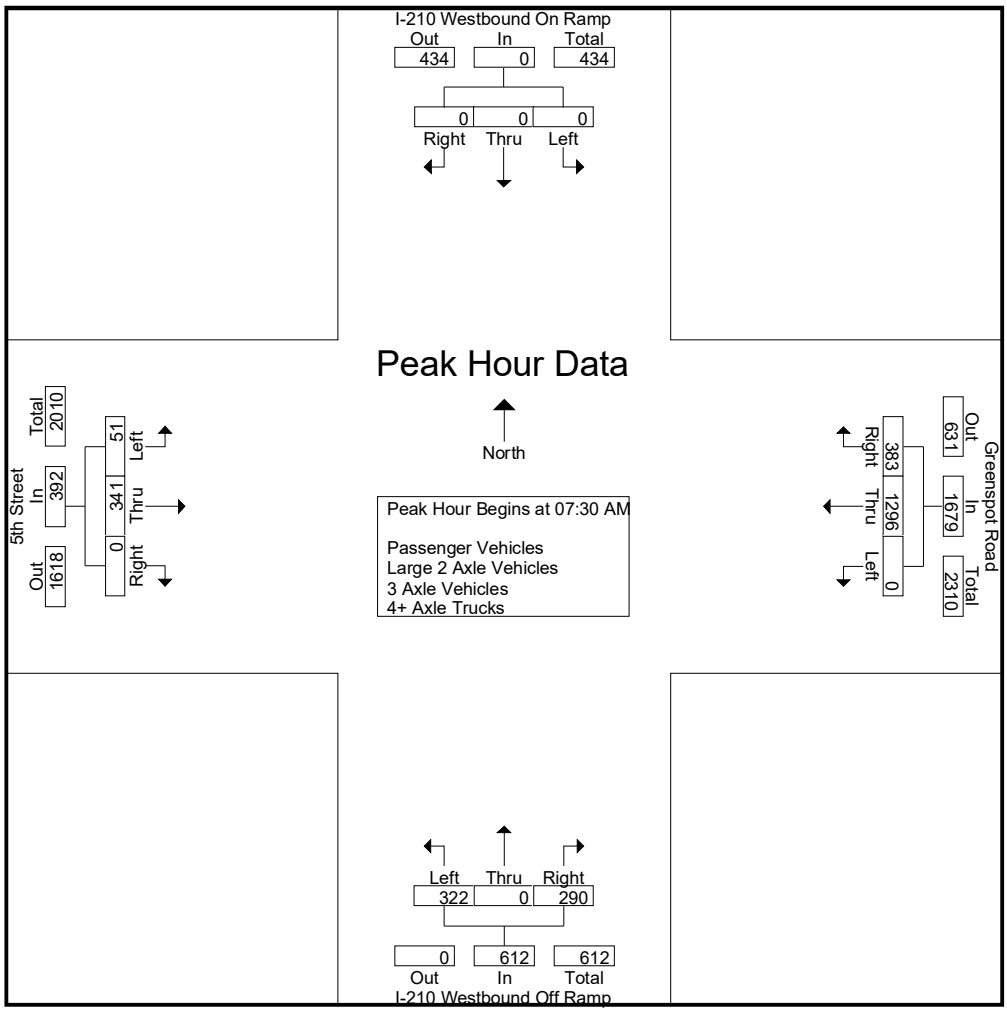
City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:00 AM				07:30 AM				07:00 AM				08:00 AM			
+0 mins.	0	0	0	0	0	319	**116**	435	**104**	0	58	162	12	78	0	90
+15 mins.	0	0	0	0	0	**377**	91	**468**	91	0	61	152	13	84	0	97
+30 mins.	0	0	0	0	0	315	78	393	80	0	**73**	153	19	**110**	0	**129**
+45 mins.	0	0	0	0	0	285	98	383	98	0	70	**168**	**23**	99	0	122
Total Volume	0	0	0	0	0	1296	383	1679	373	0	262	635	67	371	0	438
% App. Total	0	0	0		0	77.2	22.8		58.7	0	41.3		15.3	84.7	0	
PHF	.000	.000	.000	.000	.000	.859	.825	.897	.897	.000	.897	.945	.728	.843	.000	.849

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City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- Passenger Vehicles

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	99	26	125	49	0	42	91	5	38	0	43	259
06:15 AM	0	0	0	0	0	123	35	158	45	0	33	78	6	37	0	43	279
06:30 AM	0	0	0	0	0	161	48	209	62	0	22	84	13	52	0	65	358
06:45 AM	0	0	0	0	0	187	47	234	68	0	44	112	12	38	0	50	396
Total	0	0	0	0	0	570	156	726	224	0	141	365	36	165	0	201	1292
07:00 AM	0	0	0	0	0	201	77	278	99	0	54	153	15	51	0	66	497
07:15 AM	0	0	0	0	0	278	93	371	90	0	55	145	17	69	0	86	602
07:30 AM	0	0	0	0	0	313	116	429	74	0	68	142	7	86	0	93	664
07:45 AM	0	0	0	0	0	369	89	458	93	0	65	158	7	82	0	89	705
Total	0	0	0	0	0	1161	375	1536	356	0	242	598	46	288	0	334	2468
08:00 AM	0	0	0	0	0	310	77	387	70	0	67	137	8	75	0	83	607
08:15 AM	0	0	0	0	0	279	96	375	61	0	72	133	11	77	0	88	596
08:30 AM	0	0	0	0	0	226	73	299	54	0	89	143	14	101	0	115	557
08:45 AM	0	0	0	0	0	192	61	253	56	0	75	131	12	95	0	107	491
Total	0	0	0	0	0	1007	307	1314	241	0	303	544	45	348	0	393	2251
Grand Total	0	0	0	0	0	2738	838	3576	821	0	686	1507	127	801	0	928	6011
Apprch %	0	0	0		0	76.6	23.4		54.5	0	45.5		13.7	86.3	0		
Total %	0	0	0	0	0	45.5	13.9	59.5	13.7	0	11.4	25.1	2.1	13.3	0	15.4	

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	313	**116**	429	74	0	68	142	7	**86**	0	**93**	664
07:45 AM	0	0	0	0	0	**369**	89	**458**	**93**	0	65	**158**	7	82	0	89	**705**
08:00 AM	0	0	0	0	0	310	77	387	70	0	67	137	8	75	0	83	607
08:15 AM	0	0	0	0	0	279	96	375	61	0	**72**	133	**11**	77	0	88	596
Total Volume	0	0	0	0	0	1271	378	1649	298	0	272	570	33	320	0	353	2572
% App. Total	0	0	0		0	77.1	22.9		52.3	0	47.7		9.3	90.7	0		
PHF	.000	.000	.000	.000	.000	.861	.815	.900	.801	.000	.944	.902	.750	.930	.000	.949	.912

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City of Highland
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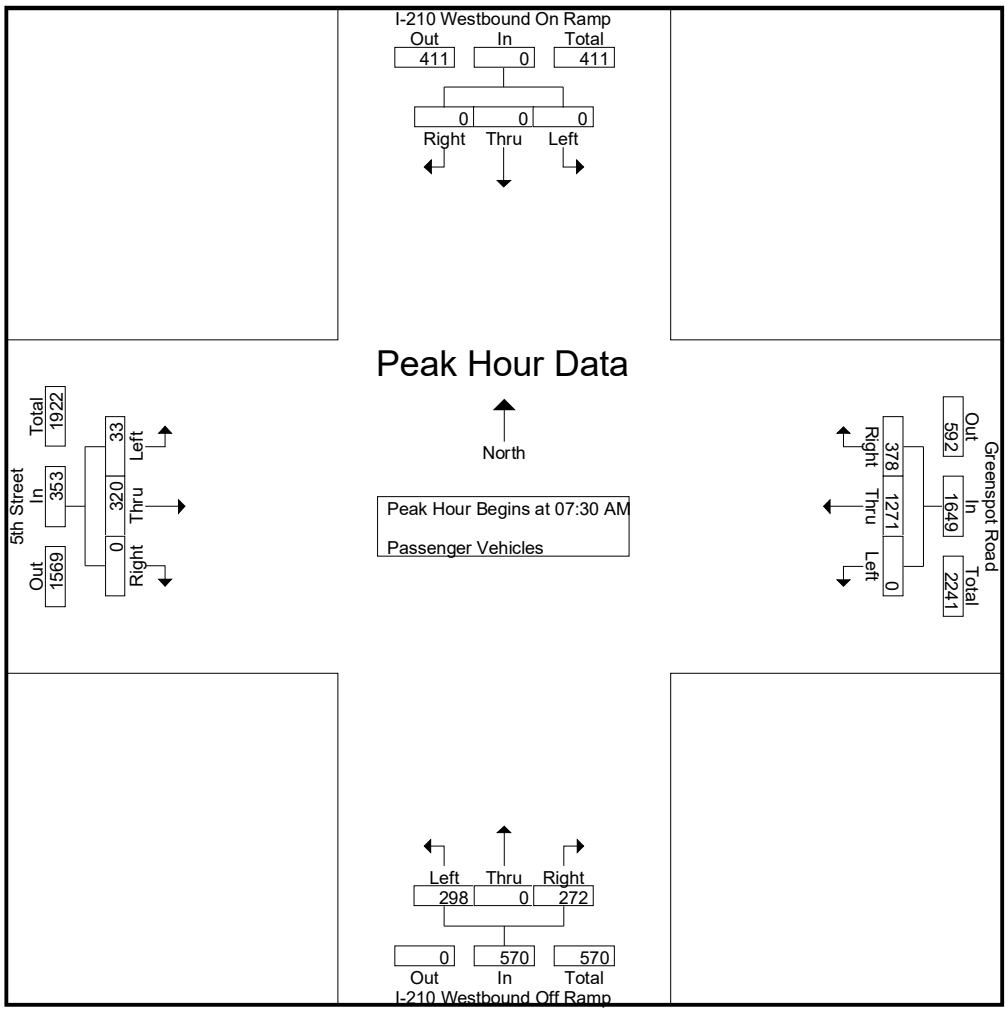
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	313	**116**	429	74	0	68	142	7	**86**	0	**93**
+15 mins.	0	0	0	0	0	**369**	89	**458**	**93**	0	65	**158**	7	82	0	89
+30 mins.	0	0	0	0	0	310	77	387	70	0	67	137	8	75	0	83
+45 mins.	0	0	0	0	0	279	96	375	61	0	**72**	133	**11**	77	0	88
Total Volume	0	0	0	0	0	1271	378	1649	298	0	272	570	33	320	0	353
% App. Total	0	0	0		0	77.1	22.9		52.3	0	47.7		9.3	90.7	0	
PHF	.000	.000	.000	.000	.000	.861	.815	.900	.801	.000	.944	.902	.750	.930	.000	.949

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City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018

Groups Printed- Large 2 Axle Vehicles

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
06:30 AM	0	0	0	0	0	1	1	2	1	0	3	4	1	1	0	2	8
06:45 AM	0	0	0	0	0	2	0	2	2	0	1	3	0	0	0	0	5
Total	0	0	0	0	0	6	1	7	3	0	4	7	1	3	0	4	18
07:00 AM	0	0	0	0	0	2	0	2	1	0	1	2	1	2	0	3	7
07:15 AM	0	0	0	0	0	2	3	5	0	0	3	3	0	1	0	1	9
07:30 AM	0	0	0	0	0	0	0	0	1	0	2	3	0	1	0	1	4
07:45 AM	0	0	0	0	0	4	1	5	1	0	1	2	0	4	0	4	11
Total	0	0	0	0	0	8	4	12	3	0	7	10	1	8	0	9	31
08:00 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
08:15 AM	0	0	0	0	0	2	0	2	2	0	3	5	0	3	0	3	10
08:30 AM	0	0	0	0	0	4	2	6	1	1	4	6	0	4	0	4	16
08:45 AM	0	0	0	0	0	3	0	3	1	0	1	2	2	3	0	5	10
Total	0	0	0	0	0	10	2	12	5	1	8	14	2	11	0	13	39
Grand Total	0	0	0	0	0	24	7	31	11	1	19	31	4	22	0	26	88
Apprch %	0	0	0		0	77.4	22.6		35.5	3.2	61.3		15.4	84.6	0		
Total %	0	0	0	0	0	27.3	8	35.2	12.5	1.1	21.6	35.2	4.5	25	0	29.5	

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	1	0	2	3	0	1	0	1	4
07:45 AM	0	0	0	0	0	**4**	**1**	**5**	1	0	1	2	0	**4**	0	**4**	**11**
08:00 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
08:15 AM	0	0	0	0	0	2	0	2	**2**	0	**3**	**5**	0	3	0	3	10
Total Volume	0	0	0	0	0	7	1	8	5	0	6	11	0	9	0	9	28
% App. Total	0	0	0		0	87.5	12.5		45.5	0	54.5		0	100	0		
PHF	.000	.000	.000	.000	.000	.438	.250	.400	.625	.000	.500	.550	.000	.563	.000	.563	.636

Counts Unlimited
PO Box 1178
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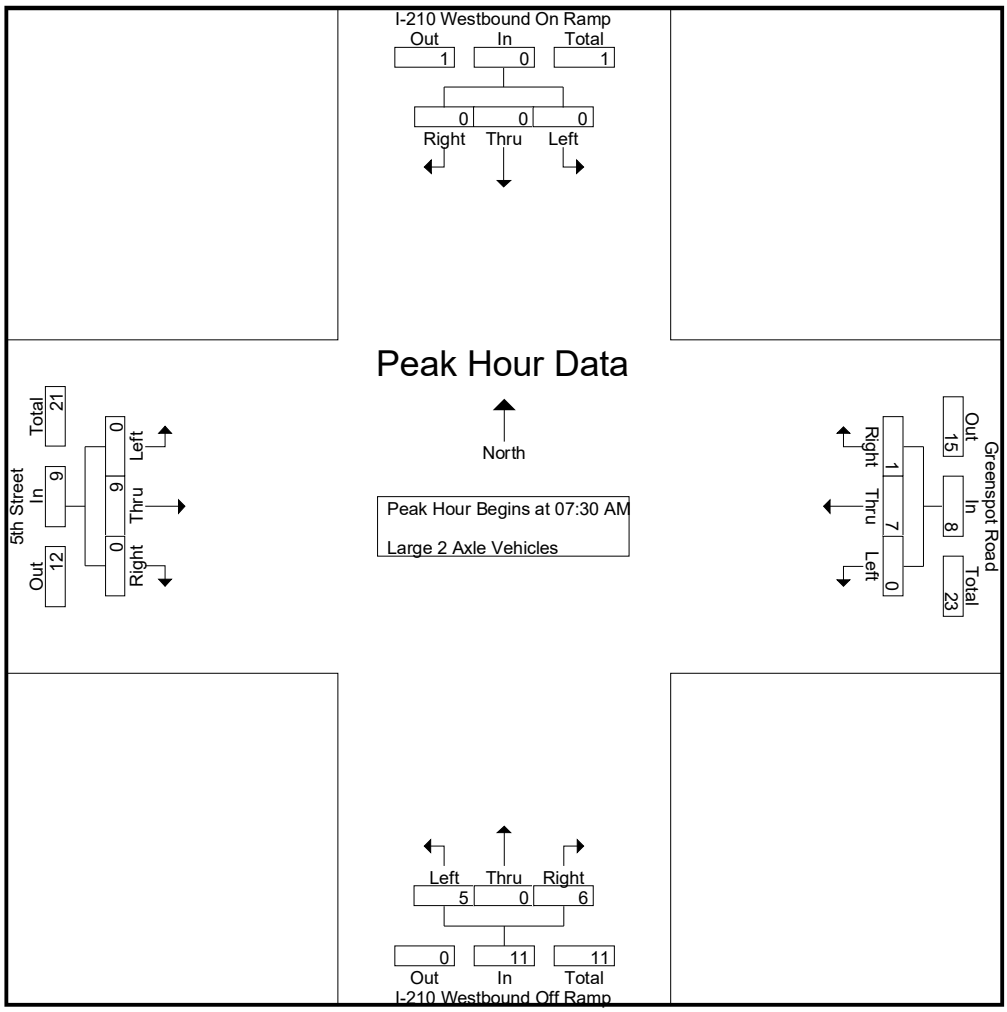
City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	1	0	2	3	0	1	0	1
+15 mins.	0	0	0	0	0	**4**	**1**	**5**	1	0	1	2	0	**4**	0	**4**
+30 mins.	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1
+45 mins.	0	0	0	0	0	2	0	2	**2**	0	**3**	**5**	0	3	0	3
Total Volume	0	0	0	0	0	7	1	8	5	0	6	11	0	9	0	9
% App. Total	0	0	0		0	87.5	12.5		45.5	0	54.5		0	100	0	
PHF	.000	.000	.000	.000	.000	.438	.250	.400	.625	.000	.500	.550	.000	.563	.000	.563

Counts Unlimited
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City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018

Groups Printed- 3 Axle Vehicles

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	3	0	3	1	0	2	3	0	0	0	0	6
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	2	2	0	0	0	0	2	1	0	3	5
06:45 AM	0	0	0	0	0	0	0	0	2	0	1	3	0	0	0	0	3
Total	0	0	0	0	0	3	2	5	3	0	3	6	2	1	0	3	14
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	3	2	0	5	6
07:15 AM	0	0	0	0	0	1	1	2	1	0	0	1	4	0	0	4	7
07:30 AM	0	0	0	0	0	1	0	1	2	0	2	4	0	1	0	1	6
07:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	6	2	0	8	10
Total	0	0	0	0	0	3	1	4	5	0	2	7	13	5	0	18	29
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	3	1	0	4	6
08:15 AM	0	0	0	0	0	2	1	3	1	0	0	1	1	2	0	3	7
08:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	3	2	0	5	6
08:45 AM	0	0	0	0	0	2	0	2	0	0	1	1	4	0	0	4	7
Total	0	0	0	0	0	6	1	7	2	0	1	3	11	5	0	16	26
Grand Total	0	0	0	0	0	12	4	16	10	0	6	16	26	11	0	37	69
Apprch %	0	0	0		0	75	25		62.5	0	37.5		70.3	29.7	0		
Total %	0	0	0	0	0	17.4	5.8	23.2	14.5	0	8.7	23.2	37.7	15.9	0	53.6	

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	1	0	1	**2**	0	**2**	**4**	0	1	0	1	6
07:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	**6**	**2**	0	**8**	**10**
08:00 AM	0	0	0	0	0	**2**	0	2	0	0	0	0	3	1	0	4	6
08:15 AM	0	0	0	0	0	2	**1**	**3**	1	0	0	1	1	2	0	3	7
Total Volume	0	0	0	0	0	6	1	7	4	0	2	6	10	6	0	16	29
% App. Total	0	0	0		0	85.7	14.3		66.7	0	33.3		62.5	37.5	0		
PHF	.000	.000	.000	.000	.000	.750	.250	.583	.500	.000	.250	.375	.417	.750	.000	.500	.725

Counts Unlimited
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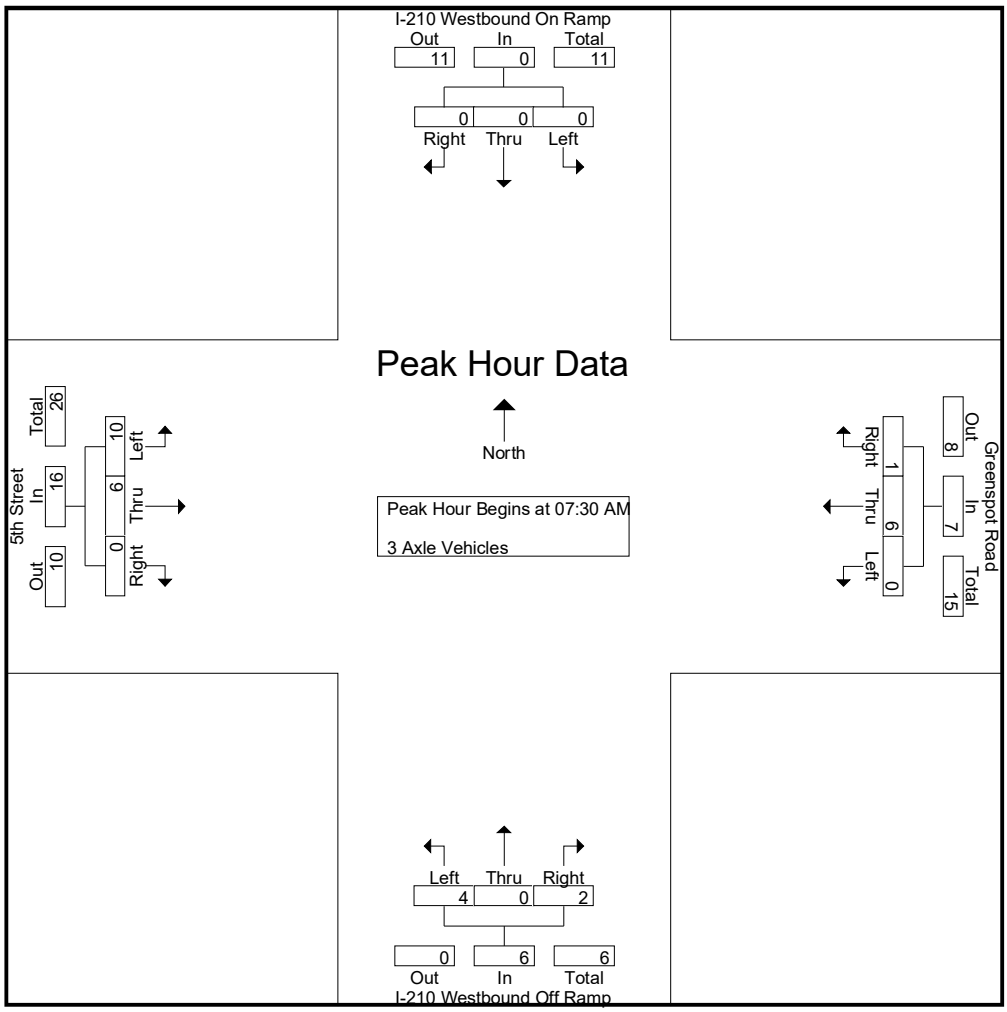
City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	1	0	1	**2**	0	**2**	**4**	0	1	0	1
+15 mins.	0	0	0	0	0	1	0	1	1	0	0	1	**6**	**2**	0	**8**
+30 mins.	0	0	0	0	0	**2**	0	2	0	0	0	0	3	1	0	4
+45 mins.	0	0	0	0	0	2	**1**	**3**	1	0	0	1	1	2	0	3
Total Volume	0	0	0	0	0	6	1	7	4	0	2	6	10	6	0	16
% App. Total	0	0	0		0	85.7	14.3		66.7	0	33.3		62.5	37.5	0	
PHF	.000	.000	.000	.000	.000	.750	.250	.583	.500	.000	.250	.375	.417	.750	.000	.500

Counts Unlimited
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City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018

Groups Printed- 4+ Axle Trucks

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	1	0	1	0	0	3	3	0	1	0	1	5
06:15 AM	0	0	0	0	0	4	0	4	1	0	0	1	2	0	0	2	7
06:30 AM	0	0	0	0	0	0	0	0	1	0	4	5	1	1	0	2	7
06:45 AM	0	0	0	0	0	1	0	1	1	0	1	2	2	0	0	2	5
Total	0	0	0	0	0	6	0	6	3	0	8	11	5	2	0	7	24
07:00 AM	0	0	0	0	0	2	0	2	3	0	3	6	1	1	0	2	10
07:15 AM	0	0	0	0	0	1	2	3	0	0	3	3	1	0	0	1	7
07:30 AM	0	0	0	0	0	5	0	5	3	0	1	4	3	1	0	4	13
07:45 AM	0	0	0	0	0	3	1	4	3	0	4	7	3	2	0	5	16
Total	0	0	0	0	0	11	3	14	9	0	11	20	8	4	0	12	46
08:00 AM	0	0	0	0	0	2	1	3	1	0	2	3	1	1	0	2	8
08:15 AM	0	0	0	0	0	2	1	3	8	0	3	11	1	2	0	3	17
08:30 AM	0	0	0	0	0	1	0	1	6	0	3	9	2	3	0	5	15
08:45 AM	0	0	0	0	0	4	1	5	3	0	2	5	5	1	0	6	16
Total	0	0	0	0	0	9	3	12	18	0	10	28	9	7	0	16	56
Grand Total	0	0	0	0	0	26	6	32	30	0	29	59	22	13	0	35	126
Apprch %	0	0	0		0	81.2	18.8		50.8	0	49.2		62.9	37.1	0		
Total %	0	0	0	0	0	20.6	4.8	25.4	23.8	0	23	46.8	17.5	10.3	0	27.8	

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**5**	0	**5**	3	0	1	4	**3**	1	0	4	13
07:45 AM	0	0	0	0	0	3	**1**	4	3	0	**4**	7	3	**2**	0	**5**	16
08:00 AM	0	0	0	0	0	2	1	3	1	0	2	3	1	1	0	2	8
08:15 AM	0	0	0	0	0	2	1	3	**8**	0	3	**11**	1	2	0	3	**17**
Total Volume	0	0	0	0	0	12	3	15	15	0	10	25	8	6	0	14	54
% App. Total	0	0	0		0	80	20		60	0	40		57.1	42.9	0		
PHF	.000	.000	.000	.000	.000	.600	.750	.750	.469	.000	.625	.568	.667	.750	.000	.700	.794

Counts Unlimited
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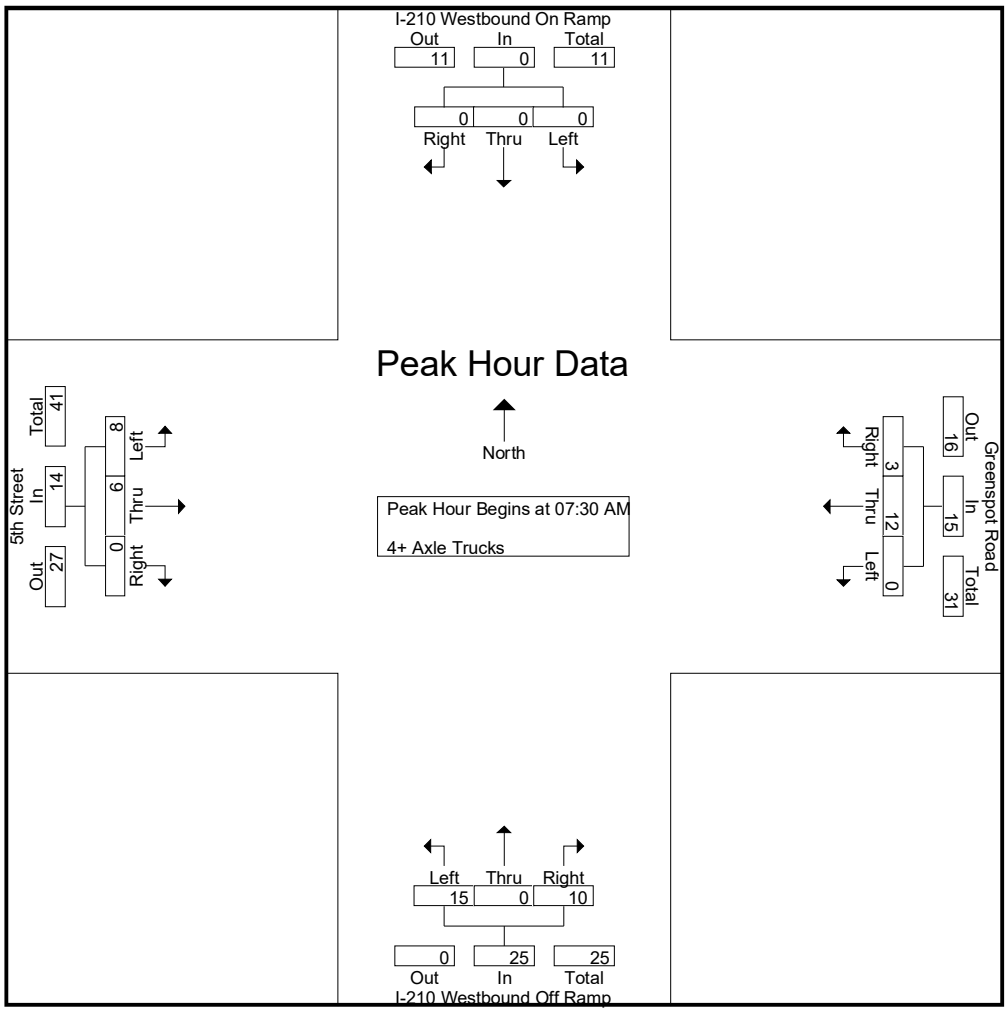
City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**5**	0	**5**	3	0	1	4	**3**	1	0	4
+15 mins.	0	0	0	0	0	3	**1**	4	3	0	**4**	7	3	**2**	0	**5**
+30 mins.	0	0	0	0	0	2	1	3	1	0	2	3	1	1	0	2
+45 mins.	0	0	0	0	0	2	1	3	**8**	0	3	**11**	1	2	0	3
Total Volume	0	0	0	0	0	12	3	15	15	0	10	25	8	6	0	14
% App. Total	0	0	0		0	80	20		60	0	40		57.1	42.9	0	
PHF	.000	.000	.000	.000	.000	.600	.750	.750	.469	.000	.625	.568	.667	.750	.000	.700

Counts Unlimited
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City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

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

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	126	64	190	68	0	110	178	32	123	0	155	523
03:15 PM	0	0	0	0	0	128	70	198	56	0	105	161	43	145	0	188	547
03:30 PM	0	0	0	0	0	155	70	225	63	0	115	178	35	123	0	158	561
03:45 PM	0	0	0	0	0	128	91	219	63	0	117	180	43	146	0	189	588
Total	0	0	0	0	0	537	295	832	250	0	447	697	153	537	0	690	2219
04:00 PM	0	0	0	0	0	161	73	234	47	0	101	148	29	192	0	221	603
04:15 PM	0	0	0	0	0	160	59	219	39	0	118	157	32	218	0	250	626
04:30 PM	0	0	0	0	0	162	53	215	34	0	87	121	50	228	0	278	614
04:45 PM	0	0	0	0	0	149	38	187	53	0	100	153	46	249	0	295	635
Total	0	0	0	0	0	632	223	855	173	0	406	579	157	887	0	1044	2478
05:00 PM	0	0	0	0	0	142	63	205	48	0	117	165	38	231	0	269	639
05:15 PM	0	0	0	0	0	134	66	200	34	0	103	137	50	308	0	358	695
05:30 PM	0	0	0	0	0	136	59	195	46	0	119	165	48	267	0	315	675
05:45 PM	0	0	0	0	0	157	78	235	57	0	94	151	31	223	0	254	640
Total	0	0	0	0	0	569	266	835	185	0	433	618	167	1029	0	1196	2649
Grand Total	0	0	0	0	0	1738	784	2522	608	0	1286	1894	477	2453	0	2930	7346
Apprch %	0	0	0		0	68.9	31.1		32.1	0	67.9		16.3	83.7	0		
Total %	0	0	0	0	0	23.7	10.7	34.3	8.3	0	17.5	25.8	6.5	33.4	0	39.9	
Passenger Vehicles	0	0	0	0	0	1717	765	2482	565	0	1281	1846	440	2428	0	2868	7196
% Passenger Vehicles	0	0	0	0	0	98.8	97.6	98.4	92.9	0	99.6	97.5	92.2	99	0	97.9	98
Large 2 Axle Vehicles	0	0	0	0	0	13	18	31	12	0	3	15	14	21	0	35	81
% Large 2 Axle Vehicles	0	0	0	0	0	0.7	2.3	1.2	2	0	0.2	0.8	2.9	0.9	0	1.2	1.1
3 Axle Vehicles	0	0	0	0	0	4	0	4	12	0	0	12	1	1	0	2	18
% 3 Axle Vehicles	0	0	0	0	0	0.2	0	0.2	2	0	0	0.6	0.2	0	0	0.1	0.2
4+ Axle Trucks	0	0	0	0	0	4	1	5	19	0	2	21	22	3	0	25	51
% 4+ Axle Trucks	0	0	0	0	0	0.2	0.1	0.2	3.1	0	0.2	1.1	4.6	0.1	0	0.9	0.7

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	142	63	205	48	0	117	**165**	38	231	0	269	639
05:15 PM	0	0	0	0	0	134	66	200	34	0	103	137	**50**	**308**	0	**358**	**695**
05:30 PM	0	0	0	0	0	136	59	195	46	0	**119**	165	48	267	0	315	675
05:45 PM	0	0	0	0	0	**157**	**78**	**235**	**57**	0	94	151	31	223	0	254	640
Total Volume	0	0	0	0	0	569	266	835	185	0	433	618	167	1029	0	1196	2649
% App. Total	0	0	0		0	68.1	31.9		29.9	0	70.1		14	86	0		
PHF	.000	.000	.000	.000	.000	.906	.853	.888	.811	.000	.910	.936	.835	.835	.000	.835	.953

Counts Unlimited
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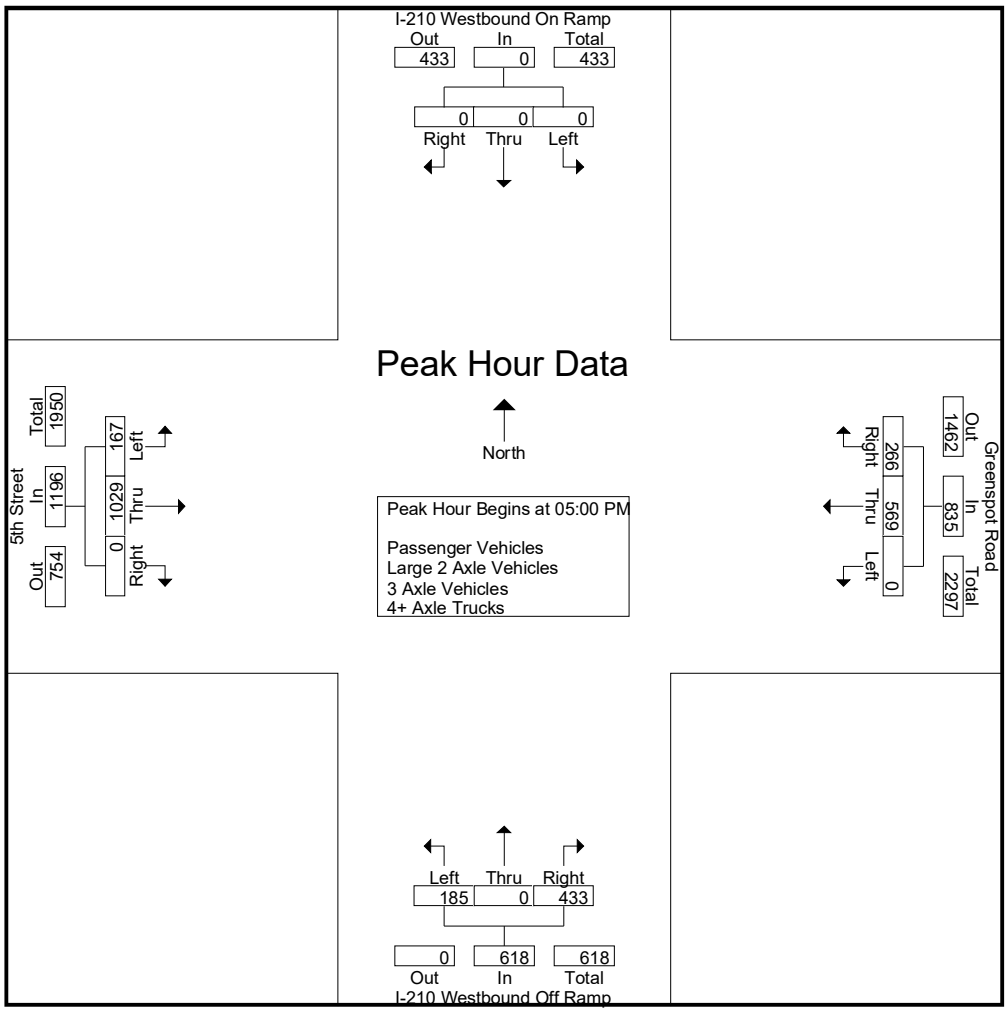
City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:30 PM				03:00 PM				04:45 PM			
+0 mins.	0	0	0	0	0	155	70	225	**68**	0	110	178	46	249	0	295
+15 mins.	0	0	0	0	0	128	**91**	219	56	0	105	161	38	231	0	269
+30 mins.	0	0	0	0	0	**161**	73	**234**	63	0	115	178	**50**	**308**	0	**358**
+45 mins.	0	0	0	0	0	160	59	219	63	0	**117**	**180**	48	267	0	315
Total Volume	0	0	0	0	0	604	293	897	250	0	447	697	182	1055	0	1237
% App. Total	0	0	0		0	67.3	32.7		35.9	0	64.1		14.7	85.3	0	
PHF	.000	.000	.000	.000	.000	.938	.805	.958	.919	.000	.955	.968	.910	.856	.000	.864

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City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018

Groups Printed- Passenger Vehicles

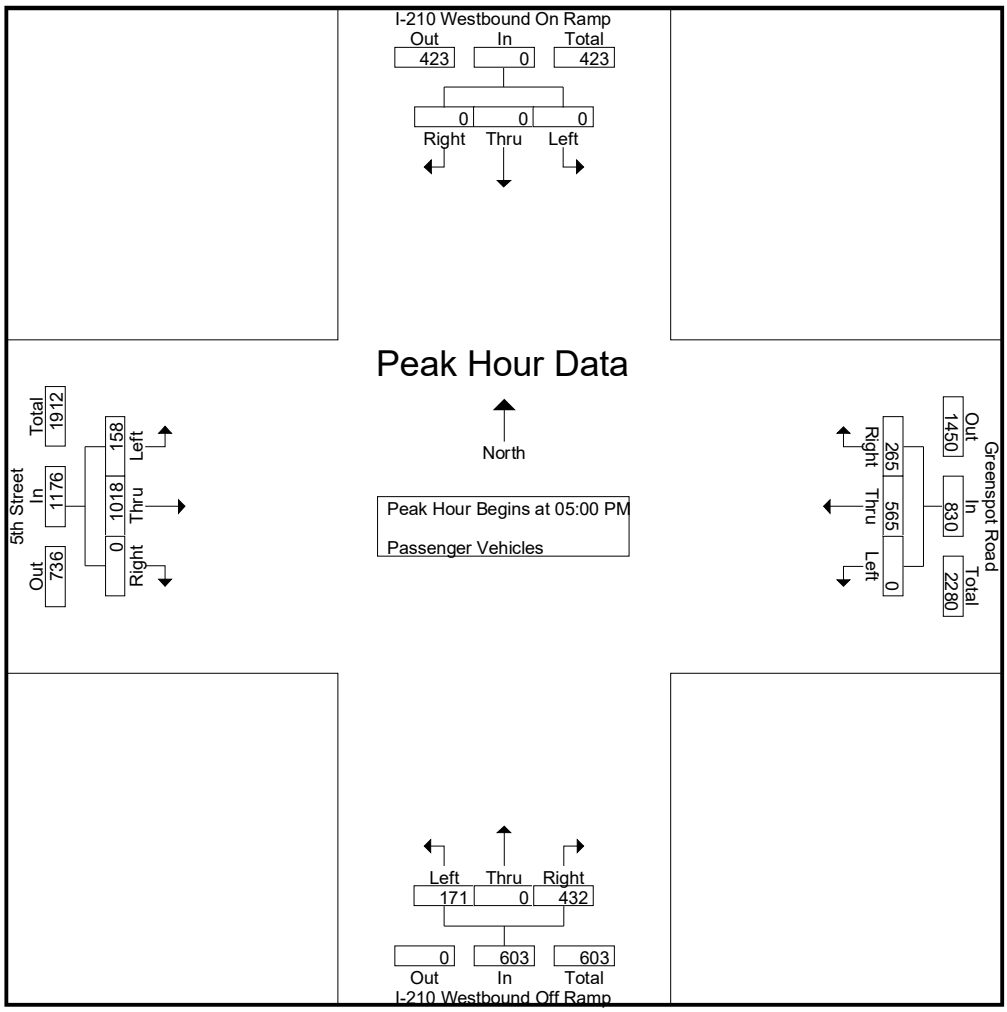
	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	124	61	185	63	0	108	171	29	120	0	149	505
03:15 PM	0	0	0	0	0	128	69	197	49	0	105	154	40	145	0	185	536
03:30 PM	0	0	0	0	0	151	70	221	60	0	115	175	33	122	0	155	551
03:45 PM	0	0	0	0	0	127	85	212	61	0	116	177	42	142	0	184	573
Total	0	0	0	0	0	530	285	815	233	0	444	677	144	529	0	673	2165
04:00 PM	0	0	0	0	0	159	68	227	43	0	100	143	24	191	0	215	585
04:15 PM	0	0	0	0	0	159	58	217	36	0	118	154	29	217	0	246	617
04:30 PM	0	0	0	0	0	156	51	207	31	0	87	118	45	226	0	271	596
04:45 PM	0	0	0	0	0	148	38	186	51	0	100	151	40	247	0	287	624
Total	0	0	0	0	0	622	215	837	161	0	405	566	138	881	0	1019	2422
05:00 PM	0	0	0	0	0	140	63	203	40	0	117	157	35	228	0	263	623
05:15 PM	0	0	0	0	0	132	66	198	30	0	102	132	47	305	0	352	682
05:30 PM	0	0	0	0	0	136	59	195	45	0	119	164	46	264	0	310	669
05:45 PM	0	0	0	0	0	157	77	234	56	0	94	150	30	221	0	251	635
Total	0	0	0	0	0	565	265	830	171	0	432	603	158	1018	0	1176	2609
Grand Total	0	0	0	0	0	1717	765	2482	565	0	1281	1846	440	2428	0	2868	7196
Apprch %	0	0	0		0	69.2	30.8		30.6	0	69.4		15.3	84.7	0		
Total %	0	0	0	0	0	23.9	10.6	34.5	7.9	0	17.8	25.7	6.1	33.7	0	39.9	

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	140	63	203	40	0	117	157	35	228	0	263	623
05:15 PM	0	0	0	0	0	132	66	198	30	0	102	132	**47**	**305**	0	**352**	**682**
05:30 PM	0	0	0	0	0	136	59	195	45	0	**119**	**164**	46	264	0	310	669
05:45 PM	0	0	0	0	0	**157**	**77**	**234**	**56**	0	94	150	30	221	0	251	635
Total Volume	0	0	0	0	0	565	265	830	171	0	432	603	158	1018	0	1176	2609
% App. Total	0	0	0		0	68.1	31.9		28.4	0	71.6		13.4	86.6	0		
PHF	.000	.000	.000	.000	.000	.900	.860	.887	.763	.000	.908	.919	.840	.834	.000	.835	.956

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

City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	140	63	203	40	0	117	157	35	228	0	263
+15 mins.	0	0	0	0	0	132	66	198	30	0	102	132	**47**	**305**	0	**352**
+30 mins.	0	0	0	0	0	136	59	195	45	0	**119**	**164**	46	264	0	310
+45 mins.	0	0	0	0	0	**157**	**77**	**234**	**56**	0	94	150	30	221	0	251
Total Volume	0	0	0	0	0	565	265	830	171	0	432	603	158	1018	0	1176
% App. Total	0	0	0		0	68.1	31.9		28.4	0	71.6		13.4	86.6	0	
PHF	.000	.000	.000	.000	.000	.900	.860	.887	.763	.000	.908	.919	.840	.834	.000	.835

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

City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018

Groups Printed- Large 2 Axle Vehicles

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	1	3	4	2	0	1	3	1	2	0	3	10
03:15 PM	0	0	0	0	0	0	1	1	1	0	0	1	3	0	0	3	5
03:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
03:45 PM	0	0	0	0	0	0	5	5	0	0	1	1	1	3	0	4	10
Total	0	0	0	0	0	2	9	11	3	0	2	5	6	6	0	12	28
04:00 PM	0	0	0	0	0	2	5	7	0	0	1	1	1	1	0	2	10
04:15 PM	0	0	0	0	0	1	1	2	1	0	0	1	1	1	0	2	5
04:30 PM	0	0	0	0	0	5	2	7	1	0	0	1	2	2	0	4	12
04:45 PM	0	0	0	0	0	1	0	1	2	0	0	2	1	1	0	2	5
Total	0	0	0	0	0	9	8	17	4	0	1	5	5	5	0	10	32
05:00 PM	0	0	0	0	0	1	0	1	2	0	0	2	1	3	0	4	7
05:15 PM	0	0	0	0	0	1	0	1	3	0	0	3	1	2	0	3	7
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	4
05:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	2	3
Total	0	0	0	0	0	2	1	3	5	0	0	5	3	10	0	13	21
Grand Total	0	0	0	0	0	13	18	31	12	0	3	15	14	21	0	35	81
Apprch %	0	0	0		0	41.9	58.1		80	0	20		40	60	0		
Total %	0	0	0	0	0	16	22.2	38.3	14.8	0	3.7	18.5	17.3	25.9	0	43.2	

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	**1**	0	**1**	2	0	0	2	**1**	**3**	0	**4**	**7**
05:15 PM	0	0	0	0	0	1	0	1	**3**	0	0	**3**	1	2	0	3	7
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	4
05:45 PM	0	0	0	0	0	0	**1**	1	0	0	0	0	0	2	0	2	3
Total Volume	0	0	0	0	0	2	1	3	5	0	0	5	3	10	0	13	21
% App. Total	0	0	0		0	66.7	33.3		100	0	0		23.1	76.9	0		
PHF	.000	.000	.000	.000	.000	.500	.250	.750	.417	.000	.000	.417	.750	.833	.000	.813	.750

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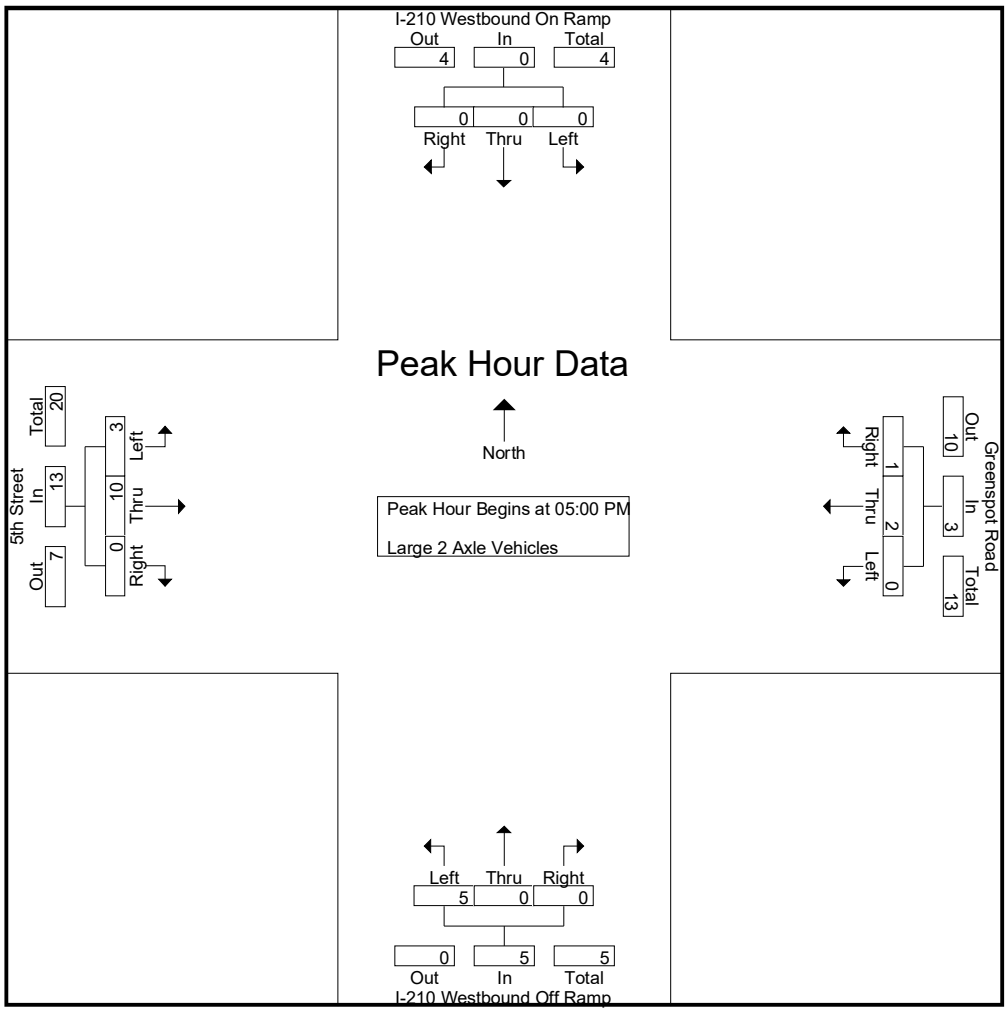
Corona, CA 92878
(951) 268-6268

City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	2	0	0	2	**1**	**3**	0	**4**
+15 mins.	0	0	0	0	0	1	0	1	**3**	0	0	**3**	1	2	0	3
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4
+45 mins.	0	0	0	0	0	0	**1**	1	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	0	2	1	3	5	0	0	5	3	10	0	13
% App. Total	0	0	0		0	66.7	33.3		100	0	0		23.1	76.9	0	
PHF	.000	.000	.000	.000	.000	.500	.250	.750	.417	.000	.000	.417	.750	.833	.000	.813

Counts Unlimited
PO Box 1178
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(951) 268-6268

City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018

Groups Printed- 3 Axle Vehicles

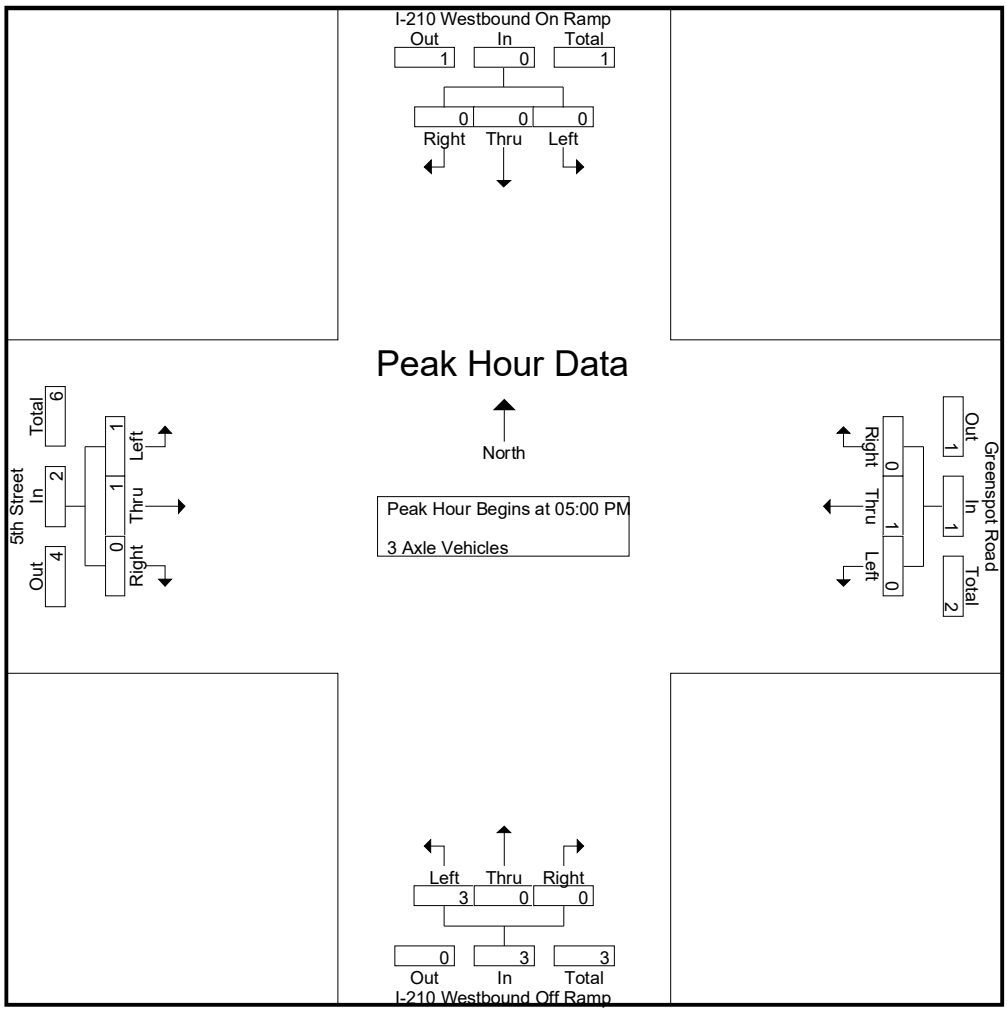
	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	2	0	2	2	0	0	2	0	0	0	0	4
03:45 PM	0	0	0	0	0	1	0	1	2	0	0	2	0	0	0	0	3
Total	0	0	0	0	0	3	0	3	5	0	0	5	0	0	0	0	8
04:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	4
05:00 PM	0	0	0	0	0	1	0	1	3	0	0	3	1	0	0	1	5
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	3	0	0	3	1	1	0	2	6
Grand Total	0	0	0	0	0	4	0	4	12	0	0	12	1	1	0	2	18
Apprch %	0	0	0		0	100	0		100	0	0		50	50	0		
Total %	0	0	0	0	0	22.2	0	22.2	66.7	0	0	66.7	5.6	5.6	0	11.1	

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	**1**	0	**1**	**3**	0	0	**3**	**1**	0	0	**1**	**5**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	3	0	0	3	1	1	0	2	6
% App. Total	0	0	0		0	100	0		100	0	0		50	50	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250	.250	.250	.000	.500	.300

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

City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	**3**	0	0	**3**	**1**	0	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	3	0	0	3	1	1	0	2
% App. Total	0	0	0		0	100	0		100	0	0		50	50	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250	.250	.250	.000	.500

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

City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018

Groups Printed- 4+ Axle Trucks

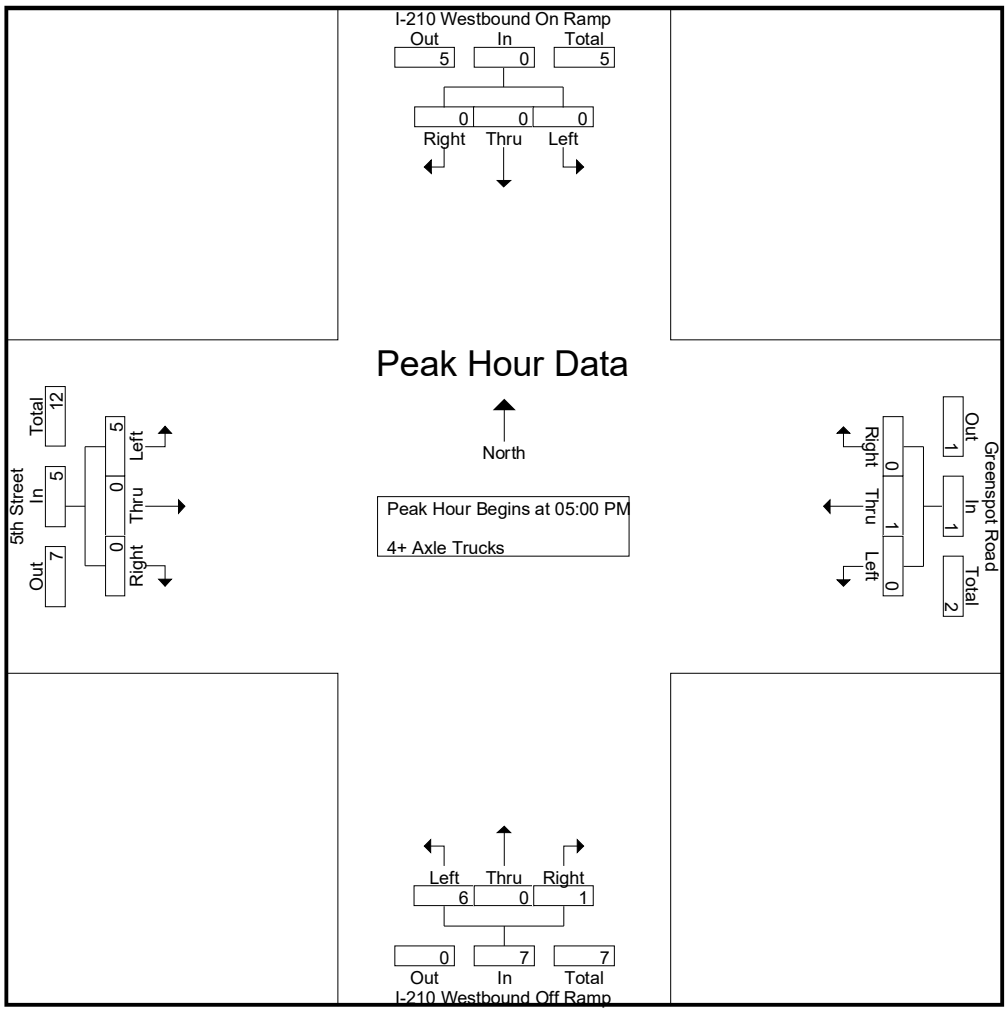
	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	1	0	1	2	0	1	3	2	1	0	3	7
03:15 PM	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	6
03:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	1	0	0	1	3
03:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	2	1	3	9	0	1	10	3	2	0	5	18
04:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	4	0	0	4	6
04:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	2	3
04:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	3	0	0	3	5
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6	6
Total	0	0	0	0	0	1	0	1	4	0	0	4	14	1	0	15	20
05:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	1	4
05:15 PM	0	0	0	0	0	1	0	1	1	0	1	2	2	0	0	2	5
05:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	2
Total	0	0	0	0	0	1	0	1	6	0	1	7	5	0	0	5	13
Grand Total	0	0	0	0	0	4	1	5	19	0	2	21	22	3	0	25	51
Apprch %	0	0	0		0	80	20		90.5	0	9.5		88	12	0		
Total %	0	0	0	0	0	7.8	2	9.8	37.3	0	3.9	41.2	43.1	5.9	0	49	

	I-210 Westbound On Ramp Southbound				Greenspot Road Westbound				I-210 Westbound Off Ramp Northbound				5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	**3**	0	0	**3**	1	0	0	1	4
05:15 PM	0	0	0	0	0	**1**	0	**1**	1	0	**1**	2	**2**	0	0	**2**	**5**
05:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	2
Total Volume	0	0	0	0	0	1	0	1	6	0	1	7	5	0	0	5	13
% App. Total	0	0	0		0	100	0		85.7	0	14.3		100	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.500	.000	.250	.583	.625	.000	.000	.625	.650

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

City of Highland
N/S: I-210 Westbound Ramps
E/W: 5th Street/Greenspot Road
Weather: Clear

File Name : 84_HLD_210W_5th_Greenspot PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	**3**	0	0	**3**	1	0	0	1
+15 mins.	0	0	0	0	0	**1**	0	**1**	1	0	**1**	2	**2**	0	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
+45 mins.	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
Total Volume	0	0	0	0	0	1	0	1	6	0	1	7	5	0	0	5
% App. Total	0	0	0		0	100	0		85.7	0	14.3		100	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.500	.000	.250	.583	.625	.000	.000	.625

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

City of San Bernardino
N/S: Tippecanoe Avenue
E/W: 3rd Street
Weather: Clear

File Name : 07_SBC_Tippecanoe_3rd AM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

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

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	42	2	47	35	44	3	82	3	23	10	36	2	7	3	12	177
06:15 AM	2	71	1	74	33	45	2	80	3	17	15	35	0	18	3	21	210
06:30 AM	5	82	3	90	42	50	1	93	6	22	26	54	1	23	10	34	271
06:45 AM	10	117	9	136	59	108	1	168	8	55	35	98	1	30	10	41	443
Total	20	312	15	347	169	247	7	423	20	117	86	223	4	78	26	108	1101
07:00 AM	8	113	7	128	52	116	6	174	10	65	46	121	10	36	12	58	481
07:15 AM	16	129	6	151	59	135	8	202	14	86	35	135	7	42	8	57	545
07:30 AM	4	131	11	146	75	129	4	208	16	48	42	106	7	42	11	60	520
07:45 AM	8	113	8	129	102	154	6	262	13	53	38	104	5	44	10	59	554
Total	36	486	32	554	288	534	24	846	53	252	161	466	29	164	41	234	2100
08:00 AM	10	89	9	108	69	94	11	174	13	61	53	127	8	42	9	59	468
08:15 AM	10	91	7	108	52	78	4	134	8	68	50	126	7	41	7	55	423
08:30 AM	7	68	9	84	70	66	11	147	9	50	44	103	6	41	9	56	390
08:45 AM	8	78	7	93	67	58	7	132	10	49	53	112	9	45	12	66	403
Total	35	326	32	393	258	296	33	587	40	228	200	468	30	169	37	236	1684
Grand Total	91	1124	79	1294	715	1077	64	1856	113	597	447	1157	63	411	104	578	4885
Apprch %	7	86.9	6.1		38.5	58	3.4		9.8	51.6	38.6		10.9	71.1	18		
Total %	1.9	23	1.6	26.5	14.6	22	1.3	38	2.3	12.2	9.2	23.7	1.3	8.4	2.1	11.8	
Passenger Vehicles	88	1094	74	1256	674	1054	63	1791	103	563	421	1087	59	394	94	547	4681
% Passenger Vehicles	96.7	97.3	93.7	97.1	94.3	97.9	98.4	96.5	91.2	94.3	94.2	93.9	93.7	95.9	90.4	94.6	95.8
Large 2 Axle Vehicles	2	18	4	24	23	14	1	38	10	26	15	51	4	13	10	27	140
% Large 2 Axle Vehicles	2.2	1.6	5.1	1.9	3.2	1.3	1.6	2	8.8	4.4	3.4	4.4	6.3	3.2	9.6	4.7	2.9
3 Axle Vehicles	0	4	0	4	3	6	0	9	0	6	3	9	0	3	0	3	25
% 3 Axle Vehicles	0	0.4	0	0.3	0.4	0.6	0	0.5	0	1	0.7	0.8	0	0.7	0	0.5	0.5
4+ Axle Trucks	1	8	1	10	15	3	0	18	0	2	8	10	0	1	0	1	39
% 4+ Axle Trucks	1.1	0.7	1.3	0.8	2.1	0.3	0	1	0	0.3	1.8	0.9	0	0.2	0	0.2	0.8

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	8	113	7	128	52	116	6	174	10	65	**46**	121	**10**	36	**12**	58	481
07:15 AM	**16**	129	6	**151**	59	135	**8**	202	14	**86**	35	**135**	7	42	8	57	545
07:30 AM	4	**131**	**11**	146	75	129	4	208	**16**	48	42	106	7	42	11	**60**	520
07:45 AM	8	113	8	129	**102**	**154**	6	**262**	13	53	38	104	5	**44**	10	59	**554**
Total Volume	36	486	32	554	288	534	24	846	53	252	161	466	29	164	41	234	2100
% App. Total	6.5	87.7	5.8		34	63.1	2.8		11.4	54.1	34.5		12.4	70.1	17.5		
PHF	.563	.927	.727	.917	.706	.867	.750	.807	.828	.733	.875	.863	.725	.932	.854	.975	.948

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Weather: Clear

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Site Code : 99918385
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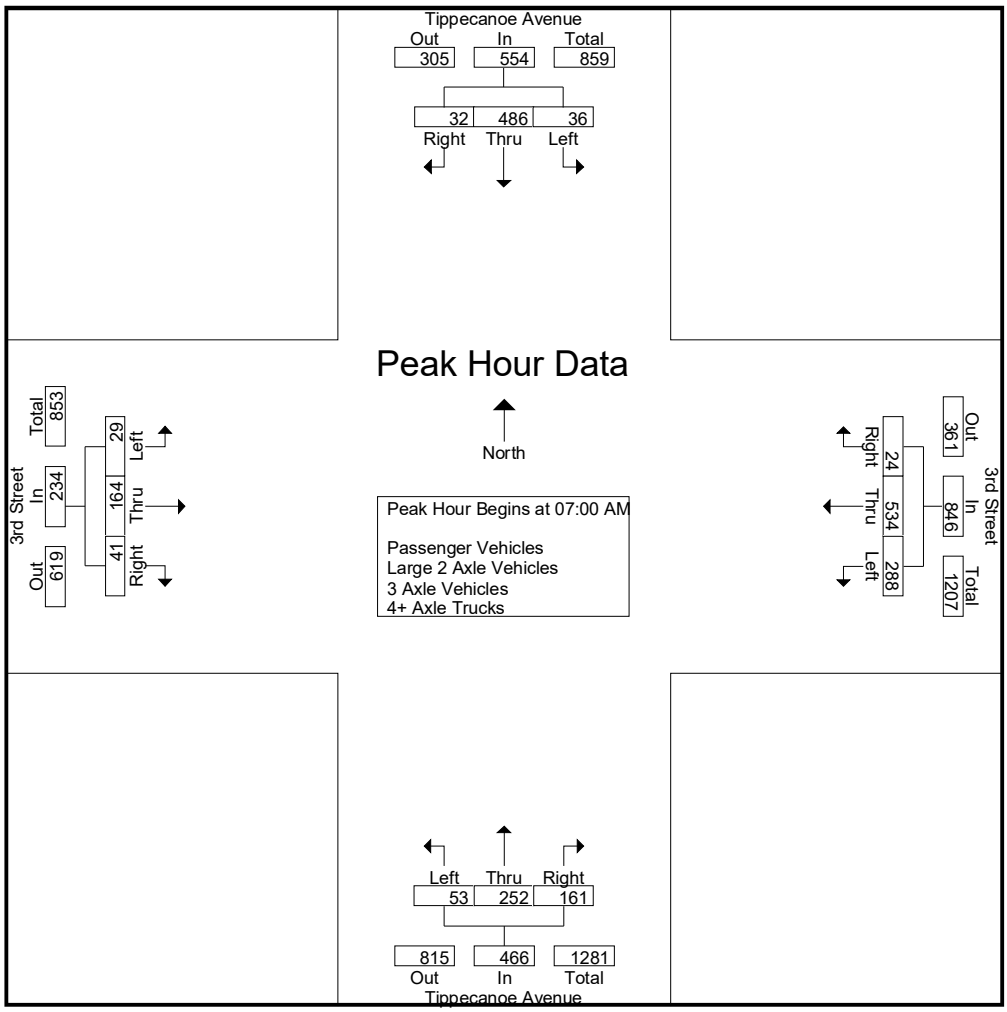

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM				07:00 AM				07:15 AM				08:00 AM			
+0 mins.	10	117	9	136	52	116	6	174	14	**86**	35	**135**	8	42	9	59
+15 mins.	8	113	7	128	59	135	**8**	202	**16**	48	42	106	7	41	7	55
+30 mins.	**16**	129	6	**151**	75	129	4	208	13	53	38	104	6	41	9	56
+45 mins.	4	**131**	**11**	146	**102**	**154**	6	**262**	13	61	**53**	127	**9**	**45**	**12**	**66**
Total Volume	38	490	33	561	288	534	24	846	56	248	168	472	30	169	37	236
% App. Total	6.8	87.3	5.9		34	63.1	2.8		11.9	52.5	35.6		12.7	71.6	15.7	
PHF	.594	.935	.750	.929	.706	.867	.750	.807	.875	.721	.792	.874	.833	.939	.771	.894

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Site Code : 99918385
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Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	41	2	46	31	44	3	78	2	21	10	33	2	7	2	11	168
06:15 AM	2	69	1	72	33	45	2	80	3	15	13	31	0	17	2	19	202
06:30 AM	5	81	3	89	41	50	1	92	6	20	23	49	1	22	9	32	262
06:45 AM	10	116	9	135	58	108	1	167	7	51	31	89	1	28	10	39	430
Total	20	307	15	342	163	247	7	417	18	107	77	202	4	74	23	101	1062
07:00 AM	8	109	7	124	50	112	6	168	9	64	42	115	9	35	11	55	462
07:15 AM	15	127	6	148	57	134	8	199	14	84	32	130	7	40	8	55	532
07:30 AM	4	128	11	143	72	126	4	202	13	43	39	95	7	41	9	57	497
07:45 AM	8	111	8	127	99	150	5	254	12	51	37	100	5	43	10	58	539
Total	35	475	32	542	278	522	23	823	48	242	150	440	28	159	38	225	2030
08:00 AM	10	87	9	106	62	90	11	163	12	60	52	124	7	42	8	57	450
08:15 AM	9	85	6	100	49	77	4	130	8	61	48	117	7	38	6	51	398
08:30 AM	7	66	6	79	64	61	11	136	8	45	44	97	5	38	8	51	363
08:45 AM	7	74	6	87	58	57	7	122	9	48	50	107	8	43	11	62	378
Total	33	312	27	372	233	285	33	551	37	214	194	445	27	161	33	221	1589
Grand Total	88	1094	74	1256	674	1054	63	1791	103	563	421	1087	59	394	94	547	4681
Apprch %	7	87.1	5.9		37.6	58.8	3.5		9.5	51.8	38.7		10.8	72	17.2		
Total %	1.9	23.4	1.6	26.8	14.4	22.5	1.3	38.3	2.2	12	9	23.2	1.3	8.4	2	11.7	

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	8	109	7	124	50	112	6	168	9	64	**42**	115	**9**	35	**11**	55	462
07:15 AM	**15**	127	6	**148**	57	134	**8**	199	**14**	**84**	32	**130**	7	40	8	55	532
07:30 AM	4	**128**	**11**	143	72	126	4	202	13	43	39	95	7	41	9	57	497
07:45 AM	8	111	8	127	**99**	**150**	5	**254**	12	51	37	100	5	**43**	10	**58**	**539**
Total Volume	35	475	32	542	278	522	23	823	48	242	150	440	28	159	38	225	2030
% App. Total	6.5	87.6	5.9		33.8	63.4	2.8		10.9	55	34.1		12.4	70.7	16.9		
PHF	.583	.928	.727	.916	.702	.870	.719	.810	.857	.720	.893	.846	.778	.924	.864	.970	.942

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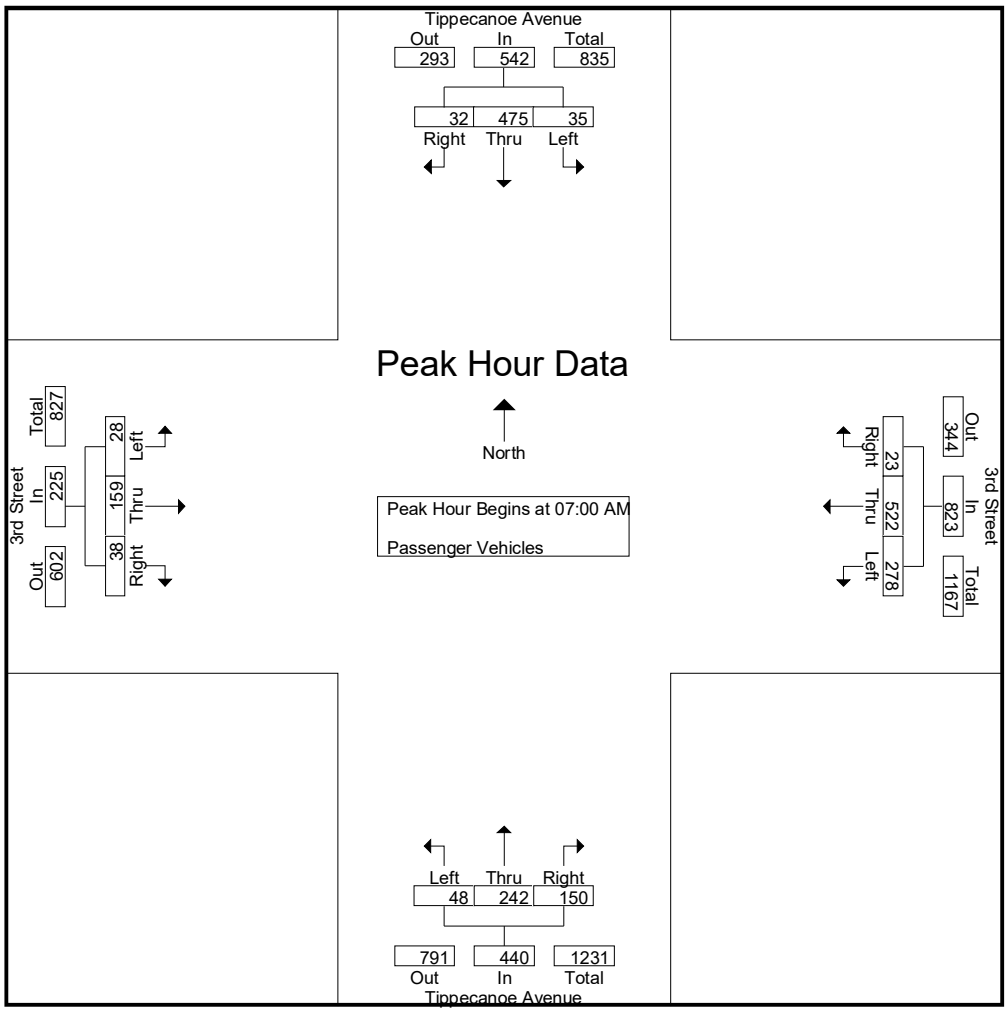

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	8	109	7	124	50	112	6	168	9	64	**42**	115	**9**	35	**11**	55
+15 mins.	**15**	127	6	**148**	57	134	**8**	199	**14**	**84**	32	**130**	7	40	8	55
+30 mins.	4	**128**	**11**	143	72	126	4	202	13	43	39	95	7	41	9	57
+45 mins.	8	111	8	127	**99**	**150**	5	**254**	12	51	37	100	5	**43**	10	**58**
Total Volume	35	475	32	542	278	522	23	823	48	242	150	440	28	159	38	225
% App. Total	6.5	87.6	5.9		33.8	63.4	2.8		10.9	55	34.1		12.4	70.7	16.9	
PHF	.583	.928	.727	.916	.702	.870	.719	.810	.857	.720	.893	.846	.778	.924	.864	.970

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File Name : 07_SBC_Tippecanoe_3rd AM
Site Code : 99918385
Start Date : 5/1/2018
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Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	1	1	3
06:15 AM	0	1	0	1	0	0	0	0	0	2	2	4	0	1	1	2	7
06:30 AM	0	0	0	0	0	0	0	0	0	2	2	4	0	1	1	2	6
06:45 AM	0	1	0	1	1	0	0	1	1	4	3	8	0	2	0	2	12
Total	0	3	0	3	1	0	0	1	2	8	7	17	0	4	3	7	28
07:00 AM	0	3	0	3	1	4	0	5	1	1	4	6	1	0	1	2	16
07:15 AM	1	2	0	3	0	0	0	0	0	2	1	3	0	2	0	2	8
07:30 AM	0	3	0	3	3	2	0	5	3	4	1	8	0	1	2	3	19
07:45 AM	0	0	0	0	2	1	1	4	1	0	0	1	0	1	0	1	6
Total	1	8	0	9	6	7	1	14	5	7	6	18	1	4	3	8	49
08:00 AM	0	0	0	0	4	2	0	6	1	1	0	2	1	0	1	2	10
08:15 AM	1	3	1	5	2	1	0	3	0	5	1	6	0	2	1	3	17
08:30 AM	0	1	3	4	3	4	0	7	1	4	0	5	1	2	1	4	20
08:45 AM	0	3	0	3	7	0	0	7	1	1	1	3	1	1	1	3	16
Total	1	7	4	12	16	7	0	23	3	11	2	16	3	5	4	12	63
Grand Total	2	18	4	24	23	14	1	38	10	26	15	51	4	13	10	27	140
Apprch %	8.3	75	16.7		60.5	36.8	2.6		19.6	51	29.4		14.8	48.1	37		
Total %	1.4	12.9	2.9	17.1	16.4	10	0.7	27.1	7.1	18.6	10.7	36.4	2.9	9.3	7.1	19.3	

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**3**	0	**3**	1	**4**	0	**5**	1	1	**4**	6	**1**	0	1	2	16
07:15 AM	**1**	2	0	3	0	0	0	0	0	2	1	3	0	**2**	0	2	8
07:30 AM	0	3	0	3	**3**	2	0	5	**3**	**4**	1	**8**	0	1	**2**	**3**	**19**
07:45 AM	0	0	0	0	2	1	**1**	4	1	0	0	1	0	1	0	1	6
Total Volume	1	8	0	9	6	7	1	14	5	7	6	18	1	4	3	8	49
% App. Total	11.1	88.9	0		42.9	50	7.1		27.8	38.9	33.3		12.5	50	37.5		
PHF	.250	.667	.000	.750	.500	.438	.250	.700	.417	.438	.375	.563	.250	.500	.375	.667	.645

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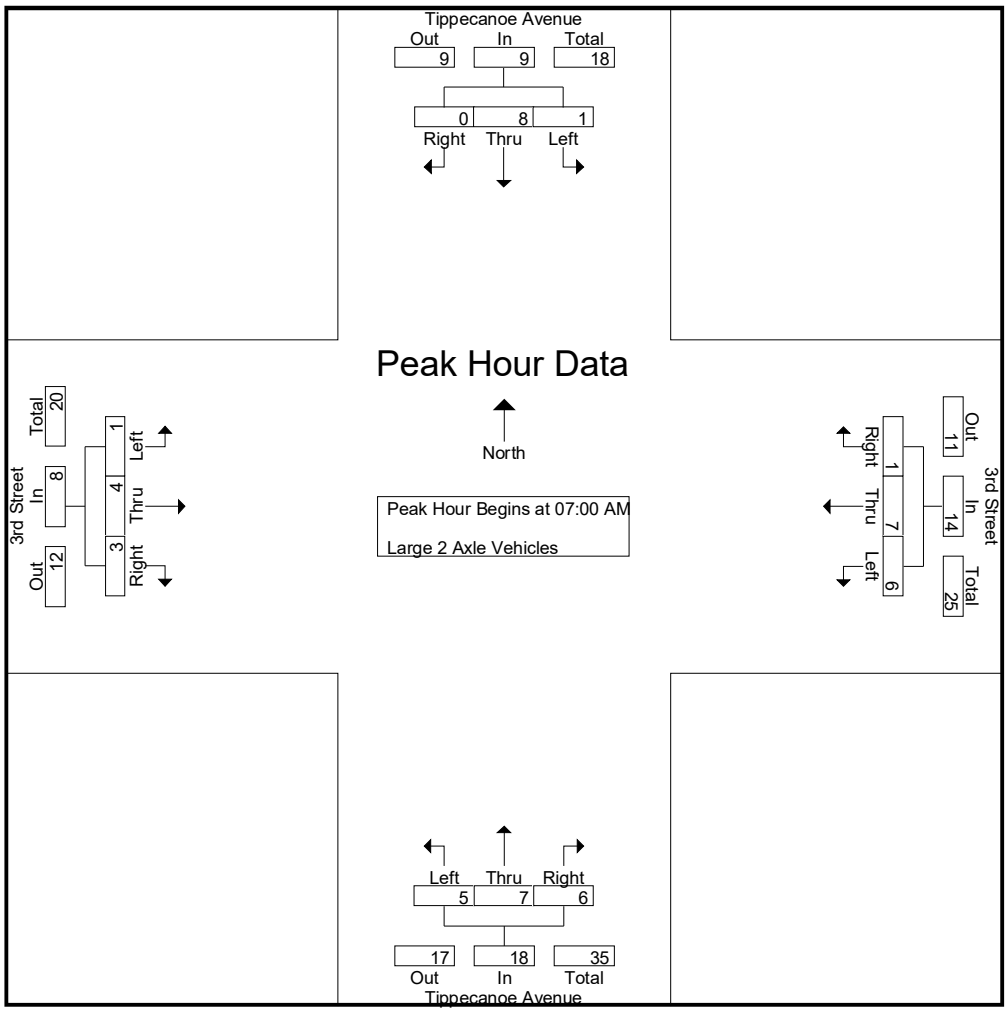

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**3**	0	**3**	1	**4**	0	**5**	1	1	**4**	6	**1**	0	1	2
+15 mins.	**1**	2	0	3	0	0	0	0	0	2	1	3	0	**2**	0	2
+30 mins.	0	3	0	3	**3**	2	0	5	**3**	**4**	1	**8**	0	1	**2**	**3**
+45 mins.	0	0	0	0	2	1	**1**	4	1	0	0	1	0	1	0	1
Total Volume	1	8	0	9	6	7	1	14	5	7	6	18	1	4	3	8
% App. Total	11.1	88.9	0		42.9	50	7.1		27.8	38.9	33.3		12.5	50	37.5	
PHF	.250	.667	.000	.750	.500	.438	.250	.700	.417	.438	.375	.563	.250	.500	.375	.667

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File Name : 07_SBC_Tippecanoe_3rd AM
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Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	1	1	2	0	3	0	1	1	2	0	0	0	0	6
Total	0	1	0	1	1	4	0	5	0	1	2	3	0	1	0	1	10
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	2	0	2	1	0	0	1	0	2	1	3	0	0	0	0	6
08:30 AM	0	0	0	0	1	1	0	2	0	1	0	1	0	1	0	1	4
08:45 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	3	0	3	2	2	0	4	0	3	1	4	0	2	0	2	13
Grand Total	0	4	0	4	3	6	0	9	0	6	3	9	0	3	0	3	25
Apprch %	0	100	0		33.3	66.7	0		0	66.7	33.3		0	100	0		
Total %	0	16	0	16	12	24	0	36	0	24	12	36	0	12	0	12	

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	**1**	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	**1**	0	**1**	**1**	**2**	0	**3**	0	**1**	1	**2**	0	0	0	0	**6**
Total Volume	0	1	0	1	1	4	0	5	0	1	2	3	0	1	0	1	10
% App. Total	0	100	0		20	80	0		0	33.3	66.7		0	100	0		
PHF	.000	.250	.000	.250	.250	.500	.000	.417	.000	.250	.500	.375	.000	.250	.000	.250	.417

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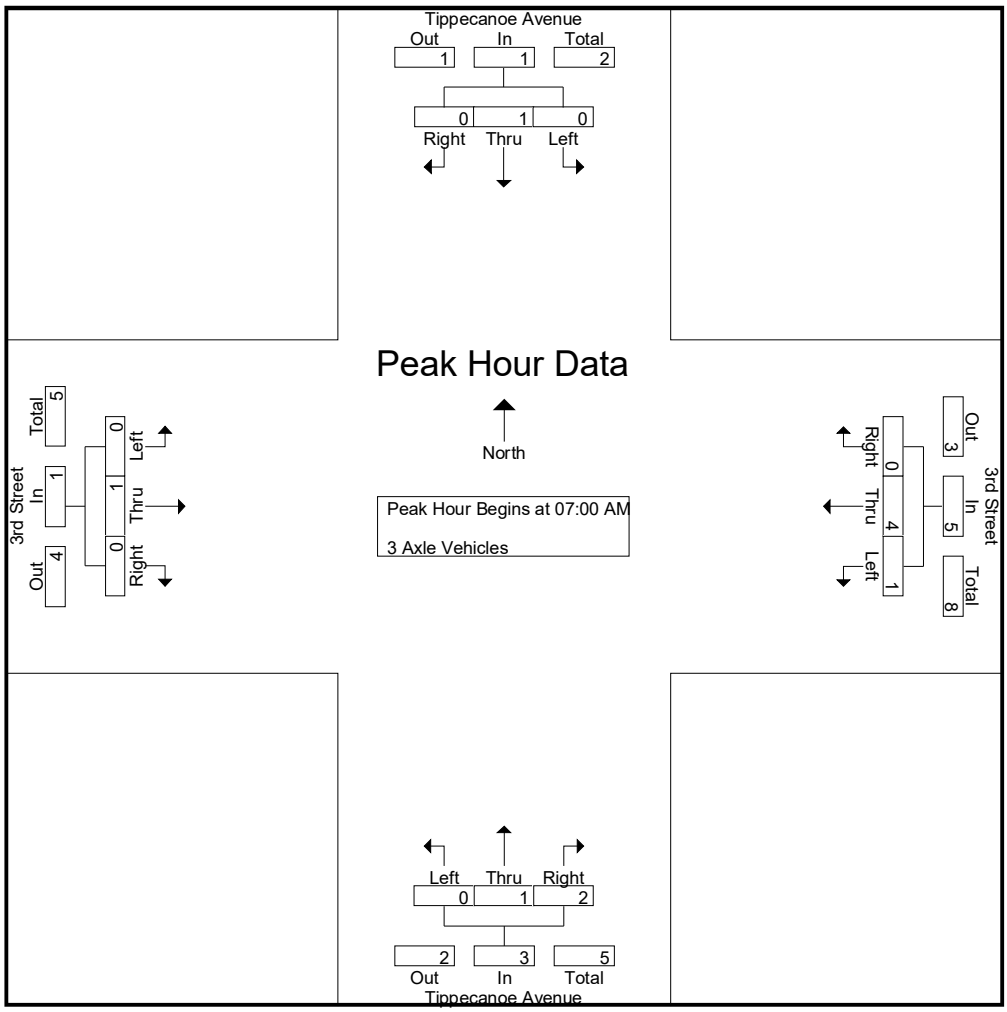

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	1	0	1	0	0	**1**	1	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	**1**	0	**1**	**1**	**2**	0	**3**	0	**1**	1	**2**	0	0	0	0
Total Volume	0	1	0	1	1	4	0	5	0	1	2	3	0	1	0	1
% App. Total	0	100	0		20	80	0		0	33.3	66.7		0	100	0	
PHF	.000	.250	.000	.250	.250	.500	.000	.417	.000	.250	.500	.375	.000	.250	.000	.250

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: 3rd Street
Weather: Clear

File Name : 07_SBC_Tippecanoe_3rd AM
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Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4
06:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 AM	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	3
06:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	2	0	2	5	0	0	5	0	0	2	2	0	0	0	0	9
07:00 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	2	0	0	2	0	0	1	1	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	3
07:45 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
Total	0	2	0	2	3	1	0	4	0	2	3	5	0	0	0	0	11
08:00 AM	0	2	0	2	3	2	0	5	0	0	1	1	0	0	0	0	8
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
08:30 AM	0	1	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3
08:45 AM	1	0	1	2	2	0	0	2	0	0	2	2	0	0	0	0	6
Total	1	4	1	6	7	2	0	9	0	0	3	3	0	1	0	1	19
Grand Total	1	8	1	10	15	3	0	18	0	2	8	10	0	1	0	1	39
Apprch %	10	80	10		83.3	16.7	0		0	20	80		0	100	0		
Total %	2.6	20.5	2.6	25.6	38.5	7.7	0	46.2	0	5.1	20.5	25.6	0	2.6	0	2.6	

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**1**	0	**1**	1	0	0	1	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	**2**	0	0	**2**	0	0	1	1	0	0	0	0	**3**
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	**2**	**3**	0	0	0	0	3
07:45 AM	0	1	0	1	0	**1**	0	1	0	1	0	1	0	0	0	0	3
Total Volume	0	2	0	2	3	1	0	4	0	2	3	5	0	0	0	0	11
% App. Total	0	100	0		75	25	0		0	40	60		0	0	0		
PHF	.000	.500	.000	.500	.375	.250	.000	.500	.000	.500	.375	.417	.000	.000	.000	.000	.917

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Weather: Clear

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Site Code : 99918385
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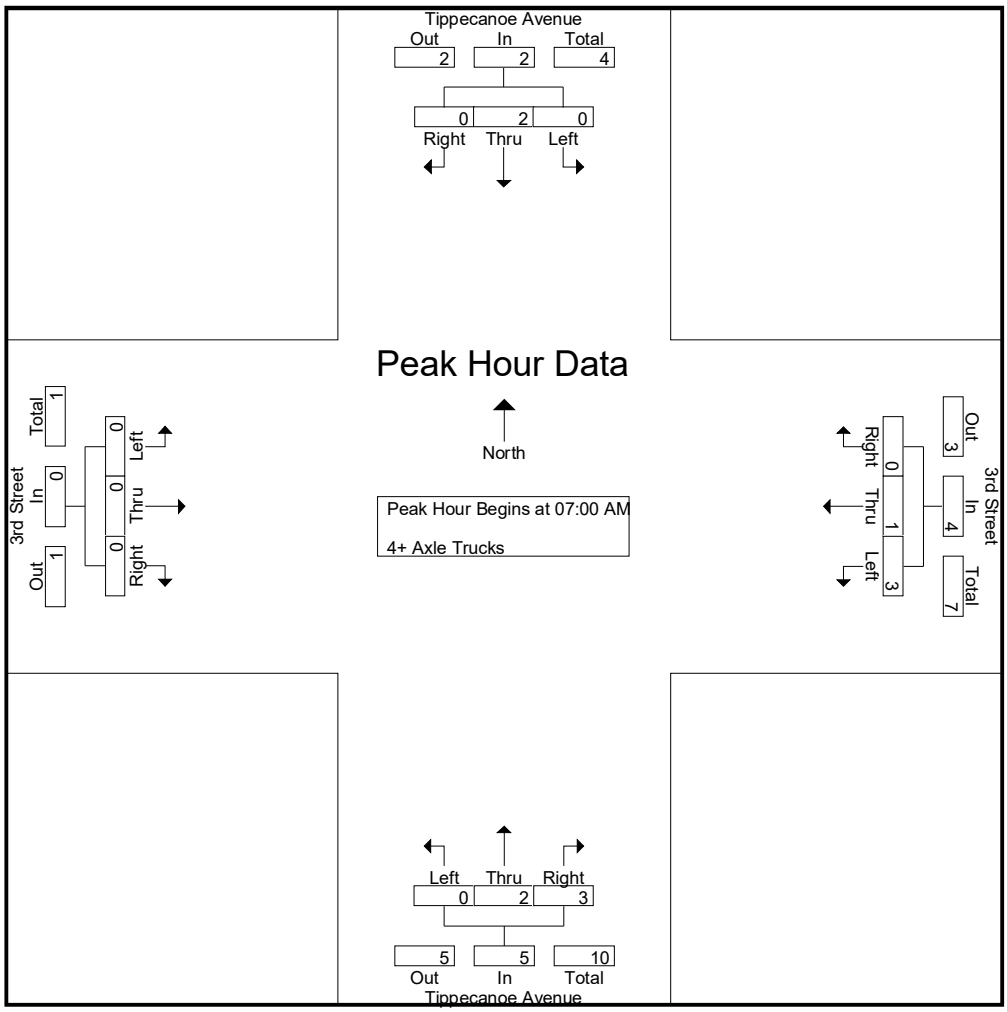

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	**1**	0	**1**	1	0	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	**2**	0	0	**2**	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	**2**	**3**	0	0	0	0
+45 mins.	0	1	0	1	0	**1**	0	1	0	1	0	1	0	0	0	0
Total Volume	0	2	0	2	3	1	0	4	0	2	3	5	0	0	0	0
% App. Total	0	100	0		75	25	0		0	40	60		0	0	0	
PHF	.000	.500	.000	.500	.375	.250	.000	.500	.000	.500	.375	.417	.000	.000	.000	.000

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

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	9	76	4	89	51	45	8	104	16	129	86	231	9	78	9	96	520
03:15 PM	6	81	6	93	53	46	13	112	11	112	79	202	7	64	13	84	491
03:30 PM	8	97	3	108	43	56	9	108	16	153	69	238	11	72	14	97	551
03:45 PM	19	92	11	122	55	76	12	143	11	143	85	239	7	85	17	109	613
Total	42	346	24	412	202	223	42	467	54	537	319	910	34	299	53	386	2175
04:00 PM	10	77	5	92	61	62	18	141	16	104	83	203	15	105	17	137	573
04:15 PM	12	74	4	90	56	60	9	125	10	114	105	229	13	104	11	128	572
04:30 PM	12	69	3	84	46	34	15	95	14	111	112	237	6	171	16	193	609
04:45 PM	10	86	6	102	49	49	10	108	16	123	103	242	9	105	11	125	577
Total	44	306	18	368	212	205	52	469	56	452	403	911	43	485	55	583	2331
05:00 PM	7	58	9	74	53	54	11	118	14	124	116	254	15	175	21	211	657
05:15 PM	10	75	7	92	46	43	10	99	14	129	143	286	12	152	9	173	650
05:30 PM	8	69	5	82	58	48	7	113	12	111	108	231	11	141	13	165	591
05:45 PM	8	71	4	83	57	44	4	105	13	93	94	200	7	100	8	115	503
Total	33	273	25	331	214	189	32	435	53	457	461	971	45	568	51	664	2401
Grand Total	119	925	67	1111	628	617	126	1371	163	1446	1183	2792	122	1352	159	1633	6907
Apprch %	10.7	83.3	6		45.8	45	9.2		5.8	51.8	42.4		7.5	82.8	9.7		
Total %	1.7	13.4	1	16.1	9.1	8.9	1.8	19.8	2.4	20.9	17.1	40.4	1.8	19.6	2.3	23.6	
Passenger Vehicles	116	894	67	1077	589	585	119	1293	155	1417	1145	2717	120	1329	147	1596	6683
% Passenger Vehicles	97.5	96.6	100	96.9	93.8	94.8	94.4	94.3	95.1	98	96.8	97.3	98.4	98.3	92.5	97.7	96.8
Large 2 Axle Vehicles	1	25	0	26	19	20	3	42	7	16	14	37	1	12	10	23	128
% Large 2 Axle Vehicles	0.8	2.7	0	2.3	3	3.2	2.4	3.1	4.3	1.1	1.2	1.3	0.8	0.9	6.3	1.4	1.9
3 Axle Vehicles	1	0	0	1	6	7	3	16	0	2	3	5	0	2	0	2	24
% 3 Axle Vehicles	0.8	0	0	0.1	1	1.1	2.4	1.2	0	0.1	0.3	0.2	0	0.1	0	0.1	0.3
4+ Axle Trucks	1	6	0	7	14	5	1	20	1	11	21	33	1	9	2	12	72
% 4+ Axle Trucks	0.8	0.6	0	0.6	2.2	0.8	0.8	1.5	0.6	0.8	1.8	1.2	0.8	0.7	1.3	0.7	1

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**12**	69	3	84	46	34	**15**	95	14	111	112	237	6	171	16	193	609
04:45 PM	10	**86**	6	**102**	49	49	10	108	**16**	123	103	242	9	105	11	125	577
05:00 PM	7	58	**9**	74	**53**	**54**	11	**118**	14	124	116	254	**15**	**175**	**21**	**211**	**657**
05:15 PM	10	75	7	92	46	43	10	99	14	**129**	**143**	**286**	12	152	9	173	650
Total Volume	39	288	25	352	194	180	46	420	58	487	474	1019	42	603	57	702	2493
% App. Total	11.1	81.8	7.1		46.2	42.9	11		5.7	47.8	46.5		6	85.9	8.1		
PHF	.813	.837	.694	.863	.915	.833	.767	.890	.906	.944	.829	.891	.700	.861	.679	.832	.949

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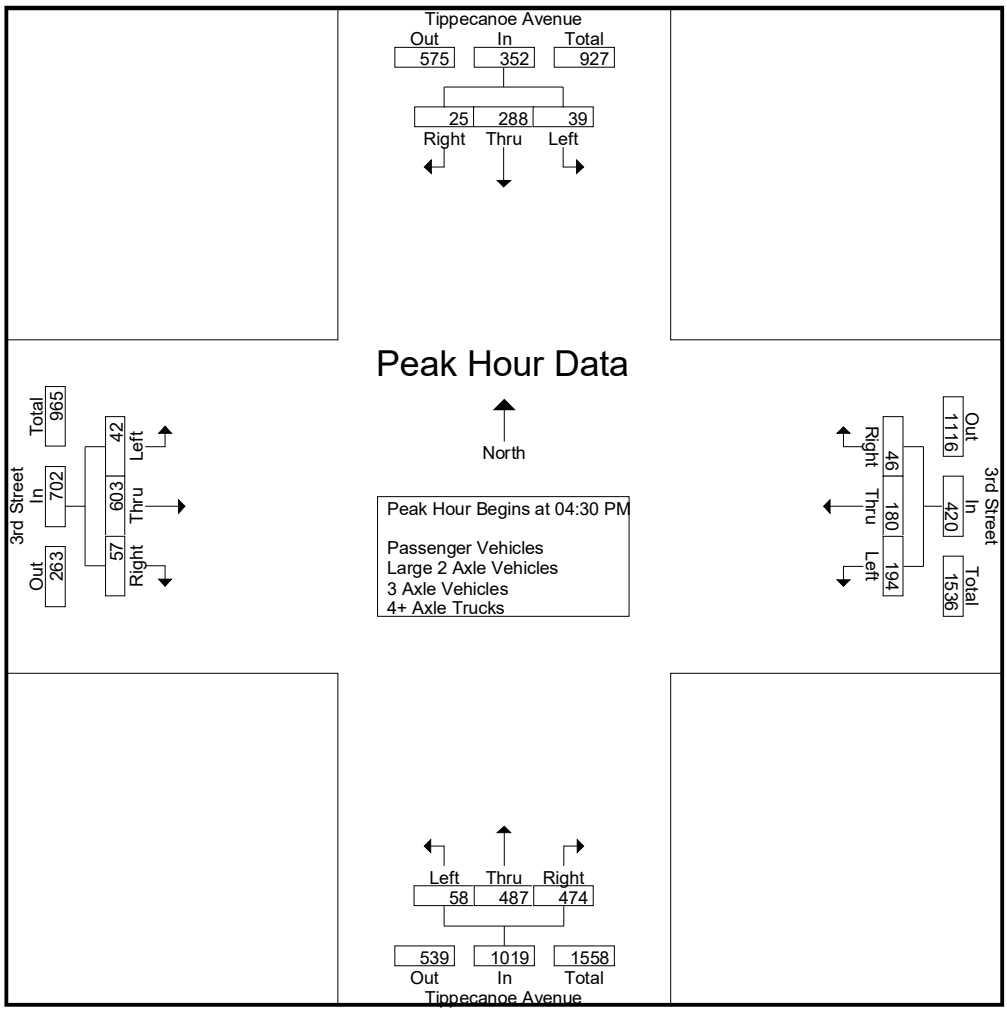

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:15 PM				03:30 PM				04:30 PM				04:30 PM			
+0 mins.	6	81	6	93	43	56	9	108	14	111	112	237	6	171	16	193
+15 mins.	8	**97**	3	108	55	**76**	12	**143**	**16**	123	103	242	9	105	11	125
+30 mins.	**19**	92	**11**	**122**	**61**	62	**18**	141	14	124	116	254	**15**	**175**	**21**	**211**
+45 mins.	10	77	5	92	56	60	9	125	14	**129**	**143**	**286**	12	152	9	173
Total Volume	43	347	25	415	215	254	48	517	58	487	474	1019	42	603	57	702
% App. Total	10.4	83.6	6		41.6	49.1	9.3		5.7	47.8	46.5		6	85.9	8.1	
PHF	.566	.894	.568	.850	.881	.836	.667	.904	.906	.944	.829	.891	.700	.861	.679	.832

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File Name : 07_SBC_Tippecanoe_3rd PM
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Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	9	71	4	84	48	45	7	100	14	127	81	222	9	78	7	94	500
03:15 PM	6	77	6	89	52	46	13	111	11	111	73	195	6	62	12	80	475
03:30 PM	8	93	3	104	40	53	9	102	15	153	65	233	10	69	12	91	530
03:45 PM	19	91	11	121	50	74	12	136	11	134	84	229	7	85	17	109	595
Total	42	332	24	398	190	218	41	449	51	525	303	879	32	294	48	374	2100
04:00 PM	10	76	5	91	55	58	17	130	14	101	79	194	15	103	15	133	548
04:15 PM	12	70	4	86	53	56	8	117	10	113	102	225	13	101	10	124	552
04:30 PM	11	67	3	81	42	30	12	84	13	107	107	227	6	169	15	190	582
04:45 PM	9	80	6	95	43	45	10	98	16	122	102	240	9	102	11	122	555
Total	42	293	18	353	193	189	47	429	53	443	390	886	43	475	51	569	2237
05:00 PM	7	58	9	74	50	50	11	111	13	124	114	251	15	173	20	208	644
05:15 PM	10	74	7	91	44	41	10	95	14	126	143	283	12	150	9	171	640
05:30 PM	8	68	5	81	56	48	7	111	11	108	104	223	11	139	11	161	576
05:45 PM	7	69	4	80	56	39	3	98	13	91	91	195	7	98	8	113	486
Total	32	269	25	326	206	178	31	415	51	449	452	952	45	560	48	653	2346
Grand Total	116	894	67	1077	589	585	119	1293	155	1417	1145	2717	120	1329	147	1596	6683
Apprch %	10.8	83	6.2		45.6	45.2	9.2		5.7	52.2	42.1		7.5	83.3	9.2		
Total %	1.7	13.4	1	16.1	8.8	8.8	1.8	19.3	2.3	21.2	17.1	40.7	1.8	19.9	2.2	23.9	

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**11**	67	3	81	42	30	**12**	84	13	107	107	227	6	169	15	190	582
04:45 PM	9	**80**	6	**95**	43	45	10	98	**16**	122	102	240	9	102	11	122	555
05:00 PM	7	58	**9**	74	**50**	**50**	11	**111**	13	124	114	251	**15**	**173**	**20**	**208**	**644**
05:15 PM	10	74	7	91	44	41	10	95	14	**126**	**143**	**283**	12	150	9	171	640
Total Volume	37	279	25	341	179	166	43	388	56	479	466	1001	42	594	55	691	2421
% App. Total	10.9	81.8	7.3		46.1	42.8	11.1		5.6	47.9	46.6		6.1	86	8		
PHF	.841	.872	.694	.897	.895	.830	.896	.874	.875	.950	.815	.884	.700	.858	.688	.831	.940

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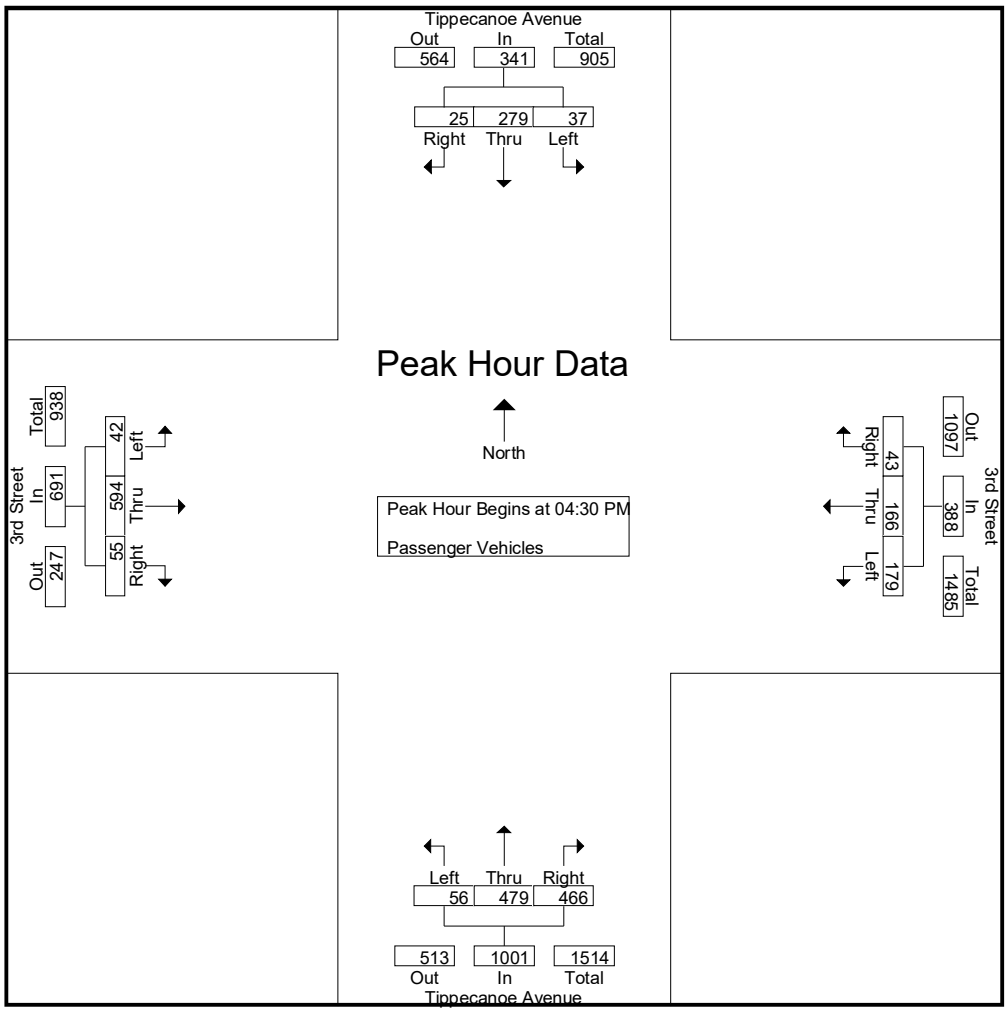

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**11**	67	3	81	42	30	**12**	84	13	107	107	227	6	169	15	190
+15 mins.	9	**80**	6	**95**	43	45	10	98	**16**	122	102	240	9	102	11	122
+30 mins.	7	58	**9**	74	**50**	**50**	11	**111**	13	124	114	251	**15**	**173**	**20**	**208**
+45 mins.	10	74	7	91	44	41	10	95	14	**126**	**143**	**283**	12	150	9	171
Total Volume	37	279	25	341	179	166	43	388	56	479	466	1001	42	594	55	691
% App. Total	10.9	81.8	7.3		46.1	42.8	11.1		5.6	47.9	46.6		6.1	86	8	
PHF	.841	.872	.694	.897	.895	.830	.896	.874	.875	.950	.815	.884	.700	.858	.688	.831

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Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	4	0	4	0	0	0	0	1	1	2	4	0	0	1	1	9
03:15 PM	0	3	0	3	1	0	0	1	0	1	4	5	1	1	1	3	12
03:30 PM	0	3	0	3	2	2	0	4	1	0	1	2	0	1	1	2	11
03:45 PM	0	1	0	1	3	1	0	4	0	3	1	4	0	0	0	0	9
Total	0	11	0	11	6	3	0	9	2	5	8	15	1	2	3	6	41
04:00 PM	0	1	0	1	3	3	0	6	2	2	1	5	0	1	2	3	15
04:15 PM	0	3	0	3	2	2	1	5	0	1	1	2	0	3	1	4	14
04:30 PM	0	2	0	2	2	4	1	7	1	2	1	4	0	1	1	2	15
04:45 PM	1	5	0	6	3	2	0	5	0	1	0	1	0	3	0	3	15
Total	1	11	0	12	10	11	2	23	3	6	3	12	0	8	4	12	59
05:00 PM	0	0	0	0	2	1	0	3	1	0	0	1	0	1	1	2	6
05:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
05:30 PM	0	1	0	1	1	0	0	1	1	2	2	5	0	0	2	2	9
05:45 PM	0	2	0	2	0	4	1	5	0	2	1	3	0	1	0	1	11
Total	0	3	0	3	3	6	1	10	2	5	3	10	0	2	3	5	28
Grand Total	1	25	0	26	19	20	3	42	7	16	14	37	1	12	10	23	128
Apprch %	3.8	96.2	0		45.2	47.6	7.1		18.9	43.2	37.8		4.3	52.2	43.5		
Total %	0.8	19.5	0	20.3	14.8	15.6	2.3	32.8	5.5	12.5	10.9	28.9	0.8	9.4	7.8	18	

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	2	0	2	2	**4**	**1**	**7**	**1**	**2**	**1**	**4**	0	1	**1**	2	**15**
04:45 PM	**1**	**5**	0	**6**	**3**	2	0	5	0	1	0	1	0	**3**	0	**3**	15
05:00 PM	0	0	0	0	2	1	0	3	1	0	0	1	0	1	1	2	6
05:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total Volume	1	7	0	8	7	8	1	16	2	4	1	7	0	5	2	7	38
% App. Total	12.5	87.5	0		43.8	50	6.2		28.6	57.1	14.3		0	71.4	28.6		
PHF	.250	.350	.000	.333	.583	.500	.250	.571	.500	.500	.250	.438	.000	.417	.500	.583	.633

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: 3rd Street
Weather: Clear

File Name : 07_SBC_Tippecanoe_3rd PM
Site Code : 99918385
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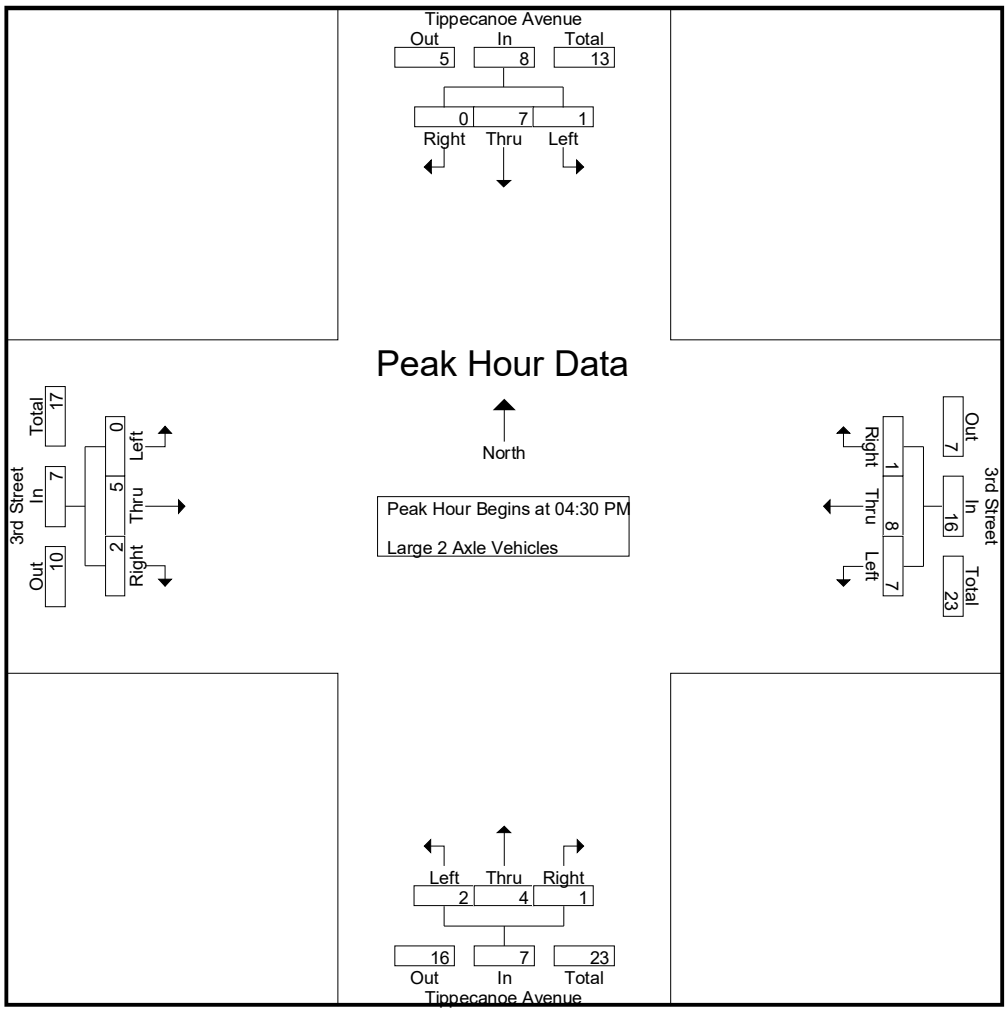

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	2	0	2	2	**4**	**1**	**7**	**1**	**2**	**1**	**4**	0	1	**1**	2
+15 mins.	**1**	**5**	0	**6**	**3**	2	0	5	0	1	0	1	0	**3**	0	**3**
+30 mins.	0	0	0	0	2	1	0	3	1	0	0	1	0	1	1	2
+45 mins.	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0
Total Volume	1	7	0	8	7	8	1	16	2	4	1	7	0	5	2	7
% App. Total	12.5	87.5	0		43.8	50	6.2		28.6	57.1	14.3		0	71.4	28.6	
PHF	.250	.350	.000	.333	.583	.500	.250	.571	.500	.500	.250	.438	.000	.417	.500	.583

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: 3rd Street
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File Name : 07_SBC_Tippecanoe_3rd PM
Site Code : 99918385
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Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	1	1	2	0	1	1	2	0	1	0	1	5
04:15 PM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
04:30 PM	1	0	0	1	1	0	2	3	0	1	1	2	0	0	0	0	6
04:45 PM	0	0	0	0	2	2	0	4	0	0	0	0	0	0	0	0	4
Total	1	0	0	1	4	4	3	11	0	2	2	4	0	1	0	1	17
05:00 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
05:15 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	2	3	0	5	0	0	1	1	0	1	0	1	7
Grand Total	1	0	0	1	6	7	3	16	0	2	3	5	0	2	0	2	24
Apprch %	100	0	0		37.5	43.8	18.8		0	40	60		0	100	0		
Total %	4.2	0	0	4.2	25	29.2	12.5	66.7	0	8.3	12.5	20.8	0	8.3	0	8.3	

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**1**	0	0	**1**	1	0	**2**	3	0	**1**	**1**	**2**	0	0	0	0	**6**
04:45 PM	0	0	0	0	**2**	**2**	0	**4**	0	0	0	0	0	0	0	0	4
05:00 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
05:15 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
Total Volume	1	0	0	1	5	4	2	11	0	1	2	3	0	0	0	0	15
% App. Total	100	0	0		45.5	36.4	18.2		0	33.3	66.7		0	0	0		
PHF	.250	.000	.000	.250	.625	.500	.250	.688	.000	.250	.500	.375	.000	.000	.000	.000	.625

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City of San Bernardino
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E/W: 3rd Street
Weather: Clear

File Name : 07_SBC_Tippecanoe_3rd PM
Site Code : 99918385
Start Date : 5/1/2018
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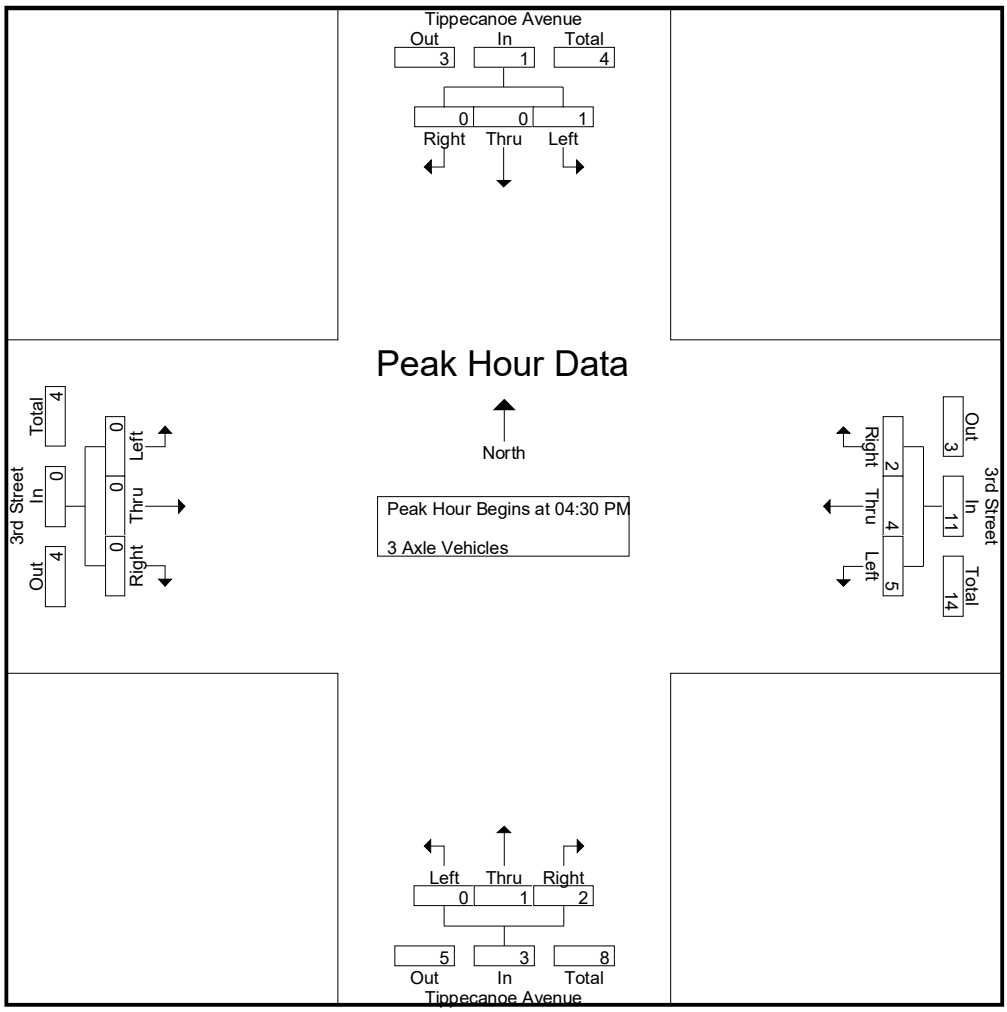

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**1**	0	0	**1**	1	0	**2**	3	0	**1**	**1**	**2**	0	0	0	0
+15 mins.	0	0	0	0	**2**	**2**	0	**4**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0
+45 mins.	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	5	4	2	11	0	1	2	3	0	0	0	0
% App. Total	100	0	0		45.5	36.4	18.2		0	33.3	66.7		0	0	0	
PHF	.250	.000	.000	.250	.625	.500	.250	.688	.000	.250	.500	.375	.000	.000	.000	.000

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N/S: Tippecanoe Avenue
E/W: 3rd Street
Weather: Clear

File Name : 07_SBC_Tippecanoe_3rd PM
Site Code : 99918385
Start Date : 5/1/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	3	0	1	4	1	1	3	5	0	0	1	1	11
03:15 PM	0	1	0	1	0	0	0	0	0	0	2	2	0	1	0	1	4
03:30 PM	0	1	0	1	1	1	0	2	0	0	3	3	1	2	1	4	10
03:45 PM	0	0	0	0	2	1	0	3	0	6	0	6	0	0	0	0	9
Total	0	3	0	3	6	2	1	9	1	7	8	16	1	3	2	6	34
04:00 PM	0	0	0	0	3	0	0	3	0	0	2	2	0	0	0	0	5
04:15 PM	0	1	0	1	0	1	0	1	0	0	2	2	0	0	0	0	4
04:30 PM	0	0	0	0	1	0	0	1	0	1	3	4	0	1	0	1	6
04:45 PM	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	3
Total	0	2	0	2	5	1	0	6	0	1	8	9	0	1	0	1	18
05:00 PM	0	0	0	0	1	1	0	2	0	0	1	1	0	1	0	1	4
05:15 PM	0	1	0	1	0	1	0	1	0	2	0	2	0	2	0	2	6
05:30 PM	0	0	0	0	1	0	0	1	0	1	2	3	0	2	0	2	6
05:45 PM	1	0	0	1	1	0	0	1	0	0	2	2	0	0	0	0	4
Total	1	1	0	2	3	2	0	5	0	3	5	8	0	5	0	5	20
Grand Total	1	6	0	7	14	5	1	20	1	11	21	33	1	9	2	12	72
Apprch %	14.3	85.7	0		70	25	5		3	33.3	63.6		8.3	75	16.7		
Total %	1.4	8.3	0	9.7	19.4	6.9	1.4	27.8	1.4	15.3	29.2	45.8	1.4	12.5	2.8	16.7	

	Tippecanoe Avenue Southbound				3rd Street Westbound				Tippecanoe Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	**1**	0	0	1	0	1	**3**	**4**	0	1	0	1	**6**
04:45 PM	0	**1**	0	**1**	1	0	0	1	0	0	1	1	0	0	0	0	3
05:00 PM	0	0	0	0	1	**1**	0	**2**	0	0	1	1	0	1	0	1	4
05:15 PM	0	1	0	1	0	1	0	1	0	**2**	0	2	0	**2**	0	**2**	6
Total Volume	0	2	0	2	3	2	0	5	0	3	5	8	0	4	0	4	19
% App. Total	0	100	0		60	40	0		0	37.5	62.5		0	100	0		
PHF	.000	.500	.000	.500	.750	.500	.000	.625	.000	.375	.417	.500	.000	.500	.000	.500	.792

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City of San Bernardino
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Weather: Clear

File Name : 07_SBC_Tippecanoe_3rd PM
Site Code : 99918385
Start Date : 5/1/2018
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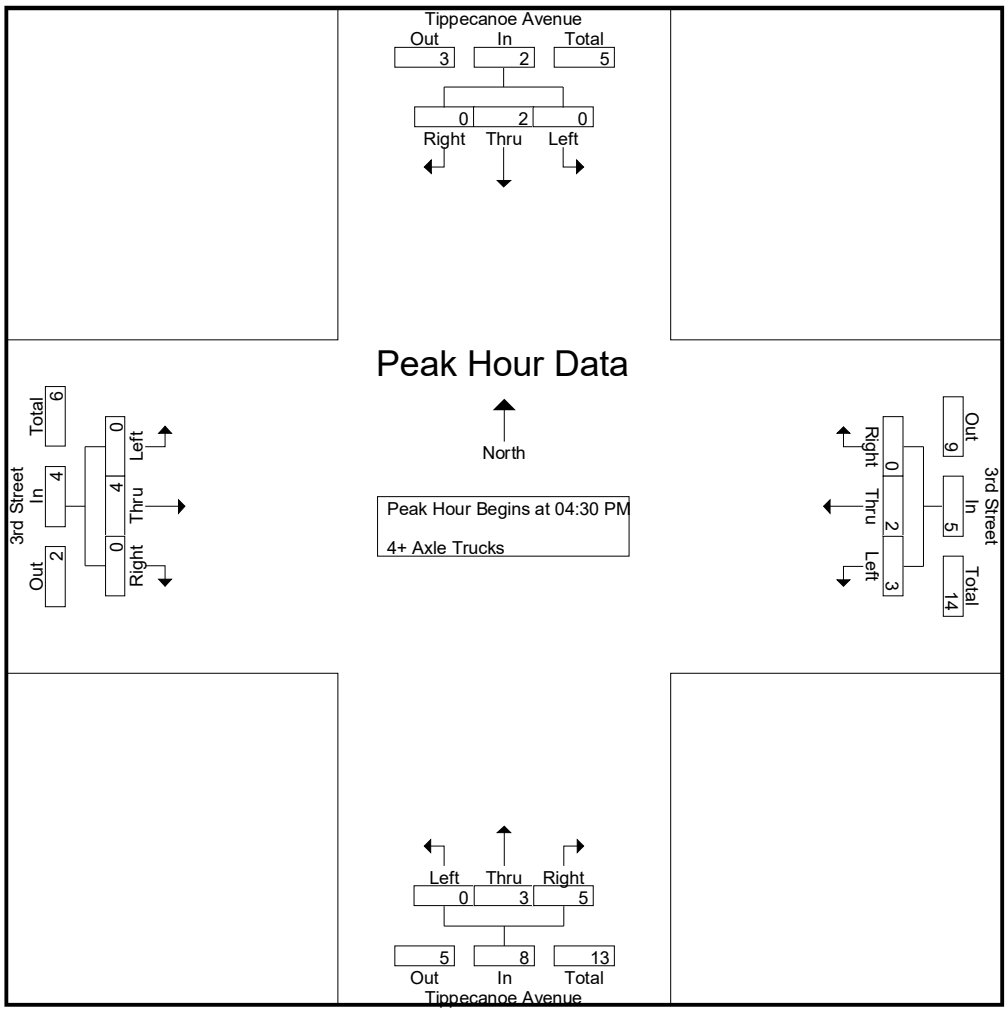

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	**1**	0	0	1	0	1	**3**	**4**	0	1	0	1
+15 mins.	0	**1**	0	**1**	1	0	0	1	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	1	**1**	0	**2**	0	0	1	1	0	1	0	1
+45 mins.	0	1	0	1	0	1	0	1	0	**2**	0	2	0	**2**	0	**2**
Total Volume	0	2	0	2	3	2	0	5	0	3	5	8	0	4	0	4
% App. Total	0	100	0		60	40	0		0	37.5	62.5		0	100	0	
PHF	.000	.500	.000	.500	.750	.500	.000	.625	.000	.375	.417	.500	.000	.500	.000	.500

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City of San Bernardino
N/S: Del Rosa Drive
E/W: 3rd Street
Weather: Clear

File Name : 05_SBC_Del Rosa Dr_3rd AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

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

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	17	7	25	13	59	9	81	0	6	6	12	3	23	3	29	147
06:15 AM	1	29	7	37	12	82	1	95	1	11	4	16	0	24	2	26	174
06:30 AM	4	35	10	49	31	89	1	121	1	8	13	22	5	36	1	42	234
06:45 AM	6	71	12	89	43	131	3	177	0	14	14	28	3	55	3	61	355
Total	12	152	36	200	99	361	14	474	2	39	37	78	11	138	9	158	910
07:00 AM	5	58	10	73	38	129	8	175	0	18	21	39	13	54	12	79	366
07:15 AM	6	66	20	92	62	172	2	236	3	23	22	48	24	39	6	69	445
07:30 AM	6	61	25	92	61	191	2	254	4	34	14	52	20	51	9	80	478
07:45 AM	9	52	22	83	65	242	3	310	4	17	22	43	14	53	6	73	509
Total	26	237	77	340	226	734	15	975	11	92	79	182	71	197	33	301	1798
08:00 AM	4	45	18	67	42	177	4	223	2	13	31	46	11	49	7	67	403
08:15 AM	5	39	11	55	24	95	2	121	2	17	21	40	12	70	7	89	305
08:30 AM	6	36	9	51	17	98	4	119	2	12	15	29	7	48	2	57	256
08:45 AM	8	23	17	48	21	83	6	110	0	11	15	26	4	55	2	61	245
Total	23	143	55	221	104	453	16	573	6	53	82	141	34	222	18	274	1209
Grand Total	61	532	168	761	429	1548	45	2022	19	184	198	401	116	557	60	733	3917
Apprch %	8	69.9	22.1		21.2	76.6	2.2		4.7	45.9	49.4		15.8	76	8.2		
Total %	1.6	13.6	4.3	19.4	11	39.5	1.1	51.6	0.5	4.7	5.1	10.2	3	14.2	1.5	18.7	
Passenger Vehicles	59	524	165	748	424	1489	37	1950	19	175	182	376	111	508	60	679	3753
% Passenger Vehicles	96.7	98.5	98.2	98.3	98.8	96.2	82.2	96.4	100	95.1	91.9	93.8	95.7	91.2	100	92.6	95.8
Large 2 Axle Vehicles	1	6	2	9	4	23	3	30	0	9	14	23	4	21	0	25	87
% Large 2 Axle Vehicles	1.6	1.1	1.2	1.2	0.9	1.5	6.7	1.5	0	4.9	7.1	5.7	3.4	3.8	0	3.4	2.2
3 Axle Vehicles	1	0	1	2	1	26	5	32	0	0	2	2	0	22	0	22	58
% 3 Axle Vehicles	1.6	0	0.6	0.3	0.2	1.7	11.1	1.6	0	0	1	0.5	0	3.9	0	3	1.5
4+ Axle Trucks	0	2	0	2	0	10	0	10	0	0	0	0	1	6	0	7	19
% 4+ Axle Trucks	0	0.4	0	0.3	0	0.6	0	0.5	0	0	0	0	0.9	1.1	0	1	0.5

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	6	**66**	20	**92**	62	172	2	236	3	23	22	48	**24**	39	6	69	445
07:30 AM	6	61	**25**	92	61	191	2	254	**4**	**34**	14	**52**	20	51	**9**	**80**	478
07:45 AM	**9**	52	22	83	**65**	**242**	3	**310**	4	17	22	43	14	**53**	6	73	**509**
08:00 AM	4	45	18	67	42	177	**4**	223	2	13	**31**	46	11	49	7	67	403
Total Volume	25	224	85	334	230	782	11	1023	13	87	89	189	69	192	28	289	1835
% App. Total	7.5	67.1	25.4		22.5	76.4	1.1		6.9	46	47.1		23.9	66.4	9.7		
PHF	.694	.848	.850	.908	.885	.808	.688	.825	.813	.640	.718	.909	.719	.906	.778	.903	.901

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City of San Bernardino
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Site Code : 99918385
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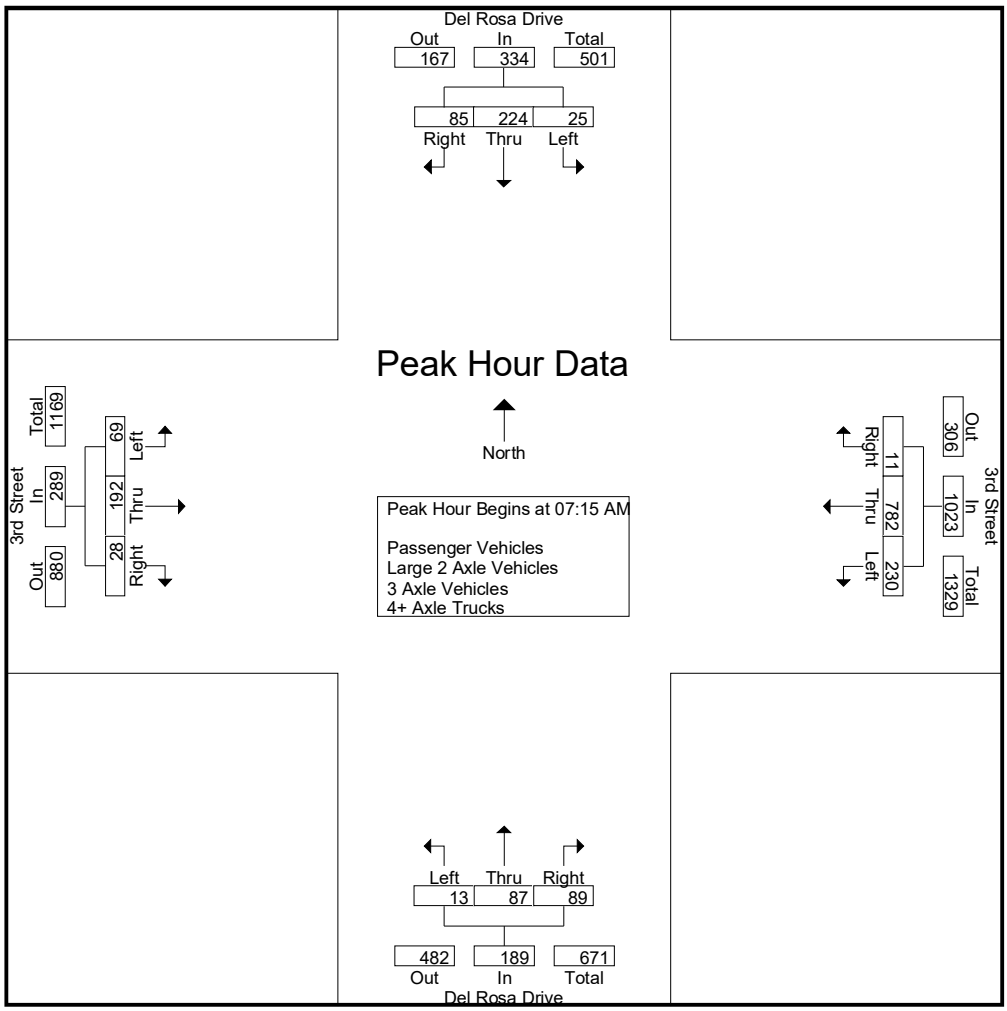

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	**6**	**71**	12	89	62	172	2	236	3	23	22	48	**20**	51	**9**	80
+15 mins.	5	58	10	73	61	191	2	254	**4**	**34**	14	**52**	14	53	6	73
+30 mins.	6	66	20	**92**	**65**	**242**	3	**310**	4	17	22	43	11	49	7	67
+45 mins.	6	61	**25**	92	42	177	**4**	223	2	13	**31**	46	12	**70**	7	**89**
Total Volume	23	256	67	346	230	782	11	1023	13	87	89	189	57	223	29	309
% App. Total	6.6	74	19.4		22.5	76.4	1.1		6.9	46	47.1		18.4	72.2	9.4	
PHF	.958	.901	.670	.940	.885	.808	.688	.825	.813	.640	.718	.909	.713	.796	.806	.868

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City of San Bernardino
N/S: Del Rosa Drive
E/W: 3rd Street
Weather: Clear

File Name : 05_SBC_Del Rosa Dr_3rd AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	17	6	24	12	56	6	74	0	5	5	10	3	23	3	29	137
06:15 AM	1	29	7	37	12	76	1	89	1	11	3	15	0	23	2	25	166
06:30 AM	4	35	10	49	30	86	1	117	1	6	11	18	5	27	1	33	217
06:45 AM	6	69	11	86	42	124	3	169	0	14	14	28	3	50	3	56	339
Total	12	150	34	196	96	342	11	449	2	36	33	71	11	123	9	143	859
07:00 AM	4	58	10	72	38	126	8	172	0	16	17	33	11	46	12	69	346
07:15 AM	6	66	19	91	62	164	2	228	3	23	20	46	22	37	6	65	430
07:30 AM	5	59	25	89	61	187	2	250	4	33	14	51	20	44	9	73	463
07:45 AM	9	52	22	83	65	236	2	303	4	17	19	40	14	51	6	71	497
Total	24	235	76	335	226	713	14	953	11	89	70	170	67	178	33	278	1736
08:00 AM	4	44	18	66	42	171	4	217	2	12	29	43	10	47	7	64	390
08:15 AM	5	37	11	53	24	95	2	121	2	16	20	38	12	67	7	86	298
08:30 AM	6	36	9	51	16	91	3	110	2	12	15	29	7	42	2	51	241
08:45 AM	8	22	17	47	20	77	3	100	0	10	15	25	4	51	2	57	229
Total	23	139	55	217	102	434	12	548	6	50	79	135	33	207	18	258	1158
Grand Total	59	524	165	748	424	1489	37	1950	19	175	182	376	111	508	60	679	3753
Apprch %	7.9	70.1	22.1		21.7	76.4	1.9		5.1	46.5	48.4		16.3	74.8	8.8		
Total %	1.6	14	4.4	19.9	11.3	39.7	1	52	0.5	4.7	4.8	10	3	13.5	1.6	18.1	

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	6	**66**	19	**91**	62	164	2	228	3	23	20	46	**22**	37	6	65	430
07:30 AM	5	59	**25**	89	61	187	2	250	**4**	**33**	14	**51**	20	44	**9**	**73**	463
07:45 AM	**9**	52	22	83	**65**	**236**	2	**303**	4	17	19	40	14	**51**	6	71	**497**
08:00 AM	4	44	18	66	42	171	**4**	217	2	12	**29**	43	10	47	7	64	390
Total Volume	24	221	84	329	230	758	10	998	13	85	82	180	66	179	28	273	1780
% App. Total	7.3	67.2	25.5		23	76	1		7.2	47.2	45.6		24.2	65.6	10.3		
PHF	.667	.837	.840	.904	.885	.803	.625	.823	.813	.644	.707	.882	.750	.877	.778	.935	.895

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Site Code : 99918385
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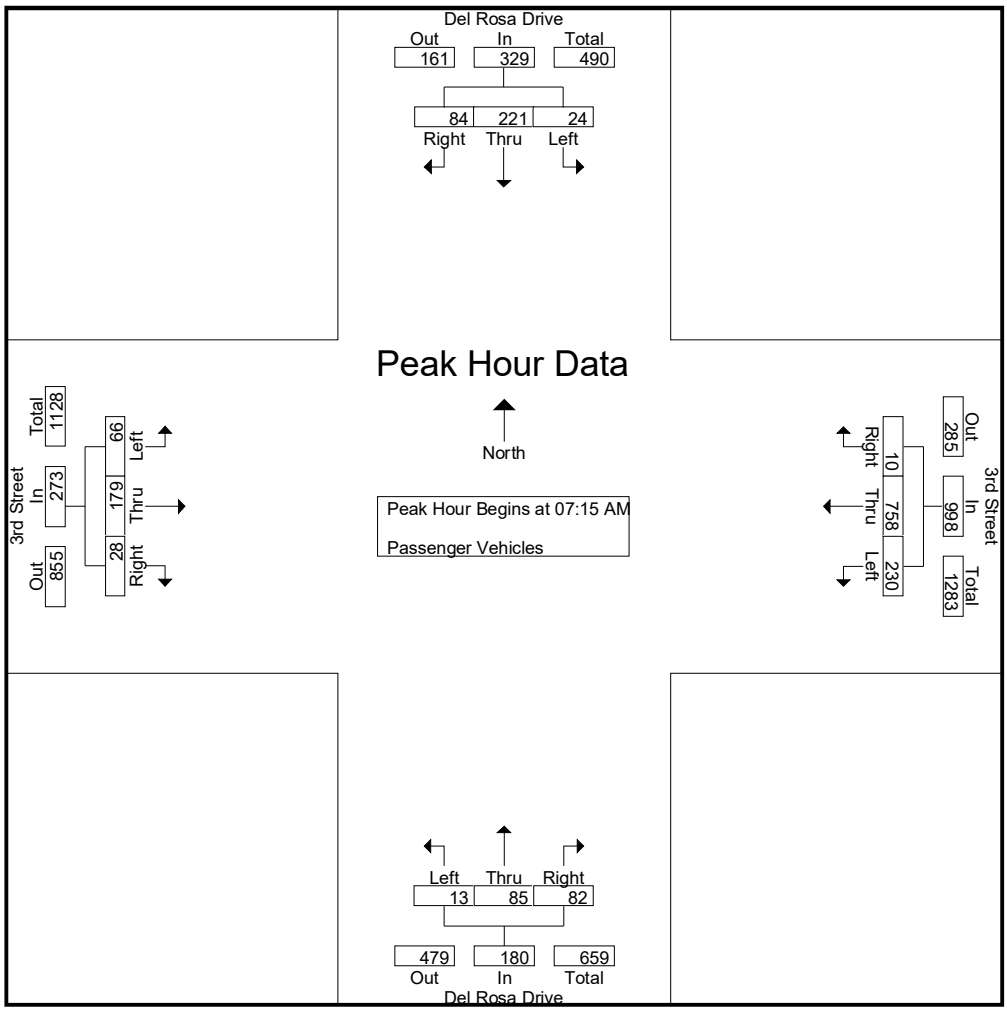

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	6	**66**	19	**91**	62	164	2	228	3	23	20	46	**22**	37	6	65
+15 mins.	5	59	**25**	89	61	187	2	250	**4**	**33**	14	**51**	20	44	**9**	**73**
+30 mins.	**9**	52	22	83	**65**	**236**	2	**303**	4	17	19	40	14	**51**	6	71
+45 mins.	4	44	18	66	42	171	**4**	217	2	12	**29**	43	10	47	7	64
Total Volume	24	221	84	329	230	758	10	998	13	85	82	180	66	179	28	273
% App. Total	7.3	67.2	25.5		23	76	1		7.2	47.2	45.6		24.2	65.6	10.3	
PHF	.667	.837	.840	.904	.885	.803	.625	.823	.813	.644	.707	.882	.750	.877	.778	.935

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Groups Printed- Large 2 Axle Vehicles

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	1	1	0	0	0	0	0	1	1	2	0	0	0	0	3
06:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	2
06:30 AM	0	0	0	0	1	1	0	2	0	2	2	4	0	4	0	4	10
06:45 AM	0	2	0	2	1	2	0	3	0	0	0	0	0	3	0	3	8
Total	0	2	1	3	2	3	0	5	0	3	4	7	0	8	0	8	23
07:00 AM	0	0	0	0	0	0	0	0	0	2	4	6	2	2	0	4	10
07:15 AM	0	0	1	1	0	2	0	2	0	0	1	1	2	0	0	2	6
07:30 AM	1	1	0	2	0	2	0	2	0	1	0	1	0	4	0	4	9
07:45 AM	0	0	0	0	0	3	1	4	0	0	3	3	0	2	0	2	9
Total	1	1	1	3	0	7	1	8	0	3	8	11	4	8	0	12	34
08:00 AM	0	1	0	1	0	3	0	3	0	1	2	3	0	0	0	0	7
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	2	0	2	4
08:30 AM	0	0	0	0	1	4	1	6	0	0	0	0	0	1	0	1	7
08:45 AM	0	1	0	1	1	6	1	8	0	1	0	1	0	2	0	2	12
Total	0	3	0	3	2	13	2	17	0	3	2	5	0	5	0	5	30
Grand Total	1	6	2	9	4	23	3	30	0	9	14	23	4	21	0	25	87
Apprch %	11.1	66.7	22.2		13.3	76.7	10		0	39.1	60.9		16	84	0		
Total %	1.1	6.9	2.3	10.3	4.6	26.4	3.4	34.5	0	10.3	16.1	26.4	4.6	24.1	0	28.7	

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	**1**	1	0	2	0	2	0	0	1	1	**2**	0	0	2	6
07:30 AM	**1**	**1**	0	**2**	0	2	0	2	0	**1**	0	1	0	**4**	0	**4**	**9**
07:45 AM	0	0	0	0	0	**3**	**1**	**4**	0	0	**3**	**3**	0	2	0	2	9
08:00 AM	0	1	0	1	0	3	0	3	0	1	2	3	0	0	0	0	7
Total Volume	1	2	1	4	0	10	1	11	0	2	6	8	2	6	0	8	31
% App. Total	25	50	25		0	90.9	9.1		0	25	75		25	75	0		
PHF	.250	.500	.250	.500	.000	.833	.250	.688	.000	.500	.500	.667	.250	.375	.000	.500	.861

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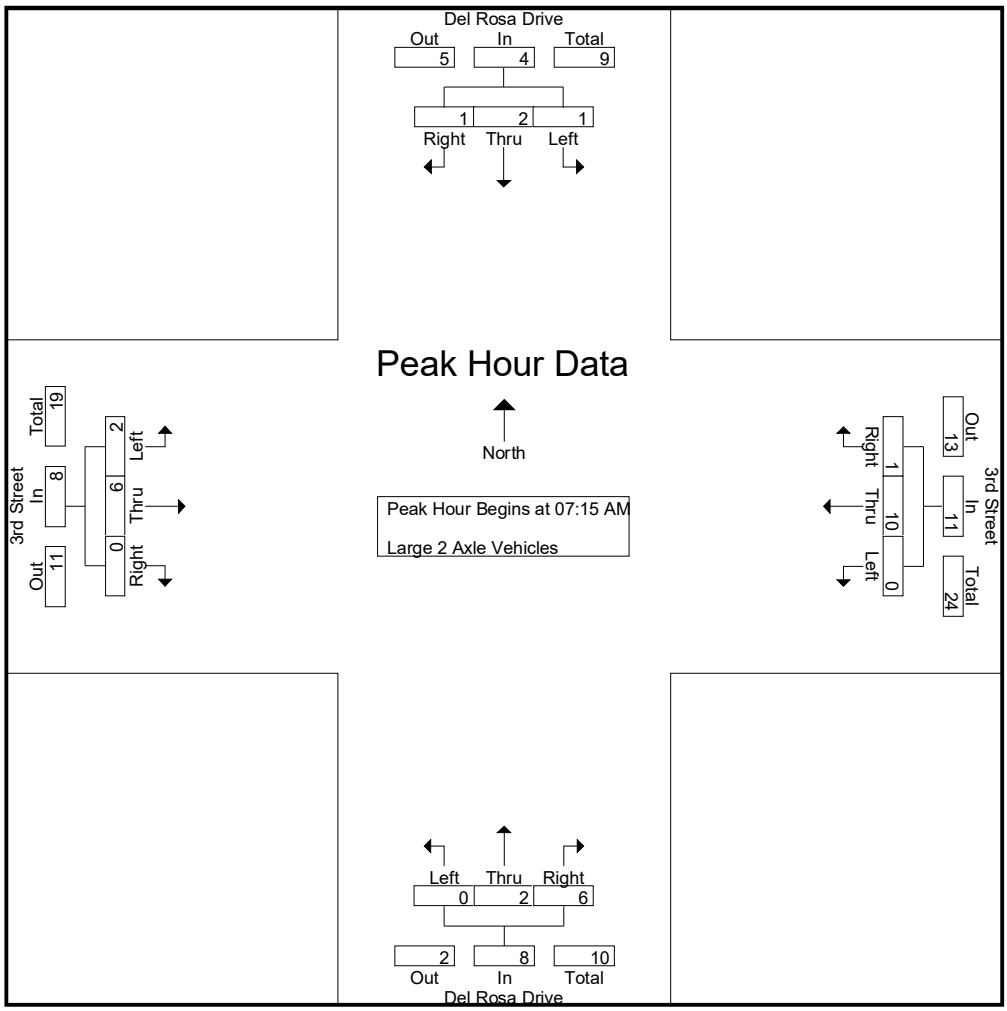

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	**1**	1	0	2	0	2	0	0	1	1	**2**	0	0	2
+15 mins.	**1**	**1**	0	**2**	0	2	0	2	0	**1**	0	1	0	**4**	0	**4**
+30 mins.	0	0	0	0	0	**3**	**1**	**4**	0	0	**3**	**3**	0	2	0	2
+45 mins.	0	1	0	1	0	3	0	3	0	1	2	3	0	0	0	0
Total Volume	1	2	1	4	0	10	1	11	0	2	6	8	2	6	0	8
% App. Total	25	50	25		0	90.9	9.1		0	25	75		25	75	0	
PHF	.250	.500	.250	.500	.000	.833	.250	.688	.000	.500	.500	.667	.250	.375	.000	.500

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Groups Printed- 3 Axle Vehicles

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	1	3	3	7	0	0	0	0	0	0	0	0	7
06:15 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	5
06:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	5	0	5	6
06:45 AM	0	0	1	1	0	4	0	4	0	0	0	0	0	2	0	2	7
Total	0	0	1	1	1	13	3	17	0	0	0	0	0	7	0	7	25
07:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	6	0	6	7
07:15 AM	0	0	0	0	0	6	0	6	0	0	1	1	0	2	0	2	9
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	9	0	9	0	0	1	1	0	9	0	9	20
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	2
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
08:45 AM	0	0	0	0	0	0	2	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	4	2	6	0	0	1	1	0	6	0	6	13
Grand Total	1	0	1	2	1	26	5	32	0	0	2	2	0	22	0	22	58
Apprch %	50	0	50		3.1	81.2	15.6		0	0	100		0	100	0		
Total %	1.7	0	1.7	3.4	1.7	44.8	8.6	55.2	0	0	3.4	3.4	0	37.9	0	37.9	

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**6**	0	**6**	0	0	**1**	**1**	0	**2**	0	**2**	**9**
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total Volume	0	0	0	0	0	11	0	11	0	0	1	1	0	4	0	4	16
% App. Total	0	0	0		0	100	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	.458	.000	.458	.000	.000	.250	.250	.000	.500	.000	.500	.444

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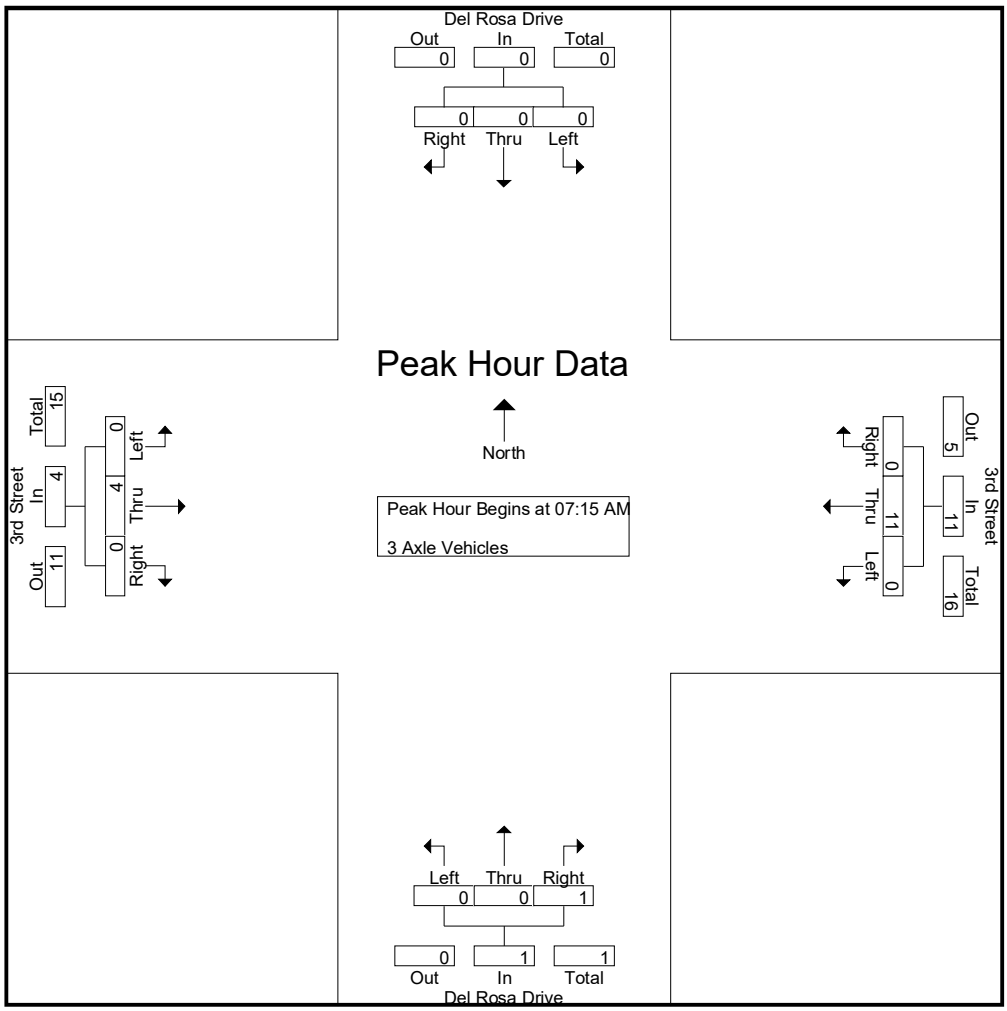

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	0	1	0	1	0	5	0	5	0	0	0	0	0	2	0	2	8
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	2	3
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	1	0	1	0	2	0	2	0	0	0	0	1	4	0	5	8
Grand Total	0	2	0	2	0	10	0	10	0	0	0	0	1	6	0	7	19
Apprch %	0	100	0		0	100	0		0	0	0		14.3	85.7	0		
Total %	0	10.5	0	10.5	0	52.6	0	52.6	0	0	0	0	5.3	31.6	0	36.8	

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**3**
07:45 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	**1**	1	0	2	3
Total Volume	0	1	0	1	0	3	0	3	0	0	0	0	1	3	0	4	8
% App. Total	0	100	0		0	100	0		0	0	0		25	75	0		
PHF	.000	.250	.000	.250	.000	.375	.000	.375	.000	.000	.000	.000	.250	.375	.000	.500	.667

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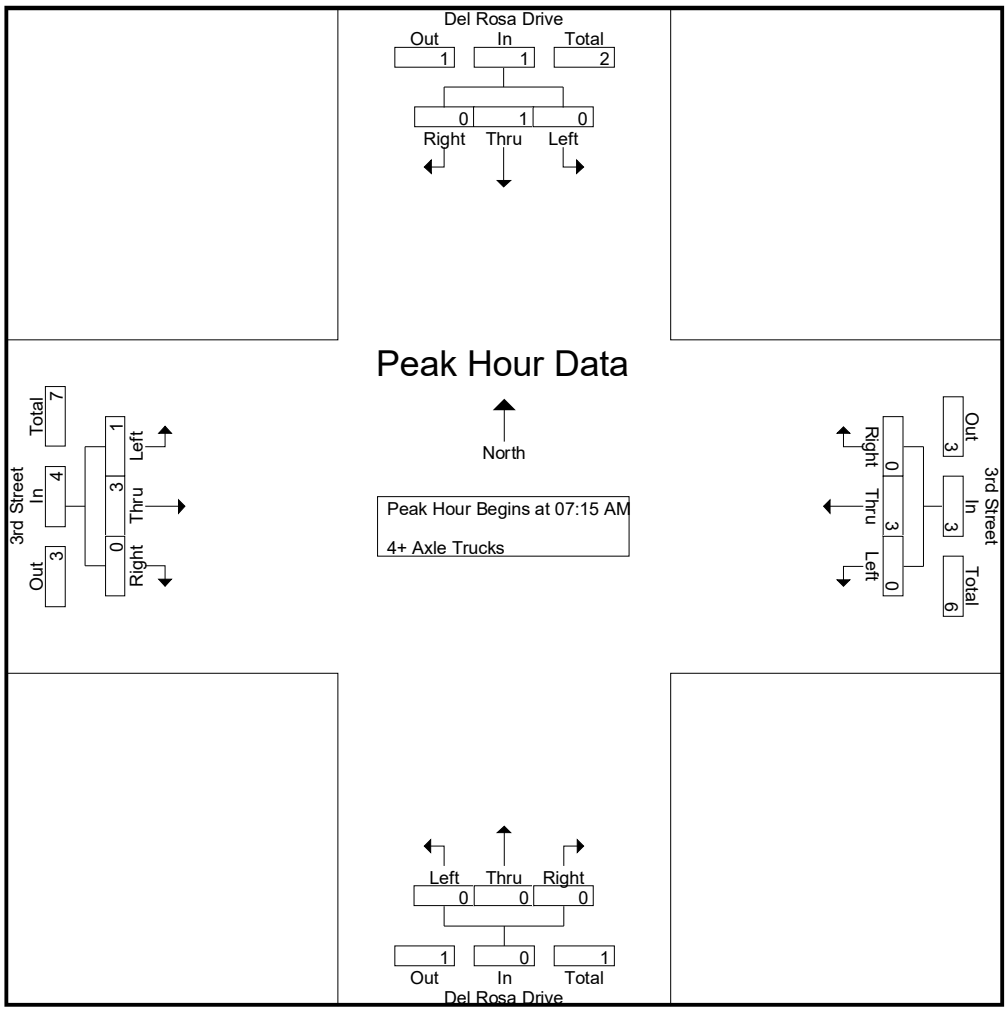

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+30 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	**1**	1	0	2
Total Volume	0	1	0	1	0	3	0	3	0	0	0	0	1	3	0	4
% App. Total	0	100	0		0	100	0		0	0	0		25	75	0	
PHF	.000	.250	.000	.250	.000	.375	.000	.375	.000	.000	.000	.000	.250	.375	.000	.500

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City of San Bernardino
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Site Code : 99918385
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	5	24	9	38	13	73	6	92	2	29	52	83	24	119	3	146	359
03:15 PM	8	18	10	36	19	77	5	101	2	29	51	82	25	131	4	160	379
03:30 PM	8	19	13	40	26	86	11	123	4	38	47	89	16	108	2	126	378
03:45 PM	8	27	25	60	25	127	5	157	1	51	50	102	27	151	4	182	501
Total	29	88	57	174	83	363	27	473	9	147	200	356	92	509	13	614	1617
04:00 PM	11	28	13	52	22	86	14	122	6	57	45	108	22	145	5	172	454
04:15 PM	10	28	10	48	17	71	12	100	5	44	48	97	24	155	1	180	425
04:30 PM	12	26	15	53	15	73	4	92	5	33	61	99	15	240	3	258	502
04:45 PM	19	34	16	69	25	100	11	136	1	40	75	116	22	214	1	237	558
Total	52	116	54	222	79	330	41	450	17	174	229	420	83	754	10	847	1939
05:00 PM	10	35	14	59	7	71	6	84	4	58	89	151	25	216	2	243	537
05:15 PM	2	34	18	54	16	89	6	111	3	51	84	138	39	304	2	345	648
05:30 PM	9	25	17	51	10	69	1	80	4	56	83	143	29	208	1	238	512
05:45 PM	11	26	13	50	25	69	6	100	2	46	68	116	19	188	2	209	475
Total	32	120	62	214	58	298	19	375	13	211	324	548	112	916	7	1035	2172
Grand Total	113	324	173	610	220	991	87	1298	39	532	753	1324	287	2179	30	2496	5728
Apprch %	18.5	53.1	28.4		16.9	76.3	6.7		2.9	40.2	56.9		11.5	87.3	1.2		
Total %	2	5.7	3	10.6	3.8	17.3	1.5	22.7	0.7	9.3	13.1	23.1	5	38	0.5	43.6	
Passenger Vehicles	105	311	165	581	212	944	86	1242	38	520	743	1301	284	2129	28	2441	5565
% Passenger Vehicles	92.9	96	95.4	95.2	96.4	95.3	98.9	95.7	97.4	97.7	98.7	98.3	99	97.7	93.3	97.8	97.2
Large 2 Axle Vehicles	2	10	7	19	5	23	0	28	1	10	3	14	2	17	2	21	82
% Large 2 Axle Vehicles	1.8	3.1	4	3.1	2.3	2.3	0	2.2	2.6	1.9	0.4	1.1	0.7	0.8	6.7	0.8	1.4
3 Axle Vehicles	4	2	1	7	2	10	1	13	0	0	5	5	0	20	0	20	45
% 3 Axle Vehicles	3.5	0.6	0.6	1.1	0.9	1	1.1	1	0	0	0.7	0.4	0	0.9	0	0.8	0.8
4+ Axle Trucks	2	1	0	3	1	14	0	15	0	2	2	4	1	13	0	14	36
% 4+ Axle Trucks	1.8	0.3	0	0.5	0.5	1.4	0	1.2	0	0.4	0.3	0.3	0.3	0.6	0	0.6	0.6

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**19**	34	16	**69**	**25**	**100**	**11**	**136**	1	40	75	116	22	214	1	237	558
05:00 PM	10	**35**	14	59	7	71	6	84	**4**	**58**	**89**	**151**	25	216	**2**	243	537
05:15 PM	2	34	**18**	54	16	89	6	111	3	51	84	138	**39**	**304**	2	**345**	**648**
05:30 PM	9	25	17	51	10	69	1	80	4	56	83	143	29	208	1	238	512
Total Volume	40	128	65	233	58	329	24	411	12	205	331	548	115	942	6	1063	2255
% App. Total	17.2	54.9	27.9		14.1	80	5.8		2.2	37.4	60.4		10.8	88.6	0.6		
PHF	.526	.914	.903	.844	.580	.823	.545	.756	.750	.884	.930	.907	.737	.775	.750	.770	.870

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Site Code : 99918385
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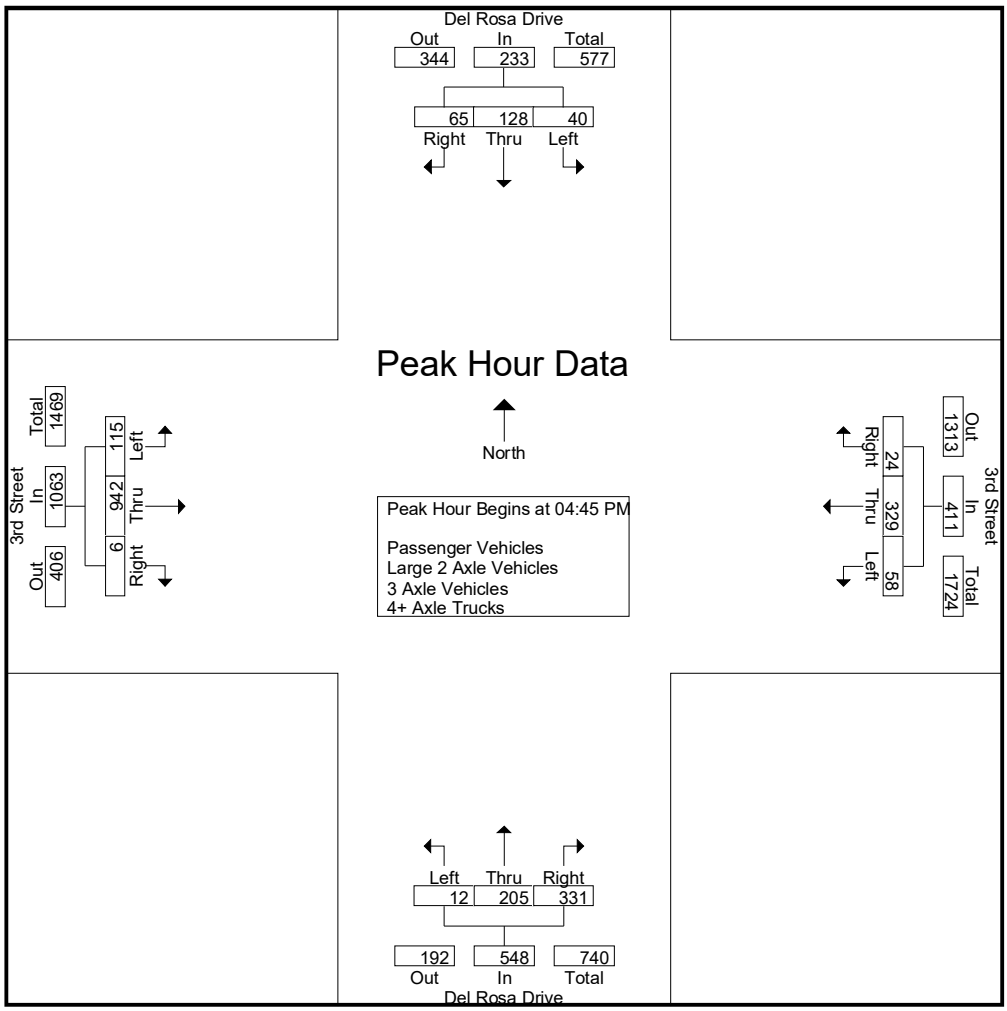

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				03:15 PM				04:45 PM				04:30 PM			
+0 mins.	12	26	15	53	19	77	5	101	1	40	75	116	15	240	**3**	258
+15 mins.	**19**	34	16	**69**	**26**	86	11	123	**4**	**58**	**89**	**151**	22	214	1	237
+30 mins.	10	**35**	14	59	25	**127**	5	**157**	3	51	84	138	25	216	2	243
+45 mins.	2	34	**18**	54	22	86	**14**	122	4	56	83	143	**39**	**304**	2	**345**
Total Volume	43	129	63	235	92	376	35	503	12	205	331	548	101	974	8	1083
% App. Total	18.3	54.9	26.8		18.3	74.8	7		2.2	37.4	60.4		9.3	89.9	0.7	
PHF	.566	.921	.875	.851	.885	.740	.625	.801	.750	.884	.930	.907	.647	.801	.667	.785

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Groups Printed- Passenger Vehicles

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	5	23	9	37	12	67	6	85	2	28	50	80	24	116	3	143	345
03:15 PM	8	18	9	35	18	73	5	96	2	29	51	82	25	125	4	154	367
03:30 PM	4	18	13	35	26	82	11	119	3	37	46	86	16	106	1	123	363
03:45 PM	8	26	25	59	24	123	5	152	1	50	49	100	27	147	4	178	489
Total	25	85	56	166	80	345	27	452	8	144	196	348	92	494	12	598	1564
04:00 PM	10	25	13	48	21	81	14	116	6	56	44	106	21	142	5	168	438
04:15 PM	9	24	8	41	17	68	12	97	5	44	48	97	24	152	1	177	412
04:30 PM	12	26	14	52	13	70	4	87	5	29	60	94	15	235	3	253	486
04:45 PM	18	33	12	63	24	93	10	127	1	40	74	115	22	207	1	230	535
Total	49	108	47	204	75	312	40	427	17	169	226	412	82	736	10	828	1871
05:00 PM	10	34	14	58	6	68	6	80	4	56	88	148	25	210	2	237	523
05:15 PM	1	34	18	53	16	87	6	109	3	51	84	138	38	299	2	339	639
05:30 PM	9	24	17	50	10	66	1	77	4	56	81	141	29	205	1	235	503
05:45 PM	11	26	13	50	25	66	6	97	2	44	68	114	18	185	1	204	465
Total	31	118	62	211	57	287	19	363	13	207	321	541	110	899	6	1015	2130
Grand Total	105	311	165	581	212	944	86	1242	38	520	743	1301	284	2129	28	2441	5565
Apprch %	18.1	53.5	28.4		17.1	76	6.9		2.9	40	57.1		11.6	87.2	1.1		
Total %	1.9	5.6	3	10.4	3.8	17	1.5	22.3	0.7	9.3	13.4	23.4	5.1	38.3	0.5	43.9	

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**18**	33	12	**63**	**24**	**93**	**10**	**127**	1	40	74	115	22	207	1	230	535
05:00 PM	10	**34**	14	58	6	68	6	80	**4**	**56**	**88**	**148**	25	210	**2**	237	523
05:15 PM	1	34	**18**	53	16	87	6	109	3	51	84	138	**38**	**299**	2	**339**	**639**
05:30 PM	9	24	17	50	10	66	1	77	4	56	81	141	29	205	1	235	503
Total Volume	38	125	61	224	56	314	23	393	12	203	327	542	114	921	6	1041	2200
% App. Total	17	55.8	27.2		14.2	79.9	5.9		2.2	37.5	60.3		11	88.5	0.6		
PHF	.528	.919	.847	.889	.583	.844	.575	.774	.750	.906	.929	.916	.750	.770	.750	.768	.861

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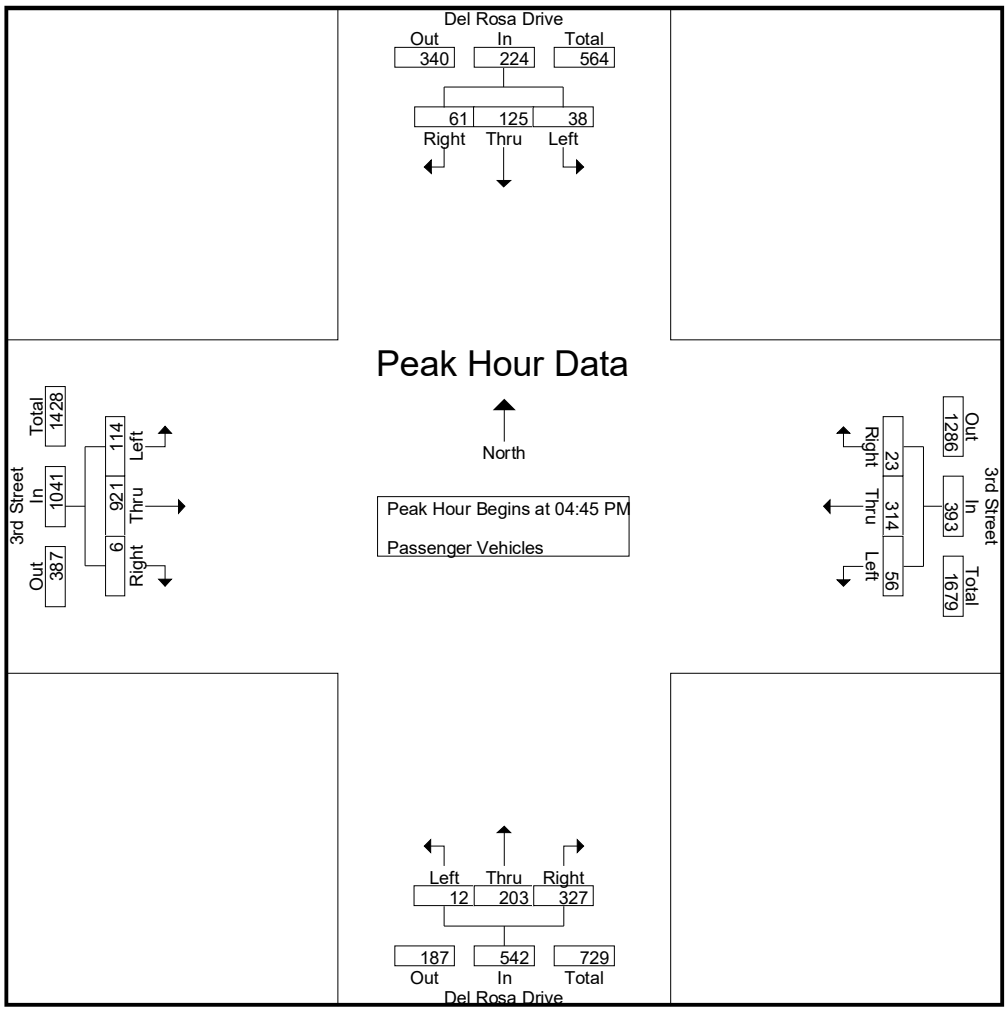

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**18**	33	12	**63**	**24**	**93**	**10**	**127**	1	40	74	115	22	207	1	230
+15 mins.	10	**34**	14	58	6	68	6	80	**4**	**56**	**88**	**148**	25	210	**2**	237
+30 mins.	1	34	**18**	53	16	87	6	109	3	51	84	138	**38**	**299**	2	**339**
+45 mins.	9	24	17	50	10	66	1	77	4	56	81	141	29	205	1	235
Total Volume	38	125	61	224	56	314	23	393	12	203	327	542	114	921	6	1041
% App. Total	17	55.8	27.2		14.2	79.9	5.9		2.2	37.5	60.3		11	88.5	0.6	
PHF	.528	.919	.847	.889	.583	.844	.575	.774	.750	.906	.929	.916	.750	.770	.750	.768

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Groups Printed- Large 2 Axle Vehicles

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	2	0	2	5
03:15 PM	0	0	0	0	1	2	0	3	0	0	0	0	0	4	0	4	7
03:30 PM	1	1	0	2	0	4	0	4	1	1	0	2	0	0	1	1	9
03:45 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	3	0	3	6
Total	1	2	0	3	1	9	0	10	1	3	0	4	0	9	1	10	27
04:00 PM	1	2	0	3	1	2	0	3	0	0	0	0	0	2	0	2	8
04:15 PM	0	3	2	5	0	1	0	1	0	0	0	0	0	1	0	1	7
04:30 PM	0	0	1	1	2	0	0	2	0	3	1	4	0	1	0	1	8
04:45 PM	0	1	4	5	0	4	0	4	0	0	0	0	0	2	0	2	11
Total	1	6	7	14	3	7	0	10	0	3	1	4	0	6	0	6	34
05:00 PM	0	1	0	1	1	2	0	3	0	2	1	3	0	0	0	0	7
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	2	0	3	5
05:30 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:45 PM	0	0	0	0	0	3	0	3	0	2	0	2	1	0	1	2	7
Total	0	2	0	2	1	7	0	8	0	4	2	6	2	2	1	5	21
Grand Total	2	10	7	19	5	23	0	28	1	10	3	14	2	17	2	21	82
Apprch %	10.5	52.6	36.8		17.9	82.1	0		7.1	71.4	21.4		9.5	81	9.5		
Total %	2.4	12.2	8.5	23.2	6.1	28	0	34.1	1.2	12.2	3.7	17.1	2.4	20.7	2.4	25.6	

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	**4**	**5**	0	**4**	0	**4**	0	0	0	0	0	**2**	0	2	**11**
05:00 PM	0	1	0	1	**1**	2	0	3	0	**2**	**1**	**3**	0	0	0	0	7
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	**1**	2	0	**3**	5
05:30 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total Volume	0	3	4	7	1	8	0	9	0	2	2	4	1	4	0	5	25
% App. Total	0	42.9	57.1		11.1	88.9	0		0	50	50		20	80	0		
PHF	.000	.750	.250	.350	.250	.500	.000	.563	.000	.250	.500	.333	.250	.500	.000	.417	.568

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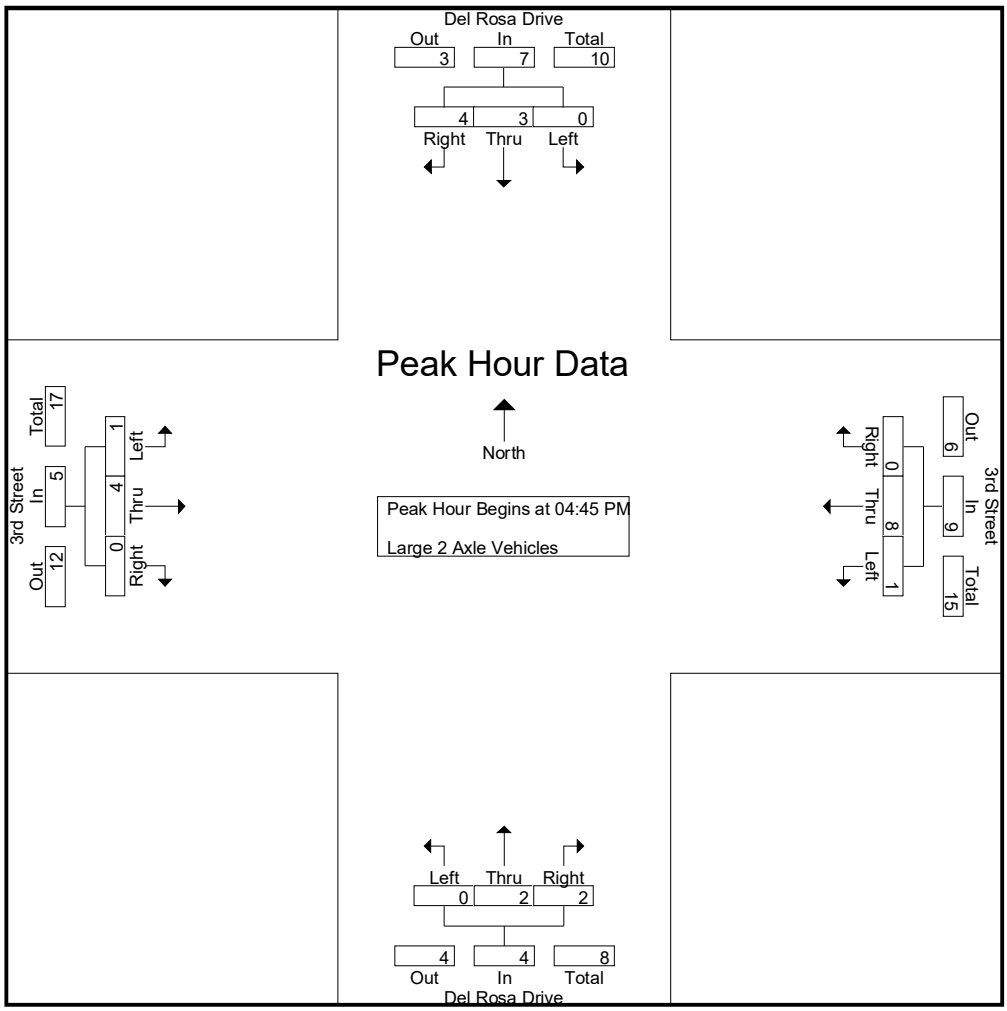

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	**4**	**5**	0	**4**	0	**4**	0	0	0	0	0	**2**	0	2
+15 mins.	0	1	0	1	**1**	2	0	3	0	**2**	**1**	**3**	0	0	0	0
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	**1**	2	0	**3**
+45 mins.	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0
Total Volume	0	3	4	7	1	8	0	9	0	2	2	4	1	4	0	5
% App. Total	0	42.9	57.1		11.1	88.9	0		0	50	50		20	80	0	
PHF	.000	.750	.250	.350	.250	.500	.000	.563	.000	.250	.500	.333	.250	.500	.000	.417

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Groups Printed- 3 Axle Vehicles

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	1	2	0	3	0	0	2	2	0	0	0	0	5
03:15 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
03:30 PM	2	0	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3
03:45 PM	0	1	0	1	1	0	0	1	0	0	1	1	0	1	0	1	4
Total	2	1	1	4	2	3	0	5	0	0	4	4	0	2	0	2	15
04:00 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	1	0	1	5
04:15 PM	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
04:45 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
Total	1	1	0	2	0	7	1	8	0	0	0	0	0	7	0	7	17
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Total	1	0	0	1	0	0	0	0	0	0	1	1	0	11	0	11	13
Grand Total	4	2	1	7	2	10	1	13	0	0	5	5	0	20	0	20	45
Apprch %	57.1	28.6	14.3		15.4	76.9	7.7		0	0	100		0	100	0		
Total %	8.9	4.4	2.2	15.6	4.4	22.2	2.2	28.9	0	0	11.1	11.1	0	44.4	0	44.4	

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	0	2	0	2	**4**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**	0	**4**	4
05:15 PM	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	2	0	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	2	0	2	3
Total Volume	1	0	0	1	0	1	1	2	0	0	1	1	0	10	0	10	14
% App. Total	100	0	0		0	50	50		0	0	100		0	100	0		
PHF	.250	.000	.000	.250	.000	.250	.250	.250	.000	.000	.250	.250	.000	.625	.000	.625	.875

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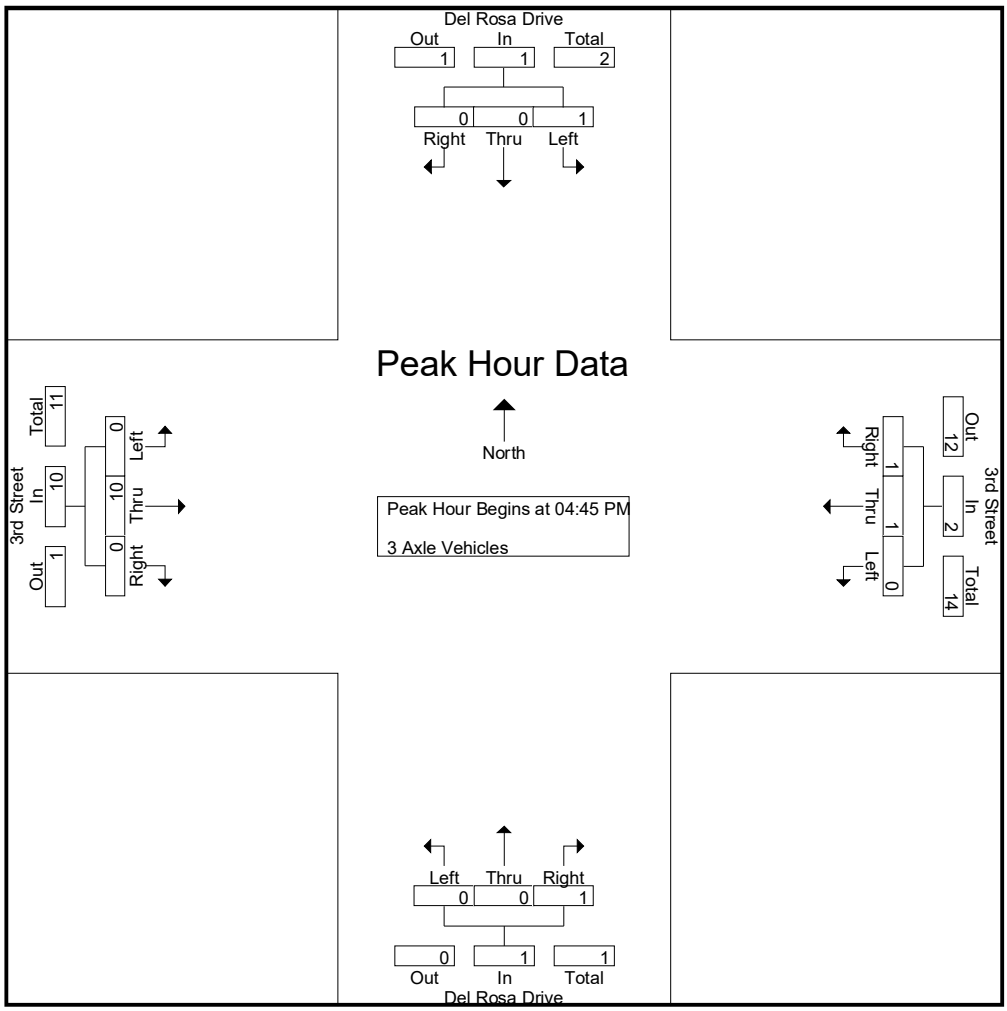

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**	0	**4**
+30 mins.	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	2	0	2
Total Volume	1	0	0	1	0	1	1	2	0	0	1	1	0	10	0	10
% App. Total	100	0	0		0	50	50		0	0	100		0	100	0	
PHF	.250	.000	.000	.250	.000	.250	.250	.250	.000	.000	.250	.250	.000	.625	.000	.625

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Groups Printed- 4+ Axle Trucks

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
03:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
03:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
03:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	1	0	0	1	0	6	0	6	0	0	0	0	0	4	0	4	11
04:00 PM	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	1	3
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	1	0	1	4
04:45 PM	1	0	0	1	1	2	0	3	0	0	1	1	0	3	0	3	8
Total	1	1	0	2	1	4	0	5	0	2	2	4	1	5	0	6	17
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
Grand Total	2	1	0	3	1	14	0	15	0	2	2	4	1	13	0	14	36
Apprch %	66.7	33.3	0		6.7	93.3	0		0	50	50		7.1	92.9	0		
Total %	5.6	2.8	0	8.3	2.8	38.9	0	41.7	0	5.6	5.6	11.1	2.8	36.1	0	38.9	

	Del Rosa Drive Southbound				3rd Street Westbound				Del Rosa Drive Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	0	0	**1**	**1**	2	0	**3**	0	0	**1**	**1**	0	**3**	0	**3**	**8**
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	**3**	0	3	0	0	0	0	0	1	0	1	4
Total Volume	1	0	0	1	1	6	0	7	0	0	1	1	0	7	0	7	16
% App. Total	100	0	0		14.3	85.7	0		0	0	100		0	100	0		
PHF	.250	.000	.000	.250	.250	.500	.000	.583	.000	.000	.250	.250	.000	.583	.000	.583	.500

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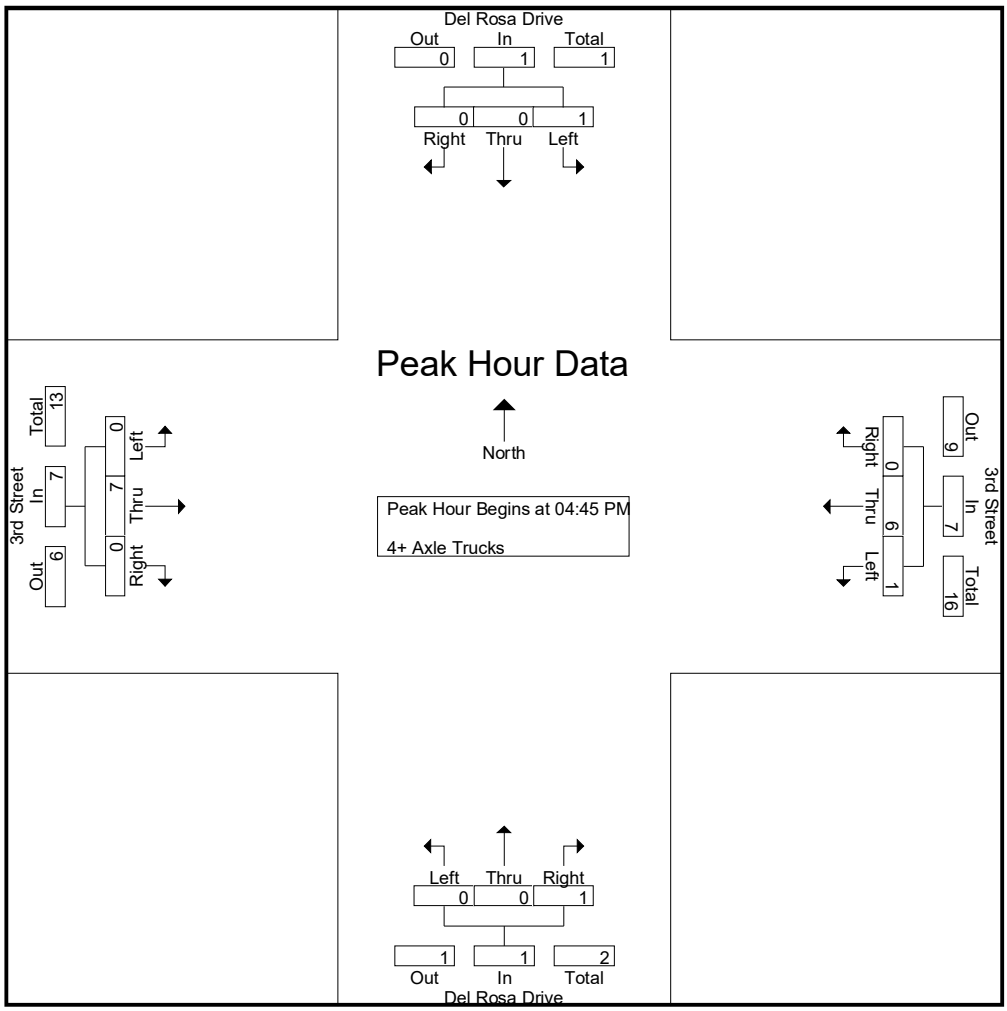
City of San Bernardino
N/S: Del Rosa Drive
E/W: 3rd Street
Weather: Clear

File Name : 05_SBC_Del Rosa Dr_3rd PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

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

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City of San Bernardino
N/S: Sterling Avenue
E/W: 3rd Street
Weather: Clear

File Name : 04_SBC_Sterling_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

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

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	0	69	73	0	147	3	150	0	0	0	0	29	52	0	81	304
07:15 AM	7	0	77	84	0	208	2	210	0	0	0	0	23	37	0	60	354
07:30 AM	6	0	90	96	0	189	7	196	0	0	0	0	23	61	0	84	376
07:45 AM	18	0	102	120	0	229	6	235	0	0	0	0	19	54	0	73	428
Total	35	0	338	373	0	773	18	791	0	0	0	0	94	204	0	298	1462
08:00 AM	8	0	61	69	0	153	8	161	0	0	0	0	31	65	0	96	326
08:15 AM	9	0	48	57	0	102	4	106	0	0	0	0	25	53	0	78	241
08:30 AM	13	0	48	61	0	94	8	102	0	0	0	0	26	50	0	76	239
08:45 AM	13	0	49	62	0	84	5	89	0	0	0	0	33	69	0	102	253
Total	43	0	206	249	0	433	25	458	0	0	0	0	115	237	0	352	1059
Grand Total	78	0	544	622	0	1206	43	1249	0	0	0	0	209	441	0	650	2521
Apprch %	12.5	0	87.5		0	96.6	3.4		0	0	0		32.2	67.8	0		
Total %	3.1	0	21.6	24.7	0	47.8	1.7	49.5	0	0	0	0	8.3	17.5	0	25.8	
Passenger Vehicles	76	0	533	609	0	1172	42	1214	0	0	0	0	205	423	0	628	2451
% Passenger Vehicles	97.4	0	98	97.9	0	97.2	97.7	97.2	0	0	0	0	98.1	95.9	0	96.6	97.2
Large 2 Axle Vehicles	1	0	11	12	0	22	0	22	0	0	0	0	4	9	0	13	47
% Large 2 Axle Vehicles	1.3	0	2	1.9	0	1.8	0	1.8	0	0	0	0	1.9	2	0	2	1.9
3 Axle Vehicles	1	0	0	1	0	5	0	5	0	0	0	0	0	4	0	4	10
% 3 Axle Vehicles	1.3	0	0	0.2	0	0.4	0	0.4	0	0	0	0	0	0.9	0	0.6	0.4
4+ Axle Trucks	0	0	0	0	0	7	1	8	0	0	0	0	0	5	0	5	13
% 4+ Axle Trucks	0	0	0	0	0	0.6	2.3	0.6	0	0	0	0	0	1.1	0	0.8	0.5

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	7	0	77	84	0	208	2	210	0	0	0	0	23	37	0	60	354
07:30 AM	6	0	90	96	0	189	7	196	0	0	0	0	23	61	0	84	376
07:45 AM	**18**	0	**102**	**120**	0	**229**	6	**235**	0	0	0	0	19	54	0	73	**428**
08:00 AM	8	0	61	69	0	153	**8**	161	0	0	0	0	**31**	**65**	0	**96**	326
Total Volume	39	0	330	369	0	779	23	802	0	0	0	0	96	217	0	313	1484
% App. Total	10.6	0	89.4		0	97.1	2.9		0	0	0		30.7	69.3	0		
PHF	.542	.000	.809	.769	.000	.850	.719	.853	.000	.000	.000	.000	.774	.835	.000	.815	.867

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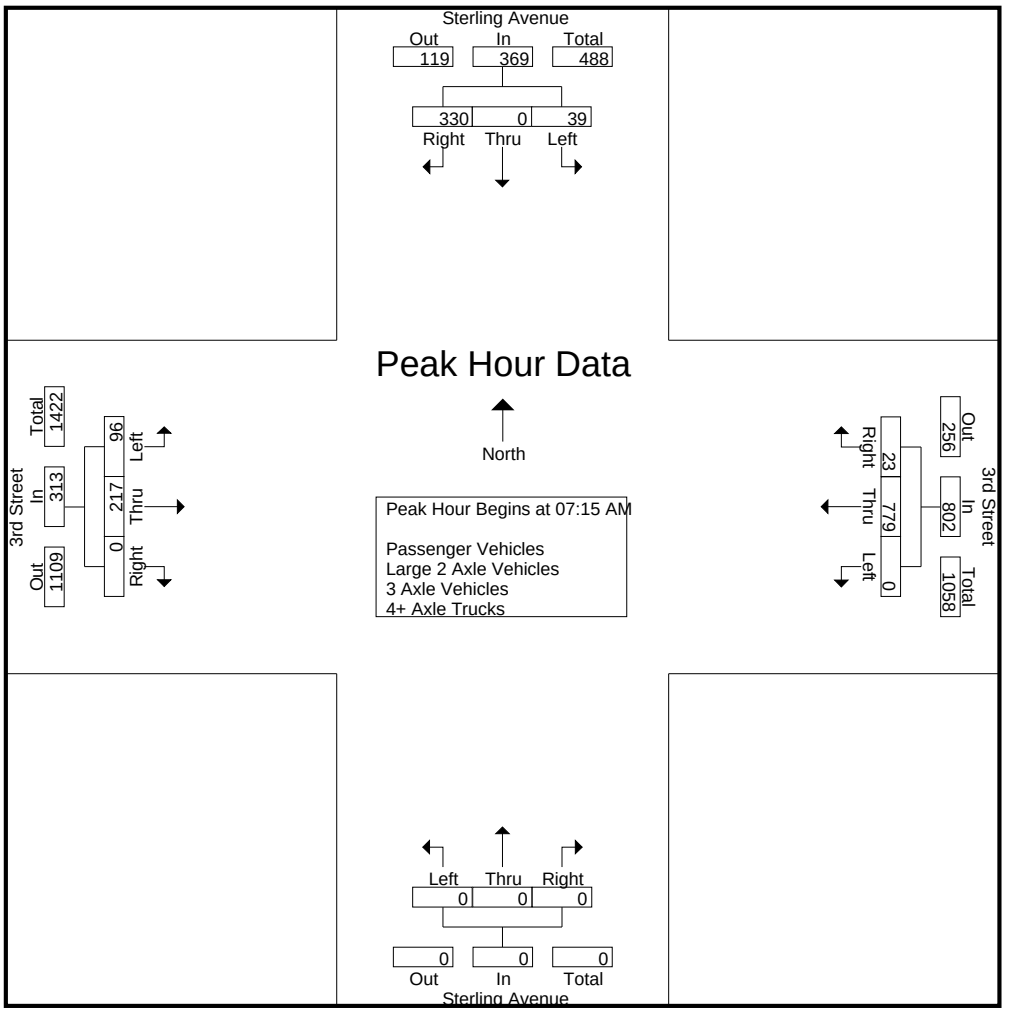
City of San Bernardino
N/S: Sterling Avenue
E/W: 3rd Street
Weather: Clear

File Name : 04_SBC_Sterling_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 2



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

	07:00 AM				07:15 AM				07:00 AM				08:00 AM			
+0 mins.	4	0	69	73	0	208	2	210	0	0	0	0	31	65	0	96
+15 mins.	7	0	77	84	0	189	7	196	0	0	0	0	25	53	0	78
+30 mins.	6	0	90	96	0	**229**	6	**235**	0	0	0	0	26	50	0	76
+45 mins.	**18**	0	**102**	**120**	0	153	**8**	161	0	0	0	0	**33**	**69**	0	**102**
Total Volume	35	0	338	373	0	779	23	802	0	0	0	0	115	237	0	352
% App. Total	9.4	0	90.6		0	97.1	2.9		0	0	0		32.7	67.3	0	
PHF	.486	.000	.828	.777	.000	.850	.719	.853	.000	.000	.000	.000	.871	.859	.000	.863

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Weather: Clear

File Name : 04_SBC_Sterling_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	0	68	72	0	143	2	145	0	0	0	0	27	49	0	76	293
07:15 AM	7	0	77	84	0	205	2	207	0	0	0	0	22	37	0	59	350
07:30 AM	6	0	89	95	0	185	7	192	0	0	0	0	22	58	0	80	367
07:45 AM	18	0	101	119	0	227	6	233	0	0	0	0	19	53	0	72	424
Total	35	0	335	370	0	760	17	777	0	0	0	0	90	197	0	287	1434
08:00 AM	8	0	60	68	0	150	8	158	0	0	0	0	31	65	0	96	322
08:15 AM	9	0	46	55	0	100	4	104	0	0	0	0	25	48	0	73	232
08:30 AM	12	0	45	57	0	89	8	97	0	0	0	0	26	48	0	74	228
08:45 AM	12	0	47	59	0	73	5	78	0	0	0	0	33	65	0	98	235
Total	41	0	198	239	0	412	25	437	0	0	0	0	115	226	0	341	1017
Grand Total	76	0	533	609	0	1172	42	1214	0	0	0	0	205	423	0	628	2451
Apprch %	12.5	0	87.5		0	96.5	3.5		0	0	0		32.6	67.4	0		
Total %	3.1	0	21.7	24.8	0	47.8	1.7	49.5	0	0	0	0	8.4	17.3	0	25.6	

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	7	0	77	84	0	205	2	207	0	0	0	0	22	37	0	59	350
07:30 AM	6	0	89	95	0	185	7	192	0	0	0	0	22	58	0	80	367
07:45 AM	**18**	0	**101**	**119**	0	**227**	6	**233**	0	0	0	0	19	53	0	72	**424**
08:00 AM	8	0	60	68	0	150	**8**	158	0	0	0	0	**31**	**65**	0	**96**	322
Total Volume	39	0	327	366	0	767	23	790	0	0	0	0	94	213	0	307	1463
% App. Total	10.7	0	89.3		0	97.1	2.9		0	0	0		30.6	69.4	0		
PHF	.542	.000	.809	.769	.000	.845	.719	.848	.000	.000	.000	.000	.758	.819	.000	.799	.863

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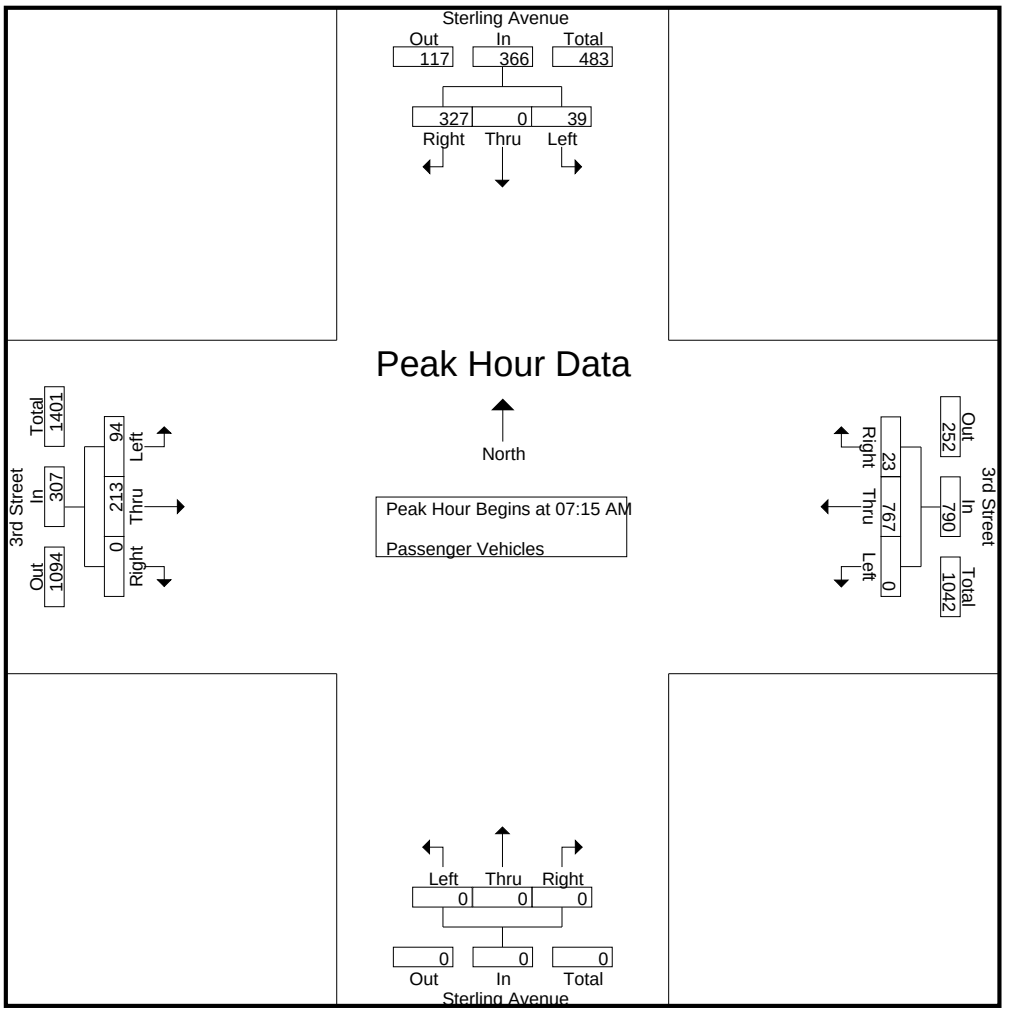
City of San Bernardino
N/S: Sterling Avenue
E/W: 3rd Street
Weather: Clear

File Name : 04_SBC_Sterling_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	7	0	77	84	0	205	2	207	0	0	0	0	22	37	0	59
+15 mins.	6	0	89	95	0	185	7	192	0	0	0	0	22	58	0	80
+30 mins.	**18**	0	**101**	**119**	0	**227**	6	**233**	0	0	0	0	19	53	0	72
+45 mins.	8	0	60	68	0	150	**8**	158	0	0	0	0	**31**	**65**	0	**96**
Total Volume	39	0	327	366	0	767	23	790	0	0	0	0	94	213	0	307
% App. Total	10.7	0	89.3		0	97.1	2.9		0	0	0		30.6	69.4	0	
PHF	.542	.000	.809	.769	.000	.845	.719	.848	.000	.000	.000	.000	.758	.819	.000	.799

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City of San Bernardino
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Weather: Clear

File Name : 04_SBC_Sterling_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	0	2	0	2	0	0	0	0	2	2	0	4	7
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
07:30 AM	0	0	1	1	0	4	0	4	0	0	0	0	1	1	0	2	7
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	0	3	3	0	8	0	8	0	0	0	0	4	4	0	8	19
08:00 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	2	2	0	1	0	1	0	0	0	0	0	3	0	3	6
08:30 AM	1	0	3	4	0	3	0	3	0	0	0	0	0	1	0	1	8
08:45 AM	0	0	2	2	0	9	0	9	0	0	0	0	0	1	0	1	12
Total	1	0	8	9	0	14	0	14	0	0	0	0	0	5	0	5	28
Grand Total	1	0	11	12	0	22	0	22	0	0	0	0	4	9	0	13	47
Apprch %	8.3	0	91.7		0	100	0		0	0	0		30.8	69.2	0		
Total %	2.1	0	23.4	25.5	0	46.8	0	46.8	0	0	0	0	8.5	19.1	0	27.7	

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	**1**	0	0	1	2
07:30 AM	0	0	**1**	**1**	0	**4**	0	**4**	0	0	0	0	1	**1**	0	**2**	**7**
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total Volume	0	0	3	3	0	7	0	7	0	0	0	0	2	2	0	4	14
% App. Total	0	0	100		0	100	0		0	0	0		50	50	0		
PHF	.000	.000	.750	.750	.000	.438	.000	.438	.000	.000	.000	.000	.500	.500	.000	.500	.500

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City of San Bernardino
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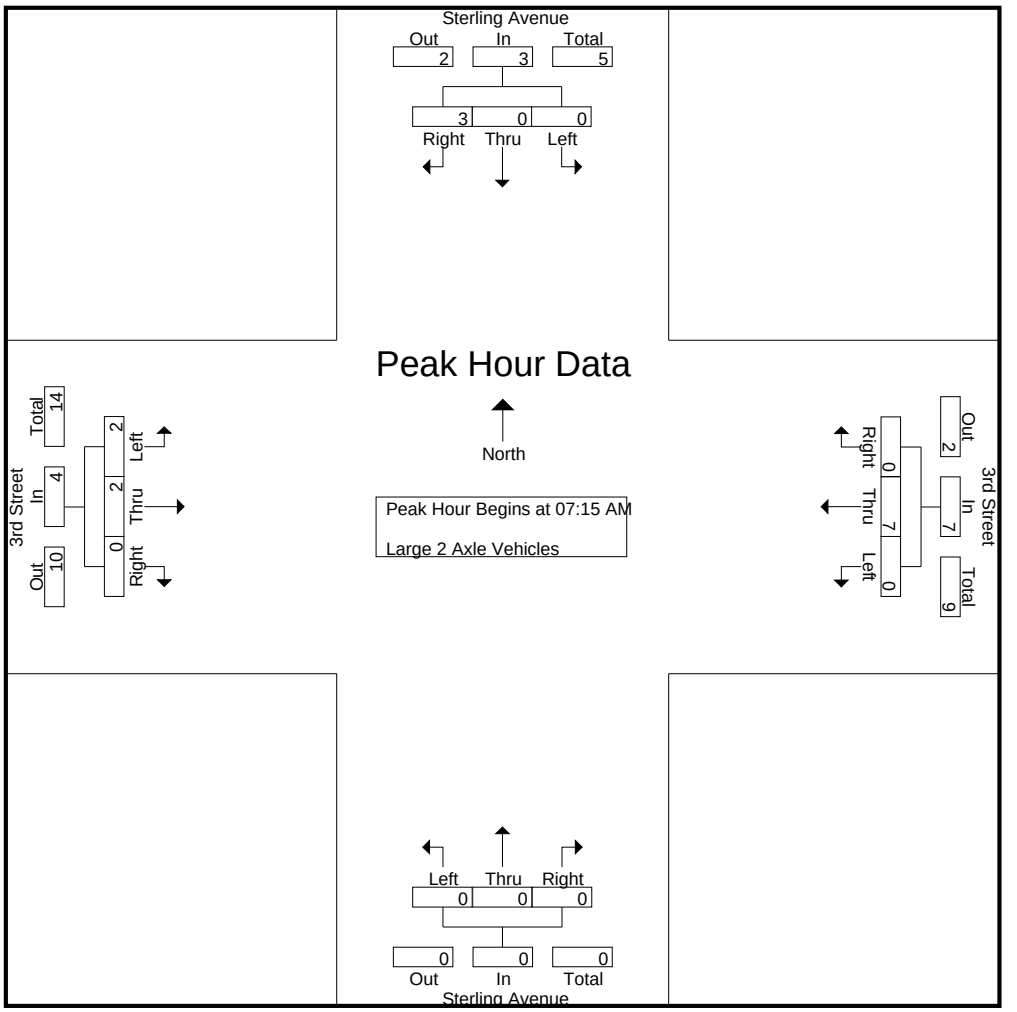
E/W: 3rd Street
Weather: Clear

File Name : 04_SBC_Sterling_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	**1**	0	0	1
+15 mins.	0	0	**1**	**1**	0	**4**	0	**4**	0	0	0	0	1	**1**	0	**2**
+30 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	3	3	0	7	0	7	0	0	0	0	2	2	0	4
% App. Total	0	0	100		0	100	0		0	0	0		50	50	0	
PHF	.000	.000	.750	.750	.000	.438	.000	.438	.000	.000	.000	.000	.500	.500	.000	.500

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City of San Bernardino
N/S: Sterling Avenue
E/W: 3rd Street
Weather: Clear

File Name : 04_SBC_Sterling_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	1	0	0	1	0	3	0	3	0	0	0	0	0	3	0	3	7
Grand Total	1	0	0	1	0	5	0	5	0	0	0	0	0	4	0	4	10
Apprch %	100	0	0		0	100	0		0	0	0		0	100	0		
Total %	10	0	0	10	0	50	0	50	0	0	0	0	0	40	0	40	

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

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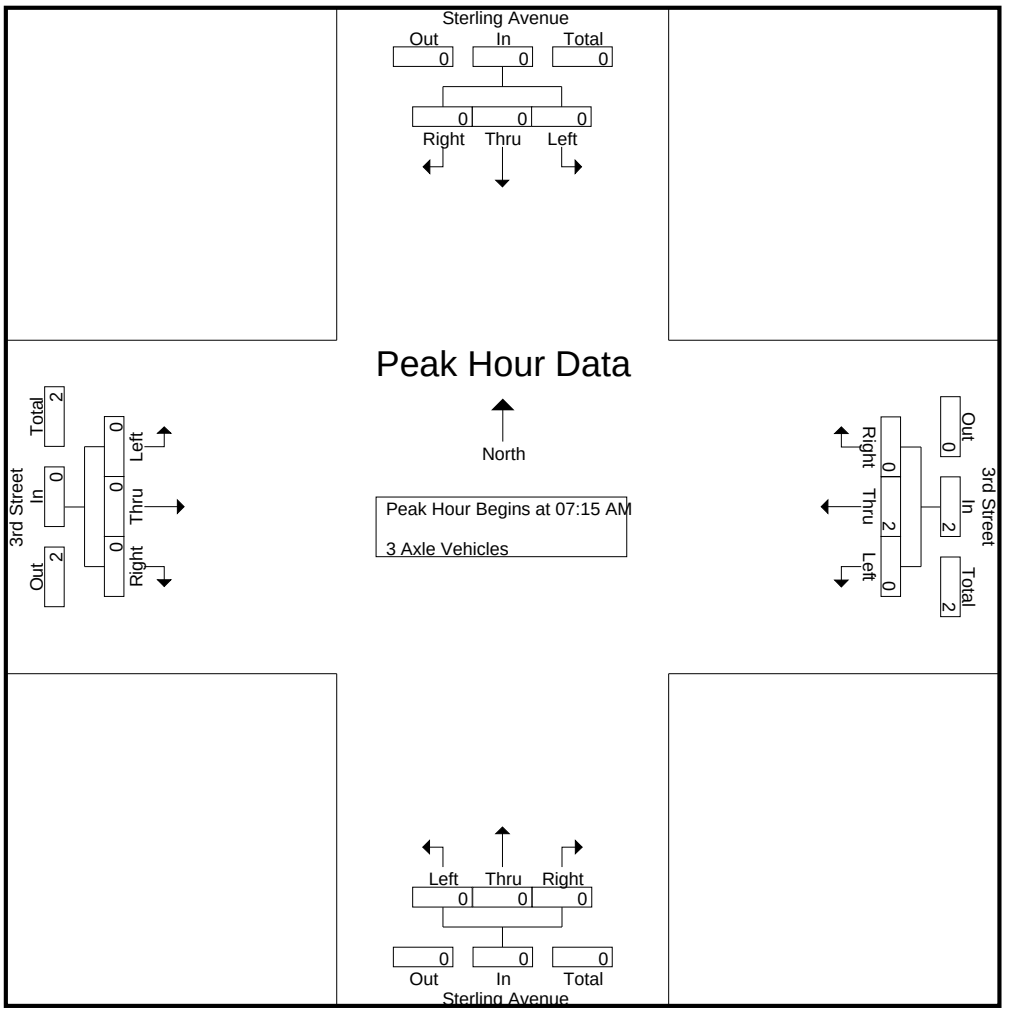
City of San Bernardino
N/S: Sterling Avenue
E/W: 3rd Street
Weather: Clear

File Name : 04_SBC_Sterling_3rd AM
Site Code : 99918352
Start Date : 5/1/2018



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000

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City of San Bernardino
N/S: Sterling Avenue
E/W: 3rd Street
Weather: Clear

File Name : 04_SBC_Sterling_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	3	1	4	0	0	0	0	0	2	0	2	6
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
Grand Total	0	0	0	0	0	7	1	8	0	0	0	0	0	5	0	5	13
Apprch %	0	0	0		0	87.5	12.5		0	0	0		0	100	0		
Total %	0	0	0	0	0	53.8	7.7	61.5	0	0	0	0	0	38.5	0	38.5	

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**2**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.250	.000	.250	.625

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City of San Bernardino
N/S: Sterling Avenue
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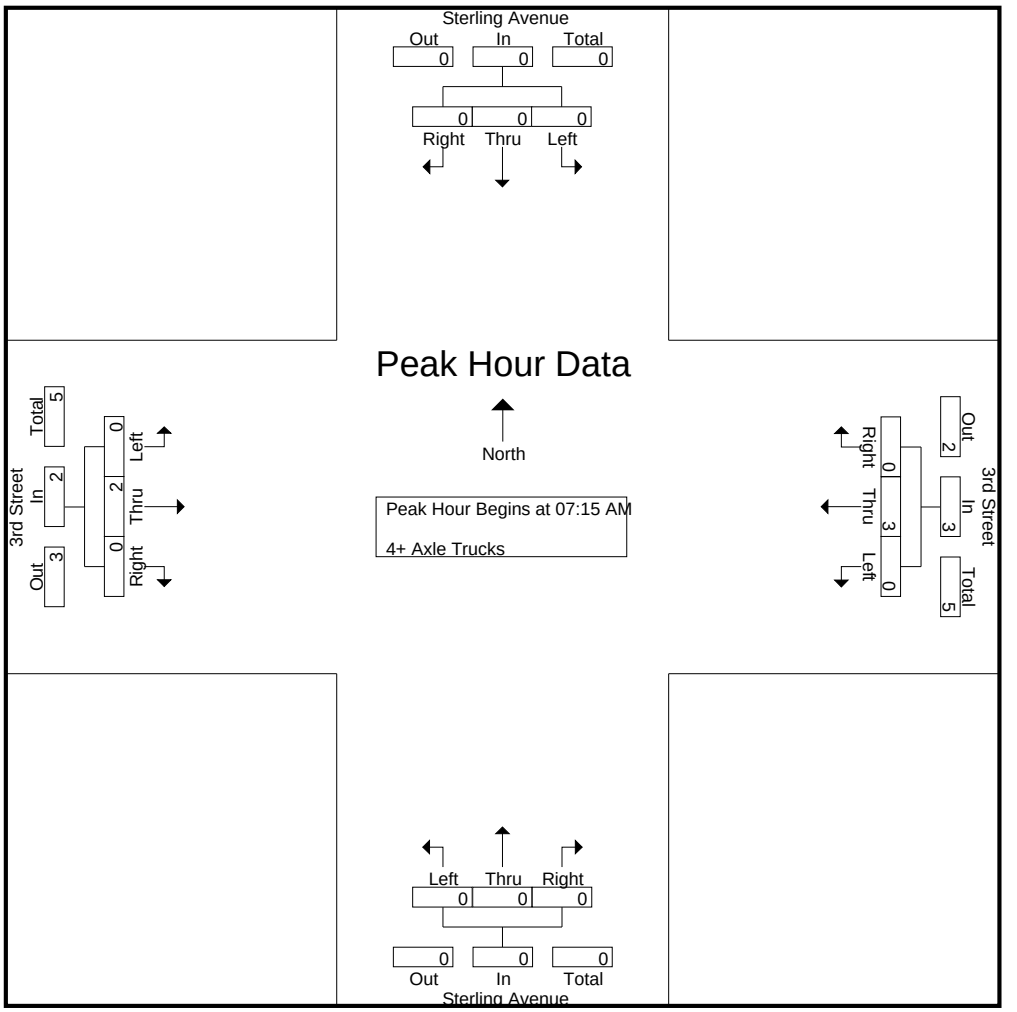

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.250	.000	.250

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City of San Bernardino
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Weather: Clear

File Name : 04_SBC_Sterling_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

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

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	16	0	39	55	0	59	10	69	0	0	0	0	63	181	0	244	368
04:15 PM	10	0	31	41	0	70	14	84	0	0	0	0	64	186	0	250	375
04:30 PM	14	0	22	36	0	66	11	77	0	0	0	0	48	270	0	318	431
04:45 PM	14	0	35	49	0	64	11	75	0	0	0	0	71	198	0	269	393
Total	54	0	127	181	0	259	46	305	0	0	0	0	246	835	0	1081	1567
05:00 PM	13	0	28	41	0	55	7	62	0	0	0	0	62	323	0	385	488
05:15 PM	18	0	27	45	0	57	9	66	0	0	0	0	85	321	0	406	517
05:30 PM	14	0	36	50	0	51	12	63	0	0	0	0	71	233	0	304	417
05:45 PM	7	0	38	45	0	52	7	59	0	0	0	0	70	178	0	248	352
Total	52	0	129	181	0	215	35	250	0	0	0	0	288	1055	0	1343	1774
Grand Total	106	0	256	362	0	474	81	555	0	0	0	0	534	1890	0	2424	3341
Apprch %	29.3	0	70.7		0	85.4	14.6		0	0	0		22	78	0		
Total %	3.2	0	7.7	10.8	0	14.2	2.4	16.6	0	0	0	0	16	56.6	0	72.6	
Passenger Vehicles	104	0	247	351	0	450	79	529	0	0	0	0	530	1864	0	2394	3274
% Passenger Vehicles	98.1	0	96.5	97	0	94.9	97.5	95.3	0	0	0	0	99.3	98.6	0	98.8	98
Large 2 Axle Vehicles	1	0	8	9	0	13	2	15	0	0	0	0	3	12	0	15	39
% Large 2 Axle Vehicles	0.9	0	3.1	2.5	0	2.7	2.5	2.7	0	0	0	0	0.6	0.6	0	0.6	1.2
3 Axle Vehicles	1	0	1	2	0	6	0	6	0	0	0	0	0	4	0	4	12
% 3 Axle Vehicles	0.9	0	0.4	0.6	0	1.3	0	1.1	0	0	0	0	0	0.2	0	0.2	0.4
4+ Axle Trucks	0	0	0	0	0	5	0	5	0	0	0	0	1	10	0	11	16
% 4+ Axle Trucks	0	0	0	0	0	1.1	0	0.9	0	0	0	0	0.2	0.5	0	0.5	0.5

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	14	0	22	36	0	**66**	**11**	**77**	0	0	0	0	48	270	0	318	431
04:45 PM	14	0	**35**	**49**	0	64	11	75	0	0	0	0	71	198	0	269	393
05:00 PM	13	0	28	41	0	55	7	62	0	0	0	0	62	**323**	0	385	488
05:15 PM	**18**	0	27	45	0	57	9	66	0	0	0	0	**85**	321	0	**406**	**517**
Total Volume	59	0	112	171	0	242	38	280	0	0	0	0	266	1112	0	1378	1829
% App. Total	34.5	0	65.5		0	86.4	13.6		0	0	0		19.3	80.7	0		
PHF	.819	.000	.800	.872	.000	.917	.864	.909	.000	.000	.000	.000	.782	.861	.000	.849	.884

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City of San Bernardino
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E/W: 3rd Street
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Site Code : 99918352
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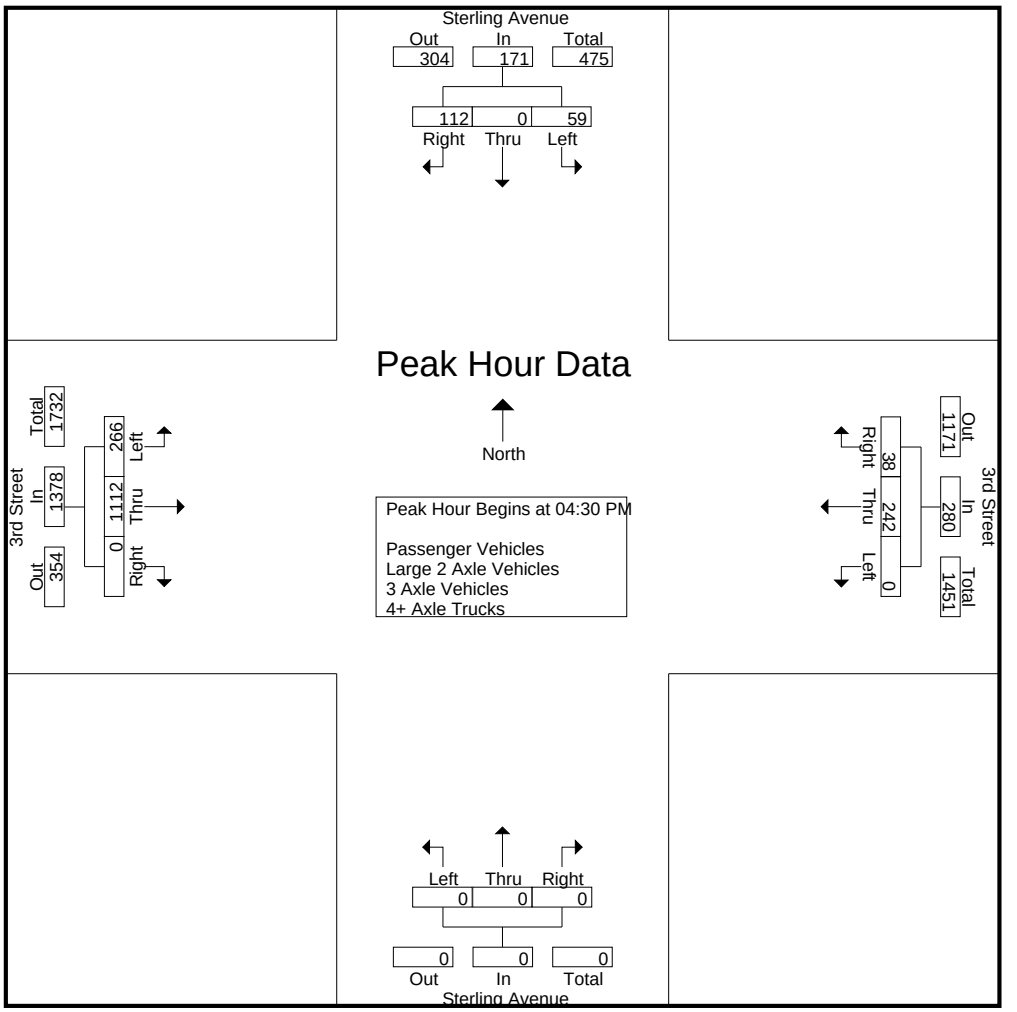

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:00 PM				04:30 PM			
+0 mins.	14	0	35	49	0	59	10	69	0	0	0	0	48	270	0	318
+15 mins.	13	0	28	41	0	**70**	**14**	**84**	0	0	0	0	71	198	0	269
+30 mins.	**18**	0	27	45	0	66	11	77	0	0	0	0	62	**323**	0	385
+45 mins.	14	0	**36**	**50**	0	64	11	75	0	0	0	0	**85**	321	0	**406**
Total Volume	59	0	126	185	0	259	46	305	0	0	0	0	266	1112	0	1378
% App. Total	31.9	0	68.1		0	84.9	15.1		0	0	0		19.3	80.7	0	
PHF	.819	.000	.875	.925	.000	.925	.821	.908	.000	.000	.000	.000	.782	.861	.000	.849

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Groups Printed- Passenger Vehicles

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	15	0	37	52	0	56	10	66	0	0	0	0	63	178	0	241	359
04:15 PM	10	0	30	40	0	65	14	79	0	0	0	0	63	179	0	242	361
04:30 PM	14	0	21	35	0	62	10	72	0	0	0	0	47	268	0	315	422
04:45 PM	14	0	32	46	0	58	11	69	0	0	0	0	71	197	0	268	383
Total	53	0	120	173	0	241	45	286	0	0	0	0	244	822	0	1066	1525
05:00 PM	13	0	27	40	0	52	7	59	0	0	0	0	61	319	0	380	479
05:15 PM	18	0	27	45	0	55	8	63	0	0	0	0	85	318	0	403	511
05:30 PM	13	0	35	48	0	51	12	63	0	0	0	0	70	230	0	300	411
05:45 PM	7	0	38	45	0	51	7	58	0	0	0	0	70	175	0	245	348
Total	51	0	127	178	0	209	34	243	0	0	0	0	286	1042	0	1328	1749
Grand Total	104	0	247	351	0	450	79	529	0	0	0	0	530	1864	0	2394	3274
Apprch %	29.6	0	70.4		0	85.1	14.9		0	0	0		22.1	77.9	0		
Total %	3.2	0	7.5	10.7	0	13.7	2.4	16.2	0	0	0	0	16.2	56.9	0	73.1	

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	14	0	21	35	0	**62**	10	**72**	0	0	0	0	47	268	0	315	422
04:45 PM	14	0	**32**	**46**	0	58	**11**	69	0	0	0	0	71	197	0	268	383
05:00 PM	13	0	27	40	0	52	7	59	0	0	0	0	61	**319**	0	380	479
05:15 PM	**18**	0	27	45	0	55	8	63	0	0	0	0	**85**	318	0	**403**	**511**
Total Volume	59	0	107	166	0	227	36	263	0	0	0	0	264	1102	0	1366	1795
% App. Total	35.5	0	64.5		0	86.3	13.7		0	0	0		19.3	80.7	0		
PHF	.819	.000	.836	.902	.000	.915	.818	.913	.000	.000	.000	.000	.776	.864	.000	.847	.878

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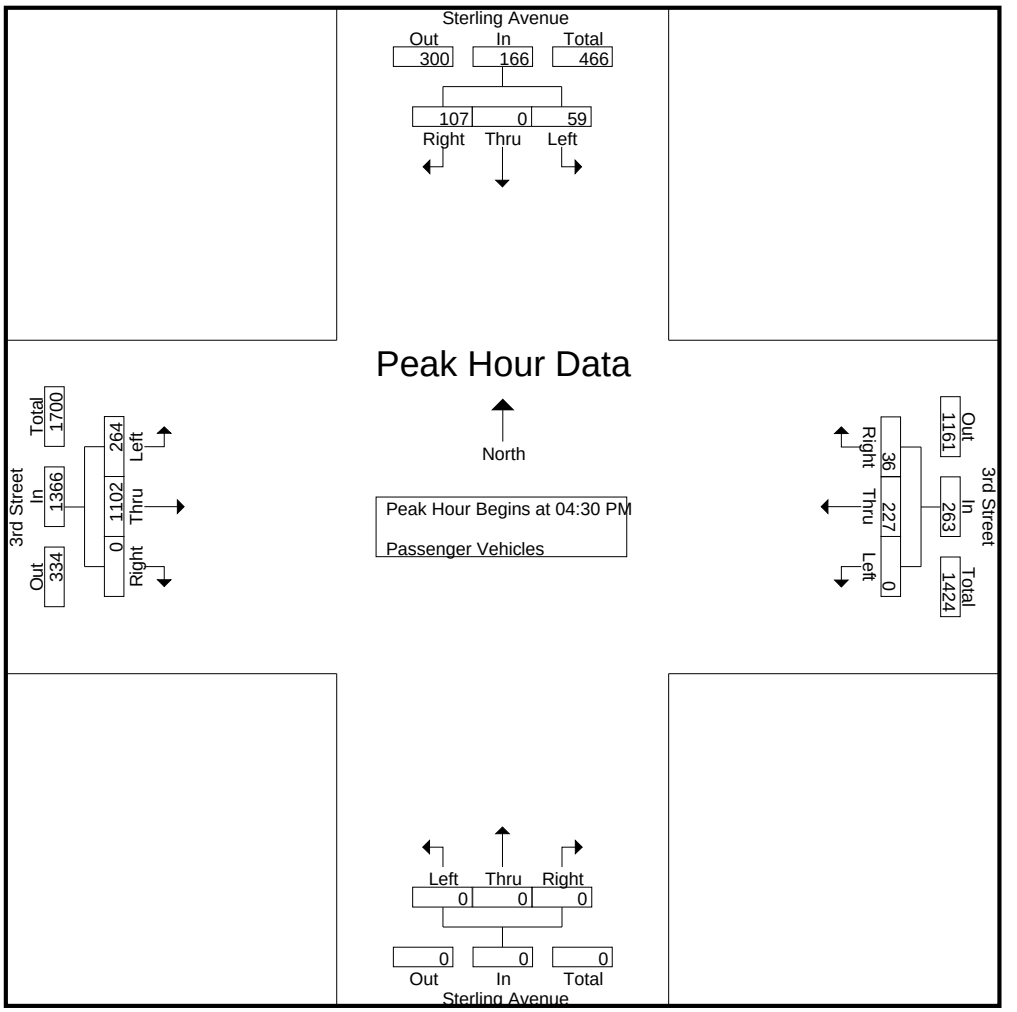

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	14	0	21	35	0	**62**	10	**72**	0	0	0	0	47	268	0	315
+15 mins.	14	0	**32**	**46**	0	58	**11**	69	0	0	0	0	71	197	0	268
+30 mins.	13	0	27	40	0	52	7	59	0	0	0	0	61	**319**	0	380
+45 mins.	**18**	0	27	45	0	55	8	63	0	0	0	0	**85**	318	0	**403**
Total Volume	59	0	107	166	0	227	36	263	0	0	0	0	264	1102	0	1366
% App. Total	35.5	0	64.5		0	86.3	13.7		0	0	0		19.3	80.7	0	
PHF	.819	.000	.836	.902	.000	.915	.818	.913	.000	.000	.000	.000	.776	.864	.000	.847

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Start Date : 5/1/2018
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Groups Printed- Large 2 Axle Vehicles

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	2	2	0	2	0	2	0	0	0	0	0	2	0	2	6
04:15 PM	0	0	1	1	0	3	0	3	0	0	0	0	1	3	0	4	8
04:30 PM	0	0	1	1	0	3	1	4	0	0	0	0	1	0	0	1	6
04:45 PM	0	0	2	2	0	4	0	4	0	0	0	0	0	0	0	0	6
Total	0	0	6	6	0	12	1	13	0	0	0	0	2	5	0	7	26
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	2	0	3	4
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
05:30 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	2	0	2	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	1	0	2	3	0	1	1	2	0	0	0	0	1	7	0	8	13
Grand Total	1	0	8	9	0	13	2	15	0	0	0	0	3	12	0	15	39
Apprch %	11.1	0	88.9		0	86.7	13.3		0	0	0		20	80	0		
Total %	2.6	0	20.5	23.1	0	33.3	5.1	38.5	0	0	0	0	7.7	30.8	0	38.5	

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	1	1	0	3	**1**	**4**	0	0	0	0	**1**	0	0	1	**6**
04:45 PM	0	0	**2**	**2**	0	**4**	0	4	0	0	0	0	0	0	0	0	6
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	**2**	0	**3**	4
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
Total Volume	0	0	4	4	0	8	2	10	0	0	0	0	2	4	0	6	20
% App. Total	0	0	100		0	80	20		0	0	0		33.3	66.7	0		
PHF	.000	.000	.500	.500	.000	.500	.500	.625	.000	.000	.000	.000	.500	.500	.000	.500	.833

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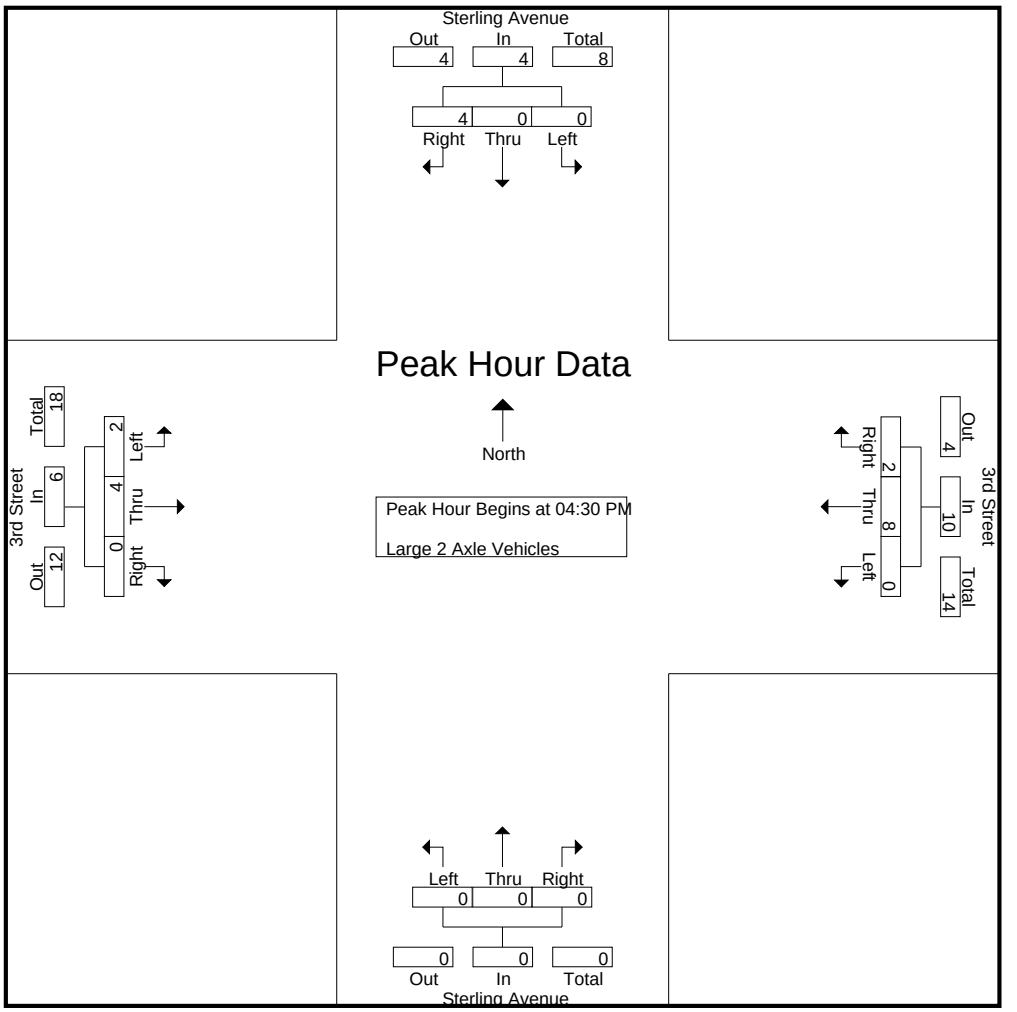

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	1	1	0	3	**1**	**4**	0	0	0	0	**1**	0	0	1
+15 mins.	0	0	**2**	**2**	0	**4**	0	4	0	0	0	0	0	0	0	0
+30 mins.	0	0	1	1	0	0	0	0	0	0	0	0	1	**2**	0	**3**
+45 mins.	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2
Total Volume	0	0	4	4	0	8	2	10	0	0	0	0	2	4	0	6
% App. Total	0	0	100		0	80	20		0	0	0		33.3	66.7	0	
PHF	.000	.000	.500	.500	.000	.500	.500	.625	.000	.000	.000	.000	.500	.500	.000	.500

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Weather: Clear

File Name : 04_SBC_Sterling_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- 3 Axle Vehicles

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	1	0	1	2	0	2	0	2	0	0	0	0	0	3	0	3	7
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
Grand Total	1	0	1	2	0	6	0	6	0	0	0	0	0	4	0	4	12
Apprch %	50	0	50		0	100	0		0	0	0		0	100	0		
Total %	8.3	0	8.3	16.7	0	50	0	50	0	0	0	0	0	33.3	0	33.3	

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	**1**	**1**	0	1	0	1	0	0	0	0	0	**1**	0	**1**	**3**
05:00 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	0	4	0	4	0	0	0	0	0	1	0	1	6
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.500

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City of San Bernardino
N/S: Sterling Avenue
E/W: 3rd Street
Weather: Clear

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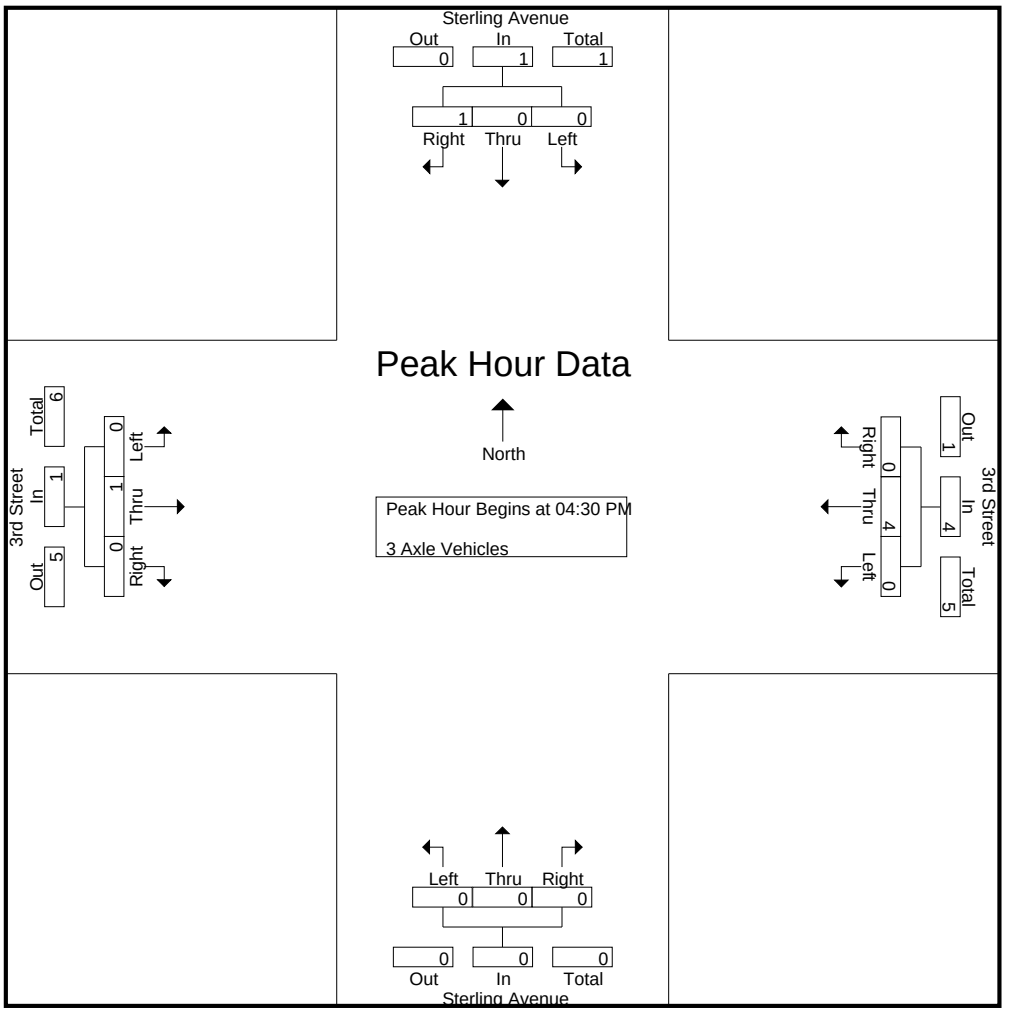

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	**1**	**1**	0	1	0	1	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	4	0	4	0	0	0	0	0	1	0	1
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250

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Groups Printed- 4+ Axle Trucks

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	1	5	0	6	7
Grand Total	0	0	0	0	0	5	0	5	0	0	0	0	1	10	0	11	16
Apprch %	0	0	0		0	100	0		0	0	0		9.1	90.9	0		
Total %	0	0	0	0	0	31.2	0	31.2	0	0	0	0	6.2	62.5	0	68.8	

	Sterling Avenue Southbound				3rd Street Westbound				Sterling Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	**3**
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5	8
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.625	.000	.625	.667

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Weather: Clear

File Name : 04_SBC_Sterling_3rd PM
Site Code : 99918352
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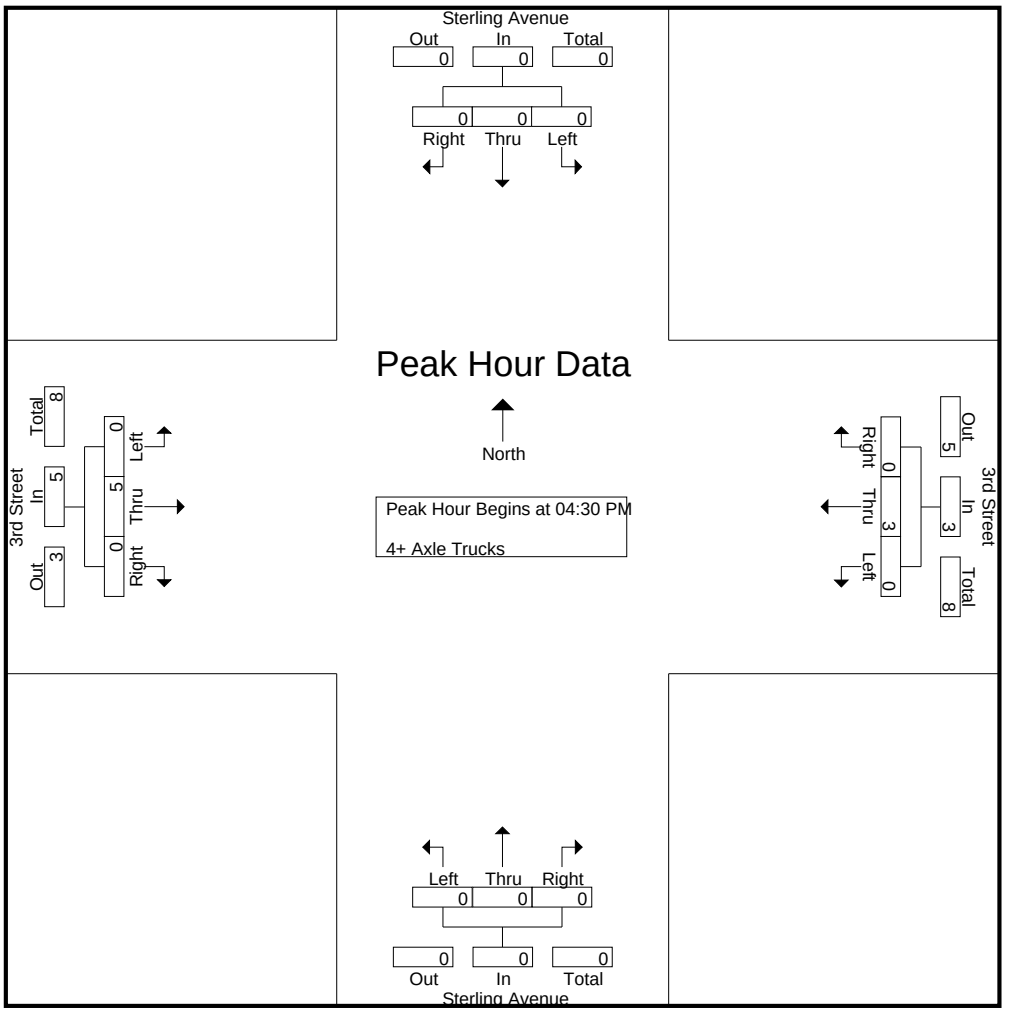

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of San Bernardino
N/S: Victoria Avenue
E/W: 3rd Street
Weather: Clear

File Name : 01_SBC_Victoria_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	8	74	92	6	70	2	78	2	3	8	13	16	36	3	55	238
07:15 AM	11	6	108	125	2	96	3	101	1	4	2	7	18	28	1	47	280
07:30 AM	15	6	121	142	6	75	0	81	2	2	1	5	20	40	3	63	291
07:45 AM	17	7	130	154	4	92	4	100	1	1	1	3	14	46	5	65	322
Total	53	27	433	513	18	333	9	360	6	10	12	28	68	150	12	230	1131
08:00 AM	12	10	87	109	3	59	4	66	2	1	5	8	28	40	13	81	264
08:15 AM	15	6	53	74	3	53	5	61	0	1	3	4	20	34	2	56	195
08:30 AM	15	4	44	63	7	47	6	60	1	2	7	10	19	32	3	54	187
08:45 AM	15	5	34	54	4	41	3	48	2	5	4	11	18	53	6	77	190
Total	57	25	218	300	17	200	18	235	5	9	19	33	85	159	24	268	836
Grand Total	110	52	651	813	35	533	27	595	11	19	31	61	153	309	36	498	1967
Apprch %	13.5	6.4	80.1		5.9	89.6	4.5		18	31.1	50.8		30.7	62	7.2		
Total %	5.6	2.6	33.1	41.3	1.8	27.1	1.4	30.2	0.6	1	1.6	3.1	7.8	15.7	1.8	25.3	
Passenger Vehicles	109	49	643	801	26	512	26	564	4	14	12	30	148	299	32	479	1874
% Passenger Vehicles	99.1	94.2	98.8	98.5	74.3	96.1	96.3	94.8	36.4	73.7	38.7	49.2	96.7	96.8	88.9	96.2	95.3
Large 2 Axle Vehicles	0	1	7	8	0	13	0	13	2	1	1	4	5	4	1	10	35
% Large 2 Axle Vehicles	0	1.9	1.1	1	0	2.4	0	2.2	18.2	5.3	3.2	6.6	3.3	1.3	2.8	2	1.8
3 Axle Vehicles	0	0	0	0	3	5	1	9	1	2	11	14	0	3	1	4	27
% 3 Axle Vehicles	0	0	0	0	8.6	0.9	3.7	1.5	9.1	10.5	35.5	23	0	1	2.8	0.8	1.4
4+ Axle Trucks	1	2	1	4	6	3	0	9	4	2	7	13	0	3	2	5	31
% 4+ Axle Trucks	0.9	3.8	0.2	0.5	17.1	0.6	0	1.5	36.4	10.5	22.6	21.3	0	1	5.6	1	1.6

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	11	6	108	125	2	**96**	3	**101**	1	**4**	2	7	18	28	1	47	280
07:30 AM	15	6	121	142	**6**	75	0	81	**2**	2	1	5	20	40	3	63	291
07:45 AM	**17**	7	**130**	**154**	4	92	**4**	100	1	1	1	3	14	**46**	5	65	**322**
08:00 AM	12	**10**	87	109	3	59	4	66	2	1	**5**	**8**	**28**	40	**13**	**81**	264
Total Volume	55	29	446	530	15	322	11	348	6	8	9	23	80	154	22	256	1157
% App. Total	10.4	5.5	84.2		4.3	92.5	3.2		26.1	34.8	39.1		31.2	60.2	8.6		
PHF	.809	.725	.858	.860	.625	.839	.688	.861	.750	.500	.450	.719	.714	.837	.423	.790	.898

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City of San Bernardino
N/S: Victoria Avenue
E/W: 3rd Street
Weather: Clear

File Name : 01_SBC_Victoria_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
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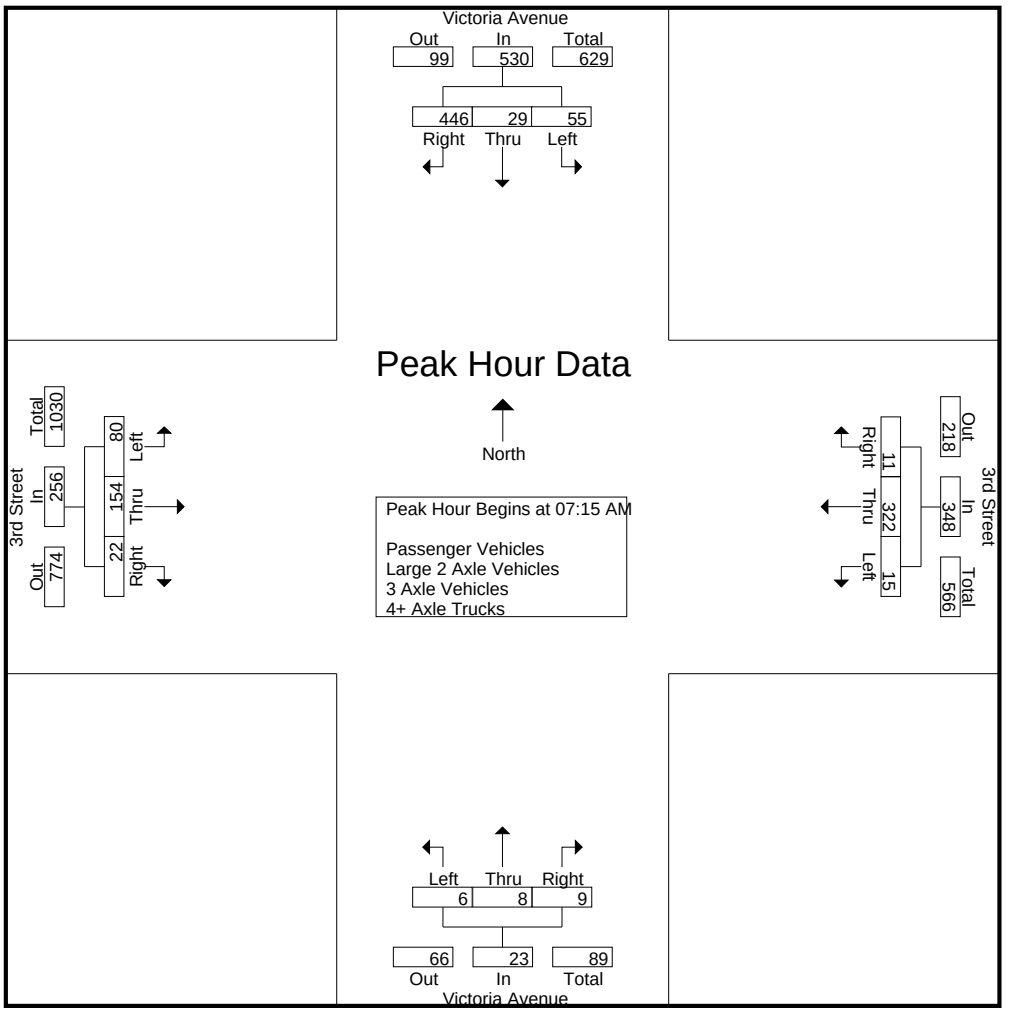

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				08:00 AM				08:00 AM			
+0 mins.	11	6	108	125	**6**	70	2	78	**2**	1	5	8	**28**	40	**13**	**81**
+15 mins.	15	6	121	142	2	**96**	3	**101**	0	1	3	4	20	34	2	56
+30 mins.	**17**	7	**130**	**154**	6	75	0	81	1	2	**7**	10	19	32	3	54
+45 mins.	12	**10**	87	109	4	92	**4**	100	2	**5**	4	**11**	18	**53**	6	77
Total Volume	55	29	446	530	18	333	9	360	5	9	19	33	85	159	24	268
% App. Total	10.4	5.5	84.2		5	92.5	2.5		15.2	27.3	57.6		31.7	59.3	9	
PHF	.809	.725	.858	.860	.750	.867	.563	.891	.625	.450	.679	.750	.759	.750	.462	.827

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File Name : 01_SBC_Victoria_3rd AM
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Start Date : 5/1/2018
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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	9	8	73	90	4	68	2	74	0	1	2	3	16	34	3	53	220
07:15 AM	11	6	108	125	2	93	2	97	0	4	0	4	18	28	1	47	273
07:30 AM	15	6	117	138	4	75	0	79	1	1	0	2	20	39	2	61	280
07:45 AM	17	7	130	154	3	90	4	97	1	1	1	3	12	46	5	63	317
Total	52	27	428	507	13	326	8	347	2	7	3	12	66	147	11	224	1090
08:00 AM	12	9	86	107	2	59	4	65	1	1	0	2	28	40	13	81	255
08:15 AM	15	6	52	73	1	52	5	58	0	1	0	1	18	33	2	53	185
08:30 AM	15	3	43	61	7	43	6	56	1	2	6	9	19	30	0	49	175
08:45 AM	15	4	34	53	3	32	3	38	0	3	3	6	17	49	6	72	169
Total	57	22	215	294	13	186	18	217	2	7	9	18	82	152	21	255	784
Grand Total	109	49	643	801	26	512	26	564	4	14	12	30	148	299	32	479	1874
Apprch %	13.6	6.1	80.3		4.6	90.8	4.6		13.3	46.7	40		30.9	62.4	6.7		
Total %	5.8	2.6	34.3	42.7	1.4	27.3	1.4	30.1	0.2	0.7	0.6	1.6	7.9	16	1.7	25.6	

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	11	6	108	125	2	**93**	2	**97**	0	**4**	0	**4**	18	28	1	47	273
07:30 AM	15	6	117	138	**4**	75	0	79	**1**	1	0	2	20	39	2	61	280
07:45 AM	**17**	7	**130**	**154**	3	90	**4**	97	1	1	**1**	3	12	**46**	5	63	**317**
08:00 AM	12	**9**	86	107	2	59	4	65	1	1	0	2	**28**	40	**13**	**81**	255
Total Volume	55	28	441	524	11	317	10	338	3	7	1	11	78	153	21	252	1125
% App. Total	10.5	5.3	84.2		3.3	93.8	3		27.3	63.6	9.1		31	60.7	8.3		
PHF	.809	.778	.848	.851	.688	.852	.625	.871	.750	.438	.250	.688	.696	.832	.404	.778	.887

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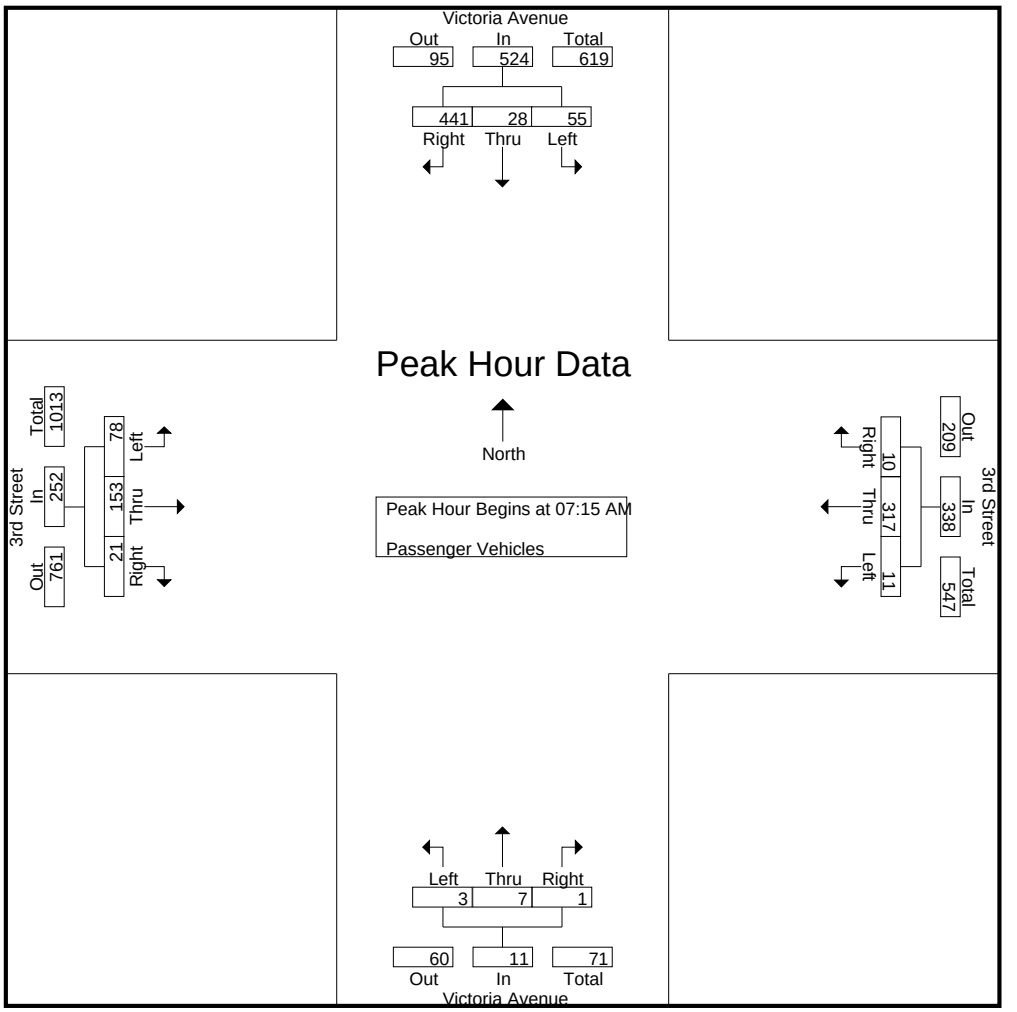

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	11	6	108	125	2	**93**	2	**97**	0	**4**	0	**4**	18	28	1	47
+15 mins.	15	6	117	138	**4**	75	0	79	**1**	1	0	2	20	39	2	61
+30 mins.	**17**	7	**130**	**154**	3	90	**4**	97	1	1	**1**	3	12	**46**	5	63
+45 mins.	12	**9**	86	107	2	59	4	65	1	1	0	2	**28**	40	**13**	**81**
Total Volume	55	28	441	524	11	317	10	338	3	7	1	11	78	153	21	252
% App. Total	10.5	5.3	84.2		3.3	93.8	3		27.3	63.6	9.1		31	60.7	8.3	
PHF	.809	.778	.848	.851	.688	.852	.625	.871	.750	.438	.250	.688	.696	.832	.404	.778

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Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	0	1	0	1	1	1	0	2	0	2	0	2	6
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	2	0	0	2	4
Total	0	0	5	5	0	5	0	5	1	1	0	2	2	2	0	4	16
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	1	1	0	0	0	0	0	0	1	1	2	1	0	3	5
08:30 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	1	1	2	5
08:45 AM	0	0	0	0	0	6	0	6	1	0	0	1	1	0	0	1	8
Total	0	1	2	3	0	8	0	8	1	0	1	2	3	2	1	6	19
Grand Total	0	1	7	8	0	13	0	13	2	1	1	4	5	4	1	10	35
Apprch %	0	12.5	87.5		0	100	0		50	25	25		50	40	10		
Total %	0	2.9	20	22.9	0	37.1	0	37.1	5.7	2.9	2.9	11.4	14.3	11.4	2.9	28.6	

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	**4**	**4**	0	0	0	0	0	0	0	0	0	0	0	0	**4**
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	**2**	0	0	**2**	4
08:00 AM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	4	5	0	4	0	4	0	0	0	0	2	0	0	2	11
% App. Total	0	20	80		0	100	0		0	0	0		100	0	0		
PHF	.000	.250	.250	.313	.000	.500	.000	.500	.000	.000	.000	.000	.250	.000	.000	.250	.688

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City of San Bernardino
N/S: Victoria Avenue
E/W: 3rd Street
Weather: Clear

File Name : 01_SBC_Victoria_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
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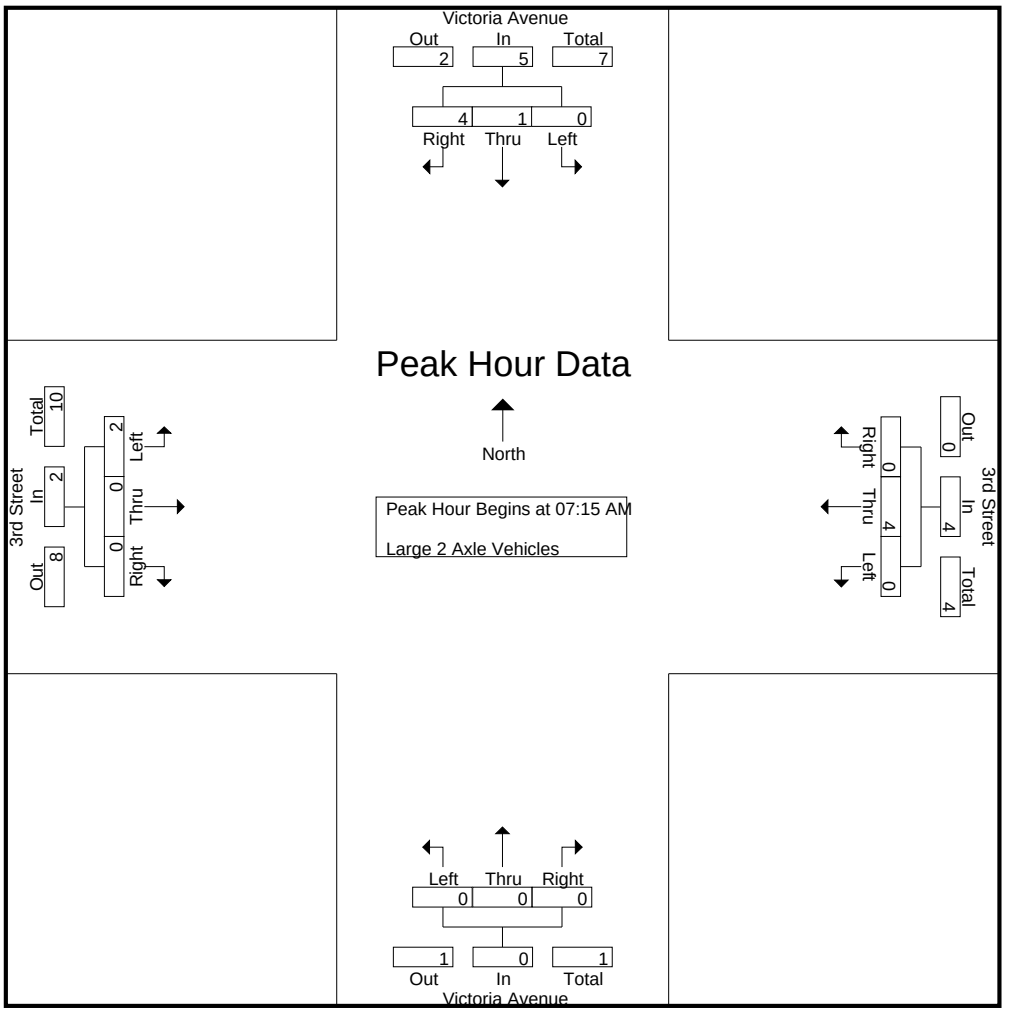

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	2	0	0	2	0	1	3	4	0	0	0	0	6
07:15 AM	0	0	0	0	0	1	1	2	0	0	1	1	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	2
07:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	3	1	1	5	1	1	5	7	0	0	0	0	12
08:00 AM	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	4
08:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
08:30 AM	0	0	0	0	0	2	0	2	0	0	1	1	0	1	1	2	5
08:45 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	2	0	2	4
Total	0	0	0	0	0	4	0	4	0	1	6	7	0	3	1	4	15
Grand Total	0	0	0	0	3	5	1	9	1	2	11	14	0	3	1	4	27
Apprch %	0	0	0		33.3	55.6	11.1		7.1	14.3	78.6		0	75	25		
Total %	0	0	0	0	11.1	18.5	3.7	33.3	3.7	7.4	40.7	51.9	0	11.1	3.7	14.8	

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**1**	**1**	**2**	0	0	1	1	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	**1**	0	1	2	0	0	0	0	2
07:45 AM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	**4**	**4**	0	0	0	0	**4**
Total Volume	0	0	0	0	1	1	1	3	1	0	6	7	0	0	0	0	10
% App. Total	0	0	0		33.3	33.3	33.3		14.3	0	85.7		0	0	0		
PHF	.000	.000	.000	.000	.250	.250	.250	.375	.250	.000	.375	.438	.000	.000	.000	.000	.625

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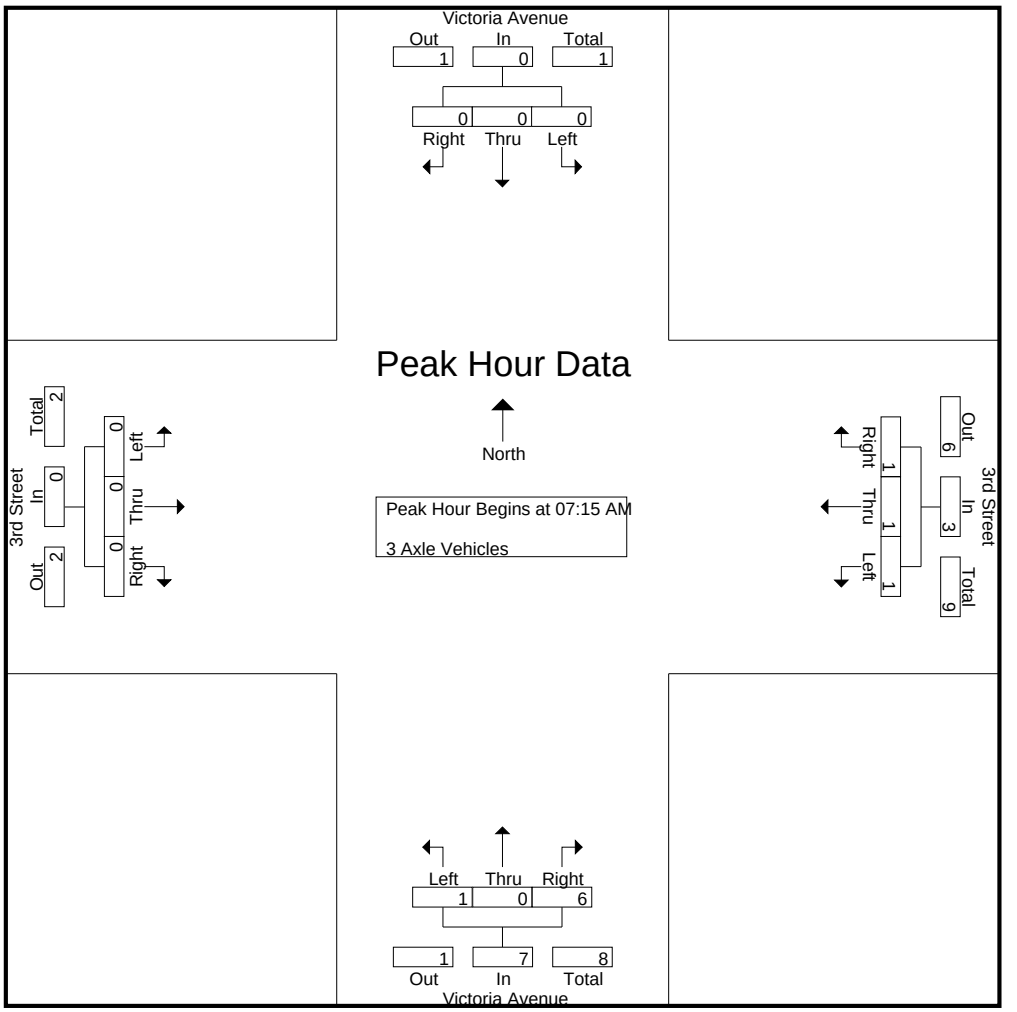

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**1**	**1**	**2**	0	0	1	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	**1**	0	1	2	0	0	0	0
+30 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	**4**	**4**	0	0	0	0
Total Volume	0	0	0	0	1	1	1	3	1	0	6	7	0	0	0	0
% App. Total	0	0	0		33.3	33.3	33.3		14.3	0	85.7		0	0	0	
PHF	.000	.000	.000	.000	.250	.250	.250	.375	.250	.000	.375	.438	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	0	1	0	1	1	0	3	4	0	0	0	0	6
07:15 AM	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	2
07:30 AM	0	0	0	0	2	0	0	2	0	1	0	1	0	1	1	2	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	2	1	0	3	2	1	4	7	0	1	1	2	13
08:00 AM	0	0	1	1	1	0	0	1	1	0	1	2	0	0	0	0	4
08:15 AM	0	0	0	0	2	0	0	2	0	0	1	1	0	0	0	0	3
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
08:45 AM	0	1	0	1	1	2	0	3	1	1	1	3	0	2	0	2	9
Total	0	2	1	3	4	2	0	6	2	1	3	6	0	2	1	3	18
Grand Total	1	2	1	4	6	3	0	9	4	2	7	13	0	3	2	5	31
Apprch %	25	50	25		66.7	33.3	0		30.8	15.4	53.8		0	60	40		
Total %	3.2	6.5	3.2	12.9	19.4	9.7	0	29	12.9	6.5	22.6	41.9	0	9.7	6.5	16.1	

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	**1**	0	**1**	**2**	0	0	0	0	2
07:30 AM	0	0	0	0	**2**	0	0	**2**	0	**1**	0	1	0	**1**	**1**	**2**	**5**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	**1**	**1**	1	0	0	1	1	0	1	2	0	0	0	0	4
Total Volume	0	0	1	1	3	0	0	3	2	1	2	5	0	1	1	2	11
% App. Total	0	0	100		100	0	0		40	20	40		0	50	50		
PHF	.000	.000	.250	.250	.375	.000	.000	.375	.500	.250	.500	.625	.000	.250	.250	.250	.550

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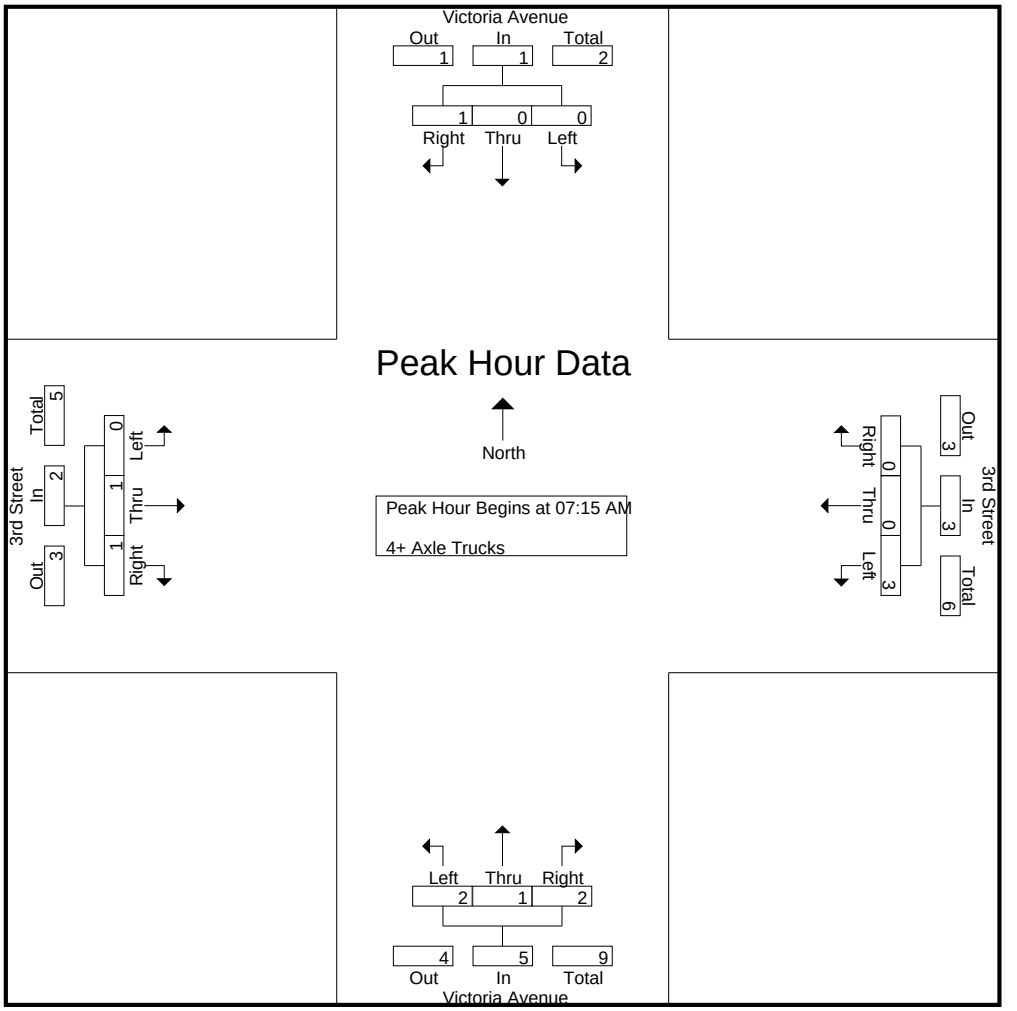

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	**1**	0	**1**	**2**	0	0	0	0
+15 mins.	0	0	0	0	**2**	0	0	**2**	0	**1**	0	1	0	**1**	**1**	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	**1**	**1**	1	0	0	1	1	0	1	2	0	0	0	0
Total Volume	0	0	1	1	3	0	0	3	2	1	2	5	0	1	1	2
% App. Total	0	0	100		100	0	0		40	20	40		0	50	50	
PHF	.000	.000	.250	.250	.375	.000	.000	.375	.500	.250	.500	.625	.000	.250	.250	.250

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File Name : 01_SBC_Victoria_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	24	1	31	56	3	40	13	56	5	2	8	15	46	142	4	192	319
04:15 PM	18	2	26	46	1	47	17	65	0	1	5	6	73	119	2	194	311
04:30 PM	12	4	34	50	2	44	4	50	5	8	5	18	69	198	0	267	385
04:45 PM	15	3	19	37	4	41	18	63	2	1	5	8	70	158	3	231	339
Total	69	10	110	189	10	172	52	234	12	12	23	47	258	617	9	884	1354
05:00 PM	10	3	21	34	5	33	5	43	5	16	14	35	84	221	0	305	417
05:15 PM	11	2	22	35	3	40	10	53	1	1	8	10	95	242	2	339	437
05:30 PM	18	0	30	48	5	33	10	48	1	5	4	10	65	181	4	250	356
05:45 PM	8	3	27	38	4	32	4	40	1	3	4	8	52	126	1	179	265
Total	47	8	100	155	17	138	29	184	8	25	30	63	296	770	7	1073	1475
Grand Total	116	18	210	344	27	310	81	418	20	37	53	110	554	1387	16	1957	2829
Apprch %	33.7	5.2	61		6.5	74.2	19.4		18.2	33.6	48.2		28.3	70.9	0.8		
Total %	4.1	0.6	7.4	12.2	1	11	2.9	14.8	0.7	1.3	1.9	3.9	19.6	49	0.6	69.2	
Passenger Vehicles	114	12	199	325	9	298	79	386	16	33	42	91	549	1372	12	1933	2735
% Passenger Vehicles	98.3	66.7	94.8	94.5	33.3	96.1	97.5	92.3	80	89.2	79.2	82.7	99.1	98.9	75	98.8	96.7
Large 2 Axle Vehicles	1	0	9	10	2	6	1	9	0	0	1	1	4	6	0	10	30
% Large 2 Axle Vehicles	0.9	0	4.3	2.9	7.4	1.9	1.2	2.2	0	0	1.9	0.9	0.7	0.4	0	0.5	1.1
3 Axle Vehicles	1	0	1	2	5	2	0	7	4	2	2	8	0	3	1	4	21
% 3 Axle Vehicles	0.9	0	0.5	0.6	18.5	0.6	0	1.7	20	5.4	3.8	7.3	0	0.2	6.2	0.2	0.7
4+ Axle Trucks	0	6	1	7	11	4	1	16	0	2	8	10	1	6	3	10	43
% 4+ Axle Trucks	0	33.3	0.5	2	40.7	1.3	1.2	3.8	0	5.4	15.1	9.1	0.2	0.4	18.8	0.5	1.5

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	12	**4**	**34**	**50**	2	**44**	4	50	**5**	8	5	18	69	198	0	267	385
04:45 PM	**15**	3	19	37	4	41	**18**	**63**	2	1	5	8	70	158	**3**	231	339
05:00 PM	10	3	21	34	**5**	33	5	43	5	**16**	**14**	**35**	84	221	0	305	417
05:15 PM	11	2	22	35	3	40	10	53	1	1	8	10	**95**	**242**	2	**339**	**437**
Total Volume	48	12	96	156	14	158	37	209	13	26	32	71	318	819	5	1142	1578
% App. Total	30.8	7.7	61.5		6.7	75.6	17.7		18.3	36.6	45.1		27.8	71.7	0.4		
PHF	.800	.750	.706	.780	.700	.898	.514	.829	.650	.406	.571	.507	.837	.846	.417	.842	.903

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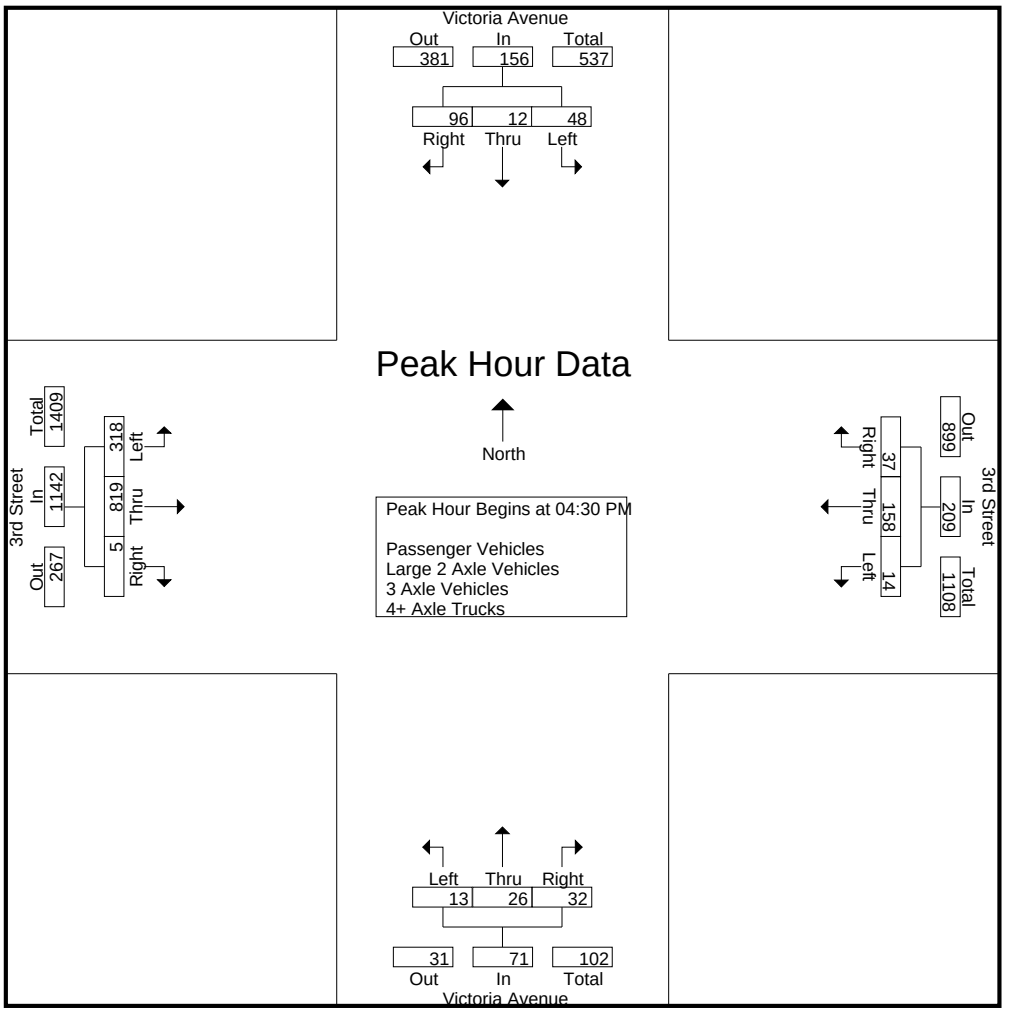

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				04:30 PM			
+0 mins.	**24**	1	31	**56**	3	40	13	56	**5**	8	5	18	69	198	0	267
+15 mins.	18	2	26	46	1	**47**	17	**65**	2	1	5	8	70	158	**3**	231
+30 mins.	12	**4**	**34**	50	2	44	4	50	5	**16**	**14**	**35**	84	221	0	305
+45 mins.	15	3	19	37	**4**	41	**18**	63	1	1	8	10	**95**	**242**	2	**339**
Total Volume	69	10	110	189	10	172	52	234	13	26	32	71	318	819	5	1142
% App. Total	36.5	5.3	58.2		4.3	73.5	22.2		18.3	36.6	45.1		27.8	71.7	0.4	
PHF	.719	.625	.809	.844	.625	.915	.722	.900	.650	.406	.571	.507	.837	.846	.417	.842

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Groups Printed- Passenger Vehicles

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	24	1	27	52	0	39	12	51	5	2	5	12	45	140	4	189	304
04:15 PM	16	2	26	44	1	44	17	62	0	0	4	4	70	117	1	188	298
04:30 PM	12	2	32	46	0	40	4	44	5	8	5	18	69	196	0	265	373
04:45 PM	15	2	17	34	1	39	17	57	1	0	4	5	70	158	2	230	326
Total	67	7	102	176	2	162	50	214	11	10	18	39	254	611	7	872	1301
05:00 PM	10	2	20	32	2	33	5	40	3	14	11	28	84	217	0	301	401
05:15 PM	11	2	20	33	1	39	10	50	1	1	7	9	95	241	2	338	430
05:30 PM	18	0	30	48	2	33	10	45	1	5	4	10	64	179	3	246	349
05:45 PM	8	1	27	36	2	31	4	37	0	3	2	5	52	124	0	176	254
Total	47	5	97	149	7	136	29	172	5	23	24	52	295	761	5	1061	1434
Grand Total	114	12	199	325	9	298	79	386	16	33	42	91	549	1372	12	1933	2735
Apprch %	35.1	3.7	61.2		2.3	77.2	20.5		17.6	36.3	46.2		28.4	71	0.6		
Total %	4.2	0.4	7.3	11.9	0.3	10.9	2.9	14.1	0.6	1.2	1.5	3.3	20.1	50.2	0.4	70.7	

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	12	**2**	**32**	**46**	0	**40**	4	44	**5**	8	5	18	69	196	0	265	373
04:45 PM	**15**	2	17	34	1	39	**17**	**57**	1	0	4	5	70	158	**2**	230	326
05:00 PM	10	2	20	32	**2**	33	5	40	3	**14**	**11**	**28**	84	217	0	301	401
05:15 PM	11	2	20	33	1	39	10	50	1	1	7	9	**95**	**241**	2	**338**	**430**
Total Volume	48	8	89	145	4	151	36	191	10	23	27	60	318	812	4	1134	1530
% App. Total	33.1	5.5	61.4		2.1	79.1	18.8		16.7	38.3	45		28	71.6	0.4		
PHF	.800	1.00	.695	.788	.500	.944	.529	.838	.500	.411	.614	.536	.837	.842	.500	.839	.890

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City of San Bernardino
N/S: Victoria Avenue
E/W: 3rd Street
Weather: Clear

File Name : 01_SBC_Victoria_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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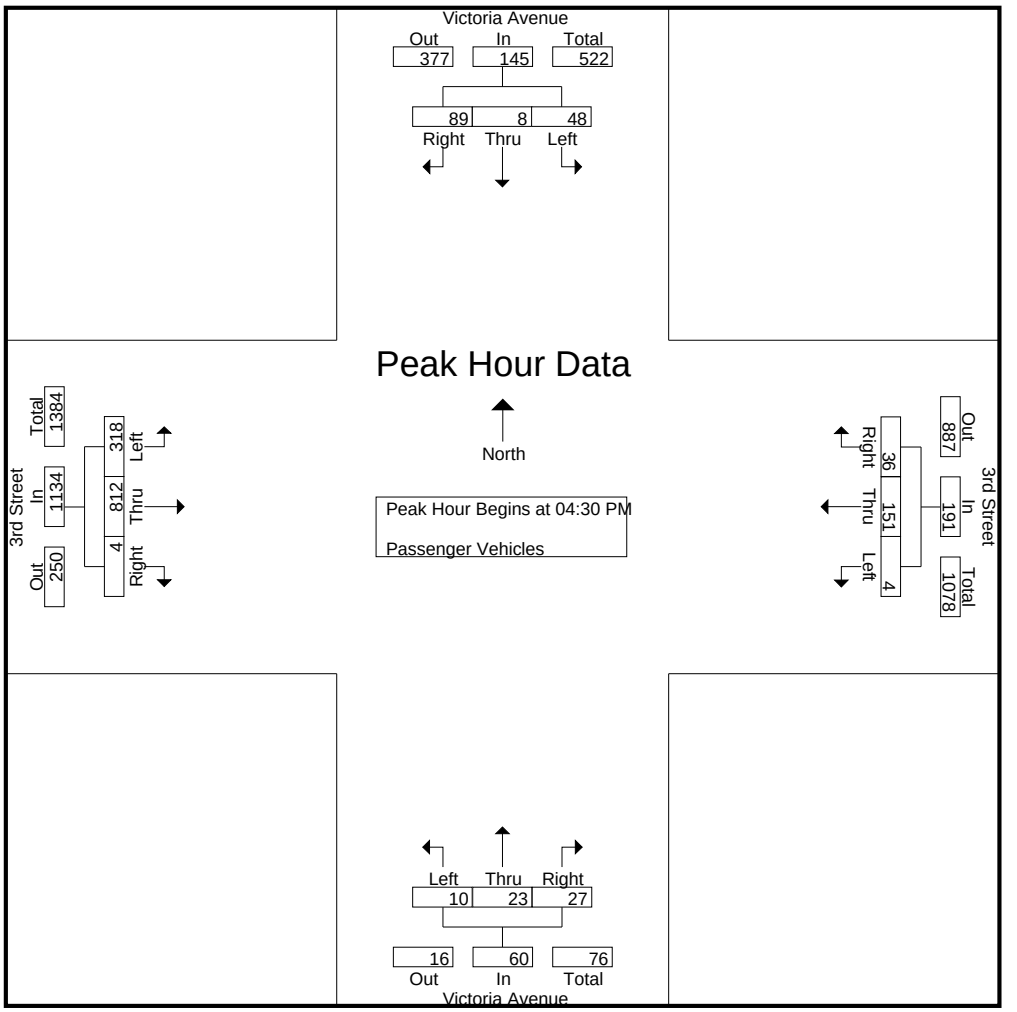

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	12	**2**	**32**	**46**	0	**40**	4	44	**5**	8	5	18	69	196	0	265
+15 mins.	**15**	2	17	34	1	39	**17**	**57**	1	0	4	5	70	158	**2**	230
+30 mins.	10	2	20	32	**2**	33	5	40	3	**14**	**11**	**28**	84	217	0	301
+45 mins.	11	2	20	33	1	39	10	50	1	1	7	9	**95**	**241**	2	**338**
Total Volume	48	8	89	145	4	151	36	191	10	23	27	60	318	812	4	1134
% App. Total	33.1	5.5	61.4		2.1	79.1	18.8		16.7	38.3	45		28	71.6	0.4	
PHF	.800	1.000	.695	.788	.500	.944	.529	.838	.500	.411	.614	.536	.837	.842	.500	.839

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

City of San Bernardino
N/S: Victoria Avenue
E/W: 3rd Street
Weather: Clear

File Name : 01_SBC_Victoria_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- Large 2 Axle Vehicles

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	4	4	0	0	0	0	0	0	0	0	1	0	0	1	5
04:15 PM	1	0	0	1	0	1	0	1	0	0	0	0	2	1	0	3	5
04:30 PM	0	0	2	2	0	3	0	3	0	0	0	0	0	0	0	0	5
04:45 PM	0	0	2	2	0	1	1	2	0	0	0	0	0	0	0	0	4
Total	1	0	8	9	0	5	1	6	0	0	0	0	3	1	0	4	19
05:00 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	2	0	2	4
05:15 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
05:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1	2	0	3	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	2	1	0	3	0	0	1	1	1	5	0	6	11
Grand Total	1	0	9	10	2	6	1	9	0	0	1	1	4	6	0	10	30
Apprch %	10	0	90		22.2	66.7	11.1		0	0	100		40	60	0		
Total %	3.3	0	30	33.3	6.7	20	3.3	30	0	0	3.3	3.3	13.3	20	0	33.3	

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**2**	**2**	0	**3**	0	**3**	0	0	0	0	0	0	0	0	**5**
04:45 PM	0	0	2	2	0	1	**1**	2	0	0	0	0	0	0	0	0	4
05:00 PM	0	0	0	0	**1**	0	0	1	0	0	**1**	**1**	0	**2**	0	**2**	4
05:15 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total Volume	0	0	5	5	1	5	1	7	0	0	1	1	0	3	0	3	16
% App. Total	0	0	100		14.3	71.4	14.3		0	0	100		0	100	0		
PHF	.000	.000	.625	.625	.250	.417	.250	.583	.000	.000	.250	.250	.000	.375	.000	.375	.800

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City of San Bernardino
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Site Code : 99918352
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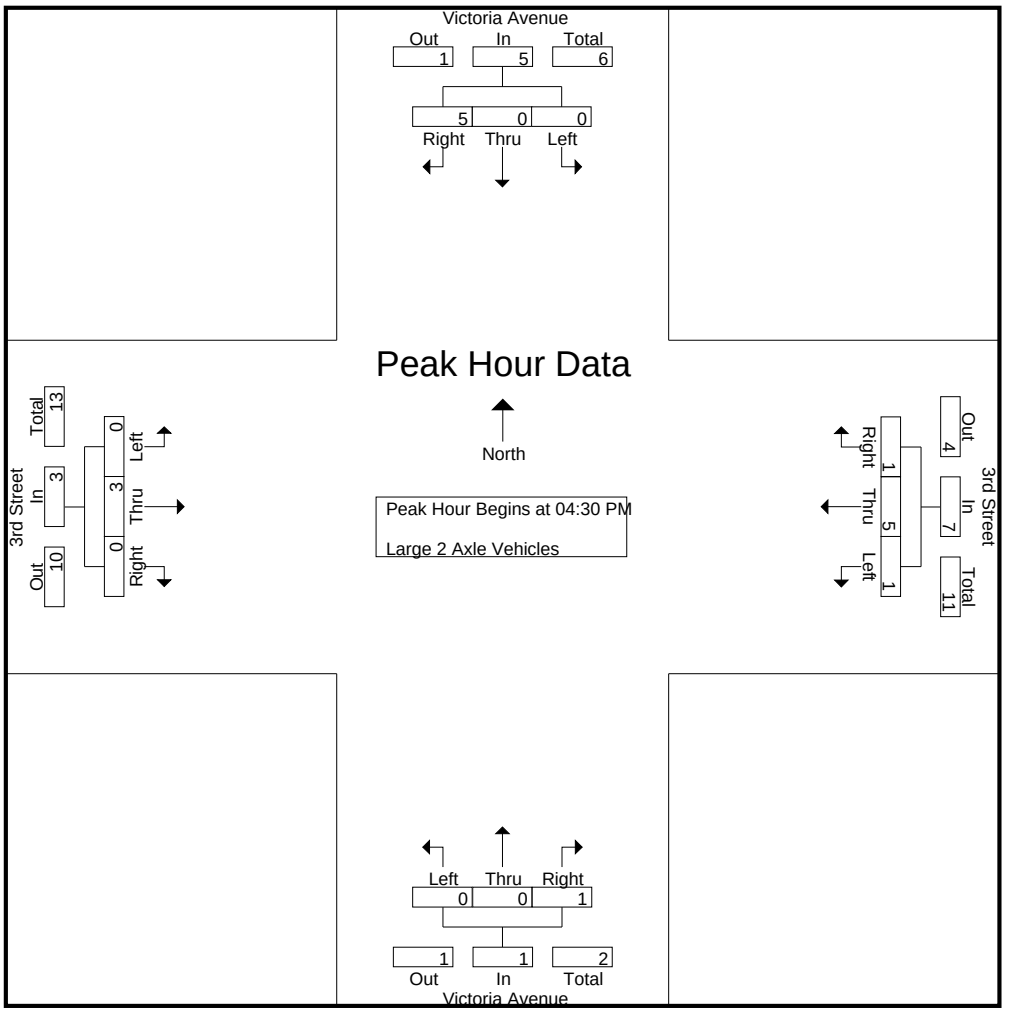

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	**2**	**2**	0	**3**	0	**3**	0	0	0	0	0	0	0	0
+15 mins.	0	0	2	2	0	1	**1**	2	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	**1**	0	0	1	0	0	**1**	**1**	0	**2**	0	**2**
+45 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	5	5	1	5	1	7	0	0	1	1	0	3	0	3
% App. Total	0	0	100		14.3	71.4	14.3		0	0	100		0	100	0	
PHF	.000	.000	.625	.625	.250	.417	.250	.583	.000	.000	.250	.250	.000	.375	.000	.375

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City of San Bernardino
N/S: Victoria Avenue
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Weather: Clear

File Name : 01_SBC_Victoria_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- 3 Axle Vehicles

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	2	1	0	3	0	0	1	1	0	2	0	2	6
04:15 PM	1	0	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
Total	1	0	0	1	2	2	0	4	1	1	1	3	0	2	1	3	11
05:00 PM	0	0	0	0	1	0	0	1	2	1	1	4	0	0	0	0	5
05:15 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
Total	0	0	1	1	3	0	0	3	3	1	1	5	0	1	0	1	10
Grand Total	1	0	1	2	5	2	0	7	4	2	2	8	0	3	1	4	21
Apprch %	50	0	50		71.4	28.6	0		50	25	25		0	75	25		
Total %	4.8	0	4.8	9.5	23.8	9.5	0	33.3	19	9.5	9.5	38.1	0	14.3	4.8	19	

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	**1**	**1**	2
05:00 PM	0	0	0	0	**1**	0	0	**1**	**2**	**1**	**1**	**4**	0	0	0	0	**5**
05:15 PM	0	0	**1**	**1**	1	0	0	1	0	0	0	0	0	0	0	0	2
Total Volume	0	0	1	1	2	0	0	2	3	1	1	5	0	0	1	1	9
% App. Total	0	0	100		100	0	0		60	20	20		0	0	100		
PHF	.000	.000	.250	.250	.500	.000	.000	.500	.375	.250	.250	.313	.000	.000	.250	.250	.450

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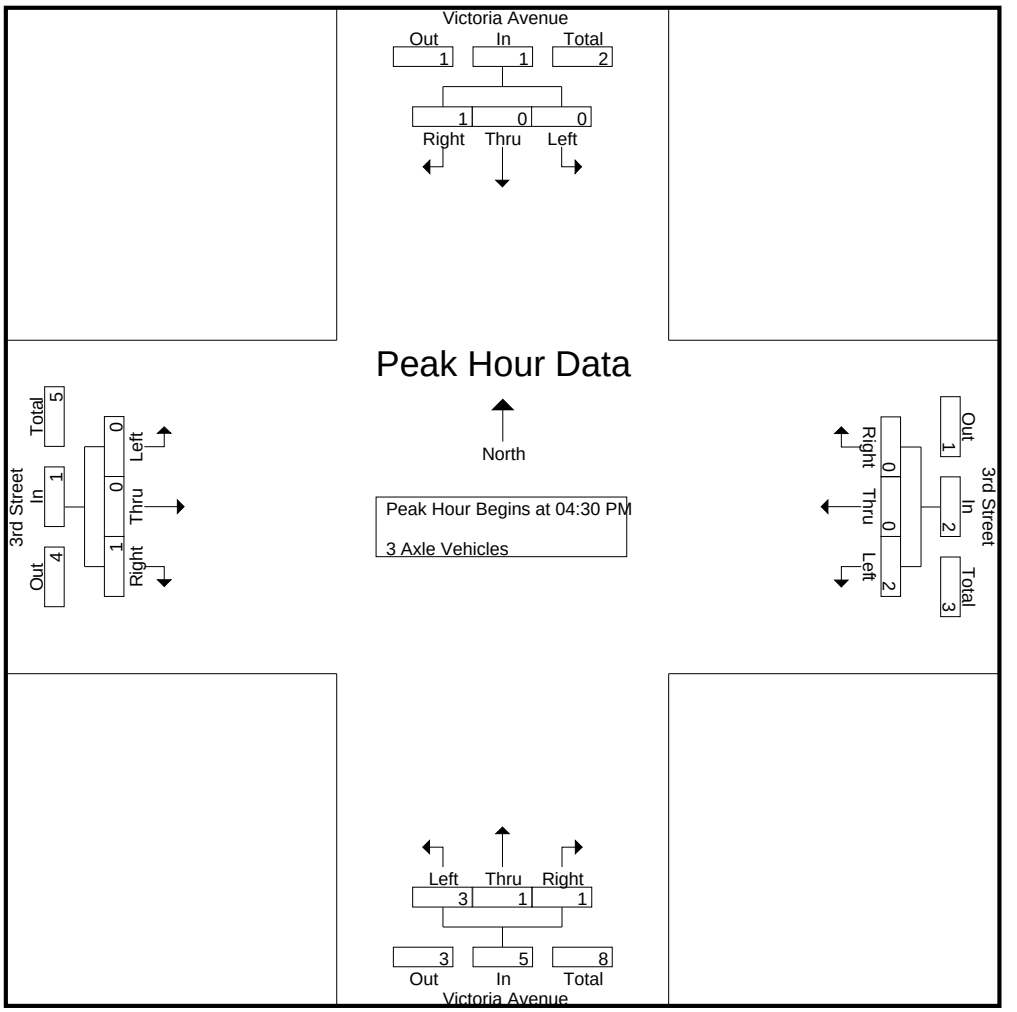

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	**1**	**1**
+30 mins.	0	0	0	0	**1**	0	0	**1**	**2**	**1**	**1**	**4**	0	0	0	0
+45 mins.	0	0	**1**	**1**	1	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	2	0	0	2	3	1	1	5	0	0	1	1
% App. Total	0	0	100		100	0	0		60	20	20		0	0	100	
PHF	.000	.000	.250	.250	.500	.000	.000	.500	.375	.250	.250	.313	.000	.000	.250	.250

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City of San Bernardino
N/S: Victoria Avenue
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File Name : 01_SBC_Victoria_3rd PM
Site Code : 99918352
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Groups Printed- 4+ Axle Trucks

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	1	0	1	2	0	0	2	2	0	0	0	0	4
04:15 PM	0	0	0	0	0	1	0	1	0	0	1	1	1	1	1	3	5
04:30 PM	0	2	0	2	2	1	0	3	0	0	0	0	0	2	0	2	7
04:45 PM	0	1	0	1	3	1	0	4	0	1	1	2	0	0	0	0	7
Total	0	3	0	3	6	3	1	10	0	1	4	5	1	3	1	5	23
05:00 PM	0	1	1	2	1	0	0	1	0	1	1	2	0	2	0	2	7
05:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
05:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	2
05:45 PM	0	2	0	2	2	1	0	3	0	0	2	2	0	1	1	2	9
Total	0	3	1	4	5	1	0	6	0	1	4	5	0	3	2	5	20
Grand Total	0	6	1	7	11	4	1	16	0	2	8	10	1	6	3	10	43
Apprch %	0	85.7	14.3		68.8	25	6.2		0	20	80		10	60	30		
Total %	0	14	2.3	16.3	25.6	9.3	2.3	37.2	0	4.7	18.6	23.3	2.3	14	7	23.3	

	Victoria Avenue Southbound				3rd Street Westbound				Victoria Avenue Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**2**	0	**2**	2	**1**	0	3	0	0	0	0	0	**2**	0	**2**	**7**
04:45 PM	0	1	0	1	**3**	1	0	**4**	0	**1**	**1**	**2**	0	0	0	0	7
05:00 PM	0	1	**1**	2	1	0	0	1	0	1	1	2	0	2	0	2	7
05:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
Total Volume	0	4	1	5	7	2	0	9	0	2	3	5	0	4	0	4	23
% App. Total	0	80	20		77.8	22.2	0		0	40	60		0	100	0		
PHF	.000	.500	.250	.625	.583	.500	.000	.563	.000	.500	.750	.625	.000	.500	.000	.500	.821

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City of San Bernardino
N/S: Victoria Avenue
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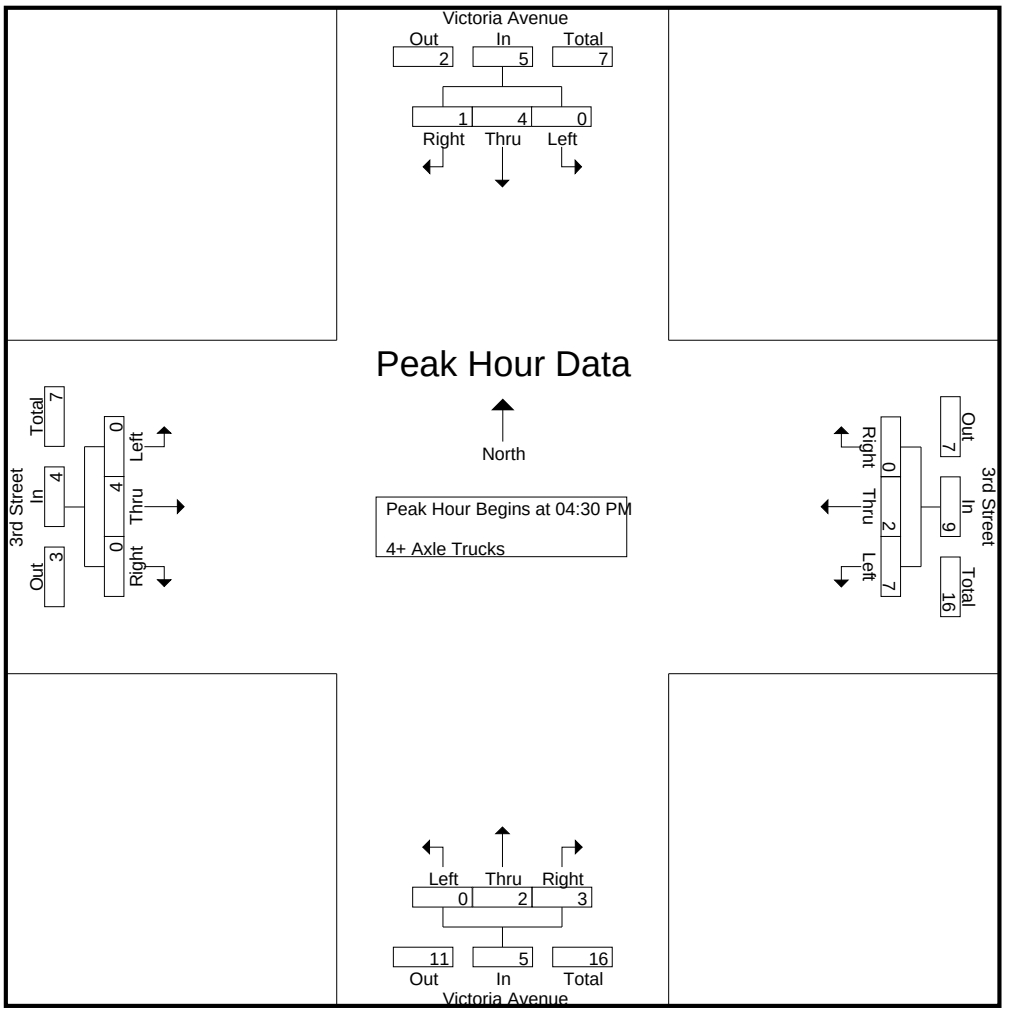

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**2**	0	**2**	2	**1**	0	3	0	0	0	0	0	**2**	0	**2**
+15 mins.	0	1	0	1	**3**	1	0	**4**	0	**1**	**1**	**2**	0	0	0	0
+30 mins.	0	1	**1**	2	1	0	0	1	0	1	1	2	0	2	0	2
+45 mins.	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0
Total Volume	0	4	1	5	7	2	0	9	0	2	3	5	0	4	0	4
% App. Total	0	80	20		77.8	22.2	0		0	40	60		0	100	0	
PHF	.000	.500	.250	.625	.583	.500	.000	.563	.000	.500	.750	.625	.000	.500	.000	.500

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

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

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	0	13	16	0	61	2	63	0	0	0	0	7	49	0	56	135
07:15 AM	7	0	23	30	0	78	0	78	0	0	0	0	4	34	0	38	146
07:30 AM	5	0	21	26	0	61	1	62	0	0	0	0	6	52	0	58	146
07:45 AM	7	0	12	19	0	88	0	88	0	0	0	0	2	60	0	62	169
Total	22	0	69	91	0	288	3	291	0	0	0	0	19	195	0	214	596
08:00 AM	3	0	16	19	0	50	0	50	0	0	0	0	7	54	0	61	130
08:15 AM	6	0	16	22	0	47	2	49	0	0	0	0	3	48	0	51	122
08:30 AM	3	0	11	14	0	48	1	49	0	0	0	0	3	43	0	46	109
08:45 AM	8	0	15	23	0	32	3	35	1	0	0	1	5	69	0	74	133
Total	20	0	58	78	0	177	6	183	1	0	0	1	18	214	0	232	494
Grand Total	42	0	127	169	0	465	9	474	1	0	0	1	37	409	0	446	1090
Apprch %	24.9	0	75.1		0	98.1	1.9		100	0	0		8.3	91.7	0		
Total %	3.9	0	11.7	15.5	0	42.7	0.8	43.5	0.1	0	0	0.1	3.4	37.5	0	40.9	
Passenger Vehicles	42	0	121	163	0	439	7	446	1	0	0	1	36	379	0	415	1025
% Passenger Vehicles	100	0	95.3	96.4	0	94.4	77.8	94.1	100	0	0	100	97.3	92.7	0	93	94
Large 2 Axle Vehicles	0	0	6	6	0	8	1	9	0	0	0	0	1	4	0	5	20
% Large 2 Axle Vehicles	0	0	4.7	3.6	0	1.7	11.1	1.9	0	0	0	0	2.7	1	0	1.1	1.8
3 Axle Vehicles	0	0	0	0	0	9	0	9	0	0	0	0	0	15	0	15	24
% 3 Axle Vehicles	0	0	0	0	0	1.9	0	1.9	0	0	0	0	0	3.7	0	3.4	2.2
4+ Axle Trucks	0	0	0	0	0	9	1	10	0	0	0	0	0	11	0	11	21
% 4+ Axle Trucks	0	0	0	0	0	1.9	11.1	2.1	0	0	0	0	0	2.7	0	2.5	1.9

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	0	13	16	0	61	**2**	63	0	0	0	0	**7**	49	0	56	135
07:15 AM	**7**	0	**23**	**30**	0	78	0	78	0	0	0	0	4	34	0	38	146
07:30 AM	5	0	21	26	0	61	1	62	0	0	0	0	6	52	0	58	146
07:45 AM	7	0	12	19	0	**88**	0	**88**	0	0	0	0	2	**60**	0	**62**	**169**
Total Volume	22	0	69	91	0	288	3	291	0	0	0	0	19	195	0	214	596
% App. Total	24.2	0	75.8		0	99	1		0	0	0		8.9	91.1	0		
PHF	.786	.000	.750	.758	.000	.818	.375	.827	.000	.000	.000	.000	.679	.813	.000	.863	.882

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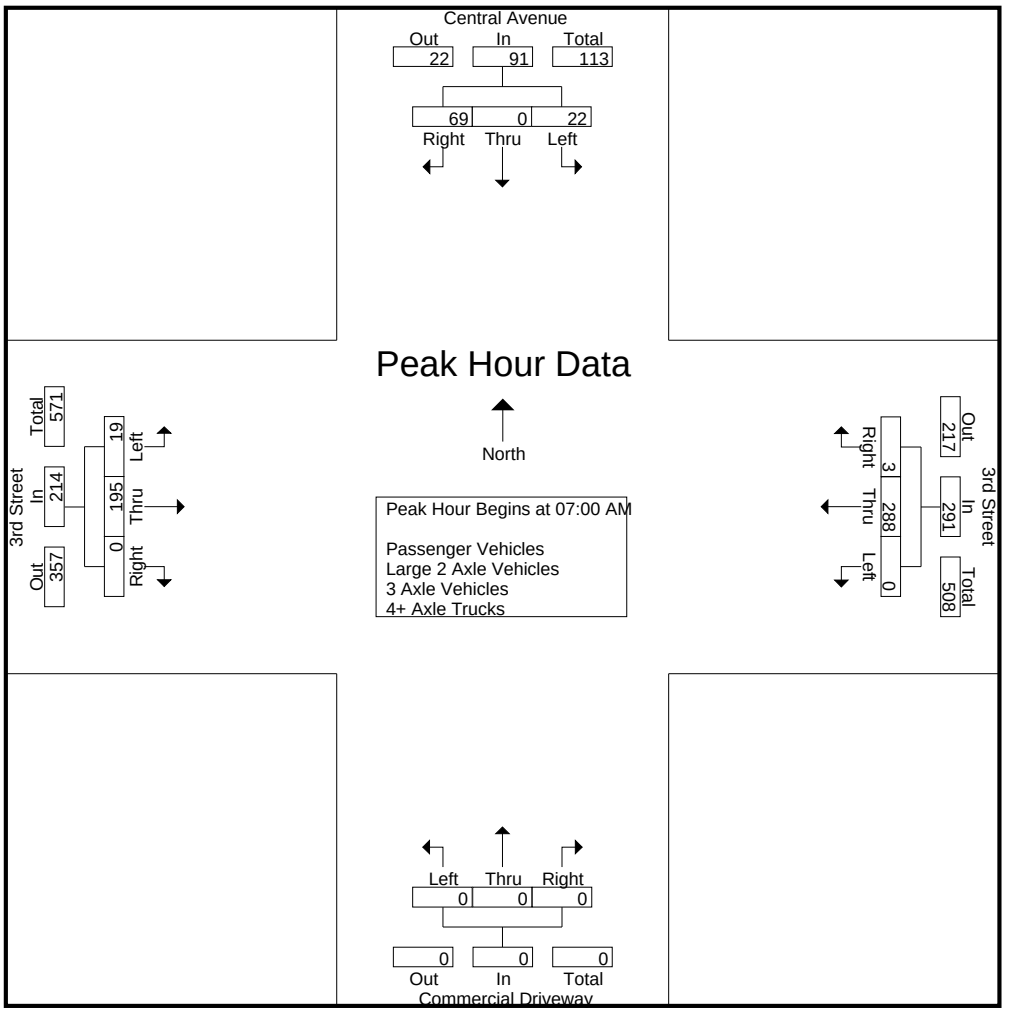

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				08:00 AM				07:30 AM			
+0 mins.	**7**	0	**23**	**30**	0	61	**2**	63	0	0	0	0	6	52	0	58
+15 mins.	5	0	21	26	0	78	0	78	0	0	0	0	2	**60**	0	**62**
+30 mins.	7	0	12	19	0	61	1	62	0	0	0	0	**7**	54	0	61
+45 mins.	3	0	16	19	0	**88**	0	**88**	**1**	0	0	**1**	3	48	0	51
Total Volume	22	0	72	94	0	288	3	291	1	0	0	1	18	214	0	232
% App. Total	23.4	0	76.6		0	99	1		100	0	0		7.8	92.2	0	
PHF	.786	.000	.783	.783	.000	.818	.375	.827	.250	.000	.000	.250	.643	.892	.000	.935

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E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- Passenger Vehicles

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	0	13	16	0	57	2	59	0	0	0	0	6	42	0	48	123
07:15 AM	7	0	22	29	0	75	0	75	0	0	0	0	4	31	0	35	139
07:30 AM	5	0	21	26	0	59	1	60	0	0	0	0	6	50	0	56	142
07:45 AM	7	0	12	19	0	85	0	85	0	0	0	0	2	60	0	62	166
Total	22	0	68	90	0	276	3	279	0	0	0	0	18	183	0	201	570
08:00 AM	3	0	16	19	0	47	0	47	0	0	0	0	7	49	0	56	122
08:15 AM	6	0	16	22	0	45	1	46	0	0	0	0	3	44	0	47	115
08:30 AM	3	0	10	13	0	45	1	46	0	0	0	0	3	40	0	43	102
08:45 AM	8	0	11	19	0	26	2	28	1	0	0	1	5	63	0	68	116
Total	20	0	53	73	0	163	4	167	1	0	0	1	18	196	0	214	455
Grand Total	42	0	121	163	0	439	7	446	1	0	0	1	36	379	0	415	1025
Apprch %	25.8	0	74.2		0	98.4	1.6		100	0	0		8.7	91.3	0		
Total %	4.1	0	11.8	15.9	0	42.8	0.7	43.5	0.1	0	0	0.1	3.5	37	0	40.5	

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	0	13	16	0	57	**2**	59	0	0	0	0	**6**	42	0	48	123
07:15 AM	**7**	0	**22**	**29**	0	75	0	75	0	0	0	0	4	31	0	35	139
07:30 AM	5	0	21	26	0	59	1	60	0	0	0	0	6	50	0	56	142
07:45 AM	7	0	12	19	0	**85**	0	**85**	0	0	0	0	2	**60**	0	**62**	**166**
Total Volume	22	0	68	90	0	276	3	279	0	0	0	0	18	183	0	201	570
% App. Total	24.4	0	75.6		0	98.9	1.1		0	0	0		9	91	0		
PHF	.786	.000	.773	.776	.000	.812	.375	.821	.000	.000	.000	.000	.750	.763	.000	.810	.858

Counts Unlimited
PO Box 1178
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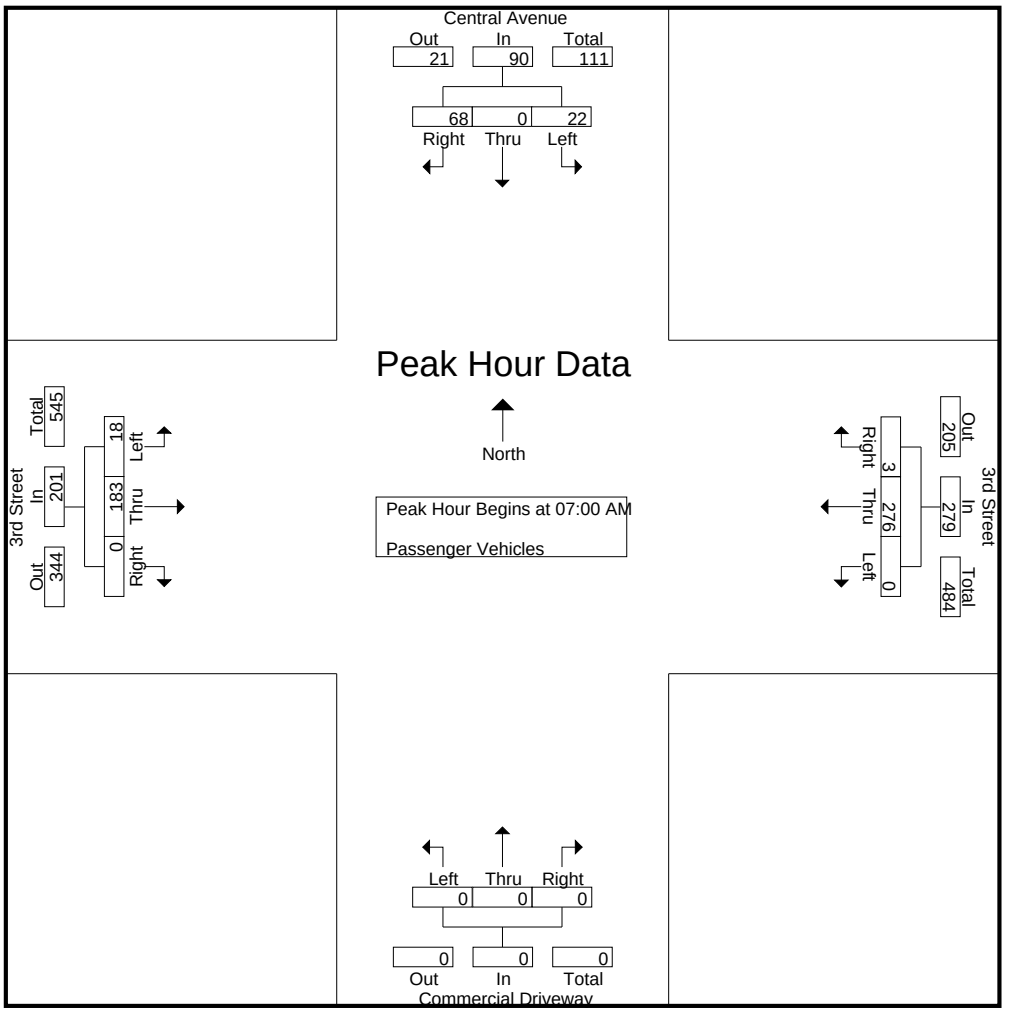
City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	3	0	13	16	0	57	**2**	59	0	0	0	0	**6**	42	0	48
+15 mins.	**7**	0	**22**	**29**	0	75	0	75	0	0	0	0	4	31	0	35
+30 mins.	5	0	21	26	0	59	1	60	0	0	0	0	6	50	0	56
+45 mins.	7	0	12	19	0	**85**	0	**85**	0	0	0	0	2	**60**	0	**62**
Total Volume	22	0	68	90	0	276	3	279	0	0	0	0	18	183	0	201
% App. Total	24.4	0	75.6		0	98.9	1.1		0	0	0		9	91	0	
PHF	.786	.000	.773	.776	.000	.812	.375	.821	.000	.000	.000	.000	.750	.763	.000	.810

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Weather: Clear

File Name : 10_HLD_Central_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- Large 2 Axle Vehicles

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
07:15 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	0	0	1	1	0	4	0	4	0	0	0	0	1	0	0	1	6
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	2	3
08:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	0	2	4
08:45 AM	0	0	4	4	0	2	0	2	0	0	0	0	0	0	0	0	6
Total	0	0	5	5	0	4	1	5	0	0	0	0	0	4	0	4	14
Grand Total	0	0	6	6	0	8	1	9	0	0	0	0	1	4	0	5	20
Apprch %	0	0	100		0	88.9	11.1		0	0	0		20	80	0		
Total %	0	0	30	30	0	40	5	45	0	0	0	0	5	20	0	25	

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	**1**	0	0	**1**	**2**
07:15 AM	0	0	**1**	**1**	0	1	0	1	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
Total Volume	0	0	1	1	0	4	0	4	0	0	0	0	1	0	0	1	6
% App. Total	0	0	100		0	100	0		0	0	0		100	0	0		
PHF	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.250	.000	.000	.250	.750

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd AM
Site Code : 99918352
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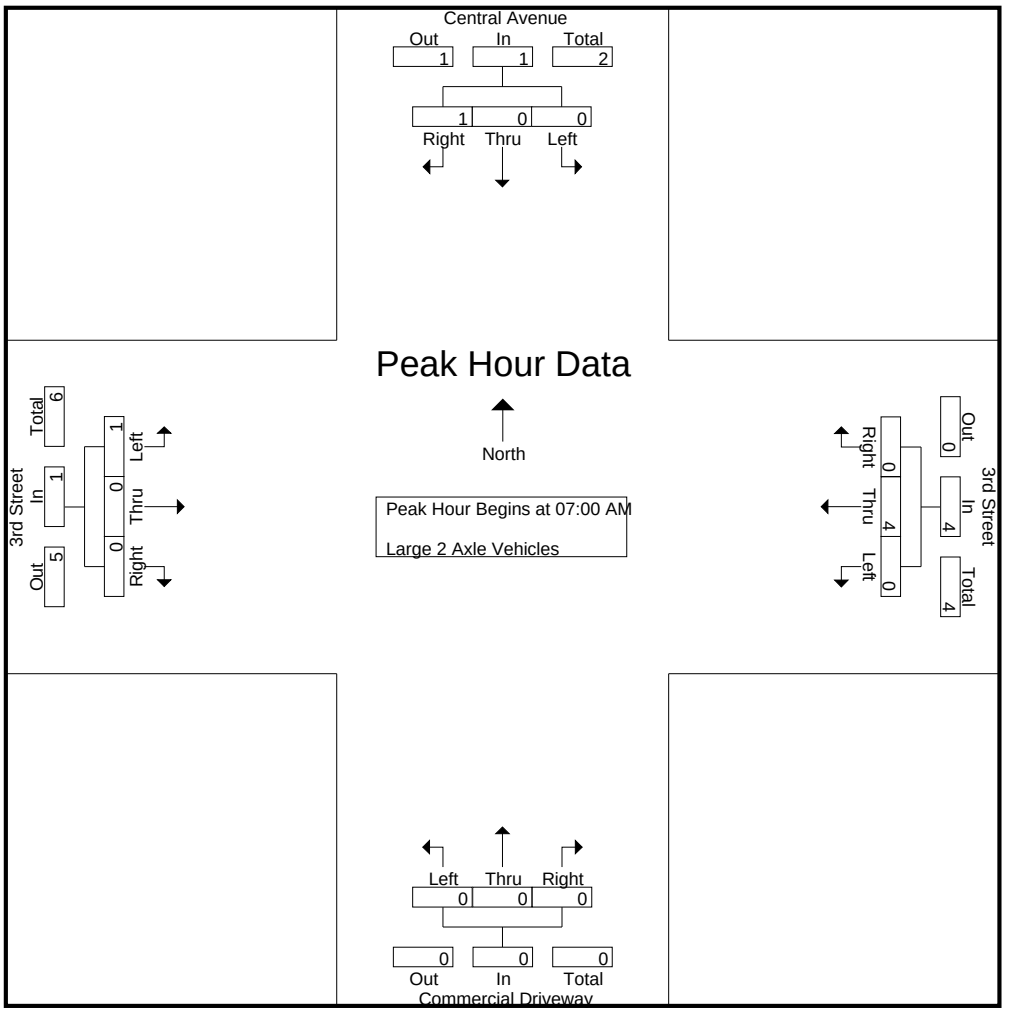

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd AM
Site Code : 99918352
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Groups Printed- 3 Axle Vehicles

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	6	0	6	11
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	9	0	9	13
Grand Total	0	0	0	0	0	9	0	9	0	0	0	0	0	15	0	15	24
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	37.5	0	37.5	0	0	0	0	0	62.5	0	62.5	

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	**4**	0	**4**	**6**
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	6	0	6	11
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.375	.000	.375	.458

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd AM
Site Code : 99918352
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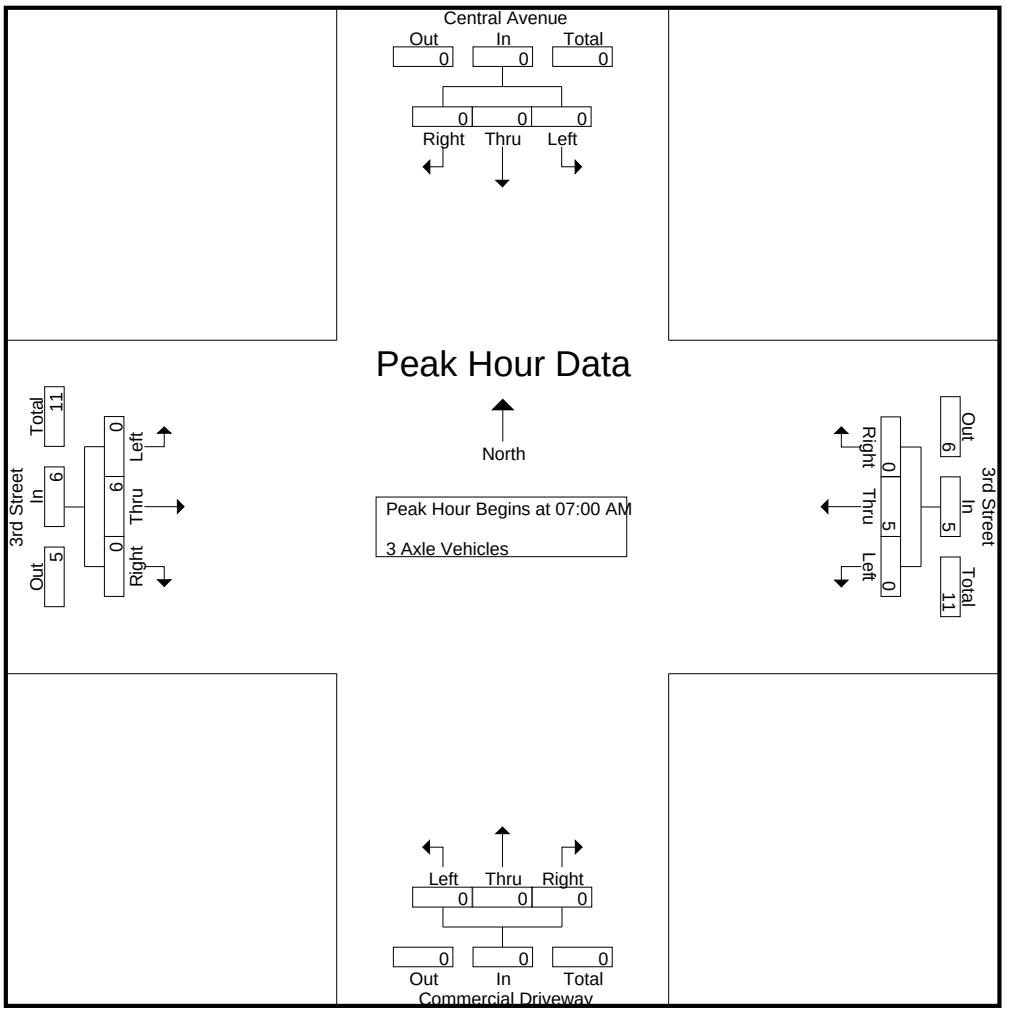

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	**4**	0	**4**
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	6	0	6
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.375	.000	.375

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd AM
Site Code : 99918352
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Groups Printed- 4+ Axle Trucks

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	6	0	6	9
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	3	1	4	0	0	0	0	0	3	0	3	7
Total	0	0	0	0	0	6	1	7	0	0	0	0	0	5	0	5	12
Grand Total	0	0	0	0	0	9	1	10	0	0	0	0	0	11	0	11	21
Apprch %	0	0	0		0	90	10		0	0	0		0	100	0		
Total %	0	0	0	0	0	42.9	4.8	47.6	0	0	0	0	0	52.4	0	52.4	

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	**3**	0	**3**	**4**
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	6	0	6	9
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.500	.000	.500	.563

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
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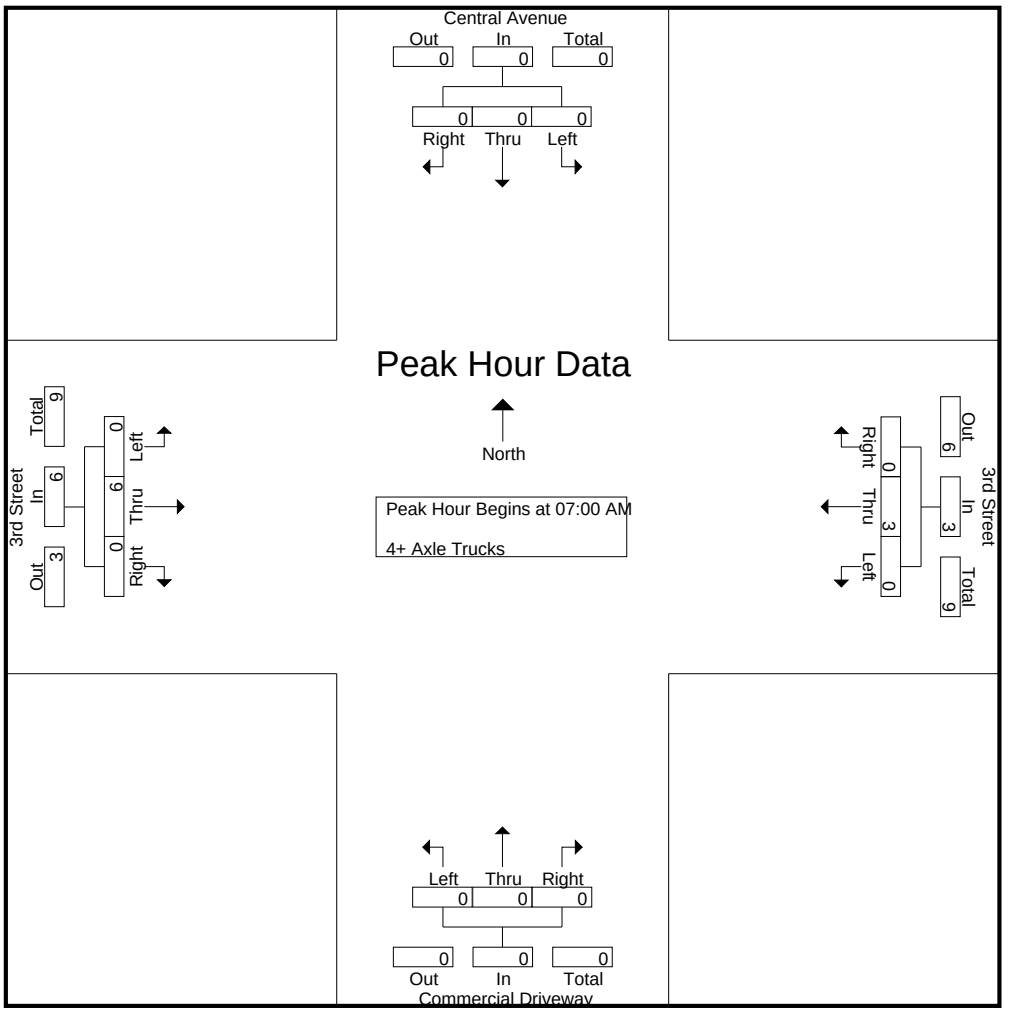

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**3**	0	**3**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	6	0	6
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.500	.000	.500

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	0	4	9	0	48	3	51	1	0	0	1	24	145	0	169	230
04:15 PM	1	0	2	3	0	65	0	65	0	0	0	0	25	117	0	142	210
04:30 PM	2	0	7	9	0	38	5	43	4	2	0	6	46	169	0	215	273
04:45 PM	6	0	4	10	0	60	6	66	0	2	0	2	31	140	0	171	249
Total	14	0	17	31	0	211	14	225	5	4	0	9	126	571	0	697	962
05:00 PM	3	0	4	7	0	42	5	47	1	0	0	1	61	181	0	242	297
05:15 PM	5	0	8	13	0	42	1	43	0	0	0	0	49	206	0	255	311
05:30 PM	6	0	5	11	0	44	8	52	0	1	0	1	35	183	0	218	282
05:45 PM	0	0	6	6	0	39	1	40	0	0	0	0	26	118	0	144	190
Total	14	0	23	37	0	167	15	182	1	1	0	2	171	688	0	859	1080
Grand Total	28	0	40	68	0	378	29	407	6	5	0	11	297	1259	0	1556	2042
Apprch %	41.2	0	58.8		0	92.9	7.1		54.5	45.5	0		19.1	80.9	0		
Total %	1.4	0	2	3.3	0	18.5	1.4	19.9	0.3	0.2	0	0.5	14.5	61.7	0	76.2	
Passenger Vehicles	27	0	37	64	0	347	29	376	6	5	0	11	295	1232	0	1527	1978
% Passenger Vehicles	96.4	0	92.5	94.1	0	91.8	100	92.4	100	100	0	100	99.3	97.9	0	98.1	96.9
Large 2 Axle Vehicles	1	0	2	3	0	5	0	5	0	0	0	0	2	7	0	9	17
% Large 2 Axle Vehicles	3.6	0	5	4.4	0	1.3	0	1.2	0	0	0	0	0.7	0.6	0	0.6	0.8
3 Axle Vehicles	0	0	0	0	0	10	0	10	0	0	0	0	0	7	0	7	17
% 3 Axle Vehicles	0	0	0	0	0	2.6	0	2.5	0	0	0	0	0	0.6	0	0.4	0.8
4+ Axle Trucks	0	0	1	1	0	16	0	16	0	0	0	0	0	13	0	13	30
% 4+ Axle Trucks	0	0	2.5	1.5	0	4.2	0	3.9	0	0	0	0	0	1	0	0.8	1.5

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**6**	0	4	10	0	**60**	6	**66**	0	**2**	0	**2**	31	140	0	171	249
05:00 PM	3	0	4	7	0	42	5	47	**1**	0	0	1	**61**	181	0	242	297
05:15 PM	5	0	**8**	**13**	0	42	1	43	0	0	0	0	49	**206**	0	**255**	**311**
05:30 PM	6	0	5	11	0	44	**8**	52	0	1	0	1	35	183	0	218	282
Total Volume	20	0	21	41	0	188	20	208	1	3	0	4	176	710	0	886	1139
% App. Total	48.8	0	51.2		0	90.4	9.6		25	75	0		19.9	80.1	0		
PHF	.833	.000	.656	.788	.000	.783	.625	.788	.250	.375	.000	.500	.721	.862	.000	.869	.916

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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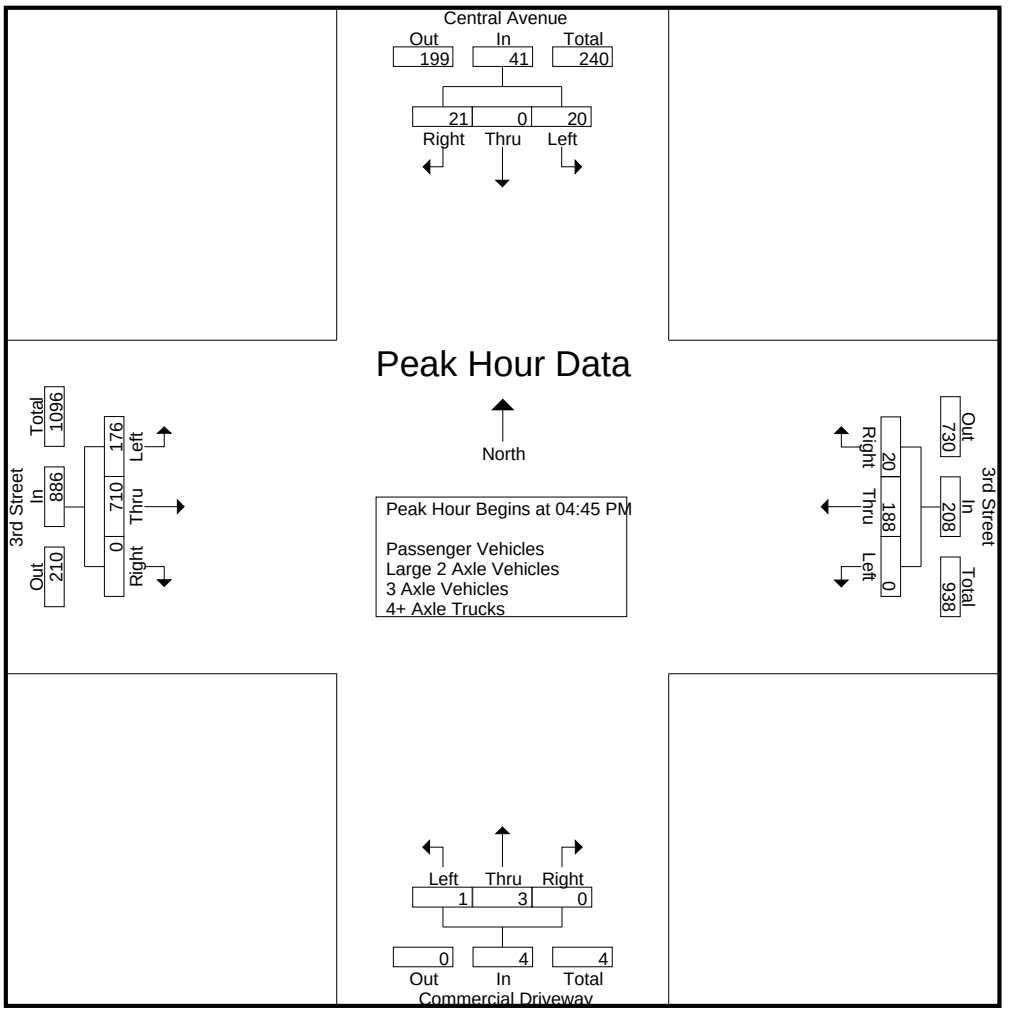

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:00 PM				04:45 PM			
+0 mins.	**6**	0	4	10	0	48	3	51	1	0	0	1	31	140	0	171
+15 mins.	3	0	4	7	0	**65**	0	65	0	0	0	0	**61**	181	0	242
+30 mins.	5	0	**8**	**13**	0	38	5	43	**4**	**2**	0	**6**	49	**206**	0	**255**
+45 mins.	6	0	5	11	0	60	**6**	**66**	0	2	0	2	35	183	0	218
Total Volume	20	0	21	41	0	211	14	225	5	4	0	9	176	710	0	886
% App. Total	48.8	0	51.2		0	93.8	6.2		55.6	44.4	0		19.9	80.1	0	
PHF	.833	.000	.656	.788	.000	.812	.583	.852	.313	.500	.000	.375	.721	.862	.000	.869

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City of Highland
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E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd PM
Site Code : 99918352
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Groups Printed- Passenger Vehicles

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	0	4	9	0	43	3	46	1	0	0	1	24	139	0	163	219
04:15 PM	1	0	2	3	0	61	0	61	0	0	0	0	25	113	0	138	202
04:30 PM	2	0	6	8	0	34	5	39	4	2	0	6	46	167	0	213	266
04:45 PM	6	0	3	9	0	55	6	61	0	2	0	2	31	139	0	170	242
Total	14	0	15	29	0	193	14	207	5	4	0	9	126	558	0	684	929
05:00 PM	3	0	3	6	0	40	5	45	1	0	0	1	61	174	0	235	287
05:15 PM	4	0	8	12	0	39	1	40	0	0	0	0	49	205	0	254	306
05:30 PM	6	0	5	11	0	39	8	47	0	1	0	1	34	180	0	214	273
05:45 PM	0	0	6	6	0	36	1	37	0	0	0	0	25	115	0	140	183
Total	13	0	22	35	0	154	15	169	1	1	0	2	169	674	0	843	1049
Grand Total	27	0	37	64	0	347	29	376	6	5	0	11	295	1232	0	1527	1978
Apprch %	42.2	0	57.8		0	92.3	7.7		54.5	45.5	0		19.3	80.7	0		
Total %	1.4	0	1.9	3.2	0	17.5	1.5	19	0.3	0.3	0	0.6	14.9	62.3	0	77.2	

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**6**	0	3	9	0	**55**	6	**61**	0	**2**	0	**2**	31	139	0	170	242
05:00 PM	3	0	3	6	0	40	5	45	**1**	0	0	1	**61**	174	0	235	287
05:15 PM	4	0	**8**	**12**	0	39	1	40	0	0	0	0	49	**205**	0	**254**	**306**
05:30 PM	6	0	5	11	0	39	**8**	47	0	1	0	1	34	180	0	214	273
Total Volume	19	0	19	38	0	173	20	193	1	3	0	4	175	698	0	873	1108
% App. Total	50	0	50		0	89.6	10.4		25	75	0		20	80	0		
PHF	.792	.000	.594	.792	.000	.786	.625	.791	.250	.375	.000	.500	.717	.851	.000	.859	.905

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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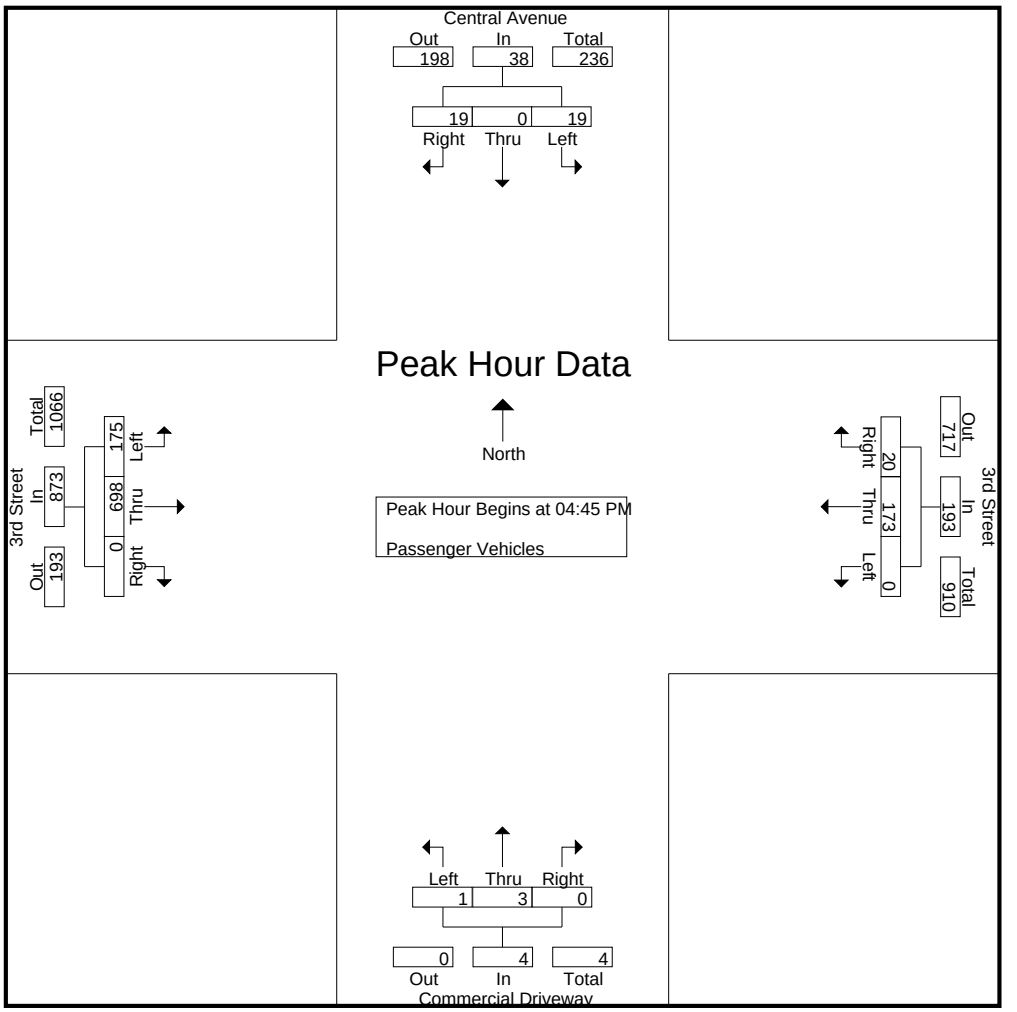

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**6**	0	3	9	0	**55**	6	**61**	0	**2**	0	**2**	31	139	0	170
+15 mins.	3	0	3	6	0	40	5	45	**1**	0	0	1	**61**	174	0	235
+30 mins.	4	0	**8**	**12**	0	39	1	40	0	0	0	0	49	**205**	0	**254**
+45 mins.	6	0	5	11	0	39	**8**	47	0	1	0	1	34	180	0	214
Total Volume	19	0	19	38	0	173	20	193	1	3	0	4	175	698	0	873
% App. Total	50	0	50		0	89.6	10.4		25	75	0		20	80	0	
PHF	.792	.000	.594	.792	.000	.786	.625	.791	.250	.375	.000	.500	.717	.851	.000	.859

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- Large 2 Axle Vehicles

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total	0	0	2	2	0	3	0	3	0	0	0	0	0	2	0	2	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
05:15 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	2	0	3	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	1	0	0	1	0	2	0	2	0	0	0	0	2	5	0	7	10
Grand Total	1	0	2	3	0	5	0	5	0	0	0	0	2	7	0	9	17
Apprch %	33.3	0	66.7		0	100	0		0	0	0		22.2	77.8	0		
Total %	5.9	0	11.8	17.6	0	29.4	0	29.4	0	0	0	0	11.8	41.2	0	52.9	

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	**1**	**1**	0	**1**	0	**1**	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	3
05:15 PM	**1**	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	**1**	2	0	3	**4**
Total Volume	1	0	1	2	0	3	0	3	0	0	0	0	1	5	0	6	11
% App. Total	50	0	50		0	100	0		0	0	0		16.7	83.3	0		
PHF	.250	.000	.250	.500	.000	.750	.000	.750	.000	.000	.000	.000	.250	.417	.000	.500	.688

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City of Highland
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E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd PM
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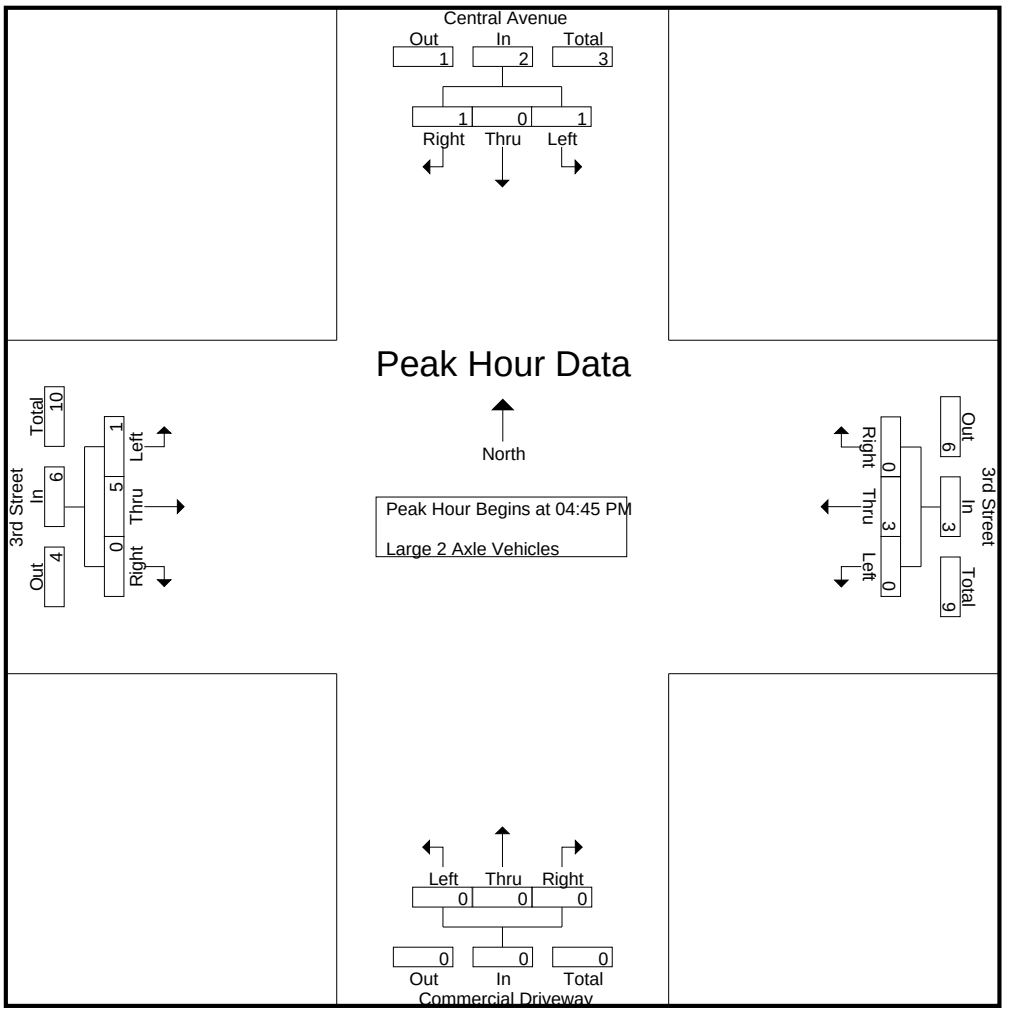

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	**1**	**1**	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**
+30 mins.	**1**	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	**1**	2	0	3
Total Volume	1	0	1	2	0	3	0	3	0	0	0	0	1	5	0	6
% App. Total	50	0	50		0	100	0		0	0	0		16.7	83.3	0	
PHF	.250	.000	.250	.500	.000	.750	.000	.750	.000	.000	.000	.000	.250	.417	.000	.500

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City of Highland
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E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- 3 Axle Vehicles

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	9
Grand Total	0	0	0	0	0	10	0	10	0	0	0	0	0	7	0	7	17
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	58.8	0	58.8	0	0	0	0	0	41.2	0	41.2	

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	**1**	0	**1**	3
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1	**4**
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2	8
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.500

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd PM
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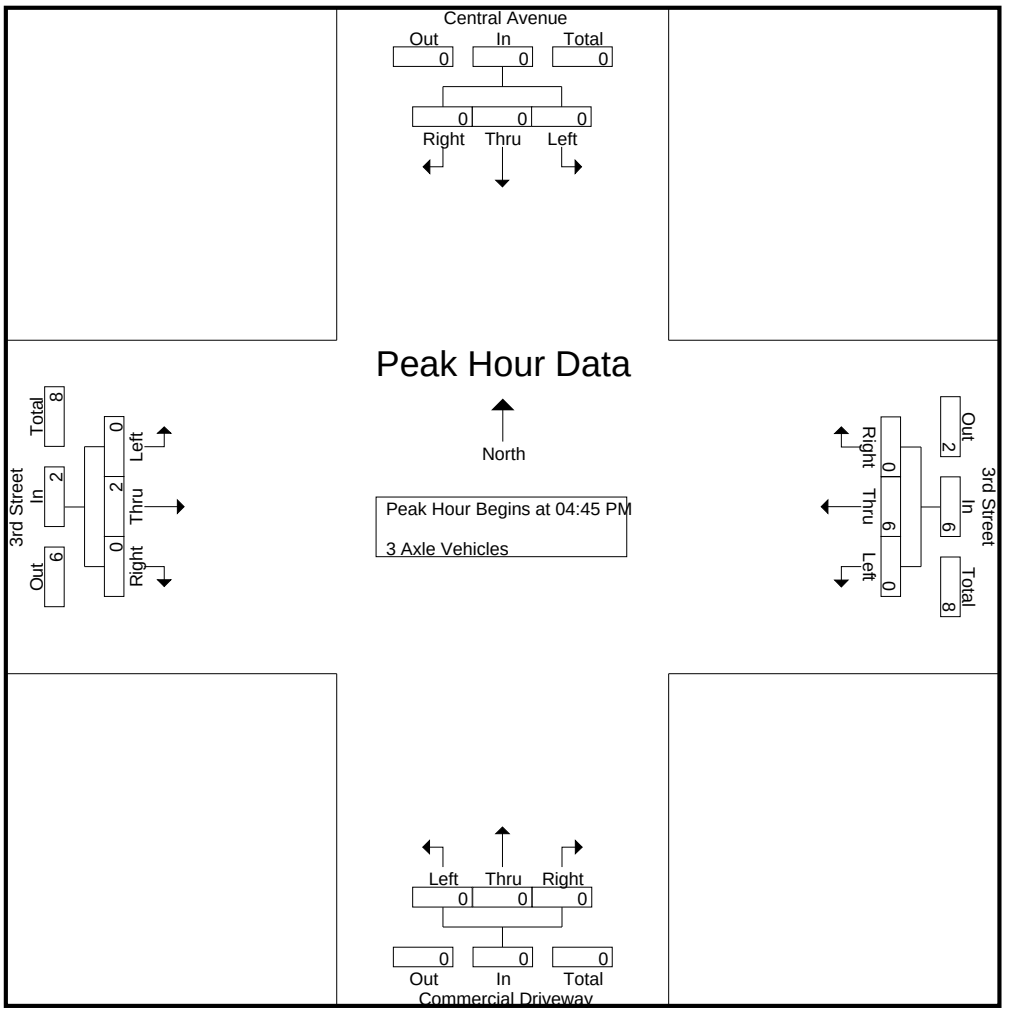

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

File Name : 10_HLD_Central_3rd PM
Site Code : 99918352
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Groups Printed- 4+ Axle Trucks

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
04:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
Total	0	0	0	0	0	11	0	11	0	0	0	0	0	7	0	7	18
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	3	4
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	0	1	1	0	5	0	5	0	0	0	0	0	6	0	6	12
Grand Total	0	0	1	1	0	16	0	16	0	0	0	0	0	13	0	13	30
Apprch %	0	0	100		0	100	0		0	0	0		0	100	0		
Total %	0	0	3.3	3.3	0	53.3	0	53.3	0	0	0	0	0	43.3	0	43.3	

	Central Avenue Southbound				3rd Street Westbound				Commercial Driveway Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	0	1	**5**
05:00 PM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	**3**	0	**3**	4
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	0	6	0	6	0	0	0	0	0	5	0	5	12
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.375	.000	.375	.000	.000	.000	.000	.000	.417	.000	.417	.600

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City of Highland
N/S: Central Avenue
E/W: 3rd Street
Weather: Clear

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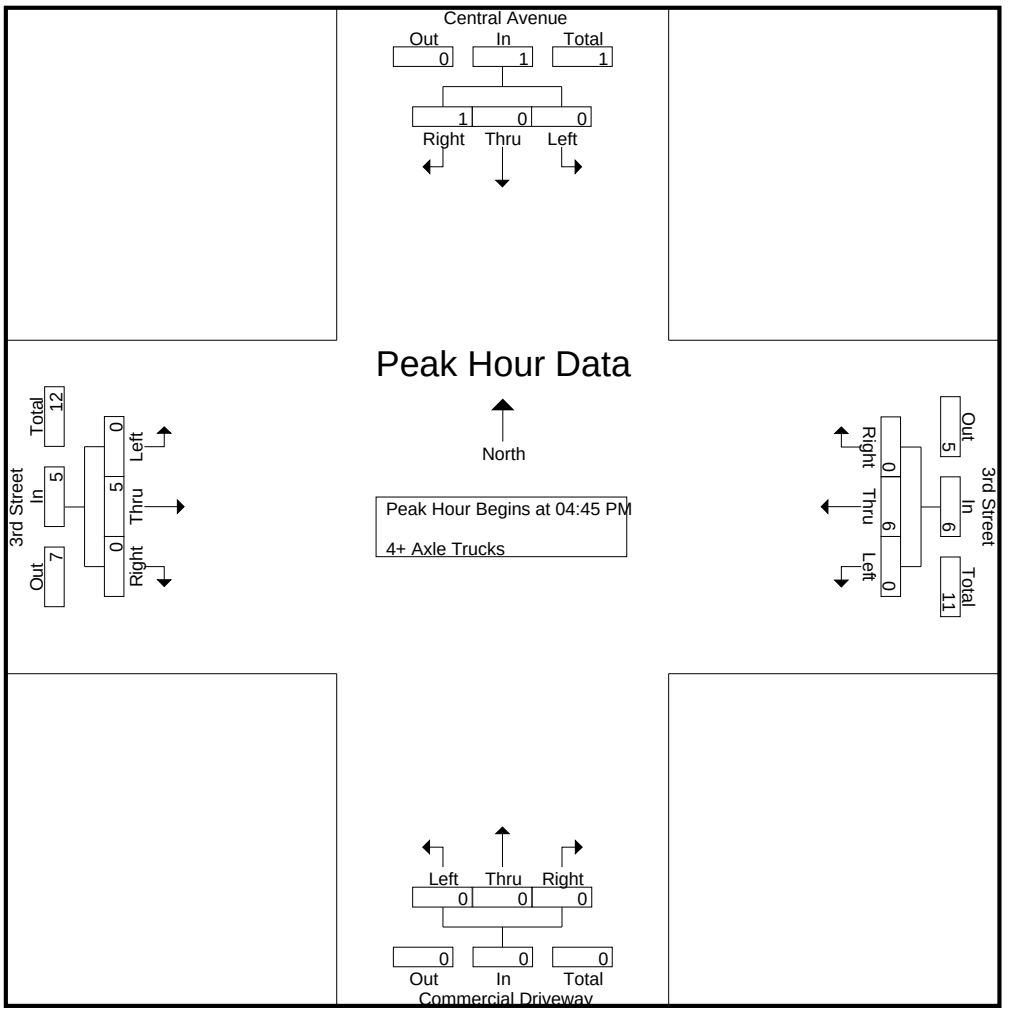

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	0	1
+15 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	**3**	0	**3**
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	6	0	6	0	0	0	0	0	5	0	5
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.375	.000	.375	.000	.000	.000	.000	.000	.417	.000	.417

Counts Unlimited
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City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

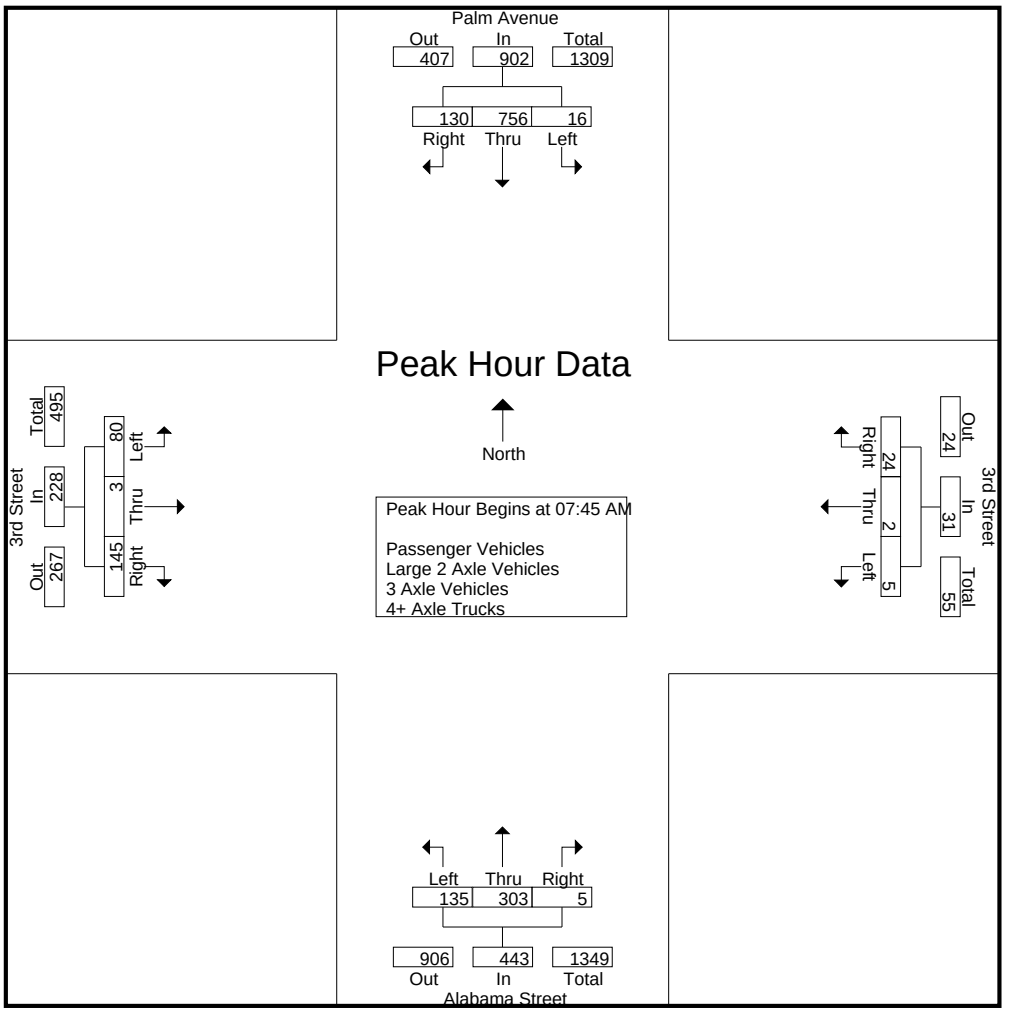
	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	88	49	140	0	3	7	10	19	37	0	56	22	1	34	57	263
07:15 AM	1	98	58	157	0	1	6	7	29	51	0	80	21	0	36	57	301
07:30 AM	3	144	42	189	1	0	4	5	29	37	0	66	18	0	42	60	320
07:45 AM	2	215	50	267	1	1	6	8	47	51	3	101	16	1	48	65	441
Total	9	545	199	753	2	5	23	30	124	176	3	303	77	2	160	239	1325
08:00 AM	1	230	35	266	0	0	4	4	27	65	0	92	25	1	32	58	420
08:15 AM	4	186	24	214	3	0	6	9	29	86	1	116	22	1	35	58	397
08:30 AM	9	125	21	155	1	1	8	10	32	101	1	134	17	0	30	47	346
08:45 AM	6	115	22	143	0	1	4	5	23	42	2	67	30	1	49	80	295
Total	20	656	102	778	4	2	22	28	111	294	4	409	94	3	146	243	1458
Grand Total	29	1201	301	1531	6	7	45	58	235	470	7	712	171	5	306	482	2783
Apprch %	1.9	78.4	19.7		10.3	12.1	77.6		33	66	1		35.5	1	63.5		
Total %	1	43.2	10.8	55	0.2	0.3	1.6	2.1	8.4	16.9	0.3	25.6	6.1	0.2	11	17.3	
Passenger Vehicles	15	1161	277	1453	5	5	24	34	192	392	6	590	131	5	262	398	2475
% Passenger Vehicles	51.7	96.7	92	94.9	83.3	71.4	53.3	58.6	81.7	83.4	85.7	82.9	76.6	100	85.6	82.6	88.9
Large 2 Axle Vehicles	3	2	10	15	1	1	10	12	1	7	1	9	3	0	4	7	43
% Large 2 Axle Vehicles	10.3	0.2	3.3	1	16.7	14.3	22.2	20.7	0.4	1.5	14.3	1.3	1.8	0	1.3	1.5	1.5
3 Axle Vehicles	1	18	3	22	0	1	5	6	15	46	0	61	23	0	26	49	138
% 3 Axle Vehicles	3.4	1.5	1	1.4	0	14.3	11.1	10.3	6.4	9.8	0	8.6	13.5	0	8.5	10.2	5
4+ Axle Trucks	10	20	11	41	0	0	6	6	27	25	0	52	14	0	14	28	127
% 4+ Axle Trucks	34.5	1.7	3.7	2.7	0	0	13.3	10.3	11.5	5.3	0	7.3	8.2	0	4.6	5.8	4.6

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	215	**50**	**267**	1	**1**	6	8	**47**	51	**3**	101	16	**1**	**48**	**65**	**441**
08:00 AM	1	**230**	35	266	0	0	4	4	27	65	0	92	**25**	1	32	58	420
08:15 AM	4	186	24	214	**3**	0	6	9	29	86	1	116	22	1	35	58	397
08:30 AM	**9**	125	21	155	1	1	**8**	**10**	32	**101**	1	**134**	17	0	30	47	346
Total Volume	16	756	130	902	5	2	24	31	135	303	5	443	80	3	145	228	1604
% App. Total	1.8	83.8	14.4		16.1	6.5	77.4		30.5	68.4	1.1		35.1	1.3	63.6		
PHF	.444	.822	.650	.845	.417	.500	.750	.775	.718	.750	.417	.826	.800	.750	.755	.877	.909

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

City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 2



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

	07:30 AM				07:45 AM				07:45 AM				08:00 AM			
+0 mins.	3	144	42	189	1	**1**	6	8	**47**	51	**3**	101	25	**1**	32	58
+15 mins.	2	215	**50**	**267**	0	0	4	4	27	65	0	92	22	1	35	58
+30 mins.	1	**230**	35	266	**3**	0	6	9	29	86	1	116	17	0	30	47
+45 mins.	**4**	186	24	214	1	1	**8**	**10**	32	**101**	1	**134**	**30**	1	**49**	**80**
Total Volume	10	775	151	936	5	2	24	31	135	303	5	443	94	3	146	243
% App. Total	1.1	82.8	16.1		16.1	6.5	77.4		30.5	68.4	1.1		38.7	1.2	60.1	
PHF	.625	.842	.755	.876	.417	.500	.750	.775	.718	.750	.417	.826	.783	.750	.745	.759

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City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	86	46	134	0	3	6	9	15	26	0	41	17	1	26	44	228
07:15 AM	0	96	57	153	0	1	6	7	23	41	0	64	12	0	30	42	266
07:30 AM	1	138	40	179	1	0	1	2	24	25	0	49	13	0	36	49	279
07:45 AM	1	209	48	258	1	0	3	4	42	36	2	80	14	1	44	59	401
Total	4	529	191	724	2	4	16	22	104	128	2	234	56	2	136	194	1174
08:00 AM	1	225	35	261	0	0	1	1	22	58	0	80	19	1	28	48	390
08:15 AM	1	180	20	201	3	0	1	4	23	80	1	104	16	1	31	48	357
08:30 AM	5	116	15	136	0	0	4	4	29	92	1	122	15	0	25	40	302
08:45 AM	4	111	16	131	0	1	2	3	14	34	2	50	25	1	42	68	252
Total	11	632	86	729	3	1	8	12	88	264	4	356	75	3	126	204	1301
Grand Total	15	1161	277	1453	5	5	24	34	192	392	6	590	131	5	262	398	2475
Apprch %	1	79.9	19.1		14.7	14.7	70.6		32.5	66.4	1		32.9	1.3	65.8		
Total %	0.6	46.9	11.2	58.7	0.2	0.2	1	1.4	7.8	15.8	0.2	23.8	5.3	0.2	10.6	16.1	

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	209	**48**	258	1	0	3	**4**	**42**	36	**2**	80	14	**1**	**44**	**59**	**401**
08:00 AM	1	**225**	35	**261**	0	0	1	1	22	58	0	80	**19**	1	28	48	390
08:15 AM	1	180	20	201	**3**	0	1	4	23	80	1	104	16	1	31	48	357
08:30 AM	**5**	116	15	136	0	0	**4**	4	29	**92**	1	**122**	15	0	25	40	302
Total Volume	8	730	118	856	4	0	9	13	116	266	4	386	64	3	128	195	1450
% App. Total	0.9	85.3	13.8		30.8	0	69.2		30.1	68.9	1		32.8	1.5	65.6		
PHF	.400	.811	.615	.820	.333	.000	.563	.813	.690	.723	.500	.791	.842	.750	.727	.826	.904

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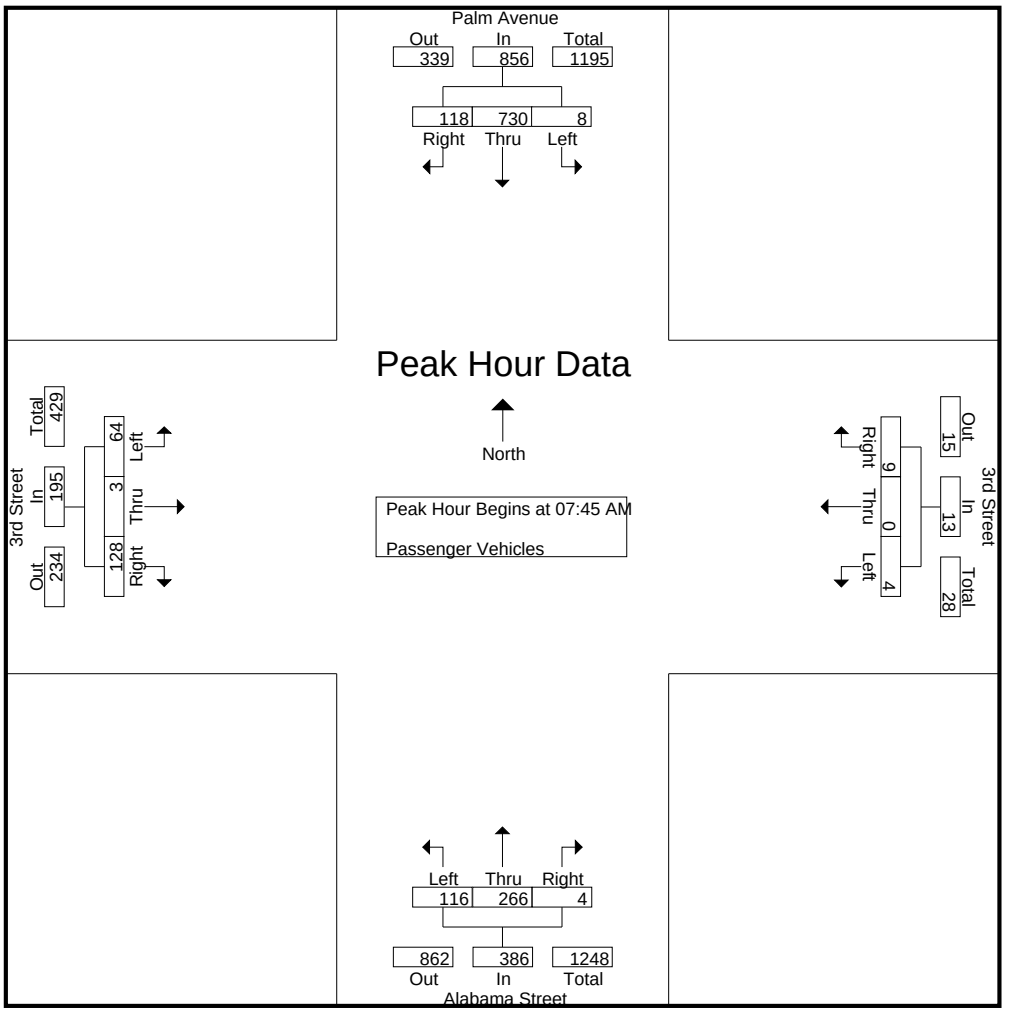
City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018



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

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	1	209	**48**	258	1	0	3	**4**	**42**	36	**2**	80	14	**1**	**44**	**59**
+15 mins.	1	**225**	35	**261**	0	0	1	1	22	58	0	80	**19**	1	28	48
+30 mins.	1	180	20	201	**3**	0	1	4	23	80	1	104	16	1	31	48
+45 mins.	**5**	116	15	136	0	0	**4**	4	29	**92**	1	**122**	15	0	25	40
Total Volume	8	730	118	856	4	0	9	13	116	266	4	386	64	3	128	195
% App. Total	0.9	85.3	13.8		30.8	0	69.2		30.1	68.9	1		32.8	1.5	65.6	
PHF	.400	.811	.615	.820	.333	.000	.563	.813	.690	.723	.500	.791	.842	.750	.727	.826

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City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018

Groups Printed- Large 2 Axle Vehicles

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	2	2	0	0	0	0	0	1	0	1	1	0	0	1	4
07:15 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:30 AM	1	0	0	1	0	0	1	1	0	0	0	0	1	0	0	1	3
07:45 AM	0	0	1	1	0	1	1	2	0	1	1	2	0	0	0	0	5
Total	1	0	4	5	0	1	2	3	0	4	1	5	2	0	0	2	15
08:00 AM	0	1	0	1	0	0	2	2	0	0	0	0	0	0	0	0	3
08:15 AM	2	0	1	3	0	0	4	4	0	1	0	1	1	0	1	2	10
08:30 AM	0	1	2	3	1	0	1	2	0	1	0	1	0	0	1	1	7
08:45 AM	0	0	3	3	0	0	1	1	1	1	0	2	0	0	2	2	8
Total	2	2	6	10	1	0	8	9	1	3	0	4	1	0	4	5	28
Grand Total	3	2	10	15	1	1	10	12	1	7	1	9	3	0	4	7	43
Apprch %	20	13.3	66.7		8.3	8.3	83.3		11.1	77.8	11.1		42.9	0	57.1		
Total %	7	4.7	23.3	34.9	2.3	2.3	23.3	27.9	2.3	16.3	2.3	20.9	7	0	9.3	16.3	

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	1	1	0	**1**	1	2	0	**1**	**1**	**2**	0	0	0	0	5
08:00 AM	0	**1**	0	1	0	0	2	2	0	0	0	0	0	0	0	0	3
08:15 AM	**2**	0	1	**3**	0	0	**4**	**4**	0	1	0	1	**1**	0	**1**	**2**	**10**
08:30 AM	0	1	**2**	3	**1**	0	1	2	0	1	0	1	0	0	1	1	7
Total Volume	2	2	4	8	1	1	8	10	0	3	1	4	1	0	2	3	25
% App. Total	25	25	50		10	10	80		0	75	25		33.3	0	66.7		
PHF	.250	.500	.500	.667	.250	.250	.500	.625	.000	.750	.250	.500	.250	.000	.500	.375	.625

Counts Unlimited
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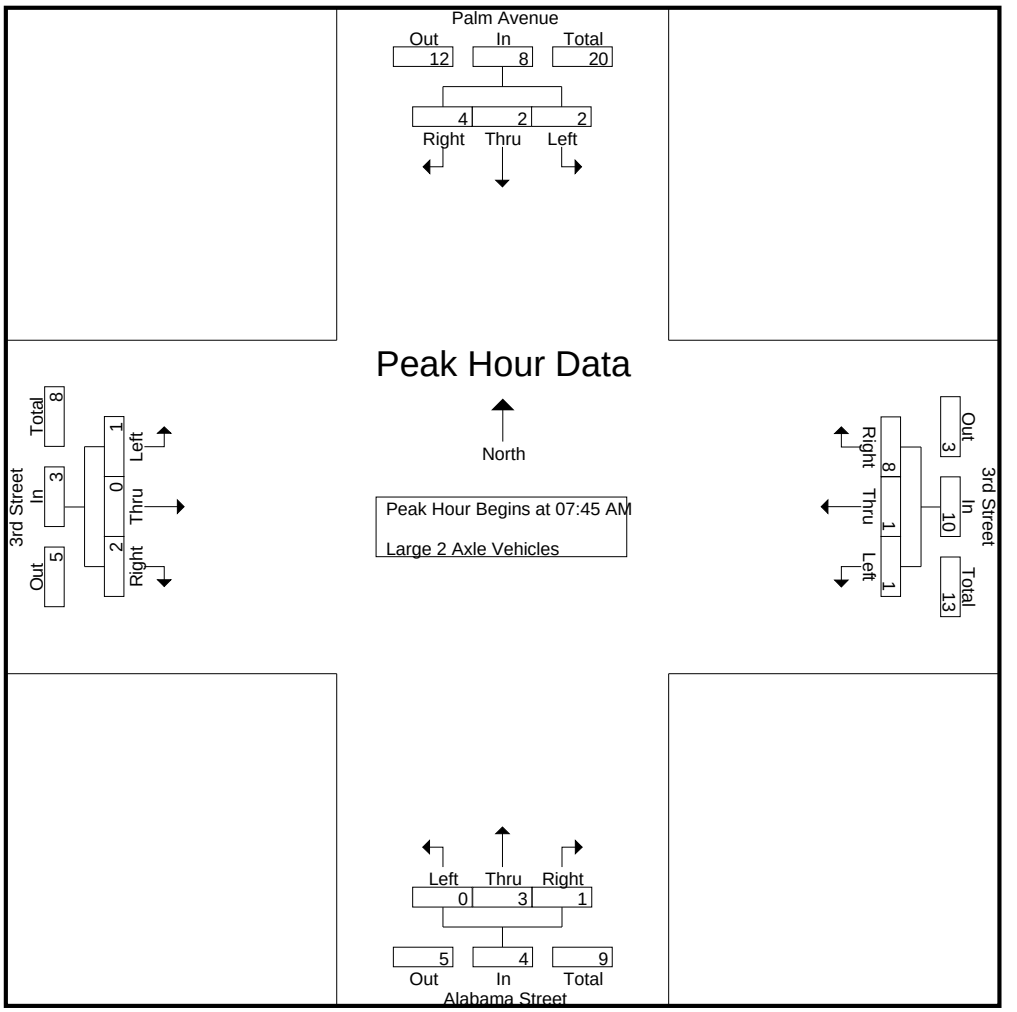
City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 2



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

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	1	1	0	**1**	1	2	0	**1**	**1**	**2**	0	0	0	0
+15 mins.	0	**1**	0	1	0	0	2	2	0	0	0	0	0	0	0	0
+30 mins.	**2**	0	1	**3**	0	0	**4**	**4**	0	1	0	1	**1**	0	**1**	**2**
+45 mins.	0	1	**2**	3	**1**	0	1	2	0	1	0	1	0	0	1	1
Total Volume	2	2	4	8	1	1	8	10	0	3	1	4	1	0	2	3
% App. Total	25	25	50		10	10	80		0	75	25		33.3	0	66.7	
PHF	.250	.500	.500	.667	.250	.250	.500	.625	.000	.750	.250	.500	.250	.000	.500	.375

Counts Unlimited
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City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018

Groups Printed- 3 Axle Vehicles

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	1	1	4	7	0	11	3	0	4	7	20
07:15 AM	0	1	0	1	0	0	0	0	2	5	0	7	5	0	4	9	17
07:30 AM	0	3	0	3	0	0	1	1	1	10	0	11	2	0	5	7	22
07:45 AM	0	1	1	2	0	0	0	0	3	9	0	12	0	0	1	1	15
Total	0	6	1	7	0	0	2	2	10	31	0	41	10	0	14	24	74
08:00 AM	0	3	0	3	0	0	1	1	0	4	0	4	4	0	3	7	15
08:15 AM	0	2	0	2	0	0	1	1	2	1	0	3	5	0	3	8	14
08:30 AM	1	6	2	9	0	1	0	1	2	6	0	8	1	0	3	4	22
08:45 AM	0	1	0	1	0	0	1	1	1	4	0	5	3	0	3	6	13
Total	1	12	2	15	0	1	3	4	5	15	0	20	13	0	12	25	64
Grand Total	1	18	3	22	0	1	5	6	15	46	0	61	23	0	26	49	138
Apprch %	4.5	81.8	13.6		0	16.7	83.3		24.6	75.4	0		46.9	0	53.1		
Total %	0.7	13	2.2	15.9	0	0.7	3.6	4.3	10.9	33.3	0	44.2	16.7	0	18.8	35.5	

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	1	1	2	0	0	0	0	**3**	**9**	0	**12**	0	0	1	1	15
08:00 AM	0	3	0	3	0	0	**1**	**1**	0	4	0	4	4	0	**3**	7	15
08:15 AM	0	2	0	2	0	0	1	1	2	1	0	3	**5**	0	3	**8**	14
08:30 AM	**1**	**6**	**2**	**9**	0	**1**	0	1	2	6	0	8	1	0	3	4	**22**
Total Volume	1	12	3	16	0	1	2	3	7	20	0	27	10	0	10	20	66
% App. Total	6.2	75	18.8		0	33.3	66.7		25.9	74.1	0		50	0	50		
PHF	.250	.500	.375	.444	.000	.250	.500	.750	.583	.556	.000	.563	.500	.000	.833	.625	.750

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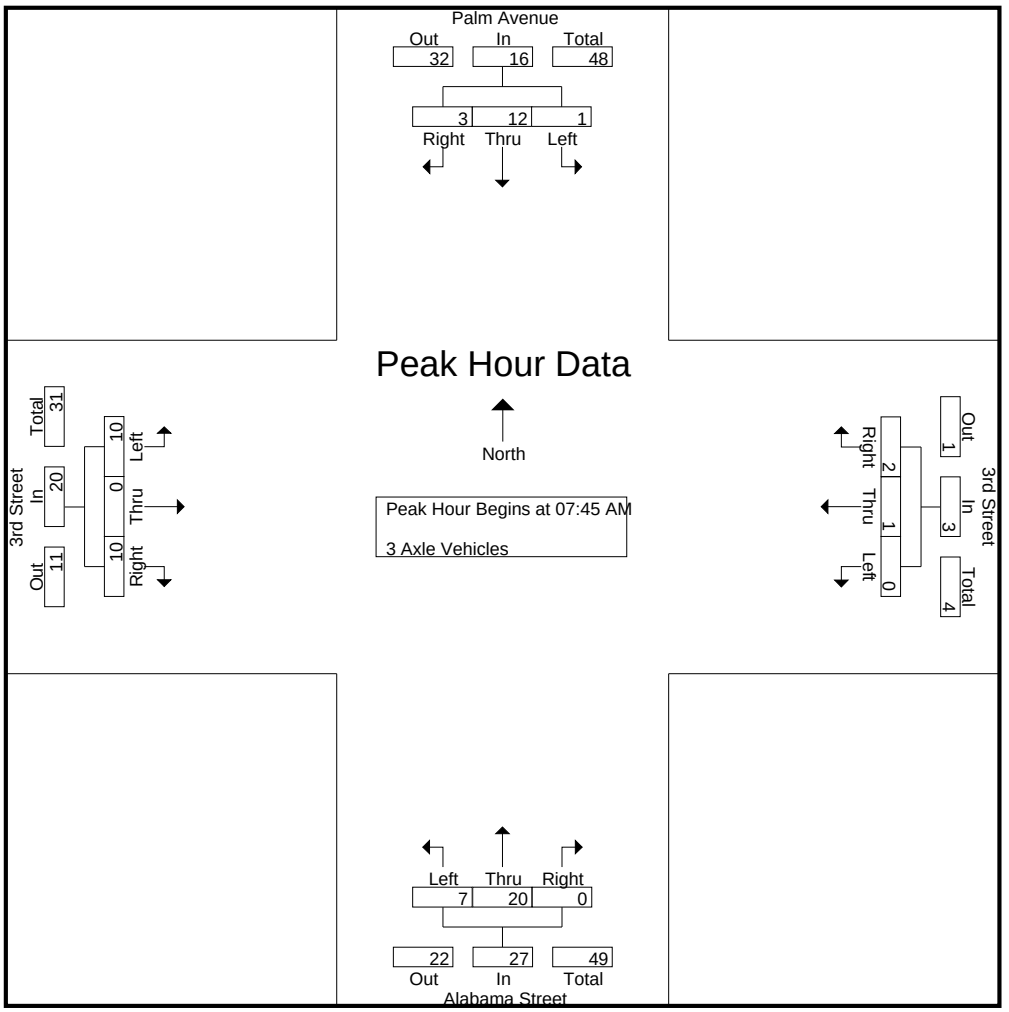
City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 2



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

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	1	1	2	0	0	0	0	**3**	**9**	0	**12**	0	0	1	1
+15 mins.	0	3	0	3	0	0	**1**	**1**	0	4	0	4	4	0	**3**	7
+30 mins.	0	2	0	2	0	0	1	1	2	1	0	3	**5**	0	3	**8**
+45 mins.	**1**	**6**	**2**	**9**	0	**1**	0	1	2	6	0	8	1	0	3	4
Total Volume	1	12	3	16	0	1	2	3	7	20	0	27	10	0	10	20
% App. Total	6.2	75	18.8		0	33.3	66.7		25.9	74.1	0		50	0	50	
PHF	.250	.500	.375	.444	.000	.250	.500	.750	.583	.556	.000	.563	.500	.000	.833	.625

Counts Unlimited
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City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	1	3	0	0	0	0	0	3	0	3	1	0	4	5	11
07:15 AM	1	1	0	2	0	0	0	0	4	3	0	7	4	0	2	6	15
07:30 AM	1	3	2	6	0	0	1	1	4	2	0	6	2	0	1	3	16
07:45 AM	1	5	0	6	0	0	2	2	2	5	0	7	2	0	3	5	20
Total	4	10	3	17	0	0	3	3	10	13	0	23	9	0	10	19	62
08:00 AM	0	1	0	1	0	0	0	0	5	3	0	8	2	0	1	3	12
08:15 AM	1	4	3	8	0	0	0	0	4	4	0	8	0	0	0	0	16
08:30 AM	3	2	2	7	0	0	3	3	1	2	0	3	1	0	1	2	15
08:45 AM	2	3	3	8	0	0	0	0	7	3	0	10	2	0	2	4	22
Total	6	10	8	24	0	0	3	3	17	12	0	29	5	0	4	9	65
Grand Total	10	20	11	41	0	0	6	6	27	25	0	52	14	0	14	28	127
Apprch %	24.4	48.8	26.8		0	0	100		51.9	48.1	0		50	0	50		
Total %	7.9	15.7	8.7	32.3	0	0	4.7	4.7	21.3	19.7	0	40.9	11	0	11	22	

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	**5**	0	6	0	0	2	2	2	**5**	0	7	**2**	0	**3**	**5**	**20**
08:00 AM	0	1	0	1	0	0	0	0	**5**	3	0	**8**	2	0	1	3	12
08:15 AM	1	4	**3**	**8**	0	0	0	0	4	4	0	8	0	0	0	0	16
08:30 AM	**3**	2	2	7	0	0	**3**	**3**	1	2	0	3	1	0	1	2	15
Total Volume	5	12	5	22	0	0	5	5	12	14	0	26	5	0	5	10	63
% App. Total	22.7	54.5	22.7		0	0	100		46.2	53.8	0		50	0	50		
PHF	.417	.600	.417	.688	.000	.000	.417	.417	.600	.700	.000	.813	.625	.000	.417	.500	.788

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E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd AM
Site Code : 99918352
Start Date : 5/1/2018
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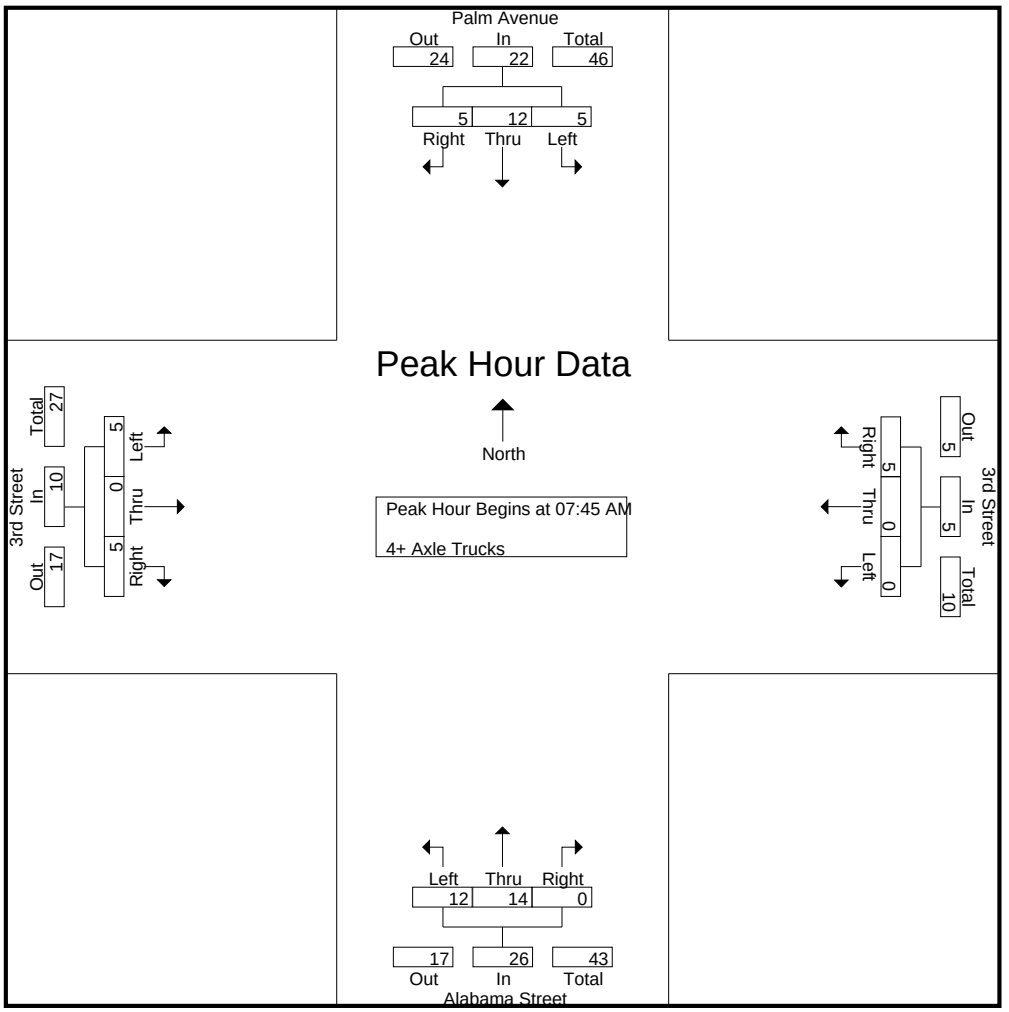

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	1	**5**	0	6	0	0	2	2	2	**5**	0	7	**2**	0	**3**	**5**
+15 mins.	0	1	0	1	0	0	0	0	**5**	3	0	**8**	2	0	1	3
+30 mins.	1	4	**3**	**8**	0	0	0	0	4	4	0	8	0	0	0	0
+45 mins.	**3**	2	2	7	0	0	**3**	**3**	1	2	0	3	1	0	1	2
Total Volume	5	12	5	22	0	0	5	5	12	14	0	26	5	0	5	10
% App. Total	22.7	54.5	22.7		0	0	100		46.2	53.8	0		50	0	50	
PHF	.417	.600	.417	.688	.000	.000	.417	.417	.600	.700	.000	.813	.625	.000	.417	.500

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Site Code : 99918352
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	94	17	113	1	1	5	7	33	189	0	222	78	1	67	146	488
04:15 PM	0	83	28	111	1	4	1	6	38	170	2	210	70	3	64	137	464
04:30 PM	1	86	16	103	2	1	1	4	28	155	3	186	89	5	65	159	452
04:45 PM	3	115	20	138	1	1	4	6	47	189	3	239	96	5	60	161	544
Total	6	378	81	465	5	7	11	23	146	703	8	857	333	14	256	603	1948
05:00 PM	2	81	21	104	3	1	7	11	28	167	2	197	93	6	85	184	496
05:15 PM	0	85	20	105	3	1	3	7	25	185	1	211	125	14	114	253	576
05:30 PM	1	95	14	110	1	0	5	6	44	208	0	252	93	5	75	173	541
05:45 PM	2	98	19	119	1	2	2	5	25	162	0	187	80	0	65	145	456
Total	5	359	74	438	8	4	17	29	122	722	3	847	391	25	339	755	2069
Grand Total	11	737	155	903	13	11	28	52	268	1425	11	1704	724	39	595	1358	4017
Apprch %	1.2	81.6	17.2		25	21.2	53.8		15.7	83.6	0.6		53.3	2.9	43.8		
Total %	0.3	18.3	3.9	22.5	0.3	0.3	0.7	1.3	6.7	35.5	0.3	42.4	18	1	14.8	33.8	
Passenger Vehicles	6	720	135	861	8	11	24	43	223	1395	10	1628	706	36	557	1299	3831
% Passenger Vehicles	54.5	97.7	87.1	95.3	61.5	100	85.7	82.7	83.2	97.9	90.9	95.5	97.5	92.3	93.6	95.7	95.4
Large 2 Axle Vehicles	2	2	5	9	4	0	2	6	5	6	1	12	2	3	5	10	37
% Large 2 Axle Vehicles	18.2	0.3	3.2	1	30.8	0	7.1	11.5	1.9	0.4	9.1	0.7	0.3	7.7	0.8	0.7	0.9
3 Axle Vehicles	3	4	5	12	1	0	1	2	17	4	0	21	3	0	18	21	56
% 3 Axle Vehicles	27.3	0.5	3.2	1.3	7.7	0	3.6	3.8	6.3	0.3	0	1.2	0.4	0	3	1.5	1.4
4+ Axle Trucks	0	11	10	21	0	0	1	1	23	20	0	43	13	0	15	28	93
% 4+ Axle Trucks	0	1.5	6.5	2.3	0	0	3.6	1.9	8.6	1.4	0	2.5	1.8	0	2.5	2.1	2.3

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**3**	**115**	20	**138**	1	**1**	4	6	**47**	189	**3**	239	96	5	60	161	544
05:00 PM	2	81	**21**	104	**3**	1	**7**	**11**	28	167	2	197	93	6	85	184	496
05:15 PM	0	85	20	105	3	1	3	7	25	185	1	211	**125**	**14**	**114**	**253**	**576**
05:30 PM	1	95	14	110	1	0	5	6	44	**208**	0	**252**	93	5	75	173	541
Total Volume	6	376	75	457	8	3	19	30	144	749	6	899	407	30	334	771	2157
% App. Total	1.3	82.3	16.4		26.7	10	63.3		16	83.3	0.7		52.8	3.9	43.3		
PHF	.500	.817	.893	.828	.667	.750	.679	.682	.766	.900	.500	.892	.814	.536	.732	.762	.936

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Site Code : 99918352
Start Date : 5/1/2018
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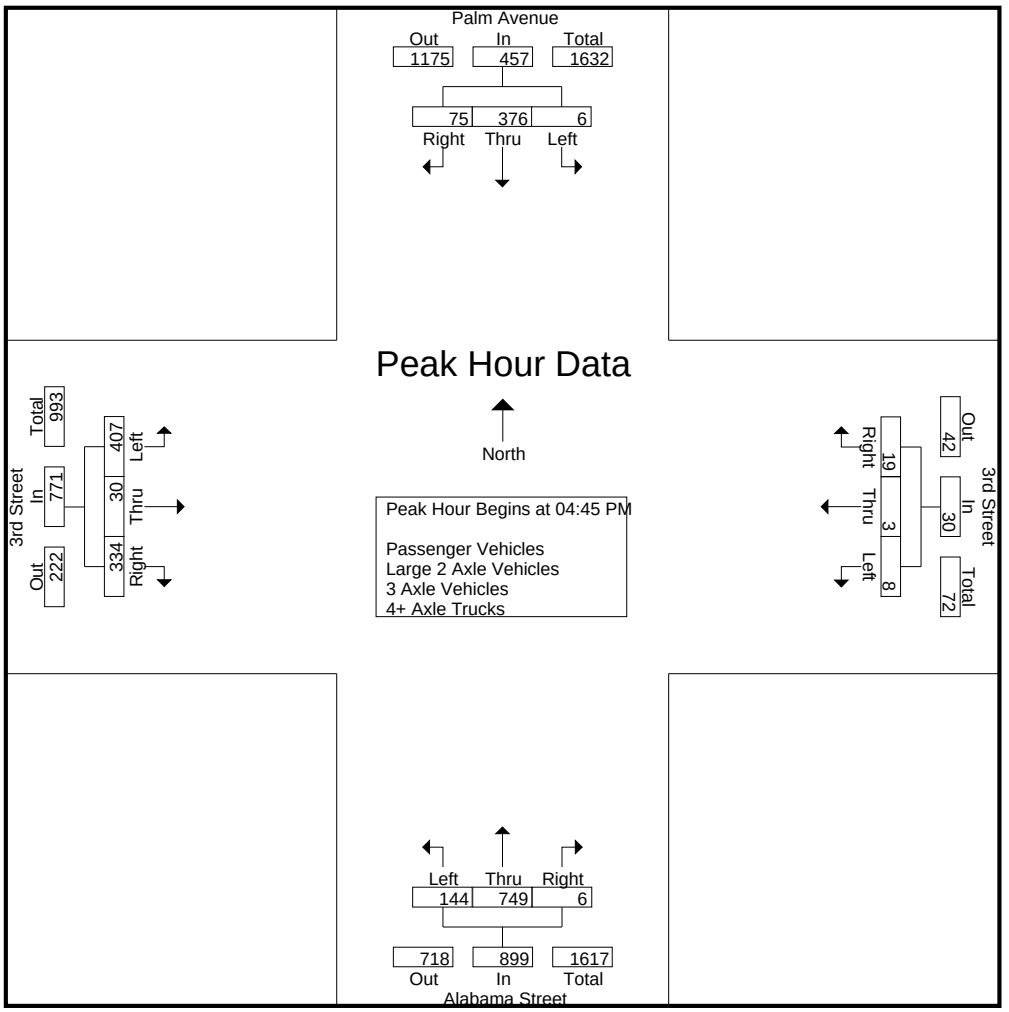

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	2	94	17	113	1	**1**	4	6	**47**	189	**3**	239	96	5	60	161
+15 mins.	0	83	**28**	111	**3**	1	**7**	**11**	28	167	2	197	93	6	85	184
+30 mins.	1	86	16	103	3	1	3	7	25	185	1	211	**125**	**14**	**114**	**253**
+45 mins.	**3**	**115**	20	**138**	1	0	5	6	44	**208**	0	**252**	93	5	75	173
Total Volume	6	378	81	465	8	3	19	30	144	749	6	899	407	30	334	771
% App. Total	1.3	81.3	17.4		26.7	10	63.3		16	83.3	0.7		52.8	3.9	43.3	
PHF	.500	.822	.723	.842	.667	.750	.679	.682	.766	.900	.500	.892	.814	.536	.732	.762

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Groups Printed- Passenger Vehicles

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	93	13	107	0	1	4	5	29	185	0	214	75	0	63	138	464
04:15 PM	0	81	24	105	0	4	1	5	35	165	2	202	68	3	60	131	443
04:30 PM	1	82	12	95	0	1	1	2	23	148	2	173	86	5	63	154	424
04:45 PM	1	111	20	132	1	1	3	5	40	186	3	229	93	5	55	153	519
Total	3	367	69	439	1	7	9	17	127	684	7	818	322	13	241	576	1850
05:00 PM	0	80	19	99	3	1	6	10	21	163	2	186	92	5	79	176	471
05:15 PM	0	84	18	102	3	1	2	6	20	181	1	202	123	14	107	244	554
05:30 PM	1	93	13	107	0	0	5	5	35	207	0	242	92	4	74	170	524
05:45 PM	2	96	16	114	1	2	2	5	20	160	0	180	77	0	56	133	432
Total	3	353	66	422	7	4	15	26	96	711	3	810	384	23	316	723	1981
Grand Total	6	720	135	861	8	11	24	43	223	1395	10	1628	706	36	557	1299	3831
Apprch %	0.7	83.6	15.7		18.6	25.6	55.8		13.7	85.7	0.6		54.3	2.8	42.9		
Total %	0.2	18.8	3.5	22.5	0.2	0.3	0.6	1.1	5.8	36.4	0.3	42.5	18.4	0.9	14.5	33.9	

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	**111**	**20**	**132**	1	**1**	3	5	**40**	186	**3**	229	93	5	55	153	519
05:00 PM	0	80	19	99	**3**	1	**6**	**10**	21	163	2	186	92	5	79	176	471
05:15 PM	0	84	18	102	3	1	2	6	20	181	1	202	**123**	**14**	**107**	**244**	**554**
05:30 PM	1	93	13	107	0	0	5	5	35	**207**	0	**242**	92	4	74	170	524
Total Volume	2	368	70	440	7	3	16	26	116	737	6	859	400	28	315	743	2068
% App. Total	0.5	83.6	15.9		26.9	11.5	61.5		13.5	85.8	0.7		53.8	3.8	42.4		
PHF	.500	.829	.875	.833	.583	.750	.667	.650	.725	.890	.500	.887	.813	.500	.736	.761	.933

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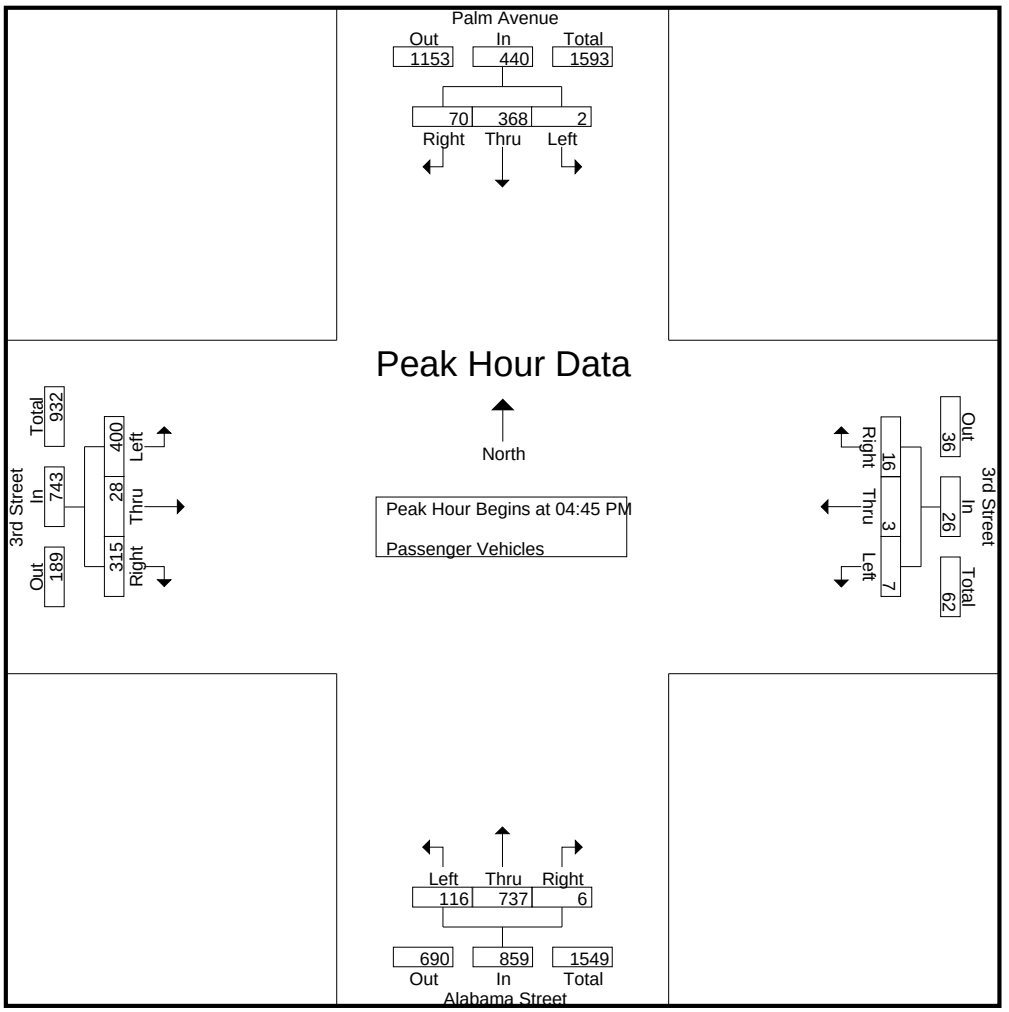

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	**111**	**20**	**132**	1	**1**	3	5	**40**	186	**3**	229	93	5	55	153
+15 mins.	0	80	19	99	**3**	1	**6**	**10**	21	163	2	186	92	5	79	176
+30 mins.	0	84	18	102	3	1	2	6	20	181	1	202	**123**	**14**	**107**	**244**
+45 mins.	1	93	13	107	0	0	5	5	35	**207**	0	**242**	92	4	74	170
Total Volume	2	368	70	440	7	3	16	26	116	737	6	859	400	28	315	743
% App. Total	0.5	83.6	15.9		26.9	11.5	61.5		13.5	85.8	0.7		53.8	3.8	42.4	
PHF	.500	.829	.875	.833	.583	.750	.667	.650	.725	.890	.500	.887	.813	.500	.736	.761

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E/W: 3rd Street
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File Name : 08_HLD_Palm_Alabama_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	1	2	1	0	0	1	0	0	0	0	0	1	0	1	4
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
04:30 PM	0	1	1	2	2	0	0	2	1	2	1	4	0	0	1	1	9
04:45 PM	1	0	0	1	0	0	1	1	1	0	0	1	0	0	0	0	3
Total	2	1	3	6	3	0	1	4	2	2	1	5	1	1	1	3	18
05:00 PM	0	0	0	0	0	0	0	0	1	2	0	3	0	1	1	2	5
05:15 PM	0	0	1	1	0	0	1	1	1	1	0	2	1	0	1	2	6
05:30 PM	0	0	0	0	1	0	0	1	1	0	0	1	0	1	1	2	4
05:45 PM	0	1	1	2	0	0	0	0	0	1	0	1	0	0	1	1	4
Total	0	1	2	3	1	0	1	2	3	4	0	7	1	2	4	7	19
Grand Total	2	2	5	9	4	0	2	6	5	6	1	12	2	3	5	10	37
Apprch %	22.2	22.2	55.6		66.7	0	33.3		41.7	50	8.3		20	30	50		
Total %	5.4	5.4	13.5	24.3	10.8	0	5.4	16.2	13.5	16.2	2.7	32.4	5.4	8.1	13.5	27	

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	0	0	**1**	0	0	**1**	**1**	**1**	0	0	1	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	1	**2**	0	**3**	0	**1**	**1**	**2**	5
05:15 PM	0	0	**1**	1	0	0	1	1	1	1	0	2	**1**	0	1	2	**6**
05:30 PM	0	0	0	0	**1**	0	0	1	1	0	0	1	0	1	1	2	4
Total Volume	1	0	1	2	1	0	2	3	4	3	0	7	1	2	3	6	18
% App. Total	50	0	50		33.3	0	66.7		57.1	42.9	0		16.7	33.3	50		
PHF	.250	.000	.250	.500	.250	.000	.500	.750	1.00	.375	.000	.583	.250	.500	.750	.750	.750

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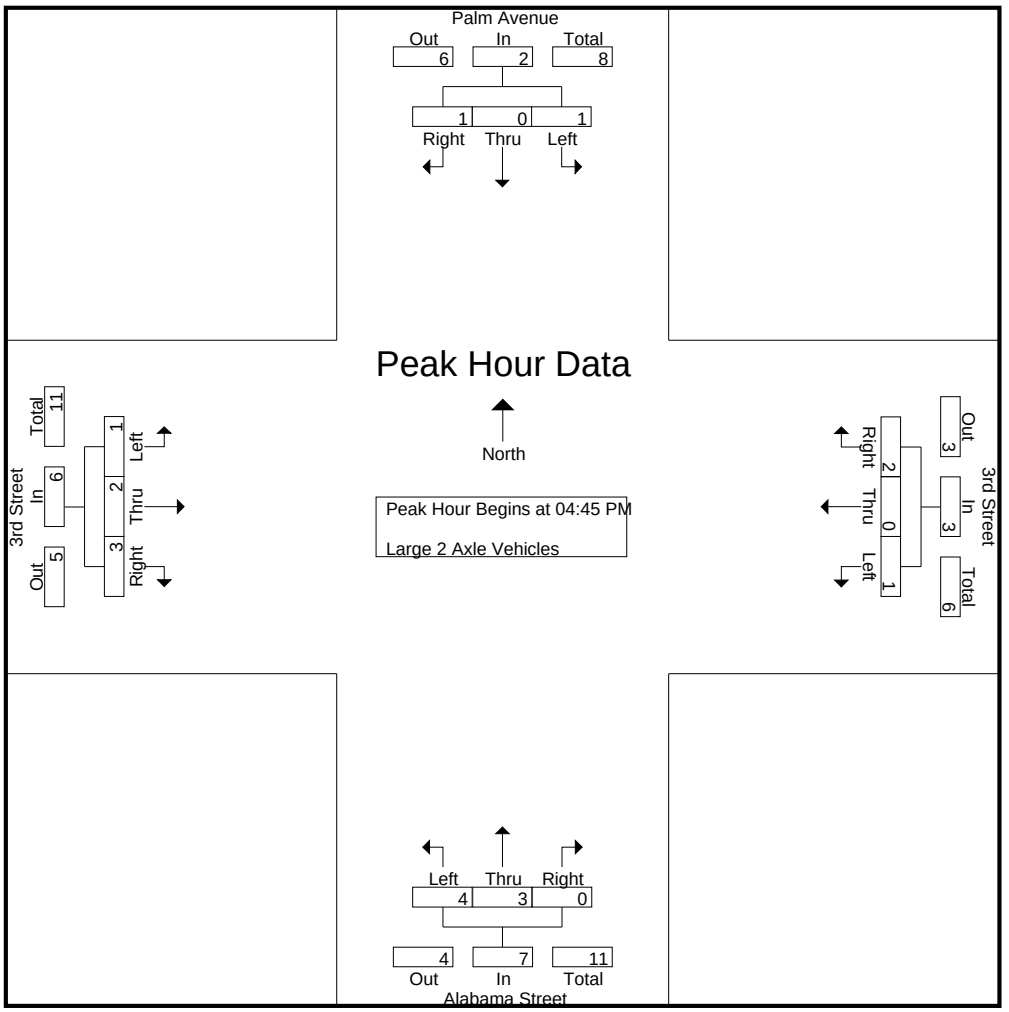

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	0	0	**1**	0	0	**1**	**1**	**1**	0	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	1	**2**	0	**3**	0	**1**	**1**	**2**
+30 mins.	0	0	**1**	1	0	0	1	1	1	1	0	2	**1**	0	1	2
+45 mins.	0	0	0	0	**1**	0	0	1	1	0	0	1	0	1	1	2
Total Volume	1	0	1	2	1	0	2	3	4	3	0	7	1	2	3	6
% App. Total	50	0	50		33.3	0	66.7		57.1	42.9	0		16.7	33.3	50	
PHF	.250	.000	.250	.500	.250	.000	.500	.750	1.000	.375	.000	.583	.250	.500	.750	.750

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Groups Printed- 3 Axle Vehicles

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	3	3	0	0	0	0	3	0	0	3	0	0	1	1	7
04:15 PM	0	0	1	1	1	0	0	1	3	1	0	4	0	0	2	2	8
04:30 PM	0	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0	4
04:45 PM	1	1	0	2	0	0	0	0	1	0	0	1	1	0	2	3	6
Total	1	3	4	8	1	0	0	1	8	2	0	10	1	0	5	6	25
05:00 PM	2	1	0	3	0	0	1	1	2	1	0	3	1	0	3	4	11
05:15 PM	0	0	1	1	0	0	0	0	2	1	0	3	0	0	5	5	9
05:30 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	5	6	7
Total	2	1	1	4	0	0	1	1	9	2	0	11	2	0	13	15	31
Grand Total	3	4	5	12	1	0	1	2	17	4	0	21	3	0	18	21	56
Apprch %	25	33.3	41.7		50	0	50		81	19	0		14.3	0	85.7		
Total %	5.4	7.1	8.9	21.4	1.8	0	1.8	3.6	30.4	7.1	0	37.5	5.4	0	32.1	37.5	

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	**1**	0	2	0	0	0	0	1	0	0	1	**1**	0	2	3	6
05:00 PM	**2**	1	0	**3**	0	0	**1**	**1**	2	**1**	0	3	1	0	3	4	**11**
05:15 PM	0	0	**1**	1	0	0	0	0	2	1	0	3	0	0	**5**	**5**	9
05:30 PM	0	0	0	0	0	0	0	0	**4**	0	0	**4**	0	0	0	0	4
Total Volume	3	2	1	6	0	0	1	1	9	2	0	11	2	0	10	12	30
% App. Total	50	33.3	16.7		0	0	100		81.8	18.2	0		16.7	0	83.3		
PHF	.375	.500	.250	.500	.000	.000	.250	.250	.563	.500	.000	.688	.500	.000	.500	.600	.682

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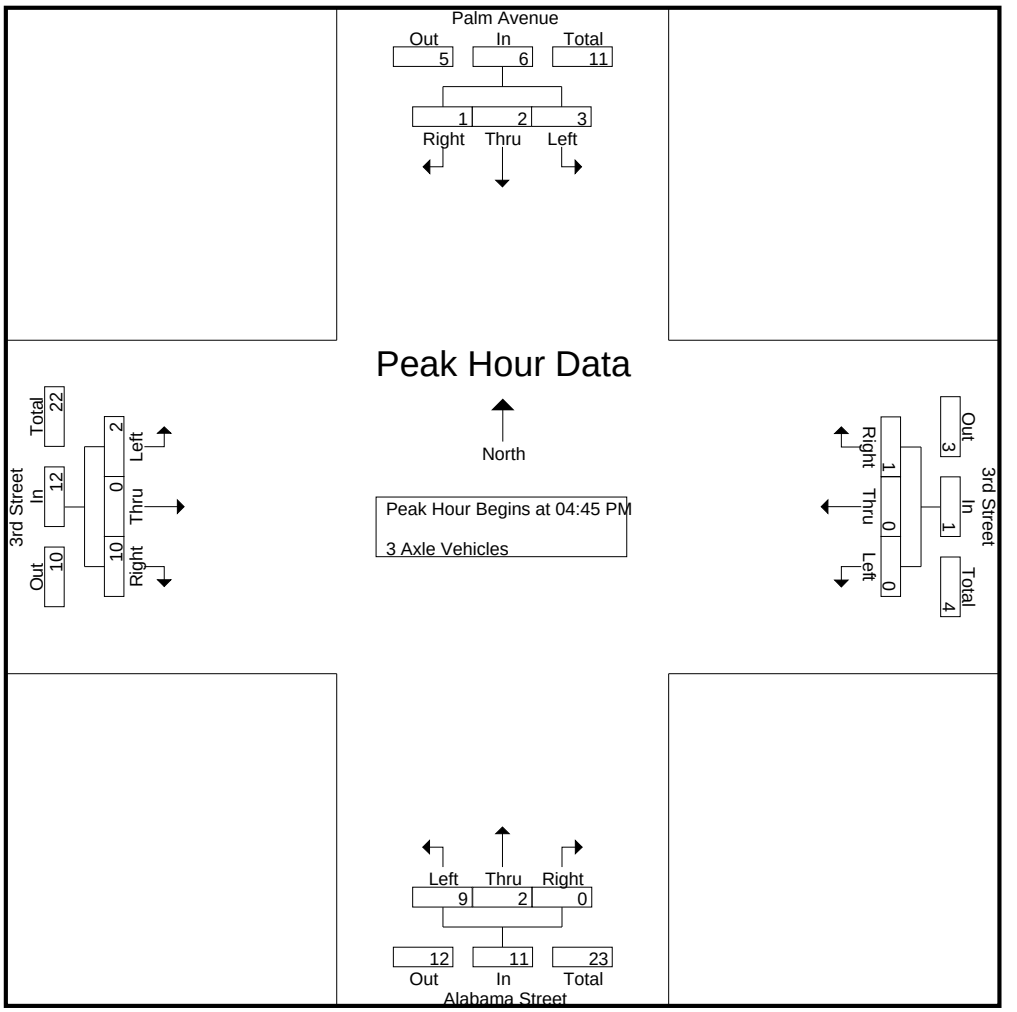
City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 2



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	1	**1**	0	2	0	0	0	0	1	0	0	1	**1**	0	2	3
+15 mins.	**2**	1	0	**3**	0	0	**1**	**1**	2	**1**	0	3	1	0	3	4
+30 mins.	0	0	**1**	1	0	0	0	0	2	1	0	3	0	0	**5**	**5**
+45 mins.	0	0	0	0	0	0	0	0	**4**	0	0	**4**	0	0	0	0
Total Volume	3	2	1	6	0	0	1	1	9	2	0	11	2	0	10	12
% App. Total	50	33.3	16.7		0	0	100		81.8	18.2	0		16.7	0	83.3	
PHF	.375	.500	.250	.500	.000	.000	.250	.250	.563	.500	.000	.688	.500	.000	.500	.600

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City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd PM
Site Code : 99918352
Start Date : 5/1/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	1	1	1	4	0	5	3	0	3	6	13
04:15 PM	0	2	2	4	0	0	0	0	0	4	0	4	1	0	2	3	11
04:30 PM	0	1	3	4	0	0	0	0	3	4	0	7	3	0	1	4	15
04:45 PM	0	3	0	3	0	0	0	0	5	3	0	8	2	0	3	5	16
Total	0	7	5	12	0	0	1	1	9	15	0	24	9	0	9	18	55
05:00 PM	0	0	2	2	0	0	0	0	4	1	0	5	0	0	2	2	9
05:15 PM	0	1	0	1	0	0	0	0	2	2	0	4	1	0	1	2	7
05:30 PM	0	2	1	3	0	0	0	0	4	1	0	5	1	0	0	1	9
05:45 PM	0	1	2	3	0	0	0	0	4	1	0	5	2	0	3	5	13
Total	0	4	5	9	0	0	0	0	14	5	0	19	4	0	6	10	38
Grand Total	0	11	10	21	0	0	1	1	23	20	0	43	13	0	15	28	93
Apprch %	0	52.4	47.6		0	0	100		53.5	46.5	0		46.4	0	53.6		
Total %	0	11.8	10.8	22.6	0	0	1.1	1.1	24.7	21.5	0	46.2	14	0	16.1	30.1	

	Palm Avenue Southbound				3rd Street Westbound				Alabama Street Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**3**	0	**3**	0	0	0	0	**5**	**3**	0	**8**	**2**	0	**3**	**5**	**16**
05:00 PM	0	0	**2**	2	0	0	0	0	4	1	0	5	0	0	2	2	9
05:15 PM	0	1	0	1	0	0	0	0	2	2	0	4	1	0	1	2	7
05:30 PM	0	2	1	3	0	0	0	0	4	1	0	5	1	0	0	1	9
Total Volume	0	6	3	9	0	0	0	0	15	7	0	22	4	0	6	10	41
% App. Total	0	66.7	33.3		0	0	0		68.2	31.8	0		40	0	60		
PHF	.000	.500	.375	.750	.000	.000	.000	.000	.750	.583	.000	.688	.500	.000	.500	.500	.641

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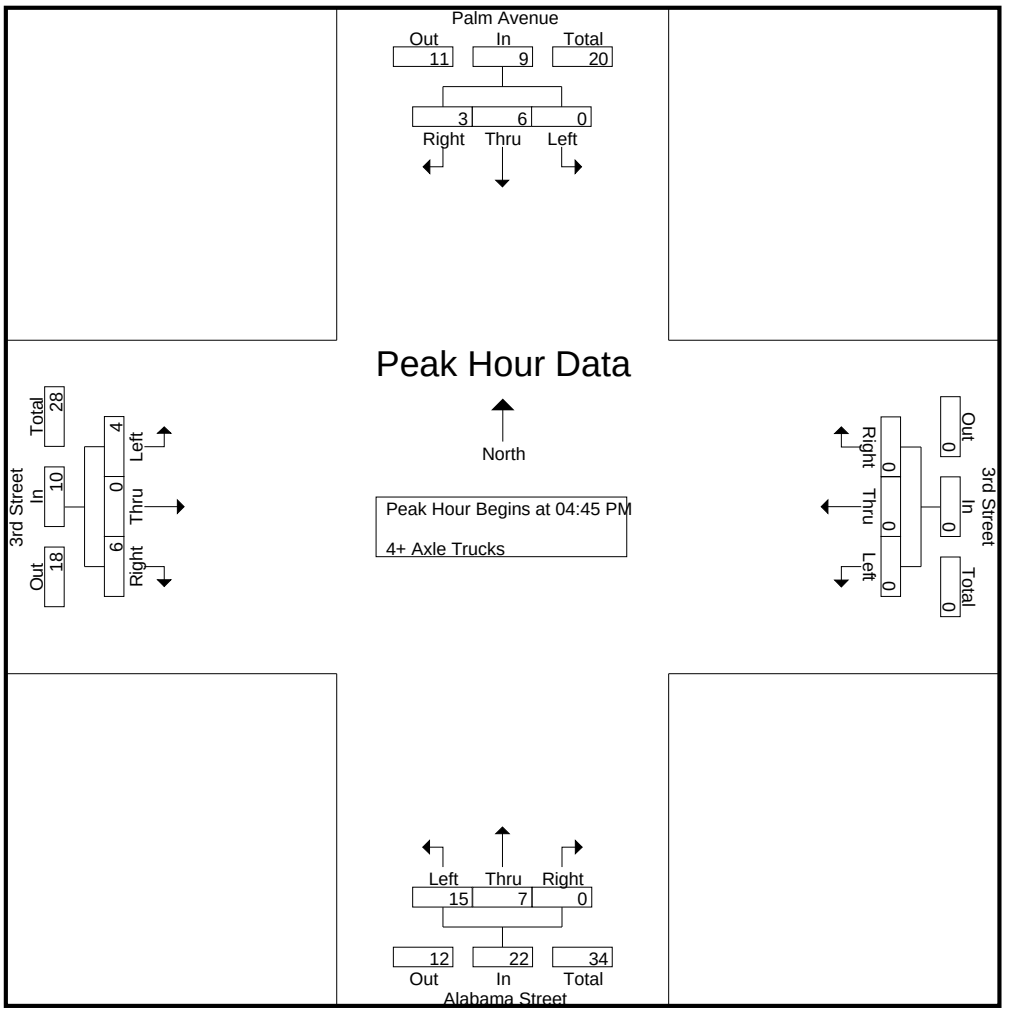
City of Highland
N/S: Palm Avenue/Alabama Street
E/W: 3rd Street
Weather: Clear

File Name : 08_HLD_Palm_Alabama_3rd PM
Site Code : 99918352
Start Date : 5/1/2018



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

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**3**	0	**3**	0	0	0	0	**5**	**3**	0	**8**	**2**	0	**3**	**5**
+15 mins.	0	0	**2**	2	0	0	0	0	4	1	0	5	0	0	2	2
+30 mins.	0	1	0	1	0	0	0	0	2	2	0	4	1	0	1	2
+45 mins.	0	2	1	3	0	0	0	0	4	1	0	5	1	0	0	1
Total Volume	0	6	3	9	0	0	0	0	15	7	0	22	4	0	6	10
% App. Total	0	66.7	33.3		0	0	0		68.2	31.8	0		40	0	60	
PHF	.000	.500	.375	.750	.000	.000	.000	.000	.750	.583	.000	.688	.500	.000	.500	.500

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

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

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:00 AM	75	2	77	8	47	55	13	9	22	154
06:15 AM	86	7	93	8	33	41	5	14	19	153
06:30 AM	121	5	126	9	54	63	2	16	18	207
06:45 AM	183	8	191	17	89	106	12	28	40	337
Total	465	22	487	42	223	265	32	67	99	851
07:00 AM	141	10	151	16	95	111	19	21	40	302
07:15 AM	186	13	199	19	118	137	28	28	56	392
07:30 AM	167	28	195	16	95	111	17	19	36	342
07:45 AM	180	24	204	14	102	116	18	22	40	360
Total	674	75	749	65	410	475	82	90	172	1396
08:00 AM	124	15	139	15	113	128	21	17	38	305
08:15 AM	120	11	131	9	94	103	13	10	23	257
08:30 AM	119	21	140	12	82	94	18	12	30	264
08:45 AM	134	14	148	9	109	118	8	17	25	291
Total	497	61	558	45	398	443	60	56	116	1117
Grand Total	1636	158	1794	152	1031	1183	174	213	387	3364
Apprch %	91.2	8.8		12.8	87.2		45	55		
Total %	48.6	4.7	53.3	4.5	30.6	35.2	5.2	6.3	11.5	
Passenger Vehicles	1565	154	1719	145	975	1120	168	203	371	3210
% Passenger Vehicles	95.7	97.5	95.8	95.4	94.6	94.7	96.6	95.3	95.9	95.4
Large 2 Axle Vehicles	31	4	35	0	35	35	5	3	8	78
% Large 2 Axle Vehicles										
3 Axle Vehicles	12	0	12	0	7	7	1	3	4	23
% 3 Axle Vehicles	0.7	0	0.7	0	0.7	0.6	0.6	1.4	1	0.7
4+ Axle Trucks	28	0	28	7	14	21	0	4	4	53
% 4+ Axle Trucks	1.7	0	1.6	4.6	1.4	1.8	0	1.9	1	1.6

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**186**	13	199	**19**	**118**	**137**	**28**	**28**	**56**	**392**
07:30 AM	167	**28**	195	16	95	111	17	19	36	342
07:45 AM	180	24	**204**	14	102	116	18	22	40	360
08:00 AM	124	15	139	15	113	128	21	17	38	305
Total Volume	657	80	737	64	428	492	84	86	170	1399
% App. Total	89.1	10.9		13	87		49.4	50.6		
PHF	.883	.714	.903	.842	.907	.898	.750	.768	.759	.892

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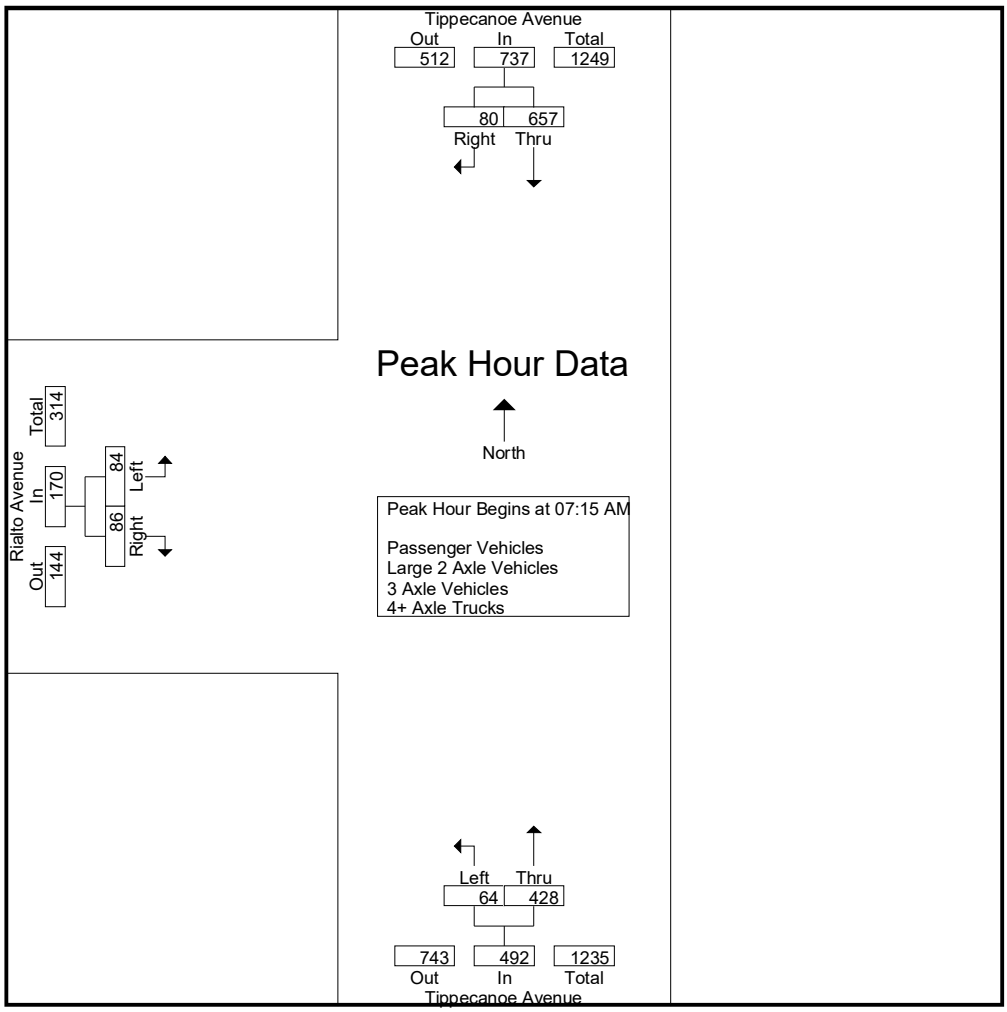
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:15 AM			06:45 AM		
+0 mins.	141	10	151	**19**	**118**	**137**	12	**28**	40
+15 mins.	**186**	13	199	16	95	111	19	21	40
+30 mins.	167	**28**	195	14	102	116	**28**	28	**56**
+45 mins.	180	24	**204**	15	113	128	17	19	36
Total Volume	674	75	749	64	428	492	76	96	172
% App. Total	90	10		13	87		44.2	55.8	
PHF	.906	.670	.918	.842	.907	.898	.679	.857	.768

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:00 AM	70	2	72	8	43	51	12	9	21	144
06:15 AM	83	7	90	8	32	40	4	13	17	147
06:30 AM	117	5	122	9	50	59	2	16	18	199
06:45 AM	178	6	184	14	83	97	11	27	38	319
Total	448	20	468	39	208	247	29	65	94	809
07:00 AM	137	10	147	15	91	106	19	21	40	293
07:15 AM	179	13	192	19	115	134	28	26	54	380
07:30 AM	164	28	192	16	90	106	17	18	35	333
07:45 AM	174	24	198	13	100	113	17	22	39	350
Total	654	75	729	63	396	459	81	87	168	1356
08:00 AM	118	14	132	15	106	121	21	15	36	289
08:15 AM	113	10	123	9	82	91	13	10	23	237
08:30 AM	110	21	131	10	79	89	16	12	28	248
08:45 AM	122	14	136	9	104	113	8	14	22	271
Total	463	59	522	43	371	414	58	51	109	1045
Grand Total	1565	154	1719	145	975	1120	168	203	371	3210
Apprch %	91	9		12.9	87.1		45.3	54.7		
Total %	48.8	4.8	53.6	4.5	30.4	34.9	5.2	6.3	11.6	

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**179**	13	192	**19**	**115**	**134**	**28**	**26**	**54**	**380**
07:30 AM	164	**28**	192	16	90	106	17	18	35	333
07:45 AM	174	24	**198**	13	100	113	17	22	39	350
08:00 AM	118	14	132	15	106	121	21	15	36	289
Total Volume	635	79	714	63	411	474	83	81	164	1352
% App. Total	88.9	11.1		13.3	86.7		50.6	49.4		
PHF	.887	.705	.902	.829	.893	.884	.741	.779	.759	.889

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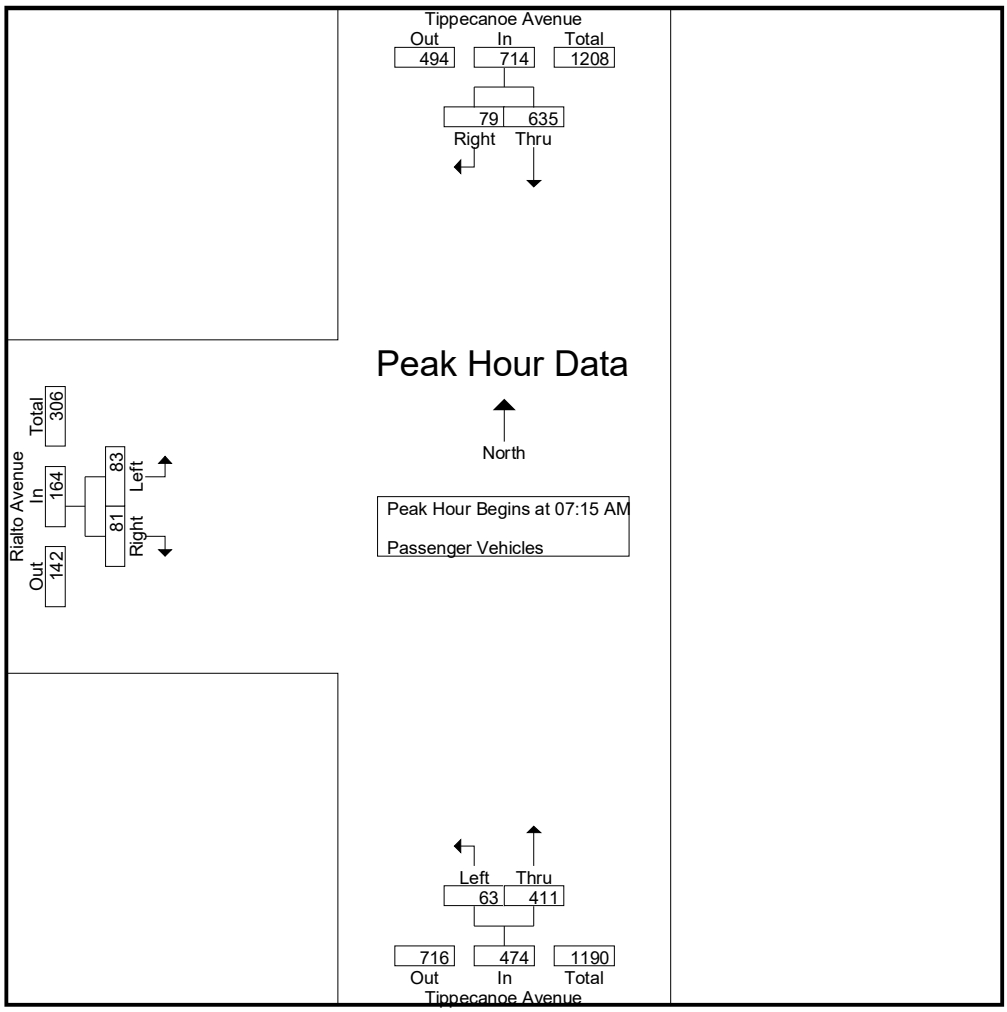
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	**179**	13	192	**19**	**115**	**134**	**28**	**26**	**54**
+15 mins.	164	**28**	192	16	90	106	17	18	35
+30 mins.	174	24	**198**	13	100	113	17	22	39
+45 mins.	118	14	132	15	106	121	21	15	36
Total Volume	635	79	714	63	411	474	83	81	164
% App. Total	88.9	11.1		13.3	86.7		50.6	49.4	
PHF	.887	.705	.902	.829	.893	.884	.741	.779	.759

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018

Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:00 AM	1	0	1	0	2	2	1	0	1	4
06:15 AM	1	0	1	0	1	1	0	0	0	2
06:30 AM	2	0	2	0	3	3	0	0	0	5
06:45 AM	2	2	4	0	5	5	1	0	1	10
Total	6	2	8	0	11	11	2	0	2	21
07:00 AM	1	0	1	0	3	3	0	0	0	4
07:15 AM	3	0	3	0	2	2	0	0	0	5
07:30 AM	1	0	1	0	1	1	0	1	1	3
07:45 AM	2	0	2	0	2	2	1	0	1	5
Total	7	0	7	0	8	8	1	1	2	17
08:00 AM	2	1	3	0	5	5	0	1	1	9
08:15 AM	4	1	5	0	8	8	0	0	0	13
08:30 AM	5	0	5	0	2	2	2	0	2	9
08:45 AM	7	0	7	0	1	1	0	1	1	9
Total	18	2	20	0	16	16	2	2	4	40
Grand Total	31	4	35	0	35	35	5	3	8	78
Apprch %	88.6	11.4		0	100		62.5	37.5		
Total %	39.7	5.1	44.9	0	44.9	44.9	6.4	3.8	10.3	

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**3**	0	**3**	0	2	2	0	0	0	5
07:30 AM	1	0	1	0	1	1	0	**1**	**1**	3
07:45 AM	2	0	2	0	2	2	**1**	0	1	5
08:00 AM	2	**1**	3	0	**5**	**5**	0	1	1	**9**
Total Volume	8	1	9	0	10	10	1	2	3	22
% App. Total	88.9	11.1		0	100		33.3	66.7		
PHF	.667	.250	.750	.000	.500	.500	.250	.500	.750	.611

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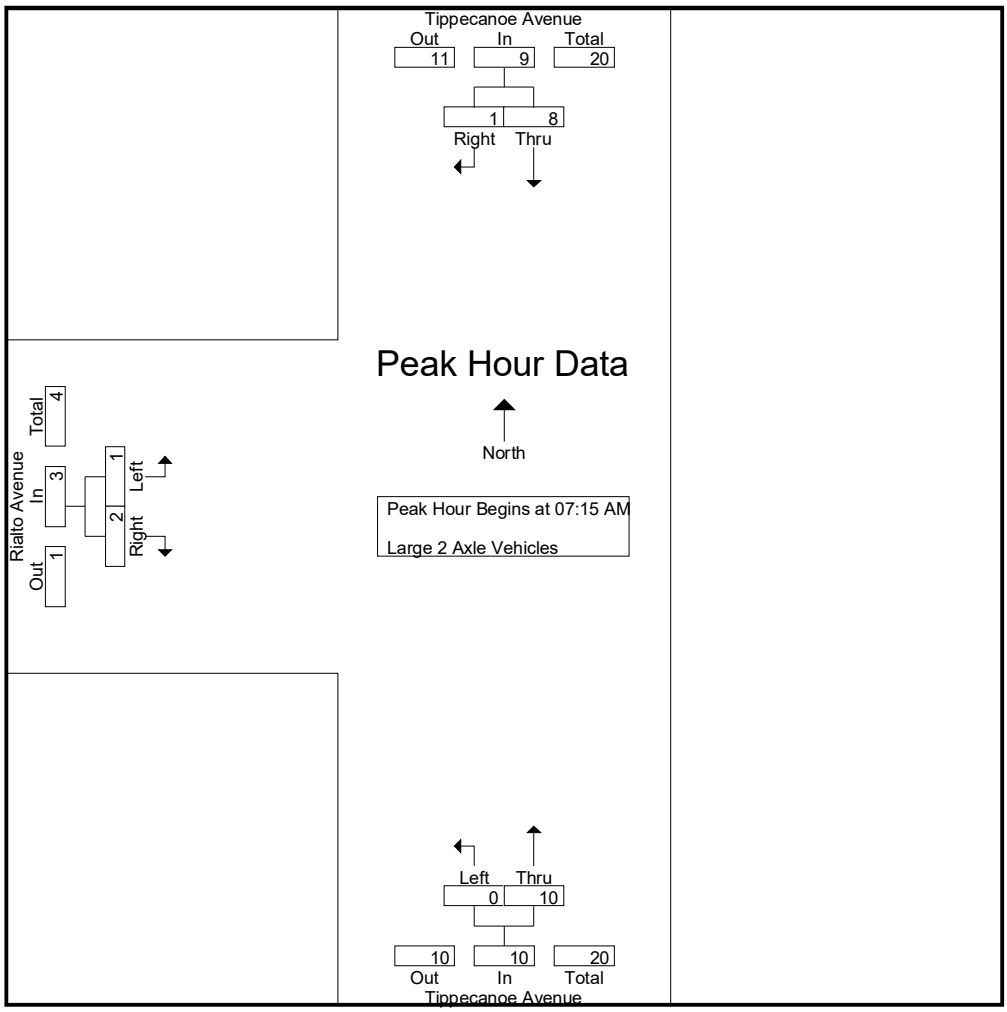
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	**3**	0	**3**	0	2	2	0	0	0
+15 mins.	1	0	1	0	1	1	0	**1**	**1**
+30 mins.	2	0	2	0	2	2	**1**	0	1
+45 mins.	2	**1**	3	0	**5**	**5**	0	1	1
Total Volume	8	1	9	0	10	10	1	2	3
% App. Total	88.9	11.1		0	100		33.3	66.7	
PHF	.667	.250	.750	.000	.500	.500	.250	.500	.750

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:00 AM	1	0	1	0	0	0	0	0	0	1
06:15 AM	2	0	2	0	0	0	1	0	1	3
06:30 AM	0	0	0	0	1	1	0	0	0	1
06:45 AM	1	0	1	0	0	0	0	0	0	1
Total	4	0	4	0	1	1	1	0	1	6
07:00 AM	1	0	1	0	0	0	0	0	0	1
07:15 AM	2	0	2	0	0	0	0	1	1	3
07:30 AM	0	0	0	0	1	1	0	0	0	1
07:45 AM	1	0	1	0	0	0	0	0	0	1
Total	4	0	4	0	1	1	0	1	1	6
08:00 AM	0	0	0	0	2	2	0	0	0	2
08:15 AM	1	0	1	0	2	2	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	3	0	3	0	1	1	0	2	2	6
Total	4	0	4	0	5	5	0	2	2	11
Grand Total	12	0	12	0	7	7	1	3	4	23
Apprch %	100	0		0	100		25	75		
Total %	52.2	0	52.2	0	30.4	30.4	4.3	13	17.4	

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**2**	0	**2**	0	0	0	0	**1**	**1**	**3**
07:30 AM	0	0	0	0	1	1	0	0	0	1
07:45 AM	1	0	1	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	**2**	**2**	0	0	0	2
Total Volume	3	0	3	0	3	3	0	1	1	7
% App. Total	100	0		0	100		0	100		
PHF	.375	.000	.375	.000	.375	.375	.000	.250	.250	.583

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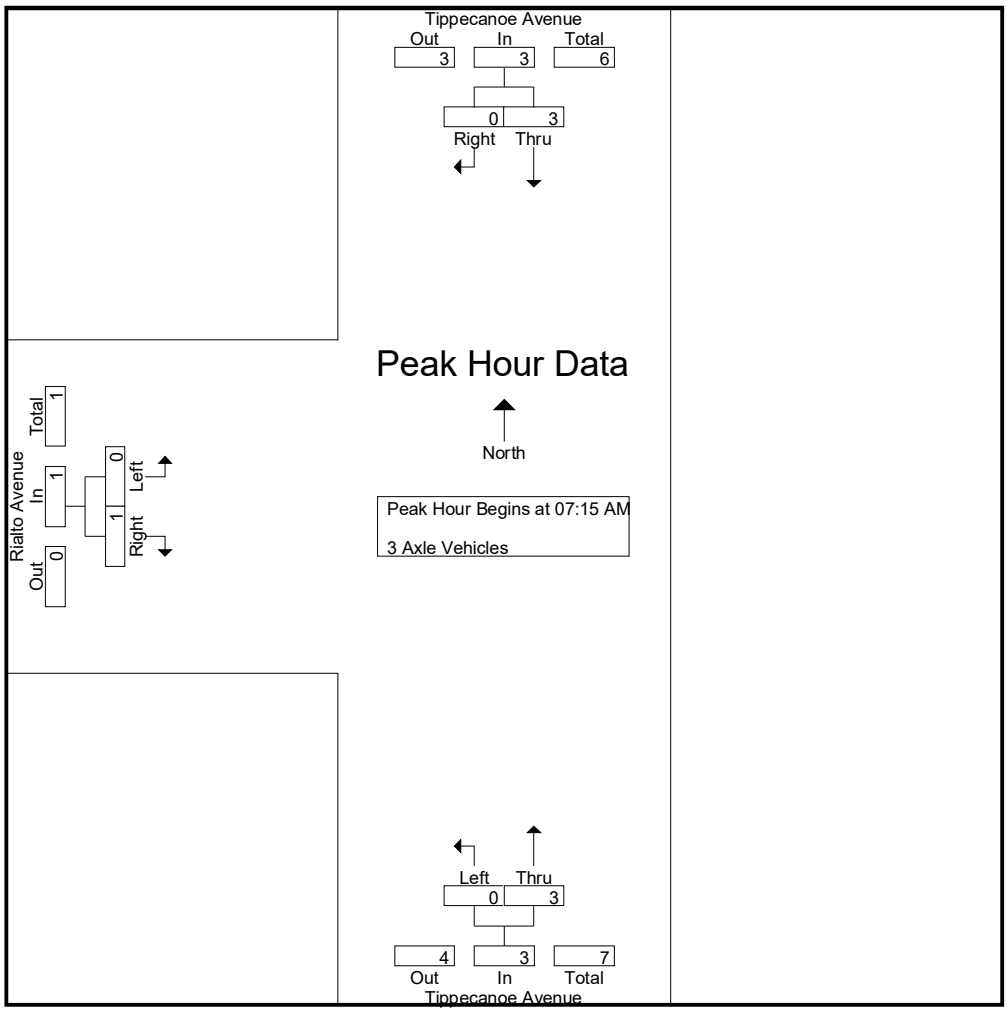
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	**2**	0	**2**	0	0	0	0	**1**	**1**
+15 mins.	0	0	0	0	1	1	0	0	0
+30 mins.	1	0	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	**2**	**2**	0	0	0
Total Volume	3	0	3	0	3	3	0	1	1
% App. Total	100	0		0	100		0	100	
PHF	.375	.000	.375	.000	.375	.375	.000	.250	.250

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
06:00 AM	3	0	3	0	2	2	0	0	0	5
06:15 AM	0	0	0	0	0	0	0	1	1	1
06:30 AM	2	0	2	0	0	0	0	0	0	2
06:45 AM	2	0	2	3	1	4	0	1	1	7
Total	7	0	7	3	3	6	0	2	2	15
07:00 AM	2	0	2	1	1	2	0	0	0	4
07:15 AM	2	0	2	0	1	1	0	1	1	4
07:30 AM	2	0	2	0	3	3	0	0	0	5
07:45 AM	3	0	3	1	0	1	0	0	0	4
Total	9	0	9	2	5	7	0	1	1	17
08:00 AM	4	0	4	0	0	0	0	1	1	5
08:15 AM	2	0	2	0	2	2	0	0	0	4
08:30 AM	4	0	4	2	1	3	0	0	0	7
08:45 AM	2	0	2	0	3	3	0	0	0	5
Total	12	0	12	2	6	8	0	1	1	21
Grand Total	28	0	28	7	14	21	0	4	4	53
Apprch %	100	0		33.3	66.7		0	100		
Total %	52.8	0	52.8	13.2	26.4	39.6	0	7.5	7.5	

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	2	0	2	0	1	1	0	**1**	**1**	4
07:30 AM	2	0	2	0	**3**	**3**	0	0	0	**5**
07:45 AM	3	0	3	**1**	0	1	0	0	0	4
08:00 AM	**4**	0	**4**	0	0	0	0	1	1	5
Total Volume	11	0	11	1	4	5	0	2	2	18
% App. Total	100	0		20	80		0	100		
PHF	.688	.000	.688	.250	.333	.417	.000	.500	.500	.900

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto AM
Site Code : 99918385
Start Date : 5/16/2018
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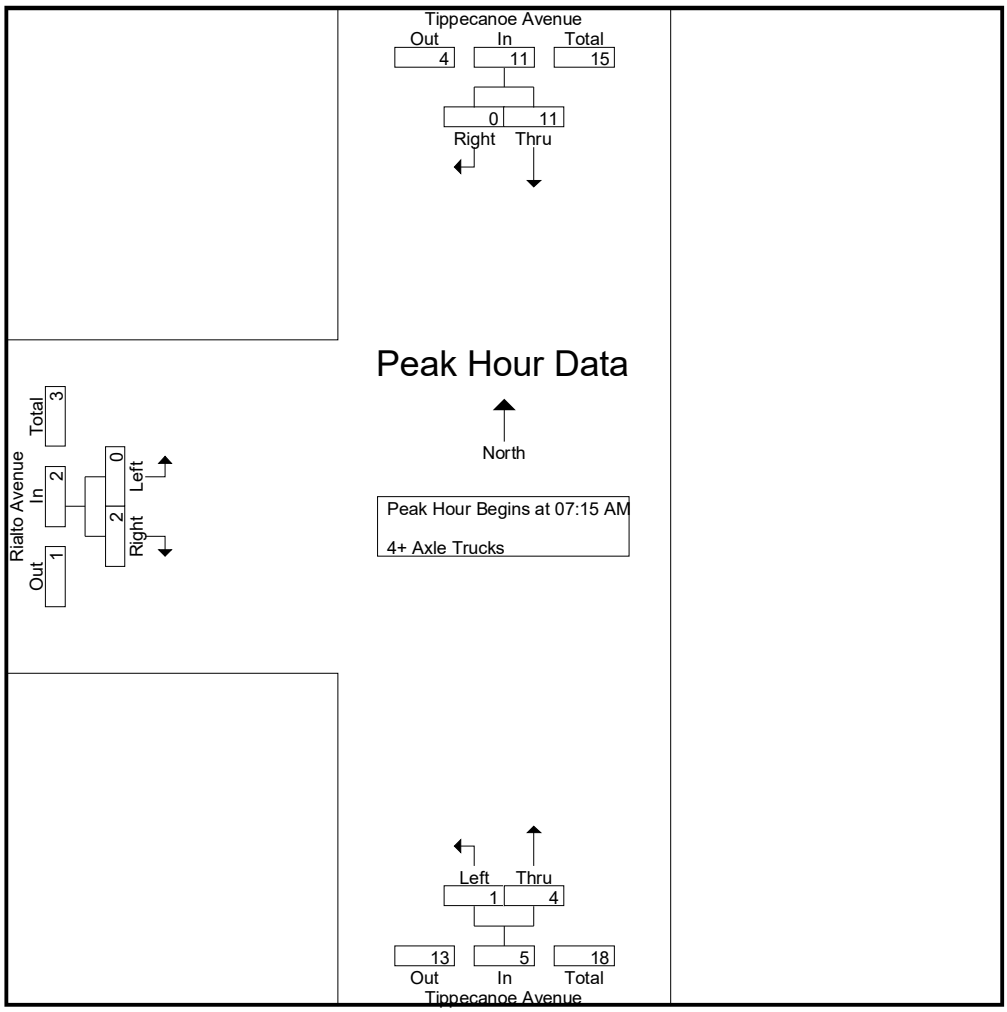

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	2	0	2	0	1	1	0	**1**	**1**
+15 mins.	2	0	2	0	**3**	**3**	0	0	0
+30 mins.	3	0	3	**1**	0	1	0	0	0
+45 mins.	**4**	0	**4**	0	0	0	0	1	1
Total Volume	11	0	11	1	4	5	0	2	2
% App. Total	100	0		20	80		0	100	
PHF	.688	.000	.688	.250	.333	.417	.000	.500	.500

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

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

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	101	13	114	18	220	238	16	20	36	388
03:15 PM	113	23	136	12	183	195	15	12	27	358
03:30 PM	148	11	159	20	242	262	24	16	40	461
03:45 PM	181	16	197	18	240	258	24	9	33	488
Total	543	63	606	68	885	953	79	57	136	1695
04:00 PM	123	15	138	26	219	245	30	8	38	421
04:15 PM	146	17	163	19	232	251	33	17	50	464
04:30 PM	129	15	144	22	203	225	30	25	55	424
04:45 PM	122	15	137	14	215	229	22	16	38	404
Total	520	62	582	81	869	950	115	66	181	1713
05:00 PM	117	13	130	26	237	263	32	21	53	446
05:15 PM	124	15	139	18	230	248	18	14	32	419
05:30 PM	140	17	157	13	223	236	33	13	46	439
05:45 PM	130	7	137	11	200	211	30	8	38	386
Total	511	52	563	68	890	958	113	56	169	1690
Grand Total	1574	177	1751	217	2644	2861	307	179	486	5098
Apprch %	89.9	10.1		7.6	92.4		63.2	36.8		
Total %	30.9	3.5	34.3	4.3	51.9	56.1	6	3.5	9.5	
Passenger Vehicles	1504	177	1681	203	2566	2769	305	172	477	4927
% Passenger Vehicles	95.6	100	96	93.5	97	96.8	99.3	96.1	98.1	96.6
Large 2 Axle Vehicles	28	0	28	5	38	43	2	3	5	76
% Large 2 Axle Vehicles										
3 Axle Vehicles	18	0	18	3	14	17	0	1	1	36
% 3 Axle Vehicles	1.1	0	1	1.4	0.5	0.6	0	0.6	0.2	0.7
4+ Axle Trucks	24	0	24	6	26	32	0	3	3	59
% 4+ Axle Trucks	1.5	0	1.4	2.8	1	1.1	0	1.7	0.6	1.2

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	148	11	159	20	**242**	**262**	24	16	40	461
03:45 PM	**181**	16	**197**	18	240	258	24	9	33	**488**
04:00 PM	123	15	138	**26**	219	245	30	8	38	421
04:15 PM	146	**17**	163	19	232	251	**33**	**17**	**50**	464
Total Volume	598	59	657	83	933	1016	111	50	161	1834
% App. Total	91	9		8.2	91.8		68.9	31.1		
PHF	.826	.868	.834	.798	.964	.969	.841	.735	.805	.940

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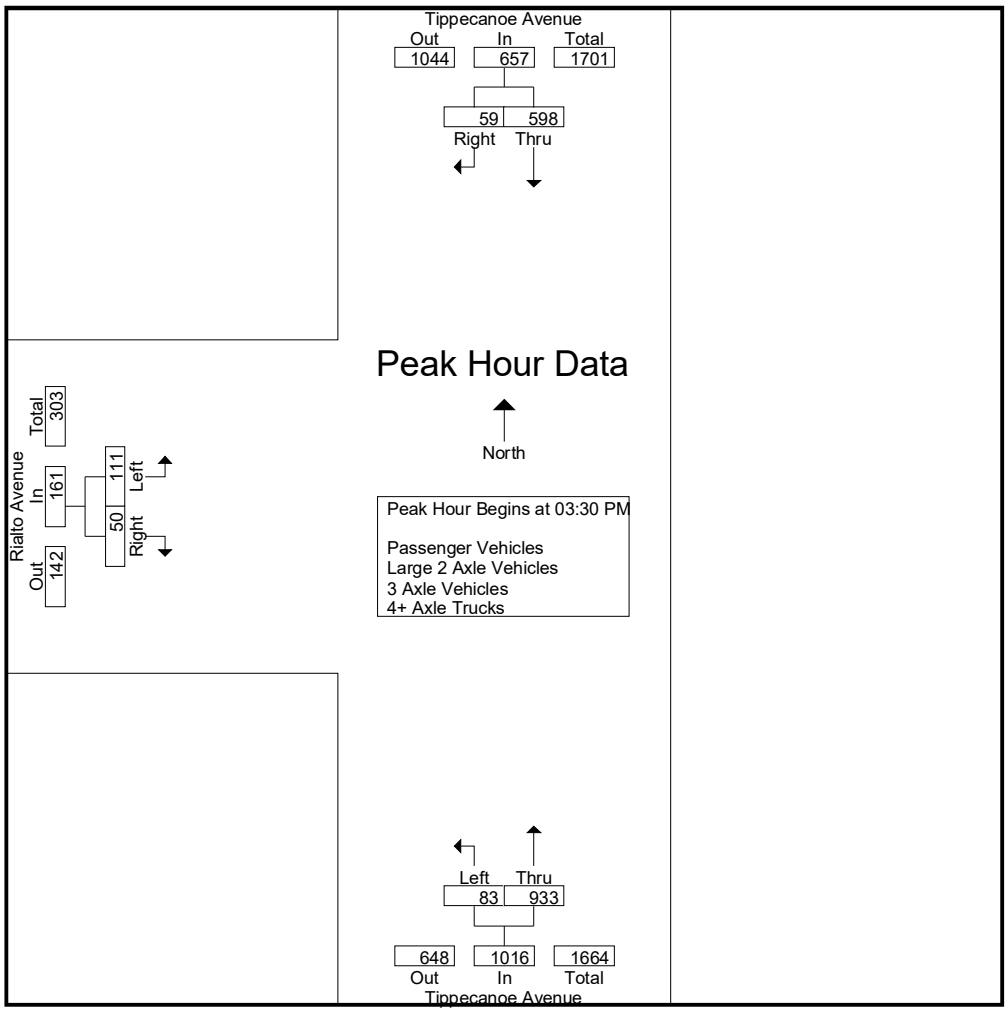
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			04:15 PM		
+0 mins.	148	11	159	20	**242**	**262**	**33**	17	50
+15 mins.	**181**	16	**197**	18	240	258	30	**25**	**55**
+30 mins.	123	15	138	**26**	219	245	22	16	38
+45 mins.	146	**17**	163	19	232	251	32	21	53
Total Volume	598	59	657	83	933	1016	117	79	196
% App. Total	91	9		8.2	91.8		59.7	40.3	
PHF	.826	.868	.834	.798	.964	.969	.886	.790	.891

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018

Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	97	13	110	17	212	229	16	17	33	372
03:15 PM	105	23	128	11	172	183	15	12	27	338
03:30 PM	142	11	153	20	236	256	24	15	39	448
03:45 PM	170	16	186	15	227	242	24	8	32	460
Total	514	63	577	63	847	910	79	52	131	1618
04:00 PM	116	15	131	22	214	236	30	8	38	405
04:15 PM	137	17	154	16	226	242	33	17	50	446
04:30 PM	120	15	135	20	196	216	28	24	52	403
04:45 PM	120	15	135	14	210	224	22	15	37	396
Total	493	62	555	72	846	918	113	64	177	1650
05:00 PM	113	13	126	26	232	258	32	21	53	437
05:15 PM	121	15	136	18	226	244	18	14	32	412
05:30 PM	135	17	152	13	220	233	33	13	46	431
05:45 PM	128	7	135	11	195	206	30	8	38	379
Total	497	52	549	68	873	941	113	56	169	1659
Grand Total	1504	177	1681	203	2566	2769	305	172	477	4927
Apprch %	89.5	10.5		7.3	92.7		63.9	36.1		
Total %	30.5	3.6	34.1	4.1	52.1	56.2	6.2	3.5	9.7	

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	142	11	153	20	**236**	**256**	24	15	39	448
03:45 PM	**170**	16	**186**	15	227	242	24	8	32	**460**
04:00 PM	116	15	131	**22**	214	236	30	8	38	405
04:15 PM	137	**17**	154	16	226	242	**33**	**17**	**50**	446
Total Volume	565	59	624	73	903	976	111	48	159	1759
% App. Total	90.5	9.5		7.5	92.5		69.8	30.2		
PHF	.831	.868	.839	.830	.957	.953	.841	.706	.795	.956

Counts Unlimited
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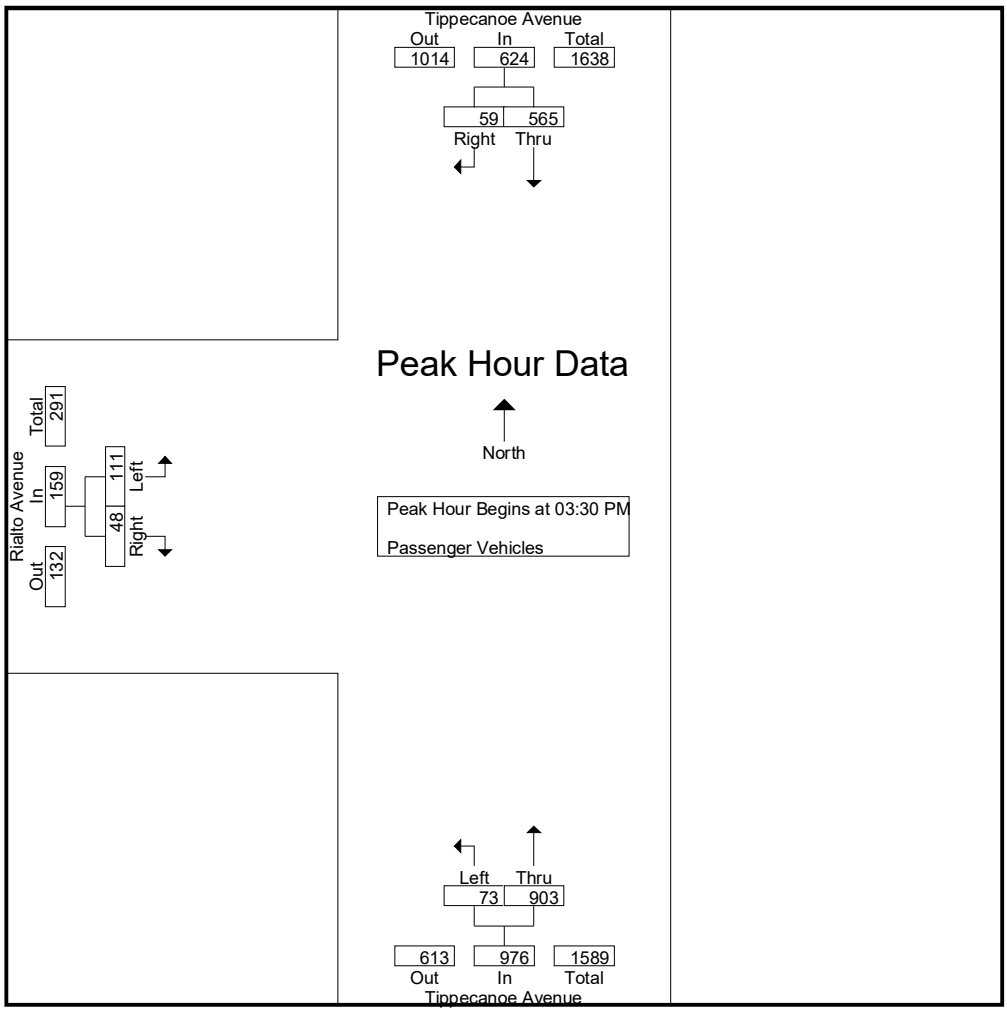
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			03:30 PM		
+0 mins.	142	11	153	20	**236**	**256**	24	15	39
+15 mins.	**170**	16	**186**	15	227	242	24	8	32
+30 mins.	116	15	131	**22**	214	236	30	8	38
+45 mins.	137	**17**	154	16	226	242	**33**	**17**	**50**
Total Volume	565	59	624	73	903	976	111	48	159
% App. Total	90.5	9.5		7.5	92.5		69.8	30.2	
PHF	.831	.868	.839	.830	.957	.953	.841	.706	.795

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018

Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	1	0	1	0	5	5	0	1	1	7
03:15 PM	2	0	2	0	8	8	0	0	0	10
03:30 PM	3	0	3	0	4	4	0	0	0	7
03:45 PM	5	0	5	1	5	6	0	1	1	12
Total	11	0	11	1	22	23	0	2	2	36
04:00 PM	2	0	2	2	2	4	0	0	0	6
04:15 PM	2	0	2	2	4	6	0	0	0	8
04:30 PM	6	0	6	0	2	2	2	0	2	10
04:45 PM	1	0	1	0	1	1	0	1	1	3
Total	11	0	11	4	9	13	2	1	3	27
05:00 PM	2	0	2	0	3	3	0	0	0	5
05:15 PM	1	0	1	0	1	1	0	0	0	2
05:30 PM	3	0	3	0	1	1	0	0	0	4
05:45 PM	0	0	0	0	2	2	0	0	0	2
Total	6	0	6	0	7	7	0	0	0	13
Grand Total	28	0	28	5	38	43	2	3	5	76
Apprch %	100	0		11.6	88.4		40	60		
Total %	36.8	0	36.8	6.6	50	56.6	2.6	3.9	6.6	

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	3	0	3	0	4	4	0	0	0	7
03:45 PM	**5**	0	**5**	1	**5**	**6**	0	**1**	**1**	**12**
04:00 PM	2	0	2	**2**	2	4	0	0	0	6
04:15 PM	2	0	2	2	4	6	0	0	0	8
Total Volume	12	0	12	5	15	20	0	1	1	33
% App. Total	100	0		25	75		0	100		
PHF	.600	.000	.600	.625	.750	.833	.000	.250	.250	.688

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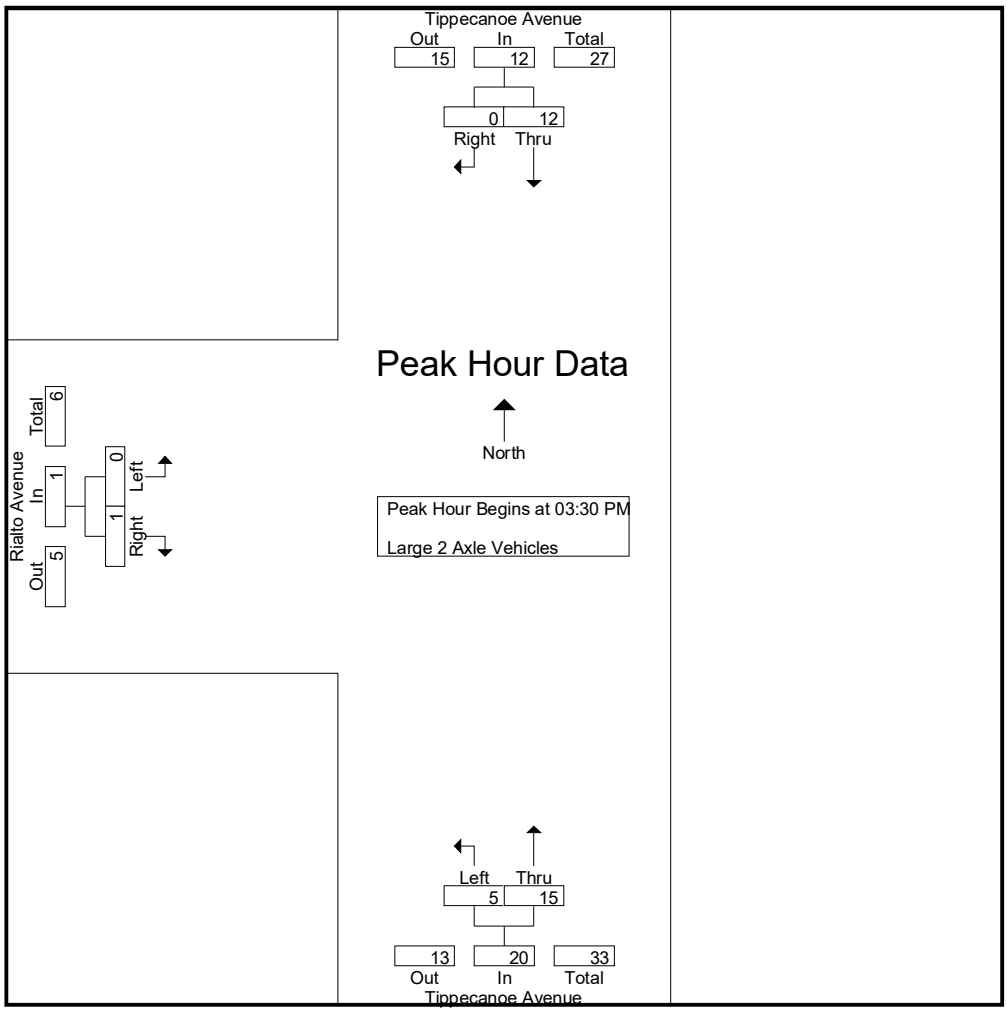
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			03:30 PM		
+0 mins.	3	0	3	0	4	4	0	0	0
+15 mins.	**5**	0	**5**	1	**5**	**6**	0	**1**	**1**
+30 mins.	2	0	2	**2**	2	4	0	0	0
+45 mins.	2	0	2	2	4	6	0	0	0
Total Volume	12	0	12	5	15	20	0	1	1
% App. Total	100	0		25	75		0	100	
PHF	.600	.000	.600	.625	.750	.833	.000	.250	.250

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	2	0	2	1	0	1	0	0	0	3
03:15 PM	4	0	4	1	2	3	0	0	0	7
03:30 PM	1	0	1	0	0	0	0	0	0	1
03:45 PM	4	0	4	0	4	4	0	0	0	8
Total	11	0	11	2	6	8	0	0	0	19
04:00 PM	1	0	1	1	2	3	0	0	0	4
04:15 PM	5	0	5	0	0	0	0	0	0	5
04:30 PM	0	0	0	0	1	1	0	1	1	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	6	0	6	1	3	4	0	1	1	11
05:00 PM	1	0	1	0	1	1	0	0	0	2
05:15 PM	0	0	0	0	1	1	0	0	0	1
05:30 PM	0	0	0	0	1	1	0	0	0	1
05:45 PM	0	0	0	0	2	2	0	0	0	2
Total	1	0	1	0	5	5	0	0	0	6
Grand Total	18	0	18	3	14	17	0	1	1	36
Apprch %	100	0		17.6	82.4		0	100		
Total %	50	0	50	8.3	38.9	47.2	0	2.8	2.8	

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	1	0	1	0	0	0	0	0	0	1
03:45 PM	4	0	4	0	**4**	**4**	0	0	0	**8**
04:00 PM	1	0	1	**1**	2	3	0	0	0	4
04:15 PM	**5**	0	**5**	0	0	0	0	0	0	5
Total Volume	11	0	11	1	6	7	0	0	0	18
% App. Total	100	0		14.3	85.7		0	0		
PHF	.550	.000	.550	.250	.375	.438	.000	.000	.000	.563

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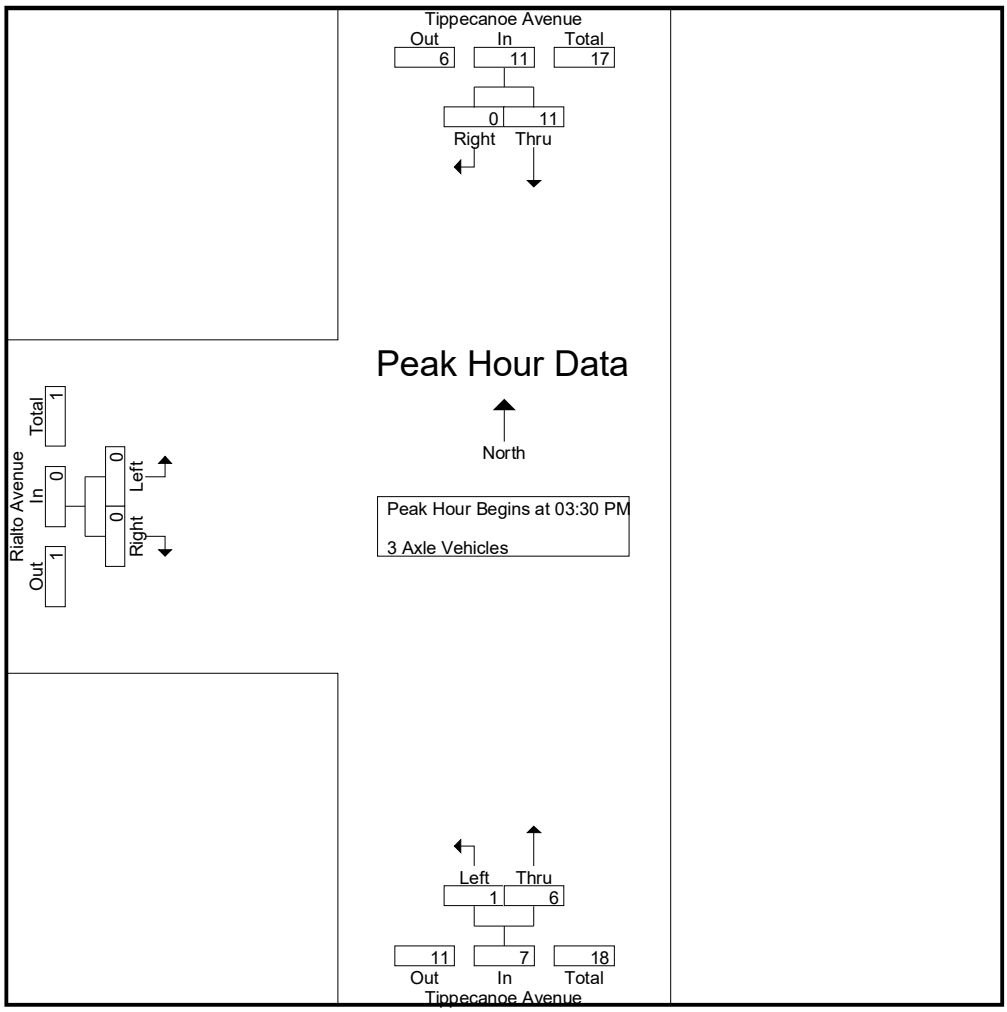
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			03:30 PM		
+0 mins.	1	0	1	0	0	0	0	0	0
+15 mins.	4	0	4	0	**4**	**4**	0	0	0
+30 mins.	1	0	1	**1**	2	3	0	0	0
+45 mins.	**5**	0	**5**	0	0	0	0	0	0
Total Volume	11	0	11	1	6	7	0	0	0
% App. Total	100	0		14.3	85.7		0	0	
PHF	.550	.000	.550	.250	.375	.438	.000	.000	.000

Counts Unlimited
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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018

Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
03:00 PM	1	0	1	0	3	3	0	2	2	6
03:15 PM	2	0	2	0	1	1	0	0	0	3
03:30 PM	2	0	2	0	2	2	0	1	1	5
03:45 PM	2	0	2	2	4	6	0	0	0	8
Total	7	0	7	2	10	12	0	3	3	22
04:00 PM	4	0	4	1	1	2	0	0	0	6
04:15 PM	2	0	2	1	2	3	0	0	0	5
04:30 PM	3	0	3	2	4	6	0	0	0	9
04:45 PM	1	0	1	0	4	4	0	0	0	5
Total	10	0	10	4	11	15	0	0	0	25
05:00 PM	1	0	1	0	1	1	0	0	0	2
05:15 PM	2	0	2	0	2	2	0	0	0	4
05:30 PM	2	0	2	0	1	1	0	0	0	3
05:45 PM	2	0	2	0	1	1	0	0	0	3
Total	7	0	7	0	5	5	0	0	0	12
Grand Total	24	0	24	6	26	32	0	3	3	59
Apprch %	100	0		18.8	81.2		0	100		
Total %	40.7	0	40.7	10.2	44.1	54.2	0	5.1	5.1	

	Tippecanoe Avenue Southbound			Tippecanoe Avenue Northbound			Rialto Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:30 PM										
03:30 PM	2	0	2	0	2	2	0	**1**	**1**	5
03:45 PM	2	0	2	**2**	**4**	**6**	0	0	0	**8**
04:00 PM	**4**	0	**4**	1	1	2	0	0	0	6
04:15 PM	2	0	2	1	2	3	0	0	0	5
Total Volume	10	0	10	4	9	13	0	1	1	24
% App. Total	100	0		30.8	69.2		0	100		
PHF	.625	.000	.625	.500	.563	.542	.000	.250	.250	.750

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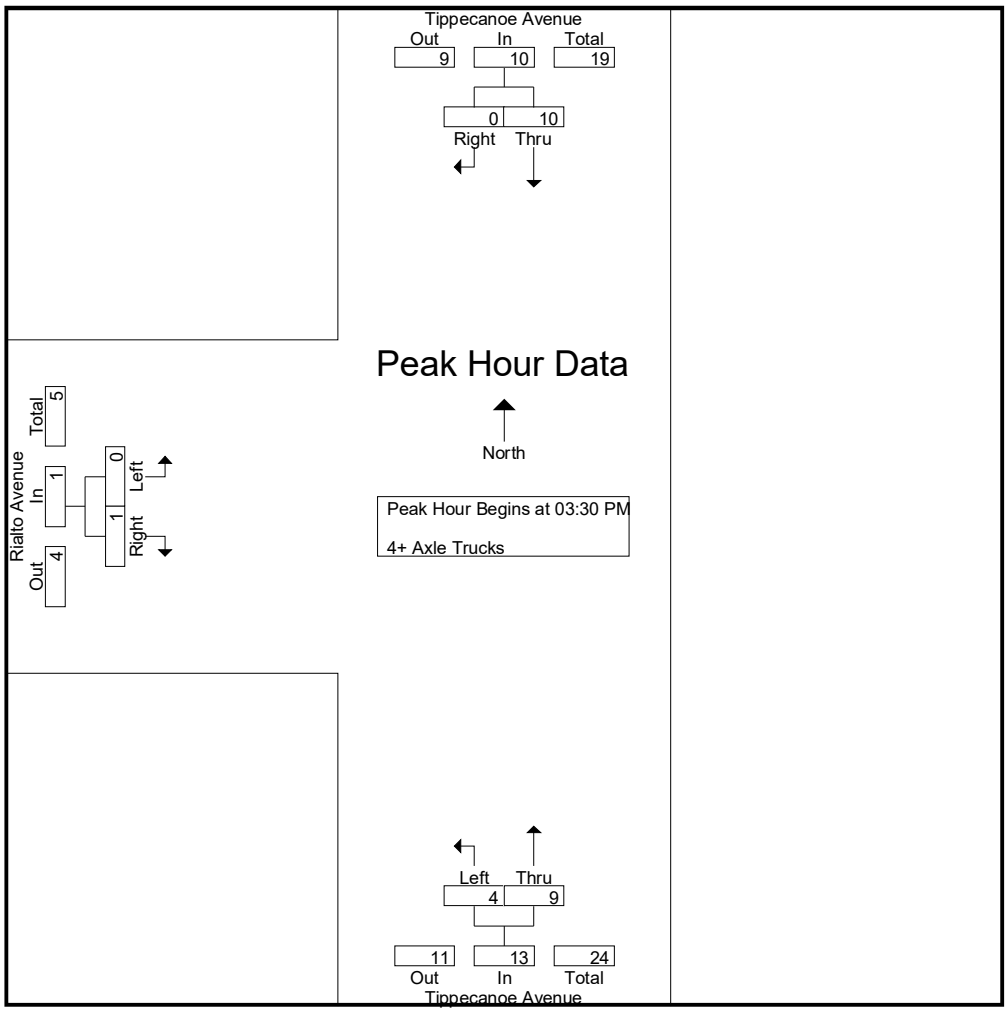
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Rialto Avenue
Weather: Clear

File Name : 48_SBC_Tippecanoe_Rialto PM
Site Code : 99918385
Start Date : 5/16/2018



Peak Hour Analysis From 03:30 PM to 04:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM			03:30 PM			03:30 PM		
+0 mins.	2	0	2	0	2	2	0	**1**	**1**
+15 mins.	2	0	2	**2**	**4**	**6**	0	0	0
+30 mins.	**4**	0	**4**	1	1	2	0	0	0
+45 mins.	2	0	2	1	2	3	0	0	0
Total Volume	10	0	10	4	9	13	0	1	1
% App. Total	100	0		30.8	69.2		0	100	
PHF	.625	.000	.625	.500	.563	.542	.000	.250	.250

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: East Mill Street
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

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

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	16	64	1	81	16	3	8	27	2	94	14	110	2	5	0	7	225
06:15 AM	23	66	0	89	18	9	14	41	1	107	22	130	2	1	2	5	265
06:30 AM	22	127	0	149	19	4	25	48	2	160	20	182	1	2	1	4	383
06:45 AM	34	162	0	196	36	3	35	74	1	210	24	235	1	7	2	10	515
Total	95	419	1	515	89	19	82	190	6	571	80	657	6	15	5	26	1388
07:00 AM	30	115	0	145	15	2	30	47	0	148	17	165	4	0	0	4	361
07:15 AM	42	137	0	179	24	2	33	59	1	173	24	198	4	2	2	8	444
07:30 AM	41	134	1	176	20	5	36	61	1	192	41	234	3	1	0	4	475
07:45 AM	36	164	1	201	43	3	32	78	1	181	40	222	2	1	2	5	506
Total	149	550	2	701	102	12	131	245	3	694	122	819	13	4	4	21	1786
08:00 AM	35	124	0	159	30	3	35	68	1	128	31	160	5	1	1	7	394
08:15 AM	23	119	0	142	23	1	24	48	0	124	31	155	7	4	0	11	356
08:30 AM	31	116	0	147	18	2	29	49	0	117	31	148	4	2	0	6	350
08:45 AM	21	106	0	127	14	2	21	37	1	112	22	135	2	1	0	3	302
Total	110	465	0	575	85	8	109	202	2	481	115	598	18	8	1	27	1402
Grand Total	354	1434	3	1791	276	39	322	637	11	1746	317	2074	37	27	10	74	4576
Apprch %	19.8	80.1	0.2		43.3	6.1	50.5		0.5	84.2	15.3		50	36.5	13.5		
Total %	7.7	31.3	0.1	39.1	6	0.9	7	13.9	0.2	38.2	6.9	45.3	0.8	0.6	0.2	1.6	
Passenger Vehicles	318	1356	2	1676	262	3	269	534	9	1675	306	1990	6	1	9	16	4216
% Passenger Vehicles	89.8	94.6	66.7	93.6	94.9	7.7	83.5	83.8	81.8	95.9	96.5	95.9	16.2	3.7	90	21.6	92.1
Large 2 Axle Vehicles	14	32	0	46	5	1	21	27	0	28	4	32	5	1	0	6	111
% Large 2 Axle Vehicles	4	2.2	0	2.6	1.8	2.6	6.5	4.2	0	1.6	1.3	1.5	13.5	3.7	0	8.1	2.4
3 Axle Vehicles	8	16	0	24	5	0	12	17	0	10	2	12	2	0	1	3	56
% 3 Axle Vehicles	2.3	1.1	0	1.3	1.8	0	3.7	2.7	0	0.6	0.6	0.6	5.4	0	10	4.1	1.2
4+ Axle Trucks	14	30	1	45	4	35	20	59	2	33	5	40	24	25	0	49	193
% 4+ Axle Trucks	4	2.1	33.3	2.5	1.4	89.7	6.2	9.3	18.2	1.9	1.6	1.9	64.9	92.6	0	66.2	4.2

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**42**	137	0	179	24	2	33	59	**1**	173	24	198	4	**2**	**2**	**8**	444
07:30 AM	41	134	**1**	176	20	**5**	**36**	61	1	**192**	**41**	**234**	3	1	0	4	475
07:45 AM	36	**164**	1	**201**	**43**	3	32	**78**	1	181	40	222	2	1	2	5	**506**
08:00 AM	35	124	0	159	30	3	35	68	1	128	31	160	**5**	1	1	7	394
Total Volume	154	559	2	715	117	13	136	266	4	674	136	814	14	5	5	24	1819
% App. Total	21.5	78.2	0.3		44	4.9	51.1		0.5	82.8	16.7		58.3	20.8	20.8		
PHF	.917	.852	.500	.889	.680	.650	.944	.853	1.00	.878	.829	.870	.700	.625	.625	.750	.899

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City of San Bernardino
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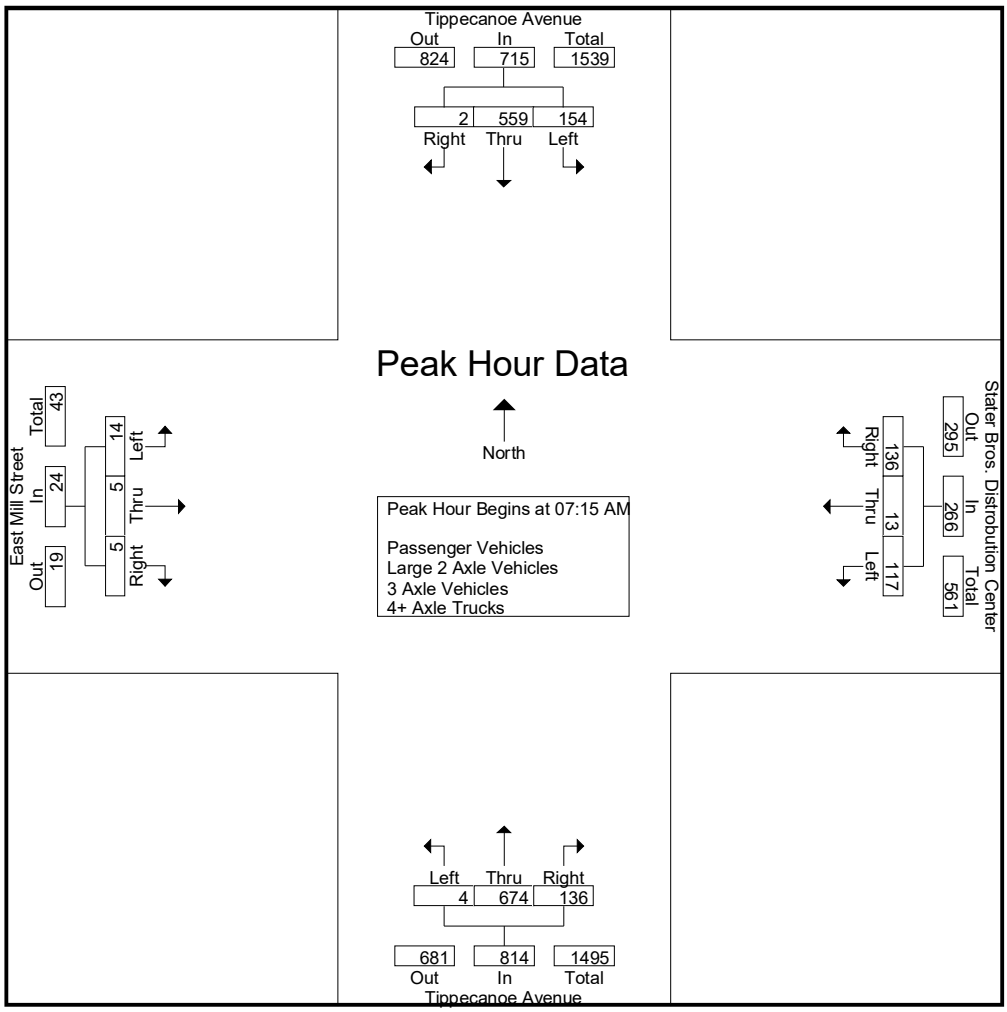
E/W: East Mill Street
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill AM
Site Code : 99918385
Start Date : 5/16/2018



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				06:45 AM				07:45 AM			
+0 mins.	**42**	137	0	179	24	2	33	59	**1**	**210**	24	**235**	2	1	**2**	5
+15 mins.	41	134	**1**	176	20	**5**	**36**	61	0	148	17	165	5	1	1	7
+30 mins.	36	**164**	1	**201**	**43**	3	32	**78**	1	173	24	198	**7**	**4**	0	**11**
+45 mins.	35	124	0	159	30	3	35	68	1	192	**41**	234	4	2	0	6
Total Volume	154	559	2	715	117	13	136	266	3	723	106	832	18	8	3	29
% App. Total	21.5	78.2	0.3		44	4.9	51.1		0.4	86.9	12.7		62.1	27.6	10.3	
PHF	.917	.852	.500	.889	.680	.650	.944	.853	.750	.861	.646	.885	.643	.500	.375	.659

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: East Mill Street
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	13	63	1	77	13	0	6	19	2	92	14	108	0	0	0	0	204
06:15 AM	18	64	0	82	16	1	8	25	1	104	21	126	0	0	2	2	235
06:30 AM	18	126	0	144	18	0	20	38	2	154	17	173	0	1	1	2	357
06:45 AM	34	153	0	187	34	0	31	65	1	203	24	228	0	0	1	1	481
Total	83	406	1	490	81	1	65	147	6	553	76	635	0	1	4	5	1277
07:00 AM	27	107	0	134	14	0	27	41	0	144	17	161	1	0	0	1	337
07:15 AM	39	126	0	165	24	0	27	51	1	165	24	190	0	0	2	2	408
07:30 AM	38	131	0	169	20	0	33	53	0	189	39	228	1	0	0	1	451
07:45 AM	35	156	1	192	41	0	28	69	1	170	40	211	0	0	2	2	474
Total	139	520	1	660	99	0	115	214	2	668	120	790	2	0	4	6	1670
08:00 AM	32	117	0	149	29	0	29	58	1	120	30	151	4	0	1	5	363
08:15 AM	19	114	0	133	23	0	19	42	0	118	27	145	0	0	0	0	320
08:30 AM	27	104	0	131	17	1	24	42	0	110	31	141	0	0	0	0	314
08:45 AM	18	95	0	113	13	1	17	31	0	106	22	128	0	0	0	0	272
Total	96	430	0	526	82	2	89	173	1	454	110	565	4	0	1	5	1269
Grand Total	318	1356	2	1676	262	3	269	534	9	1675	306	1990	6	1	9	16	4216
Apprch %	19	80.9	0.1		49.1	0.6	50.4		0.5	84.2	15.4		37.5	6.2	56.2		
Total %	7.5	32.2	0	39.8	6.2	0.1	6.4	12.7	0.2	39.7	7.3	47.2	0.1	0	0.2	0.4	

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**39**	126	0	165	24	0	27	51	**1**	165	24	190	0	0	**2**	2	408
07:30 AM	38	131	0	169	20	0	**33**	53	0	**189**	39	**228**	1	0	0	1	451
07:45 AM	35	**156**	**1**	**192**	**41**	0	28	**69**	1	170	**40**	211	0	0	2	2	**474**
08:00 AM	32	117	0	149	29	0	29	58	1	120	30	151	**4**	0	1	**5**	363
Total Volume	144	530	1	675	114	0	117	231	3	644	133	780	5	0	5	10	1696
% App. Total	21.3	78.5	0.1		49.4	0	50.6		0.4	82.6	17.1		50	0	50		
PHF	.923	.849	.250	.879	.695	.000	.886	.837	.750	.852	.831	.855	.313	.000	.625	.500	.895

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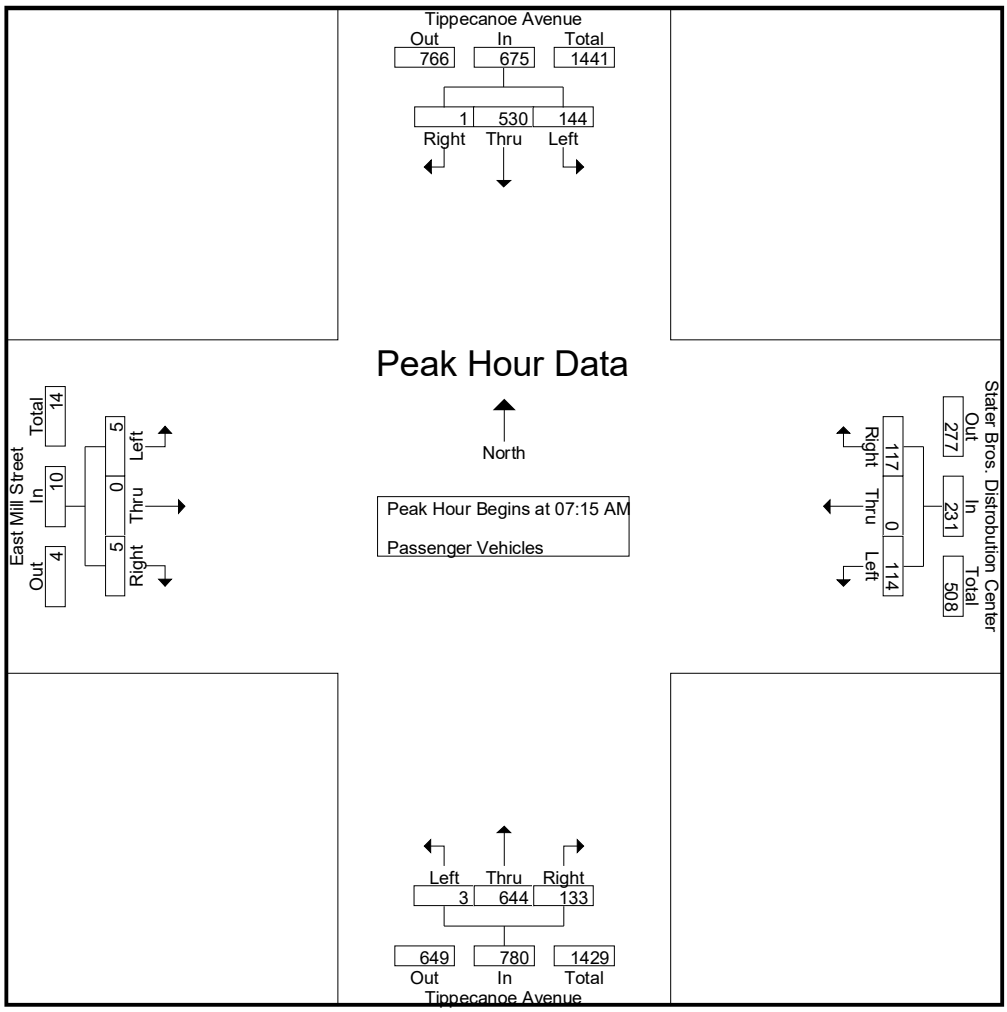
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: East Mill Street
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**39**	126	0	165	24	0	27	51	**1**	165	24	190	0	0	**2**	2
+15 mins.	38	131	0	169	20	0	**33**	53	0	**189**	39	**228**	1	0	0	1
+30 mins.	35	**156**	**1**	**192**	**41**	0	28	**69**	1	170	**40**	211	0	0	2	2
+45 mins.	32	117	0	149	29	0	29	58	1	120	30	151	**4**	0	1	**5**
Total Volume	144	530	1	675	114	0	117	231	3	644	133	780	5	0	5	10
% App. Total	21.3	78.5	0.1		49.4	0	50.6		0.4	82.6	17.1		50	0	50	
PHF	.923	.849	.250	.879	.695	.000	.886	.837	.750	.852	.831	.855	.313	.000	.625	.500

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: East Mill Street
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	1	2	0	3	0	0	1	1	0	0	0	0	0	0	0	0	4
06:30 AM	3	0	0	3	0	0	1	1	0	2	3	5	0	0	0	0	9
06:45 AM	0	2	0	2	1	0	3	4	0	6	0	6	0	0	0	0	12
Total	4	4	0	8	1	0	5	6	0	8	3	11	0	0	0	0	25
07:00 AM	0	4	0	4	0	0	1	1	0	2	0	2	0	0	0	0	7
07:15 AM	2	4	0	6	0	0	1	1	0	2	0	2	2	0	0	2	11
07:30 AM	1	0	0	1	0	1	1	2	0	1	0	1	0	0	0	0	4
07:45 AM	1	6	0	7	2	0	2	4	0	2	0	2	0	0	0	0	13
Total	4	14	0	18	2	1	5	8	0	7	0	7	2	0	0	2	35
08:00 AM	2	1	0	3	1	0	3	4	0	5	0	5	0	1	0	1	13
08:15 AM	1	4	0	5	0	0	2	2	0	2	1	3	2	0	0	2	12
08:30 AM	0	3	0	3	1	0	4	5	0	3	0	3	1	0	0	1	12
08:45 AM	3	6	0	9	0	0	2	2	0	3	0	3	0	0	0	0	14
Total	6	14	0	20	2	0	11	13	0	13	1	14	3	1	0	4	51
Grand Total	14	32	0	46	5	1	21	27	0	28	4	32	5	1	0	6	111
Apprch %	30.4	69.6	0		18.5	3.7	77.8		0	87.5	12.5		83.3	16.7	0		
Total %	12.6	28.8	0	41.4	4.5	0.9	18.9	24.3	0	25.2	3.6	28.8	4.5	0.9	0	5.4	

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	4	0	6	0	0	1	1	0	2	0	2	**2**	0	0	**2**	11
07:30 AM	1	0	0	1	0	**1**	1	2	0	1	0	1	0	0	0	0	4
07:45 AM	1	**6**	0	**7**	**2**	0	2	**4**	0	2	0	2	0	0	0	0	**13**
08:00 AM	2	1	0	3	1	0	**3**	4	0	**5**	0	**5**	0	**1**	0	1	13
Total Volume	6	11	0	17	3	1	7	11	0	10	0	10	2	1	0	3	41
% App. Total	35.3	64.7	0		27.3	9.1	63.6		0	100	0		66.7	33.3	0		
PHF	.750	.458	.000	.607	.375	.250	.583	.688	.000	.500	.000	.500	.250	.250	.000	.375	.788

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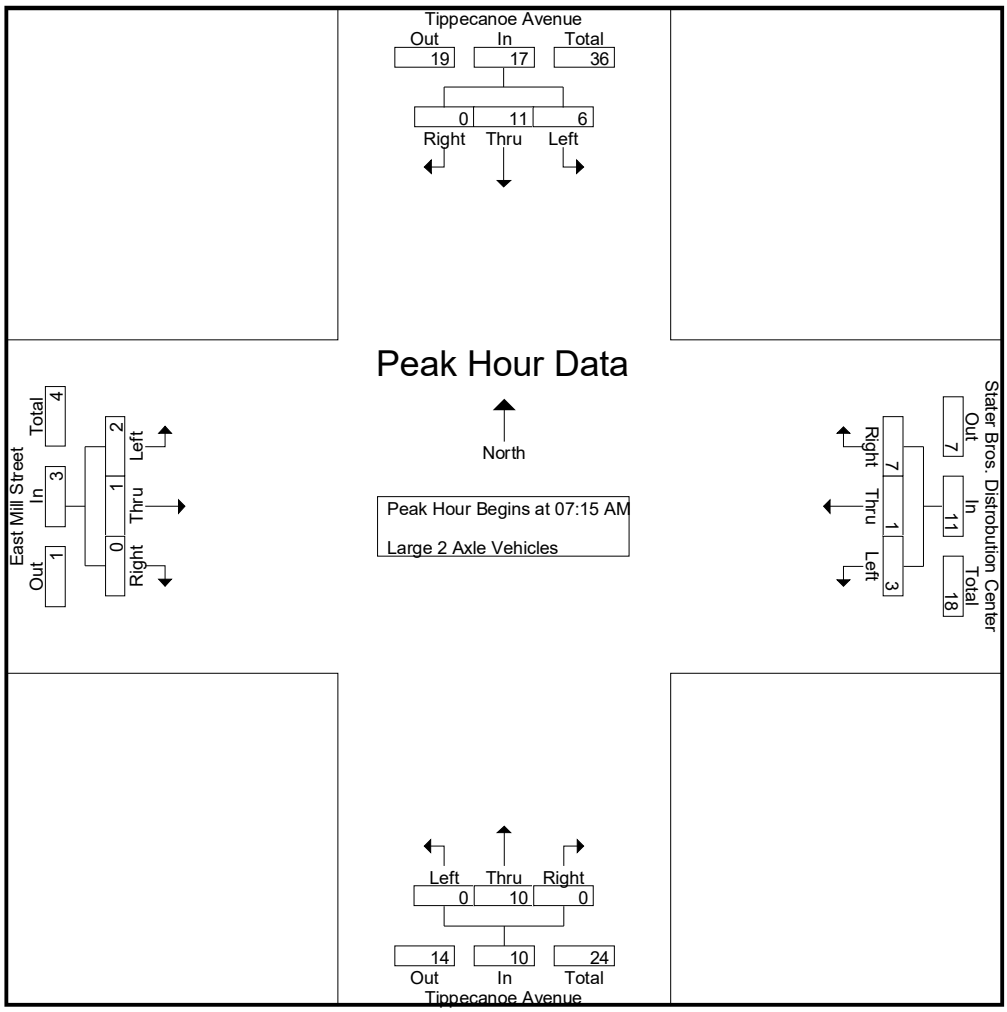
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: East Mill Street
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**2**	4	0	6	0	0	1	1	0	2	0	2	**2**	0	0	**2**
+15 mins.	1	0	0	1	0	**1**	1	2	0	1	0	1	0	0	0	0
+30 mins.	1	**6**	0	**7**	**2**	0	2	**4**	0	2	0	2	0	0	0	0
+45 mins.	2	1	0	3	1	0	**3**	4	0	**5**	0	**5**	0	**1**	0	1
Total Volume	6	11	0	17	3	1	7	11	0	10	0	10	2	1	0	3
% App. Total	35.3	64.7	0		27.3	9.1	63.6		0	100	0		66.7	33.3	0	
PHF	.750	.458	.000	.607	.375	.250	.583	.688	.000	.500	.000	.500	.250	.250	.000	.375

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: East Mill Street
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	0	0	2	2	0	2	4	0	1	0	1	0	0	0	0	7
06:15 AM	0	0	0	0	2	0	2	4	0	1	0	1	0	0	0	0	5
06:30 AM	1	0	0	1	1	0	3	4	0	1	0	1	0	0	0	0	6
06:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	3	1	0	4	5	0	7	12	0	3	0	3	0	0	1	1	20
07:00 AM	1	1	0	2	0	0	1	1	0	1	0	1	1	0	0	1	5
07:15 AM	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
07:30 AM	1	2	0	3	0	0	1	1	0	0	1	1	1	0	0	1	6
07:45 AM	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	3
Total	3	6	0	9	0	0	3	3	0	4	1	5	2	0	0	2	19
08:00 AM	0	3	0	3	0	0	2	2	0	1	0	1	0	0	0	0	6
08:15 AM	1	1	0	2	0	0	0	0	0	1	1	2	0	0	0	0	4
08:30 AM	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
08:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	2	9	0	11	0	0	2	2	0	3	1	4	0	0	0	0	17
Grand Total	8	16	0	24	5	0	12	17	0	10	2	12	2	0	1	3	56
Apprch %	33.3	66.7	0		29.4	0	70.6		0	83.3	16.7		66.7	0	33.3		
Total %	14.3	28.6	0	42.9	8.9	0	21.4	30.4	0	17.9	3.6	21.4	3.6	0	1.8	5.4	

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	**3**	0	**4**	0	0	0	0	0	1	0	1	0	0	0	0	5
07:30 AM	1	2	0	3	0	0	1	1	0	0	**1**	1	**1**	0	0	**1**	**6**
07:45 AM	0	0	0	0	0	0	1	1	0	**2**	0	**2**	0	0	0	0	3
08:00 AM	0	3	0	3	0	0	**2**	**2**	0	1	0	1	0	0	0	0	6
Total Volume	2	8	0	10	0	0	4	4	0	4	1	5	1	0	0	1	20
% App. Total	20	80	0		0	0	100		0	80	20		100	0	0		
PHF	.500	.667	.000	.625	.000	.000	.500	.500	.000	.500	.250	.625	.250	.000	.000	.250	.833

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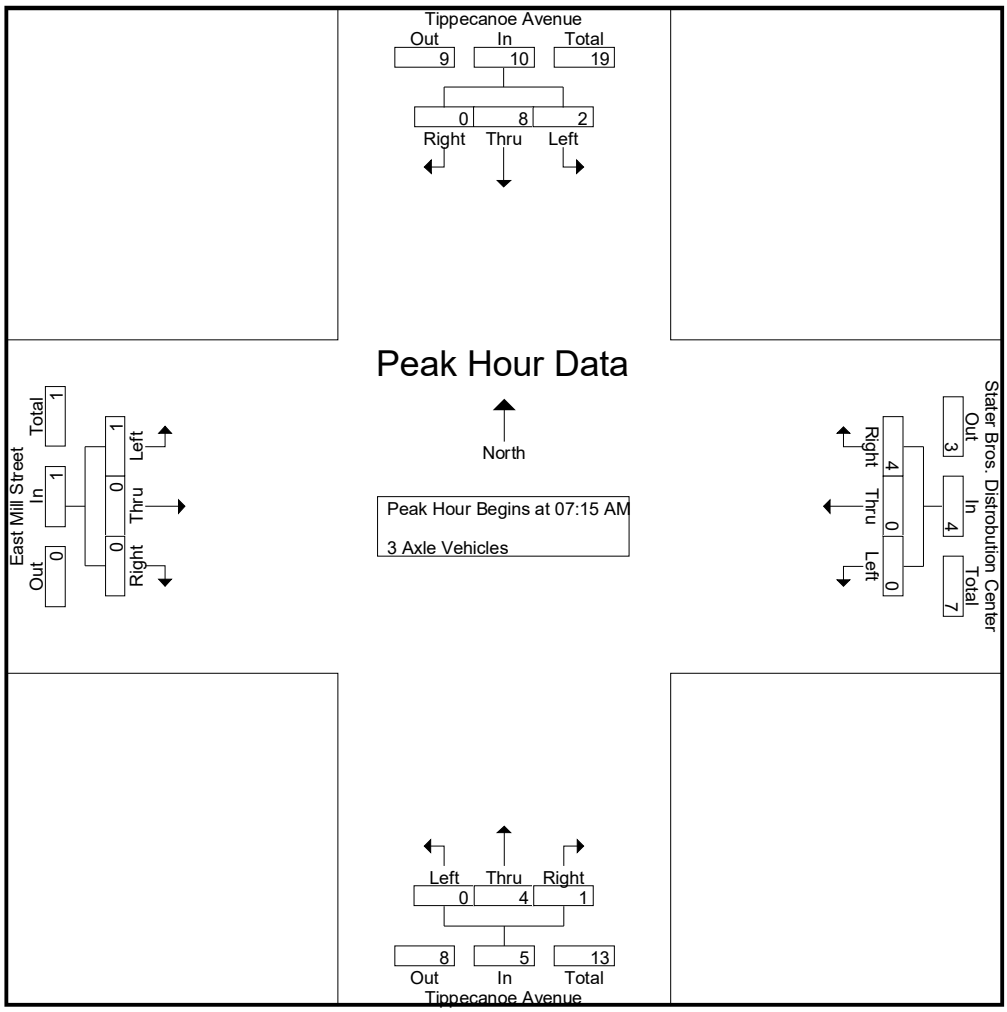

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**1**	**3**	0	**4**	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	1	2	0	3	0	0	1	1	0	0	**1**	1	**1**	0	0	**1**
+30 mins.	0	0	0	0	0	0	1	1	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	3	0	3	0	0	**2**	**2**	0	1	0	1	0	0	0	0
Total Volume	2	8	0	10	0	0	4	4	0	4	1	5	1	0	0	1
% App. Total	20	80	0		0	0	100		0	80	20		100	0	0	
PHF	.500	.667	.000	.625	.000	.000	.500	.500	.000	.500	.250	.625	.250	.000	.000	.250

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Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	1	0	2	1	3	0	4	0	1	0	1	2	5	0	7	14
06:15 AM	4	0	0	4	0	8	3	11	0	2	1	3	2	1	0	3	21
06:30 AM	0	1	0	1	0	4	1	5	0	3	0	3	1	1	0	2	11
06:45 AM	0	6	0	6	1	3	1	5	0	1	0	1	1	7	0	8	20
Total	5	8	0	13	2	18	5	25	0	7	1	8	6	14	0	20	66
07:00 AM	2	3	0	5	1	2	1	4	0	1	0	1	2	0	0	2	12
07:15 AM	0	4	0	4	0	2	5	7	0	5	0	5	2	2	0	4	20
07:30 AM	1	1	1	3	0	4	1	5	1	2	1	4	1	1	0	2	14
07:45 AM	0	2	0	2	0	3	1	4	0	7	0	7	2	1	0	3	16
Total	3	10	1	14	1	11	8	20	1	15	1	17	7	4	0	11	62
08:00 AM	1	3	0	4	0	3	1	4	0	2	1	3	1	0	0	1	12
08:15 AM	2	0	0	2	0	1	3	4	0	3	2	5	5	4	0	9	20
08:30 AM	3	6	0	9	0	1	1	2	0	3	0	3	3	2	0	5	19
08:45 AM	0	3	0	3	1	1	2	4	1	3	0	4	2	1	0	3	14
Total	6	12	0	18	1	6	7	14	1	11	3	15	11	7	0	18	65
Grand Total	14	30	1	45	4	35	20	59	2	33	5	40	24	25	0	49	193
Apprch %	31.1	66.7	2.2		6.8	59.3	33.9		5	82.5	12.5		49	51	0		
Total %	7.3	15.5	0.5	23.3	2.1	18.1	10.4	30.6	1	17.1	2.6	20.7	12.4	13	0	25.4	

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**4**	0	**4**	0	2	**5**	**7**	0	5	0	5	**2**	**2**	0	**4**	**20**
07:30 AM	**1**	1	**1**	3	0	**4**	1	5	**1**	2	**1**	4	1	1	0	2	14
07:45 AM	0	2	0	2	0	3	1	4	0	**7**	0	**7**	2	1	0	3	16
08:00 AM	1	3	0	4	0	3	1	4	0	2	1	3	1	0	0	1	12
Total Volume	2	10	1	13	0	12	8	20	1	16	2	19	6	4	0	10	62
% App. Total	15.4	76.9	7.7		0	60	40		5.3	84.2	10.5		60	40	0		
PHF	.500	.625	.250	.813	.000	.750	.400	.714	.250	.571	.500	.679	.750	.500	.000	.625	.775

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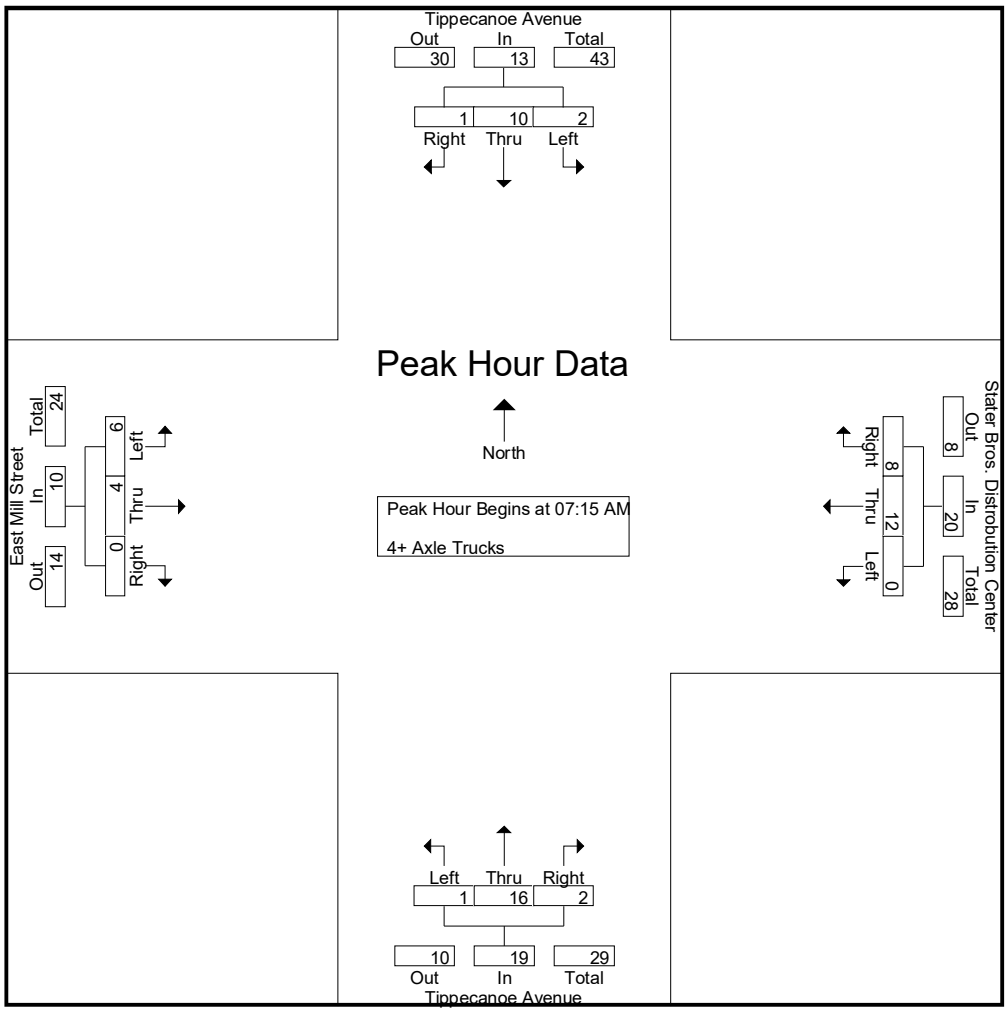

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**4**	0	**4**	0	2	**5**	**7**	0	5	0	5	**2**	**2**	0	**4**
+15 mins.	**1**	1	**1**	3	0	**4**	1	5	**1**	2	**1**	4	1	1	0	2
+30 mins.	0	2	0	2	0	3	1	4	0	**7**	0	**7**	2	1	0	3
+45 mins.	1	3	0	4	0	3	1	4	0	2	1	3	1	0	0	1
Total Volume	2	10	1	13	0	12	8	20	1	16	2	19	6	4	0	10
% App. Total	15.4	76.9	7.7		0	60	40		5.3	84.2	10.5		60	40	0	
PHF	.500	.625	.250	.813	.000	.750	.400	.714	.250	.571	.500	.679	.750	.500	.000	.625

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

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	130	43	173	5	4	0	9	23	184	0	207	34	2	37	73	462
03:15 PM	3	151	28	182	5	2	1	8	34	180	0	214	51	4	48	103	507
03:30 PM	0	199	58	257	7	5	2	14	28	256	0	284	44	3	34	81	636
03:45 PM	1	198	34	233	7	4	1	12	41	256	0	297	57	0	44	101	643
Total	4	678	163	845	24	15	4	43	126	876	0	1002	186	9	163	358	2248
04:00 PM	1	156	46	203	6	5	4	15	21	239	0	260	57	1	40	98	576
04:15 PM	1	148	17	166	1	1	0	2	20	224	0	244	45	1	40	86	498
04:30 PM	0	167	28	195	2	0	0	2	30	268	0	298	54	3	64	121	616
04:45 PM	0	147	14	161	4	4	0	8	20	189	0	209	56	1	32	89	467
Total	2	618	105	725	13	10	4	27	91	920	0	1011	212	6	176	394	2157
05:00 PM	1	210	44	255	2	3	3	8	17	244	0	261	69	0	70	139	663
05:15 PM	1	200	28	229	1	2	0	3	18	264	0	282	63	0	42	105	619
05:30 PM	0	195	30	225	0	4	0	4	33	239	1	273	49	4	53	106	608
05:45 PM	1	133	28	162	1	2	2	5	17	168	0	185	51	0	48	99	451
Total	3	738	130	871	4	11	5	20	85	915	1	1001	232	4	213	449	2341
Grand Total	9	2034	398	2441	41	36	13	90	302	2711	1	3014	630	19	552	1201	6746
Apprch %	0.4	83.3	16.3		45.6	40	14.4		10	89.9	0		52.5	1.6	46		
Total %	0.1	30.2	5.9	36.2	0.6	0.5	0.2	1.3	4.5	40.2	0	44.7	9.3	0.3	8.2	17.8	
Passenger Vehicles	9	1939	384	2332	3	5	10	18	244	2624	0	2868	619	5	511	1135	6353
% Passenger Vehicles	100	95.3	96.5	95.5	7.3	13.9	76.9	20	80.8	96.8	0	95.2	98.3	26.3	92.6	94.5	94.2
Large 2 Axle Vehicles	0	31	7	38	3	0	0	3	17	26	0	43	7	0	16	23	107
% Large 2 Axle Vehicles	0	1.5	1.8	1.6	7.3	0	0	3.3	5.6	1	0	1.4	1.1	0	2.9	1.9	1.6
3 Axle Vehicles	0	23	3	26	0	1	0	1	24	14	0	38	2	0	8	10	75
% 3 Axle Vehicles	0	1.1	0.8	1.1	0	2.8	0	1.1	7.9	0.5	0	1.3	0.3	0	1.4	0.8	1.1
4+ Axle Trucks	0	41	4	45	35	30	3	68	17	47	1	65	2	14	17	33	211
% 4+ Axle Trucks	0	2	1	1.8	85.4	83.3	23.1	75.6	5.6	1.7	100	2.2	0.3	73.7	3.1	2.7	3.1

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	167	28	195	2	0	0	2	**30**	**268**	0	**298**	54	**3**	64	121	616
04:45 PM	0	147	14	161	**4**	**4**	0	**8**	20	189	0	209	56	1	32	89	467
05:00 PM	**1**	**210**	**44**	**255**	2	3	**3**	8	17	244	0	261	**69**	0	**70**	**139**	**663**
05:15 PM	1	200	28	229	1	2	0	3	18	264	0	282	63	0	42	105	619
Total Volume	2	724	114	840	9	9	3	21	85	965	0	1050	242	4	208	454	2365
% App. Total	0.2	86.2	13.6		42.9	42.9	14.3		8.1	91.9	0		53.3	0.9	45.8		
PHF	.500	.862	.648	.824	.563	.563	.250	.656	.708	.900	.000	.881	.877	.333	.743	.817	.892

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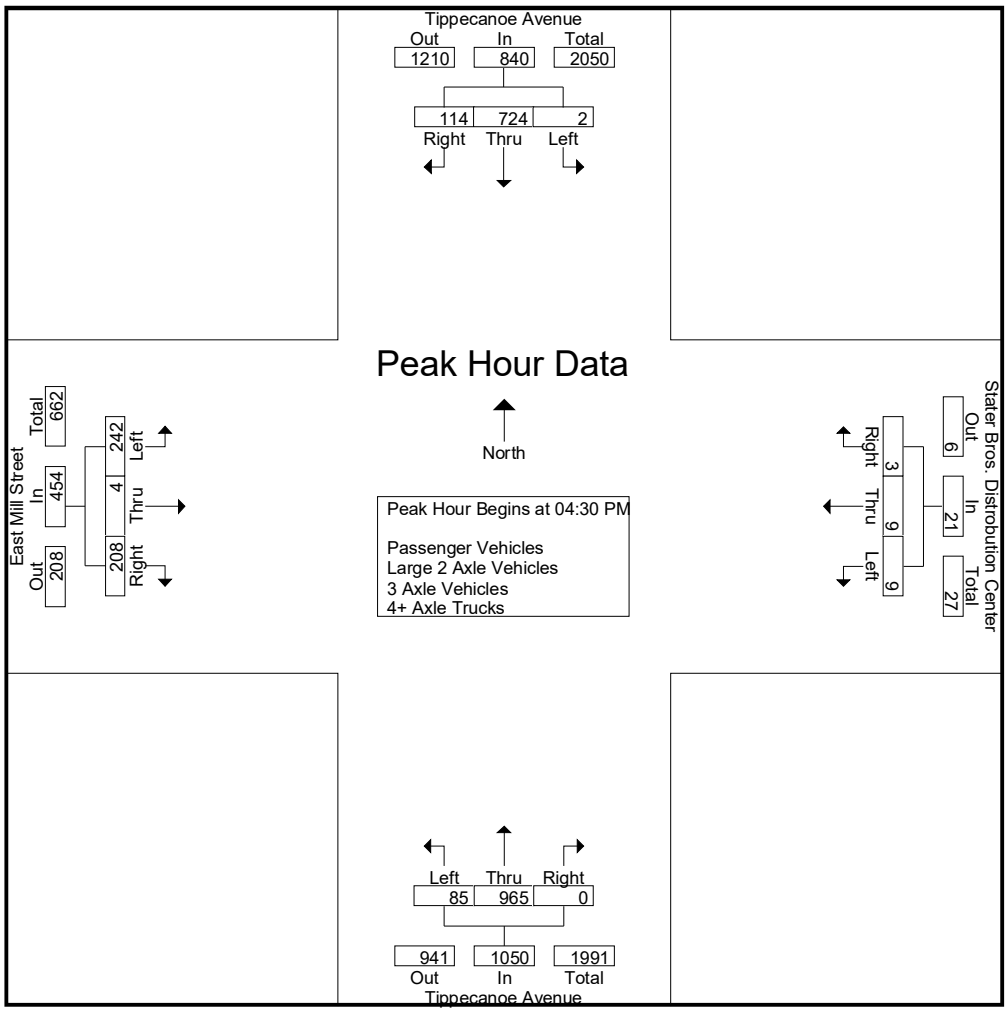

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:15 PM				03:15 PM				03:45 PM				04:30 PM			
+0 mins.	**3**	151	28	182	5	2	1	8	**41**	256	0	297	54	**3**	64	121
+15 mins.	0	**199**	**58**	**257**	**7**	**5**	2	14	21	239	0	260	56	1	32	89
+30 mins.	1	198	34	233	7	4	1	12	20	224	0	244	**69**	0	**70**	**139**
+45 mins.	1	156	46	203	6	5	**4**	**15**	30	**268**	0	**298**	63	0	42	105
Total Volume	5	704	166	875	25	16	8	49	112	987	0	1099	242	4	208	454
% App. Total	0.6	80.5	19		51	32.7	16.3		10.2	89.8	0		53.3	0.9	45.8	
PHF	.417	.884	.716	.851	.893	.800	.500	.817	.683	.921	.000	.922	.877	.333	.743	.817

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Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	121	42	163	1	0	0	1	18	176	0	194	34	0	37	71	429
03:15 PM	3	142	24	169	0	1	1	2	26	170	0	196	47	1	39	87	454
03:30 PM	0	186	54	240	0	0	1	1	22	249	0	271	44	1	33	78	590
03:45 PM	1	191	34	226	0	1	0	1	32	245	0	277	55	0	37	92	596
Total	4	640	154	798	1	2	2	5	98	840	0	938	180	2	146	328	2069
04:00 PM	1	150	46	197	1	2	4	7	15	226	0	241	57	0	39	96	541
04:15 PM	1	140	16	157	0	0	0	0	17	218	0	235	43	0	34	77	469
04:30 PM	0	162	27	189	0	0	0	0	25	257	0	282	54	1	63	118	589
04:45 PM	0	137	14	151	0	0	0	0	16	188	0	204	56	1	27	84	439
Total	2	589	103	694	1	2	4	7	73	889	0	962	210	2	163	375	2038
05:00 PM	1	202	42	245	1	0	3	4	14	237	0	251	68	0	69	137	637
05:15 PM	1	192	27	220	0	0	0	0	16	261	0	277	63	0	38	101	598
05:30 PM	0	186	30	216	0	1	0	1	30	235	0	265	48	1	49	98	580
05:45 PM	1	130	28	159	0	0	1	1	13	162	0	175	50	0	46	96	431
Total	3	710	127	840	1	1	4	6	73	895	0	968	229	1	202	432	2246
Grand Total	9	1939	384	2332	3	5	10	18	244	2624	0	2868	619	5	511	1135	6353
Apprch %	0.4	83.1	16.5		16.7	27.8	55.6		8.5	91.5	0		54.5	0.4	45		
Total %	0.1	30.5	6	36.7	0	0.1	0.2	0.3	3.8	41.3	0	45.1	9.7	0.1	8	17.9	

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	162	27	189	0	0	0	0	**25**	257	0	**282**	54	**1**	63	118	589
04:45 PM	0	137	14	151	0	0	0	0	16	188	0	204	56	1	27	84	439
05:00 PM	**1**	**202**	**42**	**245**	**1**	0	**3**	**4**	14	237	0	251	**68**	0	**69**	**137**	**637**
05:15 PM	1	192	27	220	0	0	0	0	16	**261**	0	277	63	0	38	101	598
Total Volume	2	693	110	805	1	0	3	4	71	943	0	1014	241	2	197	440	2263
% App. Total	0.2	86.1	13.7		25	0	75		7	93	0		54.8	0.5	44.8		
PHF	.500	.858	.655	.821	.250	.000	.250	.250	.710	.903	.000	.899	.886	.500	.714	.803	.888

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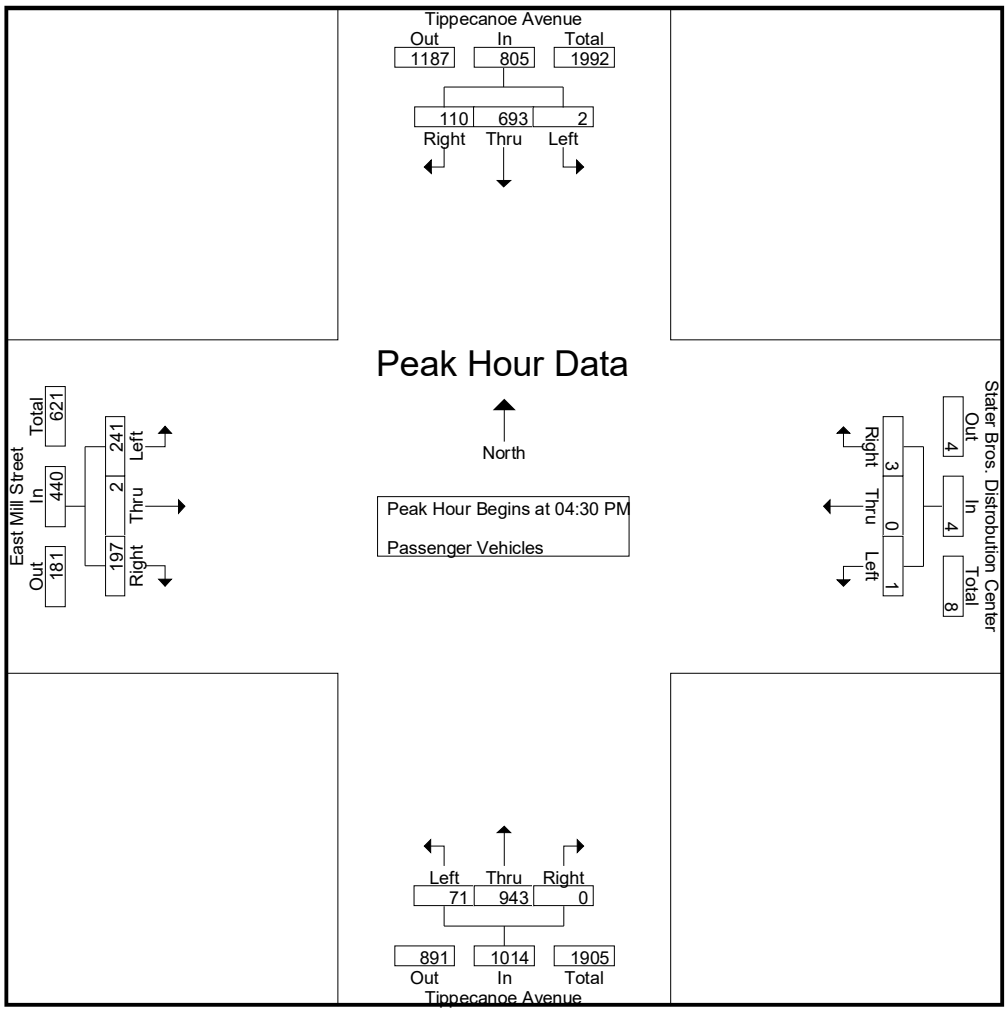

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	162	27	189	0	0	0	0	**25**	257	0	**282**	54	**1**	63	118
+15 mins.	0	137	14	151	0	0	0	0	16	188	0	204	56	1	27	84
+30 mins.	**1**	**202**	**42**	**245**	**1**	0	**3**	**4**	14	237	0	251	**68**	0	**69**	**137**
+45 mins.	1	192	27	220	0	0	0	0	16	**261**	0	277	63	0	38	101
Total Volume	2	693	110	805	1	0	3	4	71	943	0	1014	241	2	197	440
% App. Total	0.2	86.1	13.7		25	0	75		7	93	0		54.8	0.5	44.8	
PHF	.500	.858	.655	.821	.250	.000	.250	.250	.710	.903	.000	.899	.886	.500	.714	.803

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: East Mill Street
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	4	1	5	1	0	0	1	0	2	0	2	0	0	0	0	8
03:15 PM	0	2	2	4	0	0	0	0	3	5	0	8	4	0	4	8	20
03:30 PM	0	4	2	6	0	0	0	0	2	2	0	4	0	0	0	0	10
03:45 PM	0	3	0	3	0	0	0	0	3	7	0	10	0	0	2	2	15
Total	0	13	5	18	1	0	0	1	8	16	0	24	4	0	6	10	53
04:00 PM	0	2	0	2	2	0	0	2	1	3	0	4	0	0	0	0	8
04:15 PM	0	3	1	4	0	0	0	0	2	1	0	3	2	0	1	3	10
04:30 PM	0	2	0	2	0	0	0	0	1	1	0	2	0	0	0	0	4
04:45 PM	0	3	0	3	0	0	0	0	1	1	0	2	0	0	3	3	8
Total	0	10	1	11	2	0	0	2	5	6	0	11	2	0	4	6	30
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	3	1	4	0	0	0	0	0	0	0	0	0	0	2	2	6
05:30 PM	0	4	0	4	0	0	0	0	2	0	0	2	1	0	3	4	10
05:45 PM	0	0	0	0	0	0	0	0	2	3	0	5	0	0	1	1	6
Total	0	8	1	9	0	0	0	0	4	4	0	8	1	0	6	7	24
Grand Total	0	31	7	38	3	0	0	3	17	26	0	43	7	0	16	23	107
Apprch %	0	81.6	18.4		100	0	0		39.5	60.5	0		30.4	0	69.6		
Total %	0	29	6.5	35.5	2.8	0	0	2.8	15.9	24.3	0	40.2	6.5	0	15	21.5	

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	2	0	2	0	0	0	0	**1**	**1**	0	**2**	0	0	0	0	4
04:45 PM	0	**3**	0	3	0	0	0	0	1	1	0	2	0	0	**3**	**3**	**8**
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	3	**1**	**4**	0	0	0	0	0	0	0	0	0	0	2	2	6
Total Volume	0	9	1	10	0	0	0	0	2	3	0	5	0	0	5	5	20
% App. Total	0	90	10		0	0	0		40	60	0		0	0	100		
PHF	.000	.750	.250	.625	.000	.000	.000	.000	.500	.750	.000	.625	.000	.000	.417	.417	.625

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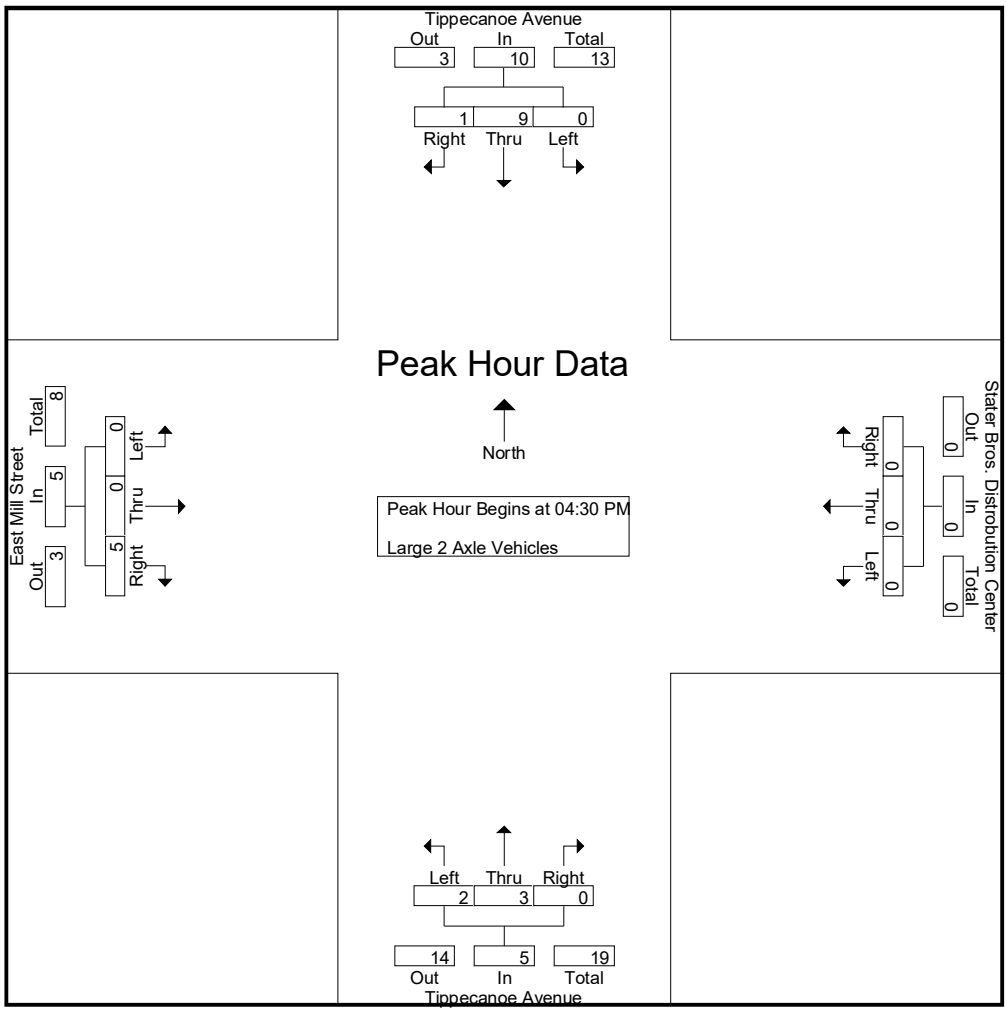
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	2	0	2	0	0	0	0	**1**	**1**	0	**2**	0	0	0	0
+15 mins.	0	**3**	0	3	0	0	0	0	1	1	0	2	0	0	**3**	**3**
+30 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	3	**1**	**4**	0	0	0	0	0	0	0	0	0	0	2	2
Total Volume	0	9	1	10	0	0	0	0	2	3	0	5	0	0	5	5
% App. Total	0	90	10		0	0	0		40	60	0		0	0	100	
PHF	.000	.750	.250	.625	.000	.000	.000	.000	.500	.750	.000	.625	.000	.000	.417	.417

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City of San Bernardino
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E/W: East Mill Street
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File Name : 51_SBC_Tippecanoe_E Mill PM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	0	0	0	3	1	0	4	0	0	0	0	5
03:15 PM	0	4	2	6	0	1	0	1	3	1	0	4	0	0	1	1	12
03:30 PM	0	7	0	7	0	0	0	0	4	1	0	5	0	0	1	1	13
03:45 PM	0	3	0	3	0	0	0	0	4	1	0	5	0	0	0	0	8
Total	0	15	2	17	0	1	0	1	14	4	0	18	0	0	2	2	38
04:00 PM	0	2	0	2	0	0	0	0	5	3	0	8	0	0	0	0	10
04:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	3	3	7
04:30 PM	0	0	1	1	0	0	0	0	2	0	0	2	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
Total	0	5	1	6	0	0	0	0	8	5	0	13	0	0	3	3	22
05:00 PM	0	1	0	1	0	0	0	0	2	1	0	3	1	0	1	2	6
05:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	1	1	4
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	3	0	3	0	0	0	0	2	5	0	7	2	0	3	5	15
Grand Total	0	23	3	26	0	1	0	1	24	14	0	38	2	0	8	10	75
Apprch %	0	88.5	11.5		0	100	0		63.2	36.8	0		20	0	80		
Total %	0	30.7	4	34.7	0	1.3	0	1.3	32	18.7	0	50.7	2.7	0	10.7	13.3	

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**1**	**1**	0	0	0	0	**2**	0	0	2	0	0	0	0	3
04:45 PM	0	**1**	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
05:00 PM	0	1	0	1	0	0	0	0	2	1	0	**3**	**1**	0	**1**	**2**	**6**
05:15 PM	0	1	0	1	0	0	0	0	0	**2**	0	2	0	0	1	1	4
Total Volume	0	3	1	4	0	0	0	0	5	3	0	8	1	0	2	3	15
% App. Total	0	75	25		0	0	0		62.5	37.5	0		33.3	0	66.7		
PHF	.000	.750	.250	1.00	.000	.000	.000	.000	.625	.375	.000	.667	.250	.000	.500	.375	.625

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Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill PM
Site Code : 99918385
Start Date : 5/16/2018
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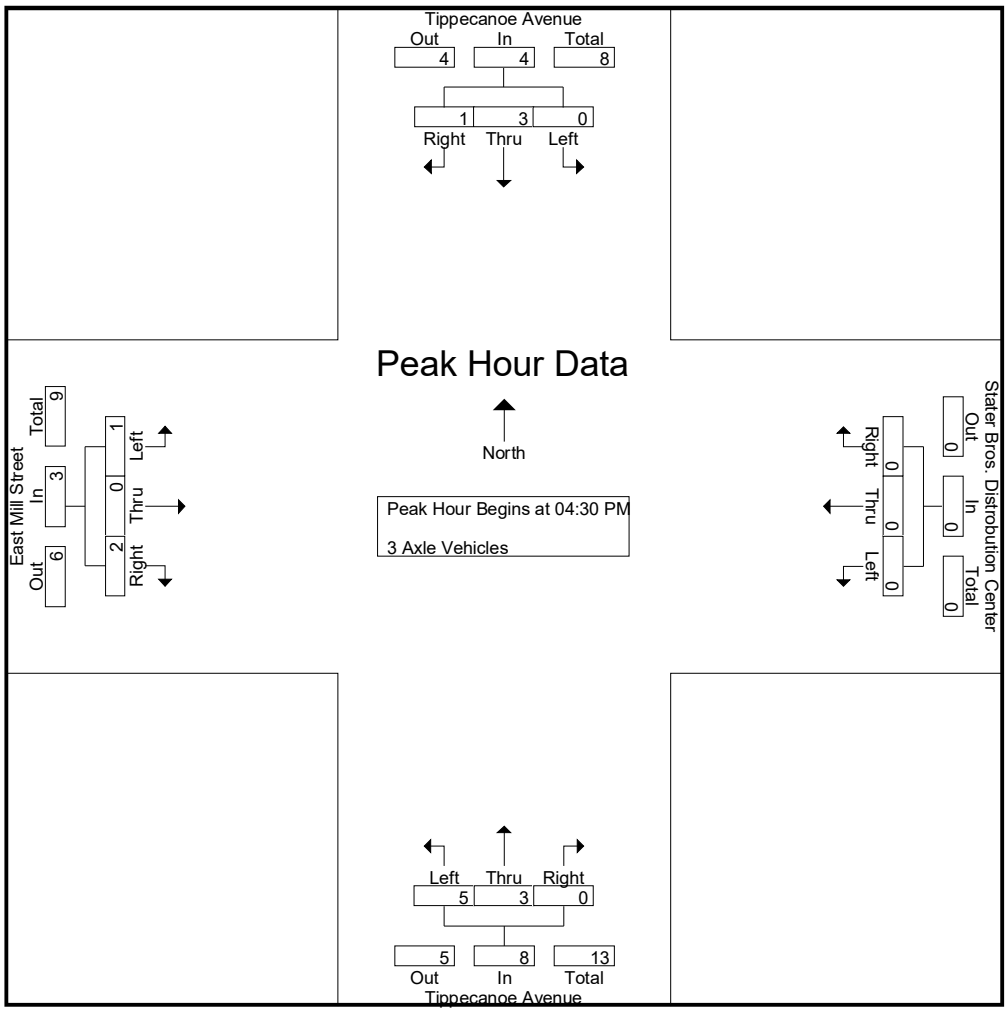

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	**1**	**1**	0	0	0	0	**2**	0	0	2	0	0	0	0
+15 mins.	0	**1**	0	1	0	0	0	0	1	0	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	2	1	0	**3**	**1**	0	**1**	**2**
+45 mins.	0	1	0	1	0	0	0	0	0	**2**	0	2	0	0	1	1
Total Volume	0	3	1	4	0	0	0	0	5	3	0	8	1	0	2	3
% App. Total	0	75	25		0	0	0		62.5	37.5	0		33.3	0	66.7	
PHF	.000	.750	.250	1.000	.000	.000	.000	.000	.625	.375	.000	.667	.250	.000	.500	.375

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E/W: East Mill Street
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File Name : 51_SBC_Tippecanoe_E Mill PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	4	0	4	3	4	0	7	2	5	0	7	0	2	0	2	20
03:15 PM	0	3	0	3	5	0	0	5	2	4	0	6	0	3	4	7	21
03:30 PM	0	2	2	4	7	5	1	13	0	4	0	4	0	2	0	2	23
03:45 PM	0	1	0	1	7	3	1	11	2	3	0	5	2	0	5	7	24
Total	0	10	2	12	22	12	2	36	6	16	0	22	2	7	9	18	88
04:00 PM	0	2	0	2	3	3	0	6	0	7	0	7	0	1	1	2	17
04:15 PM	0	3	0	3	1	1	0	2	1	3	0	4	0	1	2	3	12
04:30 PM	0	3	0	3	2	0	0	2	2	10	0	12	0	2	1	3	20
04:45 PM	0	6	0	6	4	4	0	8	2	0	0	2	0	0	2	2	18
Total	0	14	0	14	10	8	0	18	5	20	0	25	0	4	6	10	67
05:00 PM	0	6	2	8	1	3	0	4	1	5	0	6	0	0	0	0	18
05:15 PM	0	4	0	4	1	2	0	3	2	1	0	3	0	0	1	1	11
05:30 PM	0	4	0	4	0	3	0	3	1	3	1	5	0	3	0	3	15
05:45 PM	0	3	0	3	1	2	1	4	2	2	0	4	0	0	1	1	12
Total	0	17	2	19	3	10	1	14	6	11	1	18	0	3	2	5	56
Grand Total	0	41	4	45	35	30	3	68	17	47	1	65	2	14	17	33	211
Apprch %	0	91.1	8.9		51.5	44.1	4.4		26.2	72.3	1.5		6.1	42.4	51.5		
Total %	0	19.4	1.9	21.3	16.6	14.2	1.4	32.2	8.1	22.3	0.5	30.8	0.9	6.6	8.1	15.6	

	Tippecanoe Avenue Southbound				Stater Bros. Distrobution Center Westbound				Tippecanoe Avenue Northbound				East Mill Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	3	0	3	2	0	0	2	**2**	**10**	0	**12**	0	**2**	1	**3**	**20**
04:45 PM	0	**6**	0	6	**4**	**4**	0	**8**	2	0	0	2	0	0	**2**	2	18
05:00 PM	0	6	**2**	**8**	1	3	0	4	1	5	0	6	0	0	0	0	18
05:15 PM	0	4	0	4	1	2	0	3	2	1	0	3	0	0	1	1	11
Total Volume	0	19	2	21	8	9	0	17	7	16	0	23	0	2	4	6	67
% App. Total	0	90.5	9.5		47.1	52.9	0		30.4	69.6	0		0	33.3	66.7		
PHF	.000	.792	.250	.656	.500	.563	.000	.531	.875	.400	.000	.479	.000	.250	.500	.500	.838

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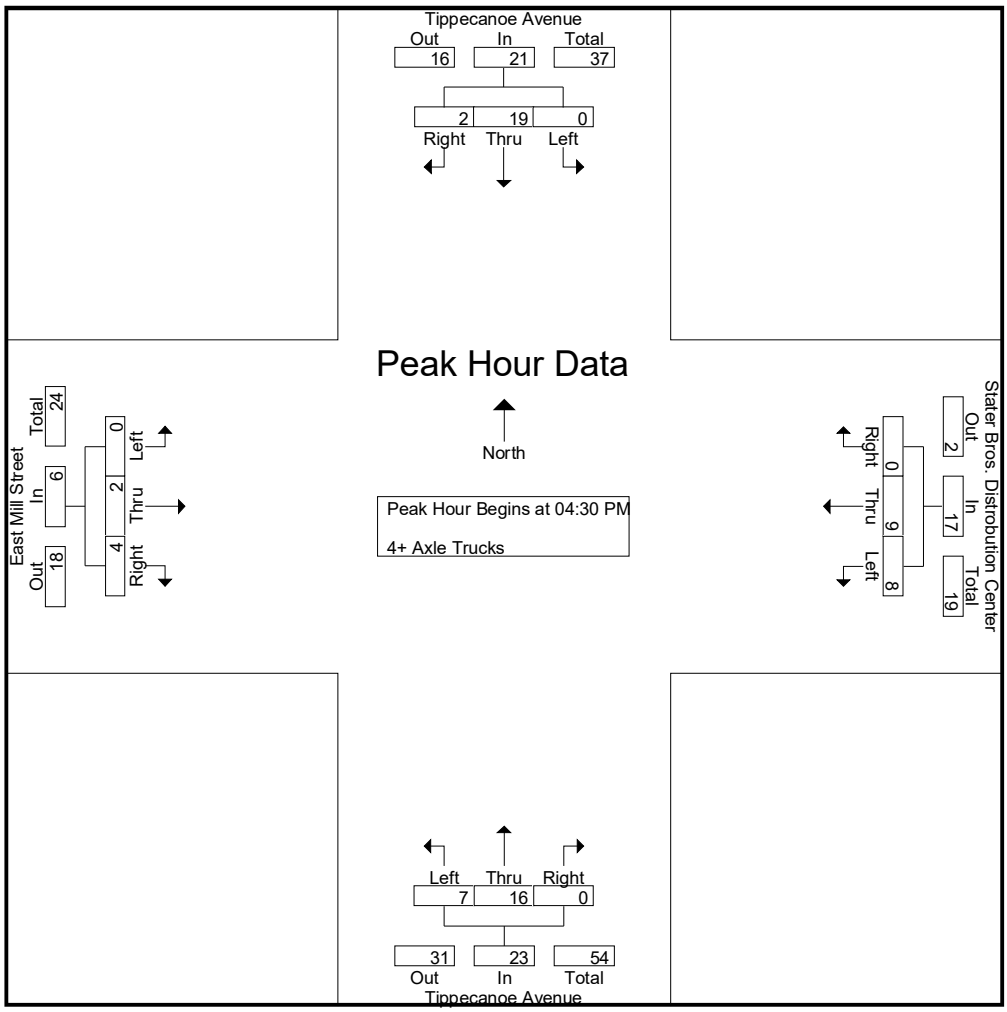
Weather: Clear

File Name : 51_SBC_Tippecanoe_E Mill PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	3	0	3	2	0	0	2	**2**	**10**	0	**12**	0	**2**	1	**3**
+15 mins.	0	**6**	0	6	**4**	**4**	0	**8**	2	0	0	2	0	0	**2**	2
+30 mins.	0	6	**2**	**8**	1	3	0	4	1	5	0	6	0	0	0	0
+45 mins.	0	4	0	4	1	2	0	3	2	1	0	3	0	0	1	1
Total Volume	0	19	2	21	8	9	0	17	7	16	0	23	0	2	4	6
% App. Total	0	90.5	9.5		47.1	52.9	0		30.4	69.6	0		0	33.3	66.7	
PHF	.000	.792	.250	.656	.500	.563	.000	.531	.875	.400	.000	.479	.000	.250	.500	.500

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

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

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	16	68	7	91	8	11	21	40	1	64	13	78	4	10	4	18	227
06:15 AM	19	90	11	120	6	4	18	28	7	86	11	104	6	19	2	27	279
06:30 AM	40	109	18	167	4	19	31	54	14	157	28	199	13	28	5	46	466
06:45 AM	59	153	29	241	2	16	50	68	7	151	23	181	12	67	10	89	579
Total	134	420	65	619	20	50	120	190	29	458	75	562	35	124	21	180	1551
07:00 AM	68	108	13	189	7	17	45	69	12	106	41	159	21	59	10	90	507
07:15 AM	65	143	24	232	3	32	40	75	11	103	32	146	29	46	5	80	533
07:30 AM	32	163	27	222	7	25	52	84	12	121	16	149	16	29	9	54	509
07:45 AM	30	184	43	257	1	16	53	70	7	160	17	184	34	19	13	66	577
Total	195	598	107	900	18	90	190	298	42	490	106	638	100	153	37	290	2126
08:00 AM	13	106	30	149	2	14	34	50	15	136	12	163	46	19	15	80	442
08:15 AM	25	121	22	168	8	9	32	49	12	128	5	145	29	11	13	53	415
08:30 AM	10	118	19	147	6	9	30	45	11	122	6	139	7	10	6	23	354
08:45 AM	13	143	16	172	6	11	19	36	8	125	6	139	10	7	3	20	367
Total	61	488	87	636	22	43	115	180	46	511	29	586	92	47	37	176	1578
Grand Total	390	1506	259	2155	60	183	425	668	117	1459	210	1786	227	324	95	646	5255
Apprch %	18.1	69.9	12		9	27.4	63.6		6.6	81.7	11.8		35.1	50.2	14.7		
Total %	7.4	28.7	4.9	41	1.1	3.5	8.1	12.7	2.2	27.8	4	34	4.3	6.2	1.8	12.3	
Passenger Vehicles	370	1381	236	1987	47	174	413	634	105	1307	190	1602	221	314	84	619	4842
% Passenger Vehicles	94.9	91.7	91.1	92.2	78.3	95.1	97.2	94.9	89.7	89.6	90.5	89.7	97.4	96.9	88.4	95.8	92.1
Large 2 Axle Vehicles	6	37	12	55	2	5	7	14	5	59	4	68	4	6	2	12	149
% Large 2 Axle Vehicles	1.5	2.5	4.6	2.6	3.3	2.7	1.6	2.1	4.3	4	1.9	3.8	1.8	1.9	2.1	1.9	2.8
3 Axle Vehicles	4	26	4	34	5	1	2	8	4	23	3	30	1	2	5	8	80
% 3 Axle Vehicles	1	1.7	1.5	1.6	8.3	0.5	0.5	1.2	3.4	1.6	1.4	1.7	0.4	0.6	5.3	1.2	1.5
4+ Axle Trucks	10	62	7	79	6	3	3	12	3	70	13	86	1	2	4	7	184
% 4+ Axle Trucks	2.6	4.1	2.7	3.7	10	1.6	0.7	1.8	2.6	4.8	6.2	4.8	0.4	0.6	4.2	1.1	3.5

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	59	153	**29**	**241**	2	16	50	68	7	**151**	23	**181**	12	**67**	**10**	89	**579**
07:00 AM	**68**	108	13	189	**7**	17	45	69	**12**	106	**41**	159	21	59	10	**90**	507
07:15 AM	65	143	24	232	3	**32**	40	75	11	103	32	146	**29**	46	5	80	533
07:30 AM	32	**163**	27	222	7	25	**52**	**84**	12	121	16	149	16	29	9	54	509
Total Volume	224	567	93	884	19	90	187	296	42	481	112	635	78	201	34	313	2128
% App. Total	25.3	64.1	10.5		6.4	30.4	63.2		6.6	75.7	17.6		24.9	64.2	10.9		
PHF	.824	.870	.802	.917	.679	.703	.899	.881	.875	.796	.683	.877	.672	.750	.850	.869	.919

Counts Unlimited
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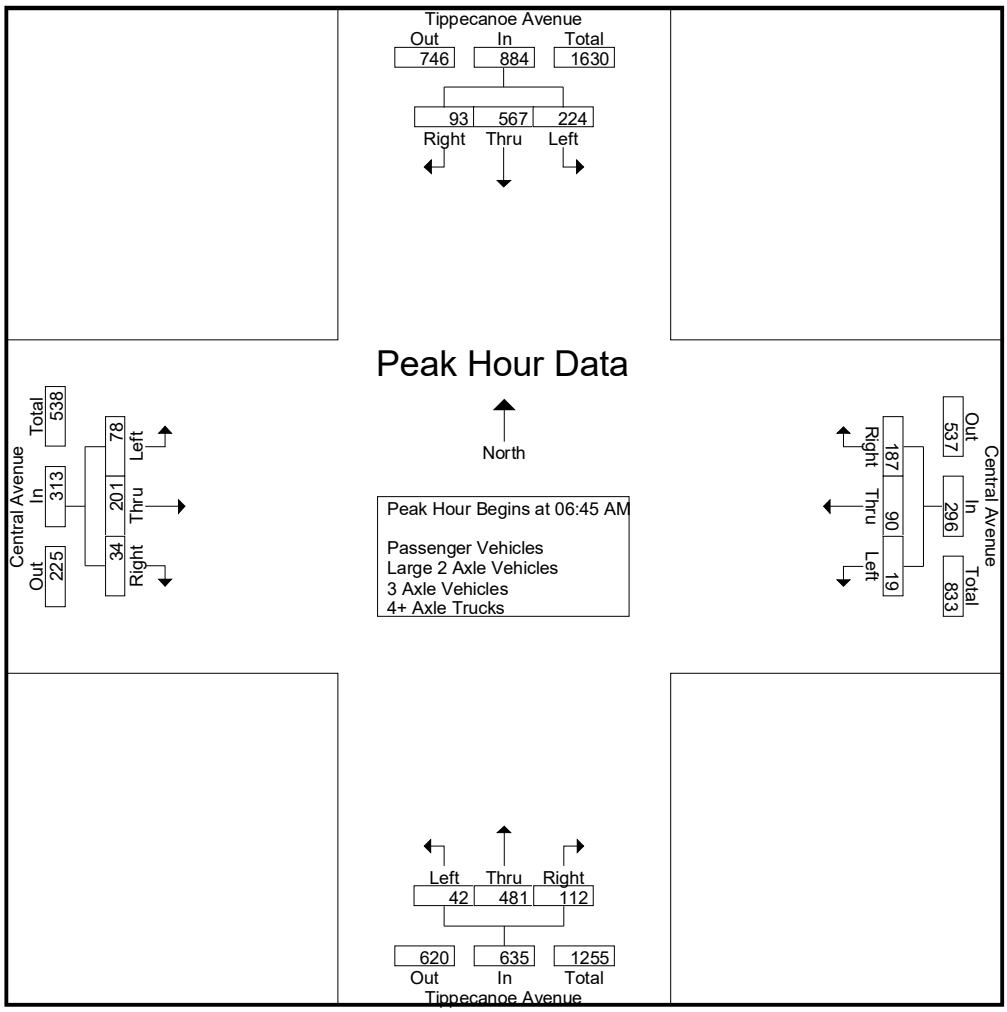
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				06:30 AM				06:45 AM			
+0 mins.	**68**	108	13	189	**7**	17	45	69	**14**	**157**	28	**199**	12	**67**	**10**	89
+15 mins.	65	143	24	232	3	**32**	40	75	7	151	23	181	21	59	10	**90**
+30 mins.	32	163	27	222	7	25	52	**84**	12	106	**41**	159	**29**	46	5	80
+45 mins.	30	**184**	**43**	**257**	1	16	**53**	70	11	103	32	146	16	29	9	54
Total Volume	195	598	107	900	18	90	190	298	44	517	124	685	78	201	34	313
% App. Total	21.7	66.4	11.9		6	30.2	63.8		6.4	75.5	18.1		24.9	64.2	10.9	
PHF	.717	.813	.622	.875	.643	.703	.896	.887	.786	.823	.756	.861	.672	.750	.850	.869

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	16	59	7	82	7	10	21	38	1	54	11	66	4	10	4	18	204
06:15 AM	16	89	11	116	6	4	17	27	7	71	10	88	6	18	2	26	257
06:30 AM	37	98	16	151	1	18	30	49	12	139	26	177	12	25	5	42	419
06:45 AM	58	144	27	229	2	16	48	66	6	136	21	163	11	66	6	83	541
Total	127	390	61	578	16	48	116	180	26	400	68	494	33	119	17	169	1421
07:00 AM	66	102	13	181	5	16	44	65	11	93	40	144	20	59	8	87	477
07:15 AM	64	132	22	218	2	30	40	72	11	95	31	137	29	45	5	79	506
07:30 AM	28	151	27	206	6	25	50	81	11	105	12	128	15	29	8	52	467
07:45 AM	30	171	41	242	1	15	52	68	4	152	16	172	33	19	12	64	546
Total	188	556	103	847	14	86	186	286	37	445	99	581	97	152	33	282	1996
08:00 AM	12	96	26	134	2	13	33	48	14	119	8	141	46	18	15	79	402
08:15 AM	22	111	19	152	6	9	30	45	11	119	5	135	29	11	13	53	385
08:30 AM	10	107	16	133	5	9	29	43	10	110	5	125	6	10	4	20	321
08:45 AM	11	121	11	143	4	9	19	32	7	114	5	126	10	4	2	16	317
Total	55	435	72	562	17	40	111	168	42	462	23	527	91	43	34	168	1425
Grand Total	370	1381	236	1987	47	174	413	634	105	1307	190	1602	221	314	84	619	4842
Apprch %	18.6	69.5	11.9		7.4	27.4	65.1		6.6	81.6	11.9		35.7	50.7	13.6		
Total %	7.6	28.5	4.9	41	1	3.6	8.5	13.1	2.2	27	3.9	33.1	4.6	6.5	1.7	12.8	

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	58	144	**27**	**229**	2	16	48	66	6	**136**	21	**163**	11	**66**	6	83	**541**
07:00 AM	**66**	102	13	181	5	16	44	65	**11**	93	**40**	144	20	59	**8**	**87**	477
07:15 AM	64	132	22	218	2	**30**	40	72	11	95	31	137	**29**	45	5	79	506
07:30 AM	28	**151**	27	206	**6**	25	**50**	**81**	11	105	12	128	15	29	8	52	467
Total Volume	216	529	89	834	15	87	182	284	39	429	104	572	75	199	27	301	1991
% App. Total	25.9	63.4	10.7		5.3	30.6	64.1		6.8	75	18.2		24.9	66.1	9		
PHF	.818	.876	.824	.910	.625	.725	.910	.877	.886	.789	.650	.877	.647	.754	.844	.865	.920

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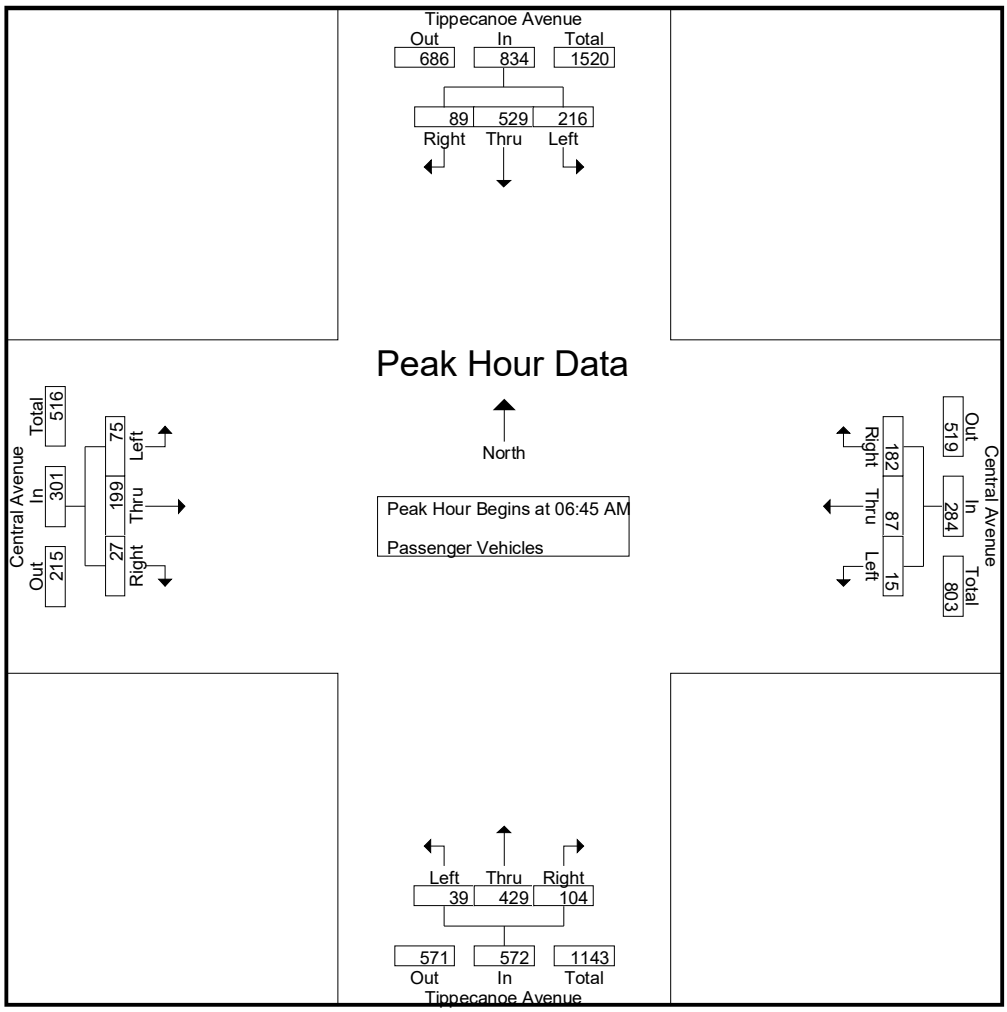
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM				06:45 AM				06:45 AM				06:45 AM			
+0 mins.	58	144	**27**	**229**	2	16	48	66	6	**136**	21	**163**	11	**66**	6	83
+15 mins.	**66**	102	13	181	5	16	44	65	**11**	93	**40**	144	20	59	**8**	**87**
+30 mins.	64	132	22	218	2	**30**	40	72	11	95	31	137	**29**	45	5	79
+45 mins.	28	**151**	27	206	**6**	25	**50**	**81**	11	105	12	128	15	29	8	52
Total Volume	216	529	89	834	15	87	182	284	39	429	104	572	75	199	27	301
% App. Total	25.9	63.4	10.7		5.3	30.6	64.1		6.8	75	18.2		24.9	66.1	9	
PHF	.818	.876	.824	.910	.625	.725	.910	.877	.886	.789	.650	.877	.647	.754	.844	.865

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
06:15 AM	1	1	0	2	0	0	1	1	0	6	0	6	0	0	0	0	9
06:30 AM	0	2	0	2	1	1	1	3	1	8	1	10	1	1	0	2	17
06:45 AM	0	4	0	4	0	0	1	1	1	10	0	11	1	0	0	1	17
Total	1	8	0	9	1	1	3	5	2	26	1	29	2	1	0	3	46
07:00 AM	1	3	0	4	0	0	0	0	1	3	0	4	1	0	0	1	9
07:15 AM	1	3	0	4	0	1	0	1	0	1	1	2	0	1	0	1	8
07:30 AM	0	4	0	4	0	0	1	1	1	4	0	5	0	0	0	0	10
07:45 AM	0	3	2	5	0	1	1	2	1	6	0	7	1	0	1	2	16
Total	2	13	2	17	0	2	2	4	3	14	1	18	2	1	1	4	43
08:00 AM	0	3	3	6	0	1	0	1	0	4	1	5	0	1	0	1	13
08:15 AM	2	2	2	6	0	0	2	2	0	4	0	4	0	0	0	0	12
08:30 AM	0	3	1	4	0	0	0	0	0	6	0	6	0	0	1	1	11
08:45 AM	1	8	4	13	1	1	0	2	0	5	1	6	0	3	0	3	24
Total	3	16	10	29	1	2	2	5	0	19	2	21	0	4	1	5	60
Grand Total	6	37	12	55	2	5	7	14	5	59	4	68	4	6	2	12	149
Apprch %	10.9	67.3	21.8		14.3	35.7	50		7.4	86.8	5.9		33.3	50	16.7		
Total %	4	24.8	8.1	36.9	1.3	3.4	4.7	9.4	3.4	39.6	2.7	45.6	2.7	4	1.3	8.1	

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	0	**4**	0	**4**	0	0	**1**	**1**	**1**	**10**	0	**11**	**1**	0	0	**1**	**17**
07:00 AM	**1**	3	0	4	0	0	0	0	1	3	0	4	1	0	0	1	9
07:15 AM	1	3	0	4	0	**1**	0	1	0	1	**1**	2	0	**1**	0	1	8
07:30 AM	0	4	0	4	0	0	1	1	1	4	0	5	0	0	0	0	10
Total Volume	2	14	0	16	0	1	2	3	3	18	1	22	2	1	0	3	44
% App. Total	12.5	87.5	0		0	33.3	66.7		13.6	81.8	4.5		66.7	33.3	0		
PHF	.500	.875	.000	1.00	.000	.250	.500	.750	.750	.450	.250	.500	.500	.250	.000	.750	.647

Counts Unlimited
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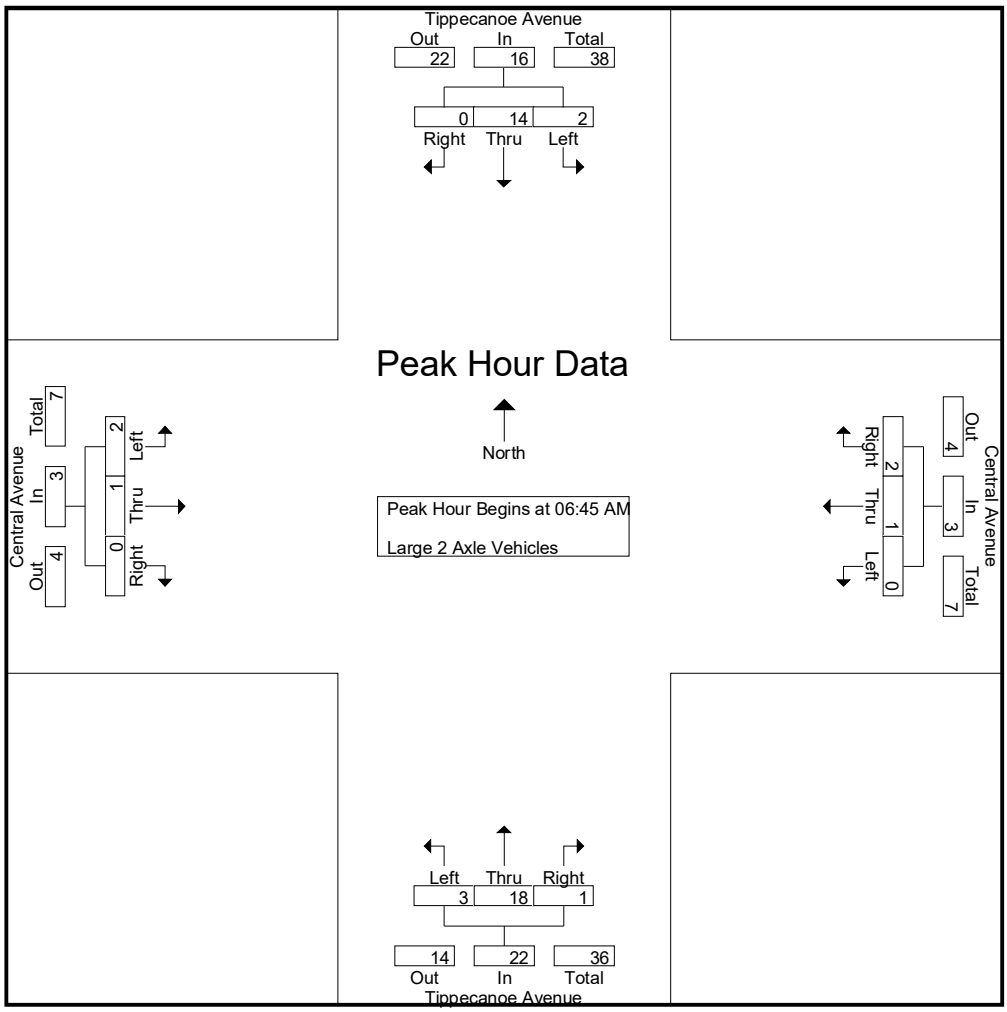
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM				06:45 AM				06:45 AM				06:45 AM			
+0 mins.	0	**4**	0	**4**	0	0	**1**	**1**	**1**	**10**	0	**11**	**1**	0	0	**1**
+15 mins.	**1**	3	0	4	0	0	0	0	1	3	0	4	1	0	0	1
+30 mins.	1	3	0	4	0	**1**	0	1	0	1	**1**	2	0	**1**	0	1
+45 mins.	0	4	0	4	0	0	1	1	1	4	0	5	0	0	0	0
Total Volume	2	14	0	16	0	1	2	3	3	18	1	22	2	1	0	3
% App. Total	12.5	87.5	0		0	33.3	66.7		13.6	81.8	4.5		66.7	33.3	0	
PHF	.500	.875	.000	1.000	.000	.250	.500	.750	.750	.450	.250	.500	.500	.250	.000	.750

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
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Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	5
06:15 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
06:30 AM	2	5	0	7	1	0	0	1	1	2	0	3	0	1	0	1	12
06:45 AM	0	3	2	5	0	0	0	0	0	0	1	1	0	1	2	3	9
Total	3	10	2	15	1	0	0	1	1	5	2	8	0	2	2	4	28
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	2	2	5
07:15 AM	0	0	0	0	1	0	0	1	0	4	0	4	0	0	0	0	5
07:30 AM	1	2	0	3	1	0	0	1	0	4	0	4	0	0	0	0	8
07:45 AM	0	3	0	3	0	0	0	0	2	0	1	3	0	0	0	0	6
Total	1	6	0	7	2	0	0	2	2	10	1	13	0	0	2	2	24
08:00 AM	0	2	1	3	0	0	1	1	1	6	0	7	0	0	0	0	11
08:15 AM	0	3	0	3	1	0	0	1	0	0	0	0	0	0	0	0	4
08:30 AM	0	2	1	3	0	0	1	1	0	2	0	2	1	0	0	1	7
08:45 AM	0	3	0	3	1	1	0	2	0	0	0	0	0	0	1	1	6
Total	0	10	2	12	2	1	2	5	1	8	0	9	1	0	1	2	28
Grand Total	4	26	4	34	5	1	2	8	4	23	3	30	1	2	5	8	80
Apprch %	11.8	76.5	11.8		62.5	12.5	25		13.3	76.7	10		12.5	25	62.5		
Total %	5	32.5	5	42.5	6.2	1.2	2.5	10	5	28.8	3.8	37.5	1.2	2.5	6.2	10	

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	0	**3**	**2**	**5**	0	0	0	0	0	0	**1**	1	0	**1**	**2**	**3**	**9**
07:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	2	2	5
07:15 AM	0	0	0	0	**1**	0	0	**1**	0	**4**	0	**4**	0	0	0	0	5
07:30 AM	**1**	2	0	3	1	0	0	1	0	4	0	4	0	0	0	0	8
Total Volume	1	6	2	9	2	0	0	2	0	10	1	11	0	1	4	5	27
% App. Total	11.1	66.7	22.2		100	0	0		0	90.9	9.1		0	20	80		
PHF	.250	.500	.250	.450	.500	.000	.000	.500	.000	.625	.250	.688	.000	.250	.500	.417	.750

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City of San Bernardino
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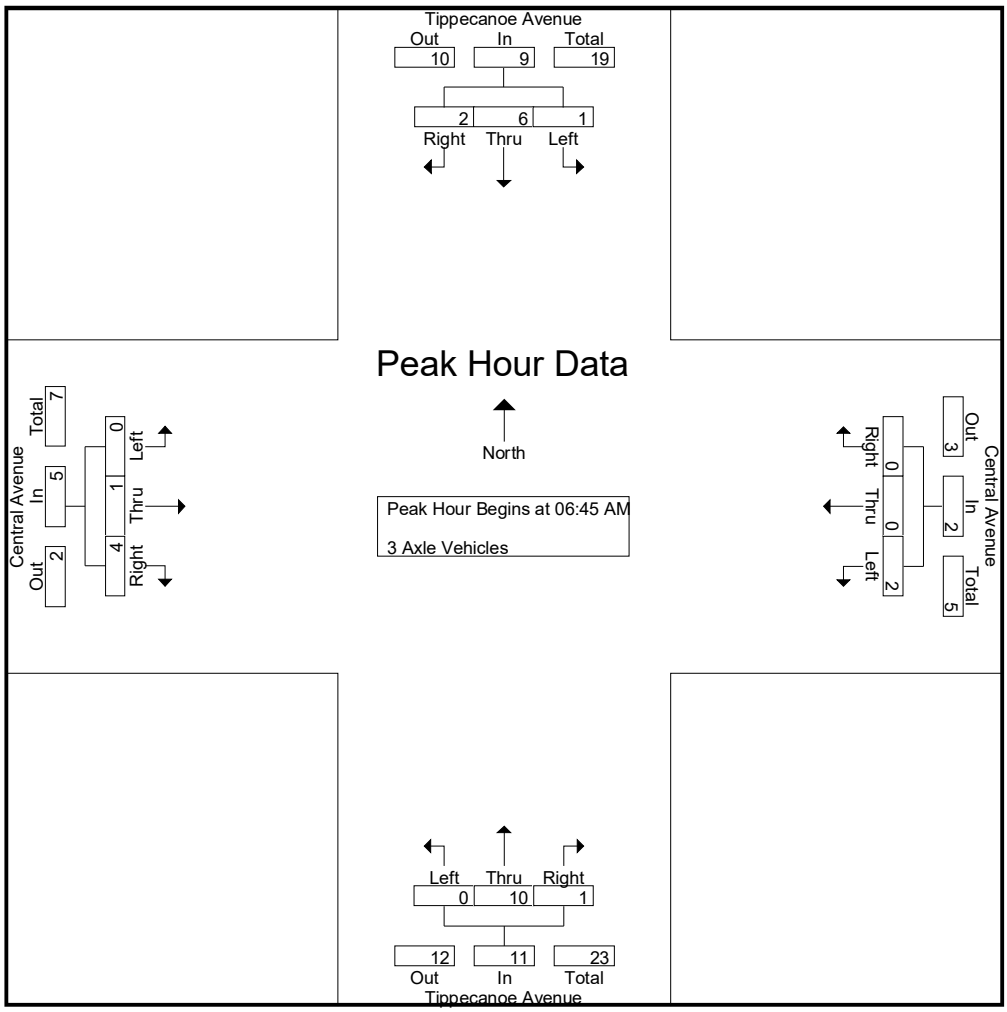
File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM				06:45 AM				06:45 AM				06:45 AM			
+0 mins.	0	**3**	**2**	**5**	0	0	0	0	0	0	**1**	1	0	**1**	**2**	**3**
+15 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	2	2
+30 mins.	0	0	0	0	**1**	0	0	**1**	0	**4**	0	**4**	0	0	0	0
+45 mins.	**1**	2	0	3	1	0	0	1	0	4	0	4	0	0	0	0
Total Volume	1	6	2	9	2	0	0	2	0	10	1	11	0	1	4	5
% App. Total	11.1	66.7	22.2		100	0	0		0	90.9	9.1		0	20	80	
PHF	.250	.500	.250	.450	.500	.000	.000	.500	.000	.625	.250	.688	.000	.250	.500	.417

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	6	0	6	1	1	0	2	0	6	1	7	0	0	0	0	15
06:15 AM	1	0	0	1	0	0	0	0	0	8	1	9	0	1	0	1	11
06:30 AM	1	4	2	7	1	0	0	1	0	8	1	9	0	1	0	1	18
06:45 AM	1	2	0	3	0	0	1	1	0	5	1	6	0	0	2	2	12
Total	3	12	2	17	2	1	1	4	0	27	4	31	0	2	2	4	56
07:00 AM	1	2	0	3	2	1	1	4	0	8	1	9	0	0	0	0	16
07:15 AM	0	8	2	10	0	1	0	1	0	3	0	3	0	0	0	0	14
07:30 AM	3	6	0	9	0	0	1	1	0	8	4	12	1	0	1	2	24
07:45 AM	0	7	0	7	0	0	0	0	0	2	0	2	0	0	0	0	9
Total	4	23	2	29	2	2	2	6	0	21	5	26	1	0	1	2	63
08:00 AM	1	5	0	6	0	0	0	0	0	7	3	10	0	0	0	0	16
08:15 AM	1	5	1	7	1	0	0	1	1	5	0	6	0	0	0	0	14
08:30 AM	0	6	1	7	1	0	0	1	1	4	1	6	0	0	1	1	15
08:45 AM	1	11	1	13	0	0	0	0	1	6	0	7	0	0	0	0	20
Total	3	27	3	33	2	0	0	2	3	22	4	29	0	0	1	1	65
Grand Total	10	62	7	79	6	3	3	12	3	70	13	86	1	2	4	7	184
Apprch %	12.7	78.5	8.9		50	25	25		3.5	81.4	15.1		14.3	28.6	57.1		
Total %	5.4	33.7	3.8	42.9	3.3	1.6	1.6	6.5	1.6	38	7.1	46.7	0.5	1.1	2.2	3.8	

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	1	2	0	3	0	0	**1**	1	0	5	1	6	0	0	**2**	**2**	12
07:00 AM	1	2	0	3	**2**	**1**	1	**4**	0	**8**	1	9	0	0	0	0	16
07:15 AM	0	**8**	**2**	**10**	0	1	0	1	0	3	0	3	0	0	0	0	14
07:30 AM	**3**	6	0	9	0	0	1	1	0	8	**4**	**12**	**1**	0	1	2	**24**
Total Volume	5	18	2	25	2	2	3	7	0	24	6	30	1	0	3	4	66
% App. Total	20	72	8		28.6	28.6	42.9		0	80	20		25	0	75		
PHF	.417	.563	.250	.625	.250	.500	.750	.438	.000	.750	.375	.625	.250	.000	.375	.500	.688

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central AM
Site Code : 99918385
Start Date : 5/16/2018
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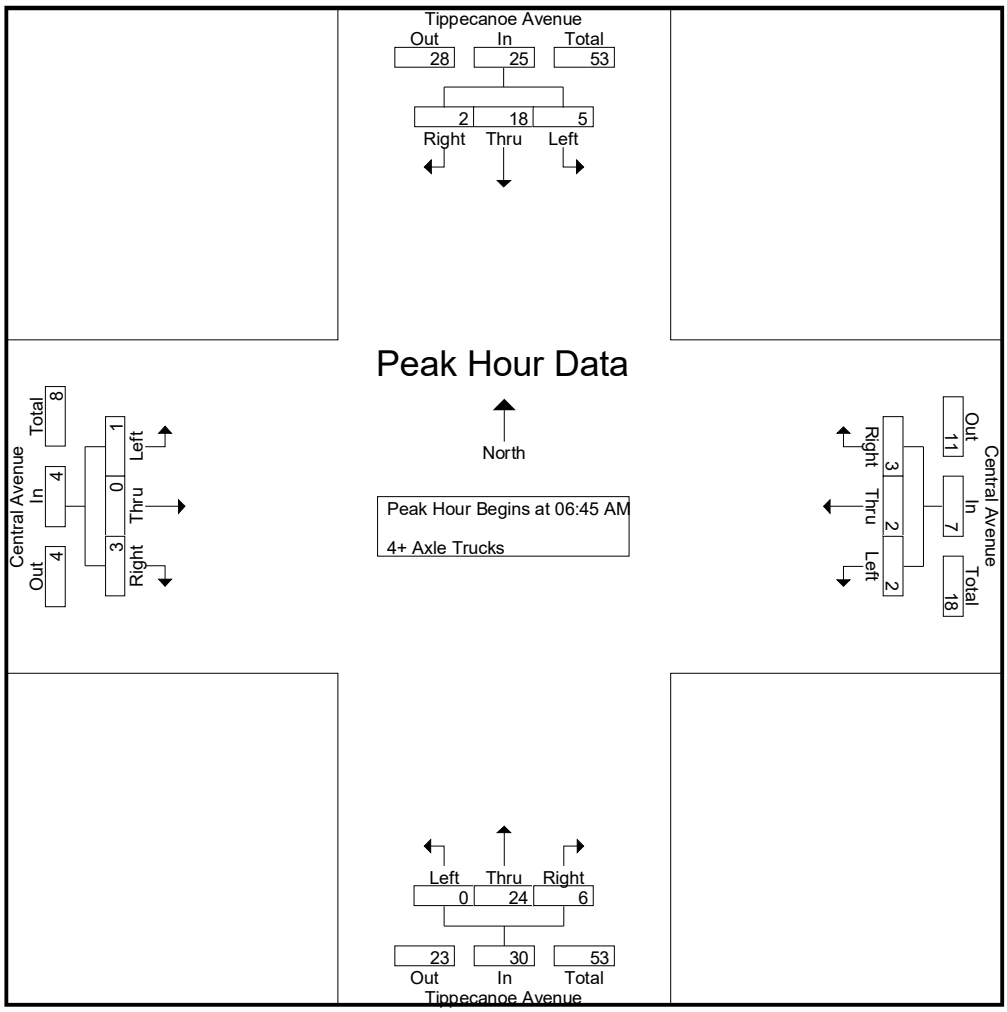

Peak Hour Analysis From 06:45 AM to 07:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM				06:45 AM				06:45 AM				06:45 AM			
+0 mins.	1	2	0	3	0	0	**1**	1	0	5	1	6	0	0	**2**	**2**
+15 mins.	1	2	0	3	**2**	**1**	1	**4**	0	**8**	1	9	0	0	0	0
+30 mins.	0	**8**	**2**	**10**	0	1	0	1	0	3	0	3	0	0	0	0
+45 mins.	**3**	6	0	9	0	0	1	1	0	8	**4**	**12**	**1**	0	1	2
Total Volume	5	18	2	25	2	2	3	7	0	24	6	30	1	0	3	4
% App. Total	20	72	8		28.6	28.6	42.9		0	80	20		25	0	75	
PHF	.417	.563	.250	.625	.250	.500	.750	.438	.000	.750	.375	.625	.250	.000	.375	.500

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City of San Bernardino
N/S: Tippecanoe Avenue
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Weather: Clear

File Name : 52_SBC_Tippecanoe_Central PM
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	32	173	22	227	17	41	56	114	17	185	7	209	25	11	10	46	596
03:15 PM	34	183	30	247	7	23	31	61	14	179	3	196	25	20	13	58	562
03:30 PM	34	177	24	235	13	32	54	99	22	217	8	247	38	47	13	98	679
03:45 PM	33	205	27	265	12	21	57	90	20	177	9	206	28	28	14	70	631
Total	133	738	103	974	49	117	198	364	73	758	27	858	116	106	50	272	2468
04:00 PM	39	190	33	262	8	23	59	90	16	177	6	199	39	24	18	81	632
04:15 PM	27	159	21	207	7	15	42	64	26	173	3	202	29	22	13	64	537
04:30 PM	60	185	29	274	17	33	63	113	16	190	10	216	35	17	3	55	658
04:45 PM	27	214	28	269	8	10	35	53	15	206	5	226	20	24	15	59	607
Total	153	748	111	1012	40	81	199	320	73	746	24	843	123	87	49	259	2434
05:00 PM	58	209	55	322	9	22	53	84	11	221	9	241	36	44	16	96	743
05:15 PM	41	200	21	262	6	26	47	79	14	229	13	256	34	36	15	85	682
05:30 PM	62	156	23	241	22	74	84	180	24	180	12	216	25	62	10	97	734
05:45 PM	66	143	35	244	12	48	61	121	9	188	22	219	21	49	9	79	663
Total	227	708	134	1069	49	170	245	464	58	818	56	932	116	191	50	357	2822
Grand Total	513	2194	348	3055	138	368	642	1148	204	2322	107	2633	355	384	149	888	7724
Apprch %	16.8	71.8	11.4		12	32.1	55.9		7.7	88.2	4.1		40	43.2	16.8		
Total %	6.6	28.4	4.5	39.6	1.8	4.8	8.3	14.9	2.6	30.1	1.4	34.1	4.6	5	1.9	11.5	
Passenger Vehicles	490	2056	325	2871	119	352	623	1094	189	2181	87	2457	340	375	132	847	7269
% Passenger Vehicles	95.5	93.7	93.4	94	86.2	95.7	97	95.3	92.6	93.9	81.3	93.3	95.8	97.7	88.6	95.4	94.1
Large 2 Axle Vehicles	8	41	18	67	2	7	10	19	5	38	2	45	8	3	4	15	146
% Large 2 Axle Vehicles	1.6	1.9	5.2	2.2	1.4	1.9	1.6	1.7	2.5	1.6	1.9	1.7	2.3	0.8	2.7	1.7	1.9
3 Axle Vehicles	4	32	1	37	7	5	3	15	7	42	5	54	3	2	5	10	116
% 3 Axle Vehicles	0.8	1.5	0.3	1.2	5.1	1.4	0.5	1.3	3.4	1.8	4.7	2.1	0.8	0.5	3.4	1.1	1.5
4+ Axle Trucks	11	65	4	80	10	4	6	20	3	61	13	77	4	4	8	16	193
% 4+ Axle Trucks	2.1	3	1.1	2.6	7.2	1.1	0.9	1.7	1.5	2.6	12.1	2.9	1.1	1	5.4	1.8	2.5

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	58	**209**	**55**	**322**	9	22	53	84	11	221	9	241	**36**	44	**16**	96	**743**
05:15 PM	41	200	21	262	6	26	47	79	14	**229**	13	**256**	34	36	15	85	682
05:30 PM	62	156	23	241	**22**	**74**	**84**	**180**	**24**	180	12	216	25	**62**	10	**97**	734
05:45 PM	**66**	143	35	244	12	48	61	121	9	188	**22**	219	21	49	9	79	663
Total Volume	227	708	134	1069	49	170	245	464	58	818	56	932	116	191	50	357	2822
% App. Total	21.2	66.2	12.5		10.6	36.6	52.8		6.2	87.8	6		32.5	53.5	14		
PHF	.860	.847	.609	.830	.557	.574	.729	.644	.604	.893	.636	.910	.806	.770	.781	.920	.950

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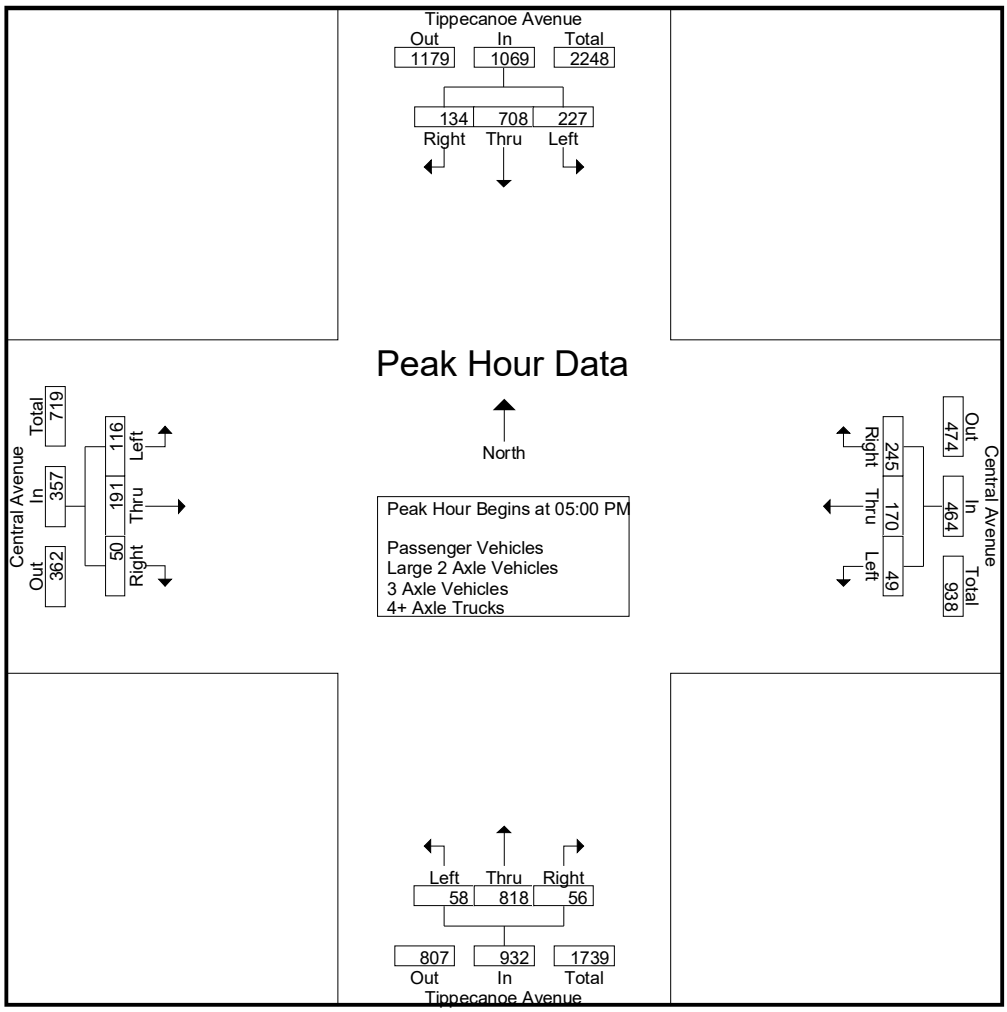

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:30 PM				05:00 PM			
+0 mins.	**60**	185	29	274	9	22	53	84	**16**	190	10	216	**36**	44	**16**	96
+15 mins.	27	**214**	28	269	6	26	47	79	15	206	5	226	34	36	15	85
+30 mins.	58	209	**55**	**322**	**22**	**74**	**84**	**180**	11	221	9	241	25	**62**	10	**97**
+45 mins.	41	200	21	262	12	48	61	121	14	**229**	**13**	**256**	21	49	9	79
Total Volume	186	808	133	1127	49	170	245	464	56	846	37	939	116	191	50	357
% App. Total	16.5	71.7	11.8		10.6	36.6	52.8		6	90.1	3.9		32.5	53.5	14	
PHF	.775	.944	.605	.875	.557	.574	.729	.644	.875	.924	.712	.917	.806	.770	.781	.920

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Site Code : 99918385
Start Date : 5/16/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	30	153	20	203	16	39	55	110	13	166	5	184	23	10	6	39	536
03:15 PM	30	163	29	222	7	20	30	57	13	160	2	175	22	20	11	53	507
03:30 PM	33	168	21	222	9	30	53	92	22	197	6	225	36	47	12	95	634
03:45 PM	29	194	24	247	10	20	55	85	18	160	7	185	28	28	12	68	585
Total	122	678	94	894	42	109	193	344	66	683	20	769	109	105	41	255	2262
04:00 PM	36	174	29	239	6	22	57	85	15	168	3	186	39	22	16	77	587
04:15 PM	27	152	19	198	5	14	42	61	25	167	1	193	29	21	12	62	514
04:30 PM	59	171	28	258	15	31	61	107	14	180	9	203	34	15	3	52	620
04:45 PM	25	200	26	251	8	9	34	51	13	197	5	215	18	22	13	53	570
Total	147	697	102	946	34	76	194	304	67	712	18	797	120	80	44	244	2291
05:00 PM	57	200	54	311	7	22	52	81	11	213	6	230	36	44	14	94	716
05:15 PM	39	194	21	254	5	23	43	71	14	224	11	249	32	36	14	82	656
05:30 PM	61	151	21	233	20	74	83	177	22	171	12	205	24	62	10	96	711
05:45 PM	64	136	33	233	11	48	58	117	9	178	20	207	19	48	9	76	633
Total	221	681	129	1031	43	167	236	446	56	786	49	891	111	190	47	348	2716
Grand Total	490	2056	325	2871	119	352	623	1094	189	2181	87	2457	340	375	132	847	7269
Apprch %	17.1	71.6	11.3		10.9	32.2	56.9		7.7	88.8	3.5		40.1	44.3	15.6		
Total %	6.7	28.3	4.5	39.5	1.6	4.8	8.6	15.1	2.6	30	1.2	33.8	4.7	5.2	1.8	11.7	

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	57	**200**	**54**	**311**	7	22	52	81	11	213	6	230	**36**	44	**14**	94	**716**
05:15 PM	39	194	21	254	5	23	43	71	14	**224**	11	**249**	32	36	14	82	656
05:30 PM	61	151	21	233	**20**	**74**	**83**	**177**	**22**	171	12	205	24	**62**	10	**96**	711
05:45 PM	**64**	136	33	233	11	48	58	117	9	178	**20**	207	19	48	9	76	633
Total Volume	221	681	129	1031	43	167	236	446	56	786	49	891	111	190	47	348	2716
% App. Total	21.4	66.1	12.5		9.6	37.4	52.9		6.3	88.2	5.5		31.9	54.6	13.5		
PHF	.863	.851	.597	.829	.538	.564	.711	.630	.636	.877	.613	.895	.771	.766	.839	.906	.948

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Site Code : 99918385
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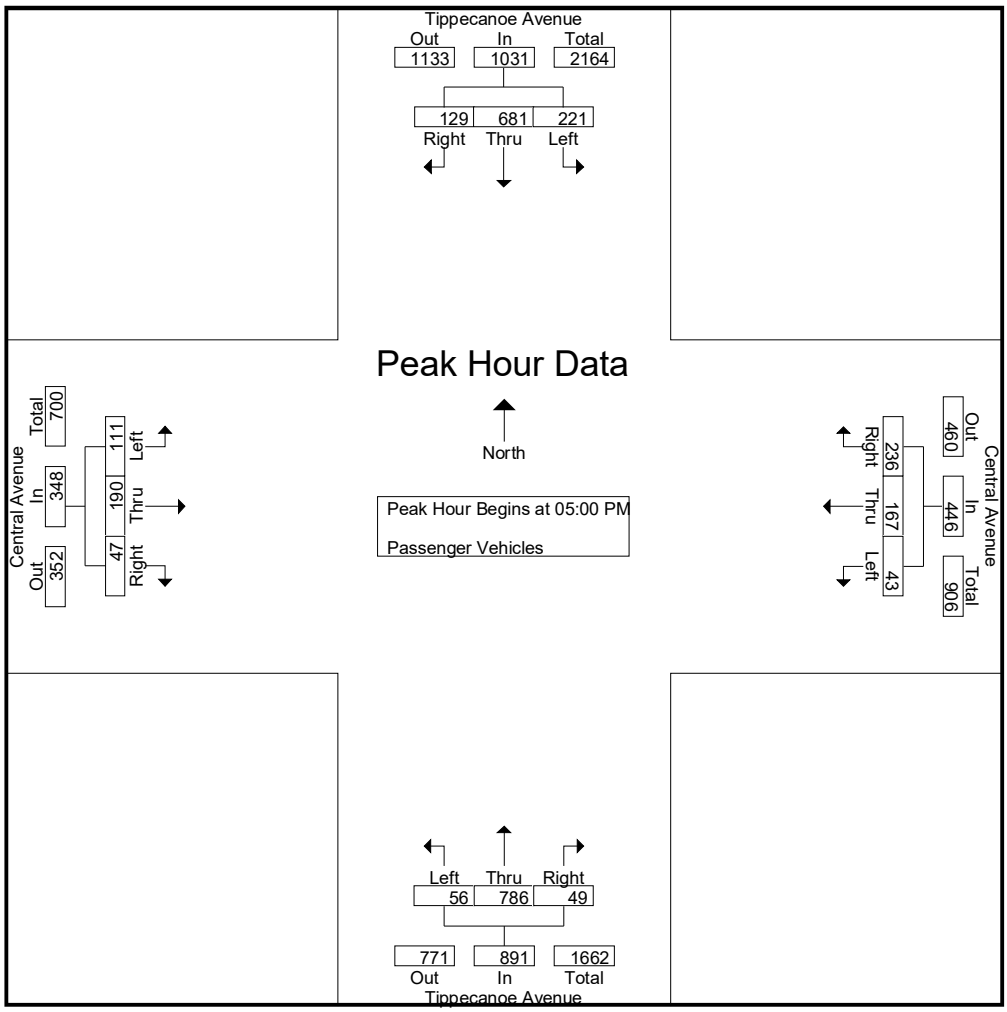

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	57	**200**	**54**	**311**	7	22	52	81	11	213	6	230	**36**	44	**14**	94
+15 mins.	39	194	21	254	5	23	43	71	14	**224**	11	**249**	32	36	14	82
+30 mins.	61	151	21	233	**20**	**74**	**83**	**177**	**22**	171	12	205	24	**62**	10	**96**
+45 mins.	**64**	136	33	233	11	48	58	117	9	178	**20**	207	19	48	9	76
Total Volume	221	681	129	1031	43	167	236	446	56	786	49	891	111	190	47	348
% App. Total	21.4	66.1	12.5		9.6	37.4	52.9		6.3	88.2	5.5		31.9	54.6	13.5	
PHF	.863	.851	.597	.829	.538	.564	.711	.630	.636	.877	.613	.895	.771	.766	.839	.906

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Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	2	6	1	9	0	0	1	1	2	4	1	7	1	0	0	1	18
03:15 PM	2	7	1	10	0	2	1	3	0	5	0	5	1	0	0	1	19
03:30 PM	0	4	3	7	1	2	0	3	0	3	0	3	0	0	0	0	13
03:45 PM	1	2	3	6	0	1	2	3	0	6	0	6	0	0	0	0	15
Total	5	19	8	32	1	5	4	10	2	18	1	21	2	0	0	2	65
04:00 PM	1	5	4	10	0	0	1	1	0	3	0	3	0	1	1	2	16
04:15 PM	0	3	2	5	0	0	0	0	1	2	0	3	0	0	1	1	9
04:30 PM	0	2	1	3	0	1	0	1	1	3	0	4	1	0	0	1	9
04:45 PM	0	4	2	6	0	0	1	1	0	3	0	3	1	1	1	3	13
Total	1	14	9	24	0	1	2	3	2	11	0	13	2	2	3	7	47
05:00 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
05:15 PM	0	2	0	2	0	1	1	2	0	0	0	0	2	0	1	3	7
05:30 PM	1	0	0	1	1	0	0	1	1	2	0	3	1	0	0	1	6
05:45 PM	1	3	1	5	0	0	3	3	0	4	1	5	1	1	0	2	15
Total	2	8	1	11	1	1	4	6	1	9	1	11	4	1	1	6	34
Grand Total	8	41	18	67	2	7	10	19	5	38	2	45	8	3	4	15	146
Apprch %	11.9	61.2	26.9		10.5	36.8	52.6		11.1	84.4	4.4		53.3	20	26.7		
Total %	5.5	28.1	12.3	45.9	1.4	4.8	6.8	13	3.4	26	1.4	30.8	5.5	2.1	2.7	10.3	

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**3**	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
05:15 PM	0	2	0	2	0	**1**	1	2	0	0	0	0	**2**	0	**1**	**3**	7
05:30 PM	**1**	0	0	1	**1**	0	0	1	**1**	2	0	3	1	0	0	1	6
05:45 PM	1	3	**1**	**5**	0	0	**3**	**3**	0	**4**	**1**	**5**	1	**1**	0	2	**15**
Total Volume	2	8	1	11	1	1	4	6	1	9	1	11	4	1	1	6	34
% App. Total	18.2	72.7	9.1		16.7	16.7	66.7		9.1	81.8	9.1		66.7	16.7	16.7		
PHF	.500	.667	.250	.550	.250	.250	.333	.500	.250	.563	.250	.550	.500	.250	.250	.500	.567

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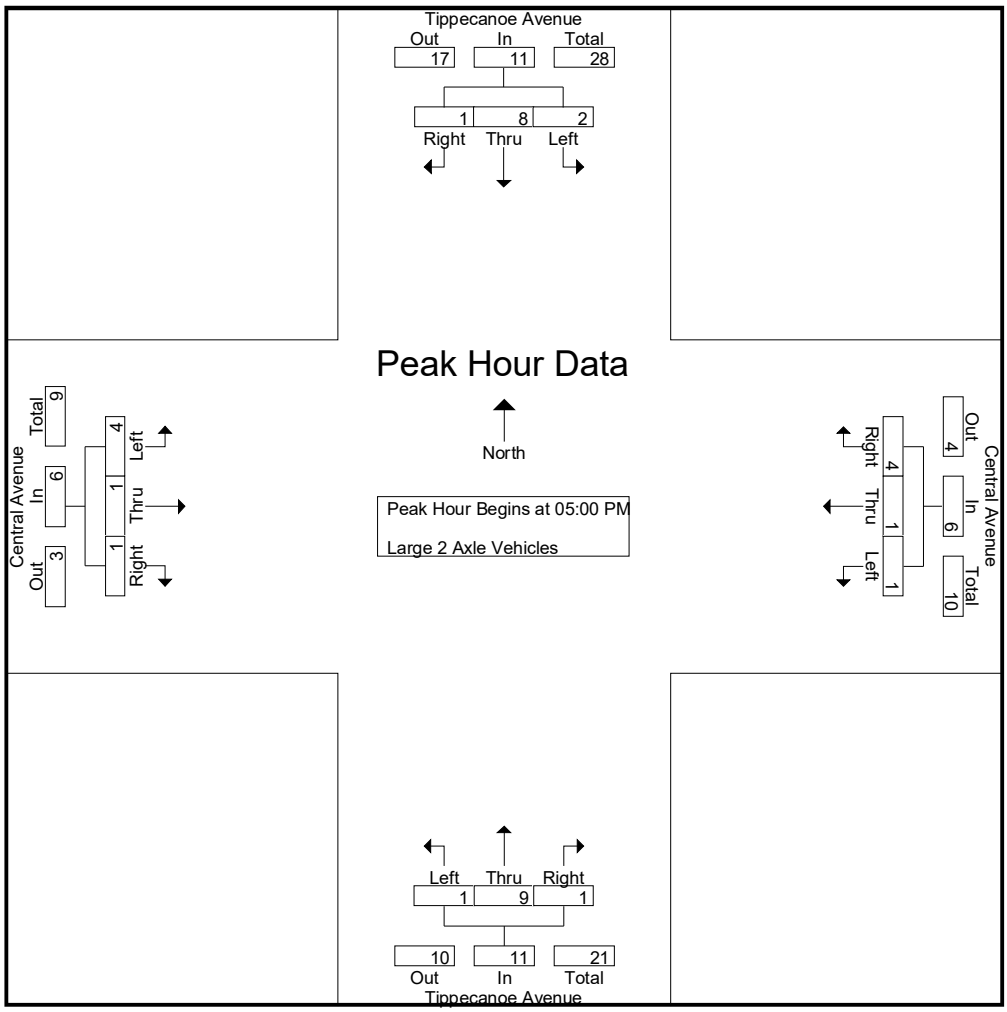

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**3**	0	3	0	0	0	0	0	3	0	3	0	0	0	0
+15 mins.	0	2	0	2	0	**1**	1	2	0	0	0	0	**2**	0	**1**	**3**
+30 mins.	**1**	0	0	1	**1**	0	0	1	**1**	2	0	3	1	0	0	1
+45 mins.	1	3	**1**	**5**	0	0	**3**	**3**	0	**4**	**1**	**5**	1	**1**	0	2
Total Volume	2	8	1	11	1	1	4	6	1	9	1	11	4	1	1	6
% App. Total	18.2	72.7	9.1		16.7	16.7	66.7		9.1	81.8	9.1		66.7	16.7	16.7	
PHF	.500	.667	.250	.550	.250	.250	.333	.500	.250	.563	.250	.550	.500	.250	.250	.500

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Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	5	0	5	0	1	0	1	2	4	0	6	1	0	2	3	15
03:15 PM	1	2	0	3	0	0	0	0	1	9	0	10	1	0	0	1	14
03:30 PM	0	4	0	4	1	0	1	2	0	10	0	10	0	0	1	1	17
03:45 PM	0	3	0	3	1	0	0	1	1	5	2	8	0	0	2	2	14
Total	1	14	0	15	2	1	1	4	4	28	2	34	2	0	5	7	60
04:00 PM	1	4	0	5	1	0	0	1	1	3	1	5	0	1	0	1	12
04:15 PM	0	2	0	2	1	1	0	2	0	0	1	1	0	0	0	0	5
04:30 PM	1	6	0	7	0	1	0	1	1	0	0	1	0	0	0	0	9
04:45 PM	0	1	0	1	0	0	0	0	1	3	0	4	0	1	0	1	6
Total	2	13	0	15	2	2	0	4	3	6	2	11	0	2	0	2	32
05:00 PM	0	2	0	2	2	0	0	2	0	2	1	3	0	0	0	0	7
05:15 PM	0	2	0	2	1	2	2	5	0	2	0	2	0	0	0	0	9
05:30 PM	0	1	1	2	0	0	0	0	0	3	0	3	0	0	0	0	5
05:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
Total	1	5	1	7	3	2	2	7	0	8	1	9	1	0	0	1	24
Grand Total	4	32	1	37	7	5	3	15	7	42	5	54	3	2	5	10	116
Apprch %	10.8	86.5	2.7		46.7	33.3	20		13	77.8	9.3		30	20	50		
Total %	3.4	27.6	0.9	31.9	6	4.3	2.6	12.9	6	36.2	4.3	46.6	2.6	1.7	4.3	8.6	

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**2**	0	**2**	**2**	0	0	2	0	2	**1**	**3**	0	0	0	0	7
05:15 PM	0	2	0	2	1	**2**	**2**	**5**	0	2	0	2	0	0	0	0	**9**
05:30 PM	0	1	**1**	2	0	0	0	0	0	**3**	0	3	0	0	0	0	5
05:45 PM	**1**	0	0	1	0	0	0	0	0	1	0	1	**1**	0	0	**1**	3
Total Volume	1	5	1	7	3	2	2	7	0	8	1	9	1	0	0	1	24
% App. Total	14.3	71.4	14.3		42.9	28.6	28.6		0	88.9	11.1		100	0	0		
PHF	.250	.625	.250	.875	.375	.250	.250	.350	.000	.667	.250	.750	.250	.000	.000	.250	.667

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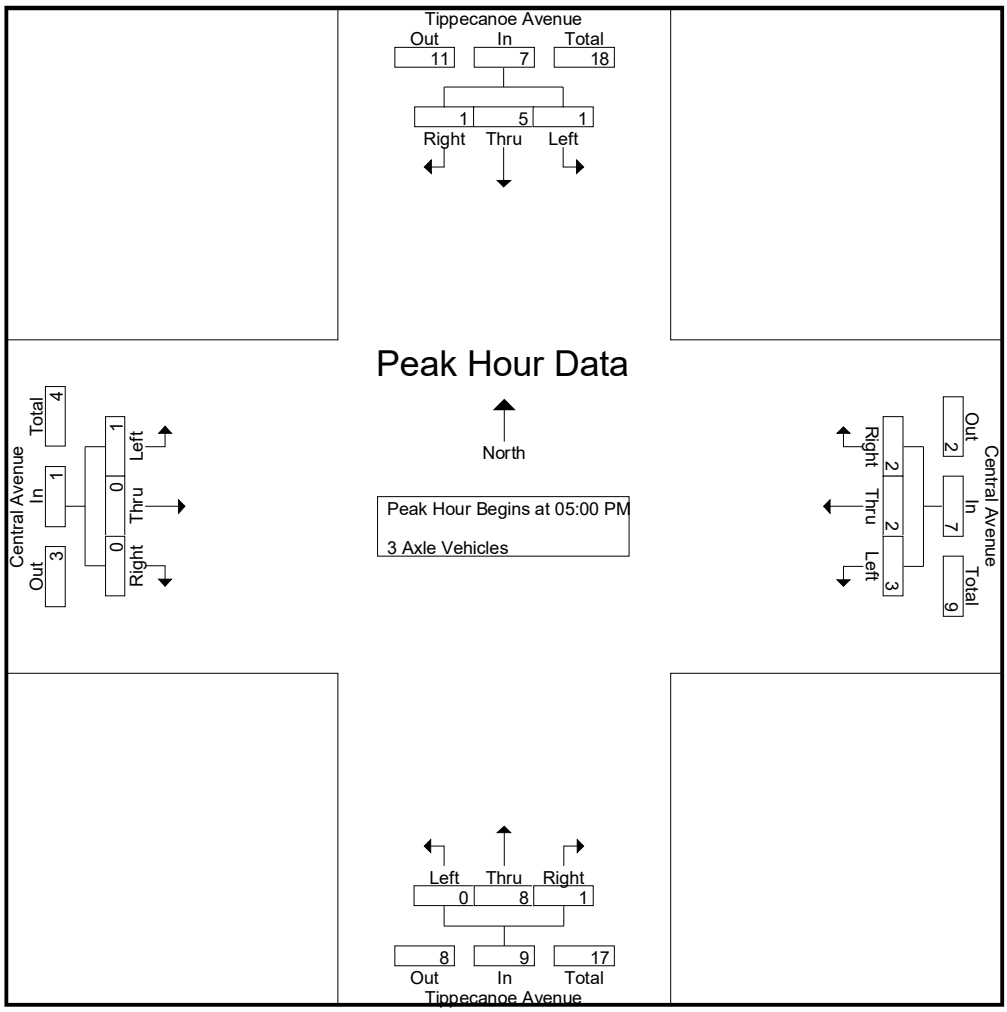
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central PM
Site Code : 99918385
Start Date : 5/16/2018
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**2**	0	**2**	**2**	0	0	2	0	2	**1**	**3**	0	0	0	0
+15 mins.	0	2	0	2	1	**2**	**2**	**5**	0	2	0	2	0	0	0	0
+30 mins.	0	1	**1**	2	0	0	0	0	0	**3**	0	3	0	0	0	0
+45 mins.	**1**	0	0	1	0	0	0	0	0	1	0	1	**1**	0	0	**1**
Total Volume	1	5	1	7	3	2	2	7	0	8	1	9	1	0	0	1
% App. Total	14.3	71.4	14.3		42.9	28.6	28.6		0	88.9	11.1		100	0	0	
PHF	.250	.625	.250	.875	.375	.250	.250	.350	.000	.667	.250	.750	.250	.000	.000	.250

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City of San Bernardino
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E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central PM
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Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	9	1	10	1	1	0	2	0	11	1	12	0	1	2	3	27
03:15 PM	1	11	0	12	0	1	0	1	0	5	1	6	1	0	2	3	22
03:30 PM	1	1	0	2	2	0	0	2	0	7	2	9	2	0	0	2	15
03:45 PM	3	6	0	9	1	0	0	1	1	6	0	7	0	0	0	0	17
Total	5	27	1	33	4	2	0	6	1	29	4	34	3	1	4	8	81
04:00 PM	1	7	0	8	1	1	1	3	0	3	2	5	0	0	1	1	17
04:15 PM	0	2	0	2	1	0	0	1	0	4	1	5	0	1	0	1	9
04:30 PM	0	6	0	6	2	0	2	4	0	7	1	8	0	2	0	2	20
04:45 PM	2	9	0	11	0	1	0	1	1	3	0	4	1	0	1	2	18
Total	3	24	0	27	4	2	3	9	1	17	4	22	1	3	2	6	64
05:00 PM	1	4	1	6	0	0	1	1	0	3	2	5	0	0	2	2	14
05:15 PM	2	2	0	4	0	0	1	1	0	3	2	5	0	0	0	0	10
05:30 PM	0	4	1	5	1	0	1	2	1	4	0	5	0	0	0	0	12
05:45 PM	0	4	1	5	1	0	0	1	0	5	1	6	0	0	0	0	12
Total	3	14	3	20	2	0	3	5	1	15	5	21	0	0	2	2	48
Grand Total	11	65	4	80	10	4	6	20	3	61	13	77	4	4	8	16	193
Apprch %	13.8	81.2	5		50	20	30		3.9	79.2	16.9		25	25	50		
Total %	5.7	33.7	2.1	41.5	5.2	2.1	3.1	10.4	1.6	31.6	6.7	39.9	2.1	2.1	4.1	8.3	

	Tippecanoe Avenue Southbound				Central Avenue Westbound				Tippecanoe Avenue Northbound				Central Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	**4**	**1**	**6**	0	0	**1**	1	0	3	**2**	5	0	0	**2**	**2**	**14**
05:15 PM	**2**	2	0	4	0	0	1	1	0	3	2	5	0	0	0	0	10
05:30 PM	0	4	1	5	**1**	0	1	**2**	**1**	4	0	5	0	0	0	0	12
05:45 PM	0	4	1	5	1	0	0	1	0	**5**	1	**6**	0	0	0	0	12
Total Volume	3	14	3	20	2	0	3	5	1	15	5	21	0	0	2	2	48
% App. Total	15	70	15		40	0	60		4.8	71.4	23.8		0	0	100		
PHF	.375	.875	.750	.833	.500	.000	.750	.625	.250	.750	.625	.875	.000	.000	.250	.250	.857

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City of San Bernardino
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E/W: Central Avenue
Weather: Clear

File Name : 52_SBC_Tippecanoe_Central PM
Site Code : 99918385
Start Date : 5/16/2018
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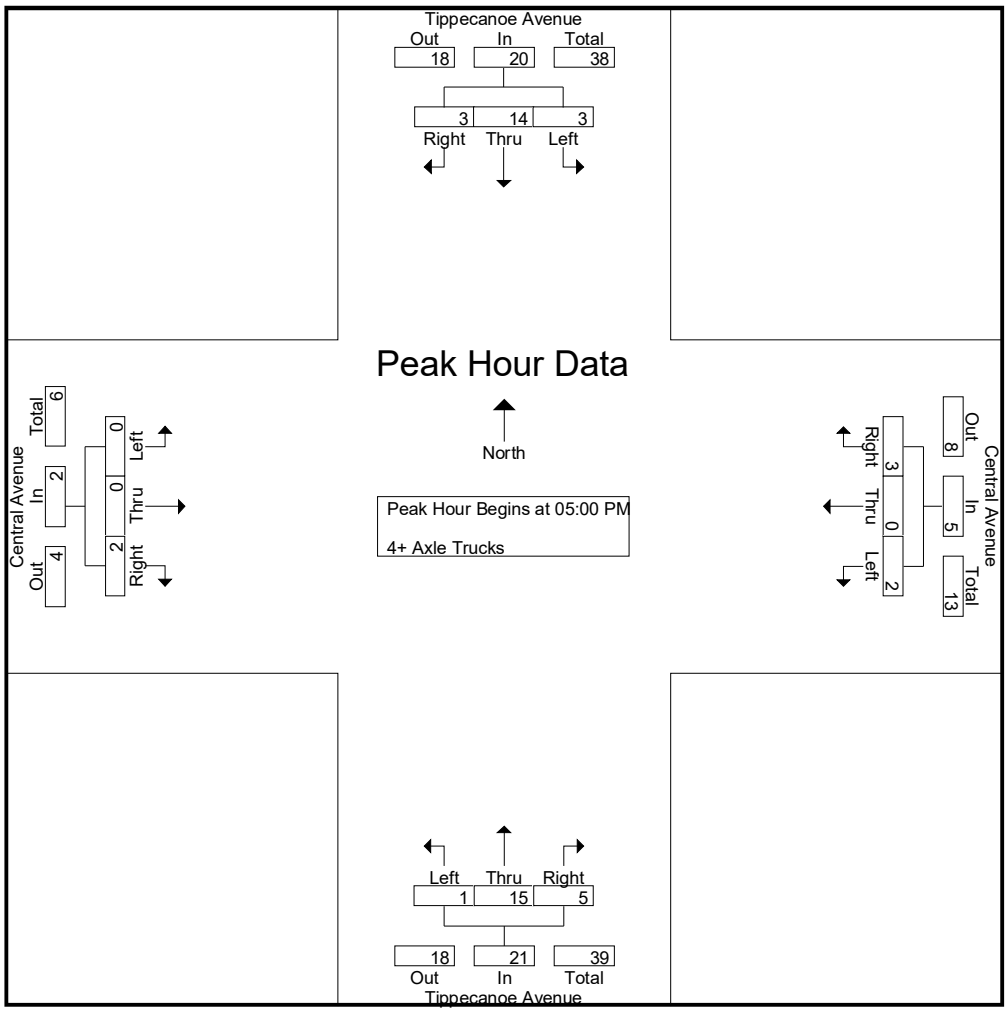

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	1	**4**	**1**	**6**	0	0	**1**	1	0	3	**2**	5	0	0	**2**	**2**
+15 mins.	**2**	2	0	4	0	0	1	1	0	3	2	5	0	0	0	0
+30 mins.	0	4	1	5	**1**	0	1	**2**	**1**	4	0	5	0	0	0	0
+45 mins.	0	4	1	5	1	0	0	1	0	**5**	1	**6**	0	0	0	0
Total Volume	3	14	3	20	2	0	3	5	1	15	5	21	0	0	2	2
% App. Total	15	70	15		40	0	60		4.8	71.4	23.8		0	0	100	
PHF	.375	.875	.750	.833	.500	.000	.750	.625	.250	.750	.625	.875	.000	.000	.250	.250

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino AM
Site Code : 99918385
Start Date : 5/17/2018
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	18	74	6	98	2	12	8	22	7	62	15	84	8	17	8	33	237
06:15 AM	12	72	9	93	8	15	14	37	8	74	12	94	14	17	8	39	263
06:30 AM	16	92	11	119	6	22	17	45	8	163	10	181	33	26	21	80	425
06:45 AM	33	107	7	147	10	32	18	60	13	115	6	134	36	49	25	110	451
Total	79	345	33	457	26	81	57	164	36	414	43	493	91	109	62	262	1376
07:00 AM	20	101	9	130	18	55	28	101	9	110	9	128	27	35	20	82	441
07:15 AM	24	104	15	143	14	58	19	91	18	92	7	117	23	43	23	89	440
07:30 AM	25	135	21	181	23	74	25	122	17	110	12	139	23	34	26	83	525
07:45 AM	35	158	12	205	19	60	28	107	16	130	12	158	23	40	35	98	568
Total	104	498	57	659	74	247	100	421	60	442	40	542	96	152	104	352	1974
08:00 AM	18	112	8	138	19	46	28	93	16	111	7	134	32	26	38	96	461
08:15 AM	21	109	12	142	18	25	23	66	7	103	9	119	15	30	28	73	400
08:30 AM	26	113	12	151	19	31	21	71	7	105	12	124	14	21	23	58	404
08:45 AM	29	91	5	125	13	31	23	67	17	112	12	141	12	34	19	65	398
Total	94	425	37	556	69	133	95	297	47	431	40	518	73	111	108	292	1663
Grand Total	277	1268	127	1672	169	461	252	882	143	1287	123	1553	260	372	274	906	5013
Apprch %	16.6	75.8	7.6		19.2	52.3	28.6		9.2	82.9	7.9		28.7	41.1	30.2		
Total %	5.5	25.3	2.5	33.4	3.4	9.2	5	17.6	2.9	25.7	2.5	31	5.2	7.4	5.5	18.1	
Passenger Vehicles	261	1146	104	1511	148	433	229	810	133	1172	106	1411	211	341	260	812	4544
% Passenger Vehicles	94.2	90.4	81.9	90.4	87.6	93.9	90.9	91.8	93	91.1	86.2	90.9	81.2	91.7	94.9	89.6	90.6
Large 2 Axle Vehicles	3	42	8	53	11	19	9	39	8	36	8	52	28	16	8	52	196
% Large 2 Axle Vehicles	1.1	3.3	6.3	3.2	6.5	4.1	3.6	4.4	5.6	2.8	6.5	3.3	10.8	4.3	2.9	5.7	3.9
3 Axle Vehicles	9	14	4	27	2	3	9	14	0	10	0	10	3	8	2	13	64
% 3 Axle Vehicles	3.2	1.1	3.1	1.6	1.2	0.7	3.6	1.6	0	0.8	0	0.6	1.2	2.2	0.7	1.4	1.3
4+ Axle Trucks	4	66	11	81	8	6	5	19	2	69	9	80	18	7	4	29	209
% 4+ Axle Trucks	1.4	5.2	8.7	4.8	4.7	1.3	2	2.2	1.4	5.4	7.3	5.2	6.9	1.9	1.5	3.2	4.2

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	24	104	15	143	14	58	19	91	**18**	92	7	117	23	**43**	23	89	440
07:30 AM	25	135	**21**	181	**23**	**74**	25	**122**	17	110	**12**	139	23	34	26	83	525
07:45 AM	**35**	**158**	12	**205**	19	60	**28**	107	16	**130**	12	**158**	23	40	35	**98**	**568**
08:00 AM	18	112	8	138	19	46	28	93	16	111	7	134	**32**	26	**38**	96	461
Total Volume	102	509	56	667	75	238	100	413	67	443	38	548	101	143	122	366	1994
% App. Total	15.3	76.3	8.4		18.2	57.6	24.2		12.2	80.8	6.9		27.6	39.1	33.3		
PHF	.729	.805	.667	.813	.815	.804	.893	.846	.931	.852	.792	.867	.789	.831	.803	.934	.878

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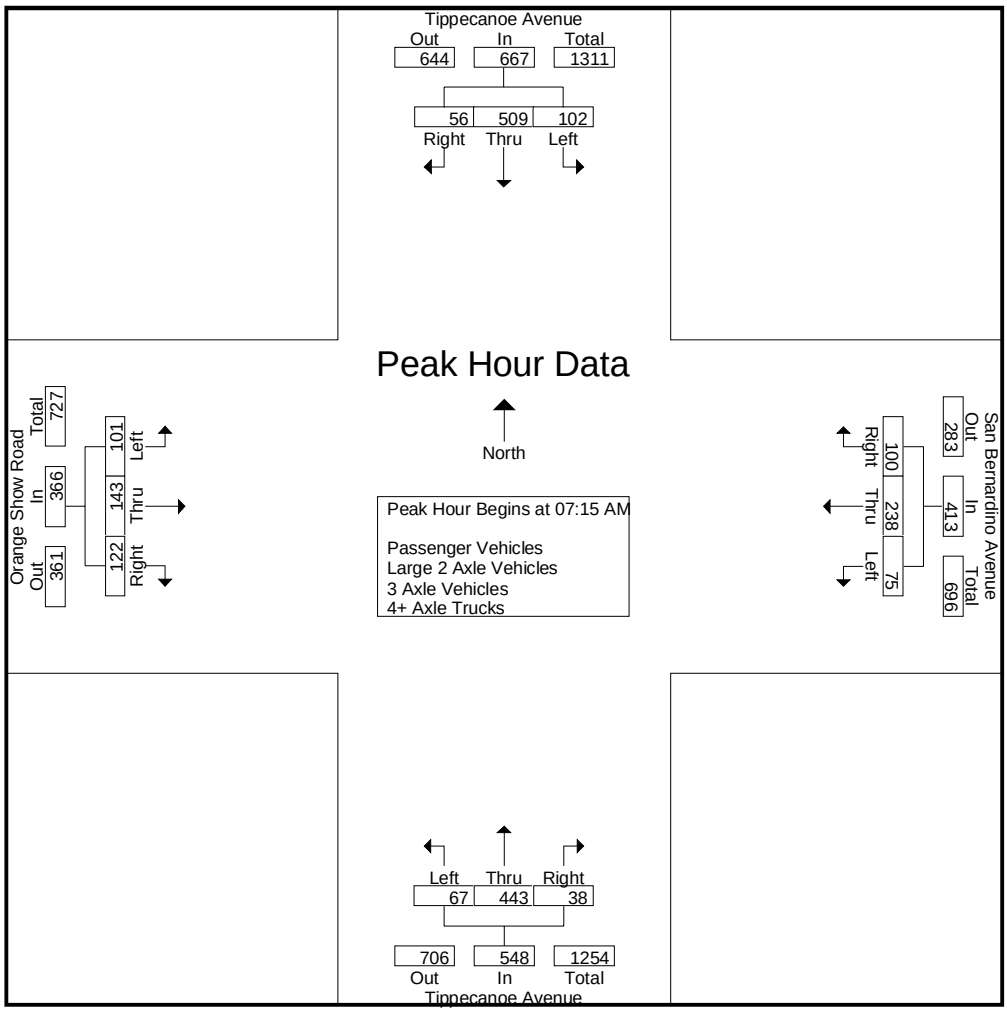
File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino AM
Site Code : 99918385
Start Date : 5/17/2018



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				06:30 AM				07:15 AM			
+0 mins.	24	104	15	143	18	55	**28**	101	8	**163**	**10**	**181**	23	**43**	23	89
+15 mins.	25	135	**21**	181	14	58	19	91	13	115	6	134	23	34	26	83
+30 mins.	**35**	**158**	12	**205**	**23**	**74**	25	**122**	9	110	9	128	23	40	35	**98**
+45 mins.	18	112	8	138	19	60	28	107	**18**	92	7	117	**32**	26	**38**	96
Total Volume	102	509	56	667	74	247	100	421	48	480	32	560	101	143	122	366
% App. Total	15.3	76.3	8.4		17.6	58.7	23.8		8.6	85.7	5.7		27.6	39.1	33.3	
PHF	.729	.805	.667	.813	.804	.834	.893	.863	.667	.736	.800	.773	.789	.831	.803	.934

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File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino AM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	17	63	3	83	2	12	6	20	7	53	15	75	7	15	8	30	208
06:15 AM	12	70	9	91	8	14	11	33	8	67	11	86	9	14	8	31	241
06:30 AM	14	85	9	108	5	21	16	42	8	150	8	166	24	25	20	69	385
06:45 AM	30	101	7	138	8	28	18	54	12	108	5	125	24	46	25	95	412
Total	73	319	28	420	23	75	51	149	35	378	39	452	64	100	61	225	1246
07:00 AM	18	94	4	116	17	54	28	99	9	97	8	114	24	33	18	75	404
07:15 AM	22	94	14	130	14	56	18	88	16	86	4	106	21	41	21	83	407
07:30 AM	25	122	20	167	20	69	22	111	16	95	9	120	21	31	26	78	476
07:45 AM	34	145	10	189	13	55	26	94	15	124	12	151	20	36	34	90	524
Total	99	455	48	602	64	234	94	392	56	402	33	491	86	141	99	326	1811
08:00 AM	17	96	7	120	19	44	23	86	14	97	7	118	26	25	37	88	412
08:15 AM	20	99	8	127	16	25	22	63	7	96	7	110	15	27	28	70	370
08:30 AM	23	101	10	134	15	28	20	63	7	96	9	112	11	18	18	47	356
08:45 AM	29	76	3	108	11	27	19	57	14	103	11	128	9	30	17	56	349
Total	89	372	28	489	61	124	84	269	42	392	34	468	61	100	100	261	1487
Grand Total	261	1146	104	1511	148	433	229	810	133	1172	106	1411	211	341	260	812	4544
Apprch %	17.3	75.8	6.9		18.3	53.5	28.3		9.4	83.1	7.5		26	42	32		
Total %	5.7	25.2	2.3	33.3	3.3	9.5	5	17.8	2.9	25.8	2.3	31.1	4.6	7.5	5.7	17.9	

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	22	94	14	130	14	56	18	88	**16**	86	4	106	21	**41**	21	83	407
07:30 AM	25	122	**20**	167	**20**	**69**	22	**111**	16	95	9	120	21	31	26	78	476
07:45 AM	**34**	**145**	10	**189**	13	55	**26**	94	15	**124**	**12**	**151**	20	36	34	**90**	**524**
08:00 AM	17	96	7	120	19	44	23	86	14	97	7	118	**26**	25	**37**	88	412
Total Volume	98	457	51	606	66	224	89	379	61	402	32	495	88	133	118	339	1819
% App. Total	16.2	75.4	8.4		17.4	59.1	23.5		12.3	81.2	6.5		26	39.2	34.8		
PHF	.721	.788	.638	.802	.825	.812	.856	.854	.953	.810	.667	.820	.846	.811	.797	.942	.868

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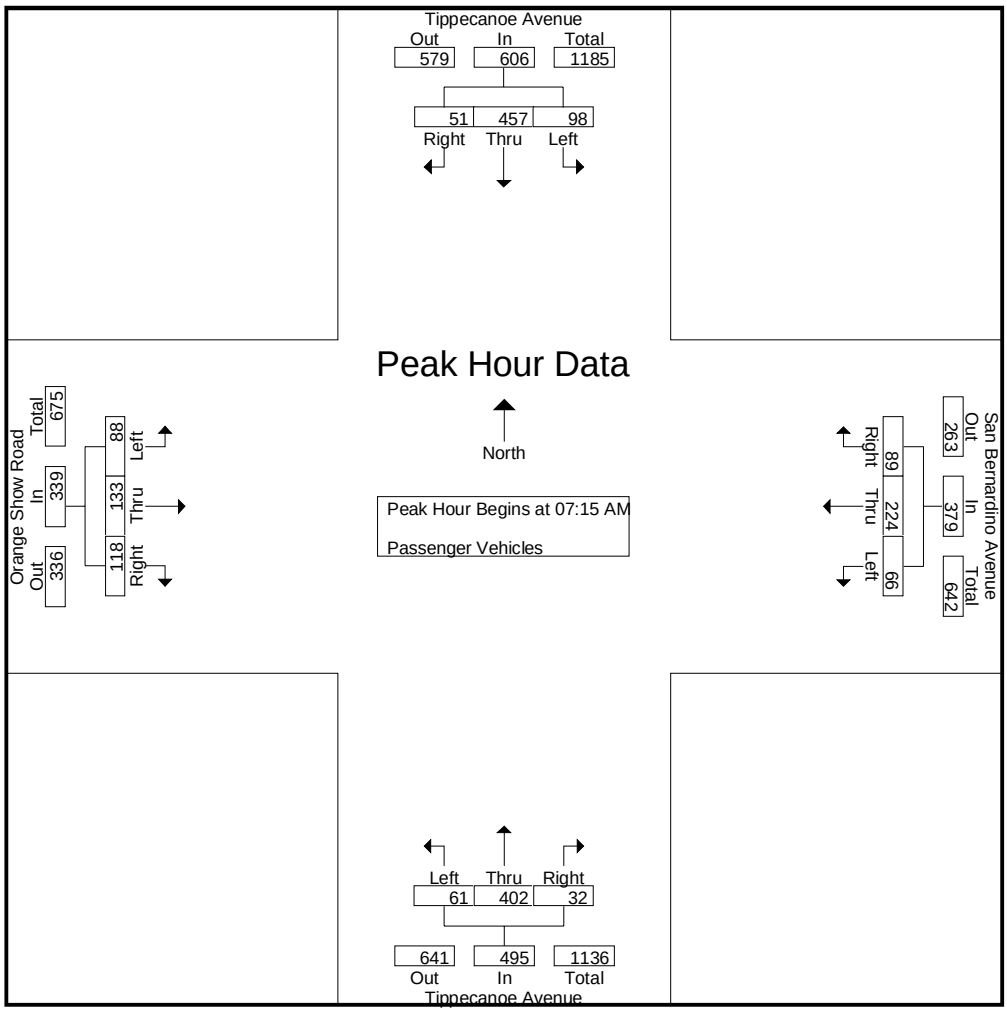
File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino AM
Site Code : 99918385
Start Date : 5/17/2018



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	22	94	14	130	14	56	18	88	**16**	86	4	106	21	**41**	21	83
+15 mins.	25	122	**20**	167	**20**	**69**	22	**111**	16	95	9	120	21	31	26	78
+30 mins.	**34**	**145**	10	**189**	13	55	**26**	94	15	**124**	**12**	**151**	20	36	34	**90**
+45 mins.	17	96	7	120	19	44	23	86	14	97	7	118	**26**	25	**37**	88
Total Volume	98	457	51	606	66	224	89	379	61	402	32	495	88	133	118	339
% App. Total	16.2	75.4	8.4		17.4	59.1	23.5		12.3	81.2	6.5		26	39.2	34.8	
PHF	.721	.788	.638	.802	.825	.812	.856	.854	.953	.810	.667	.820	.846	.811	.797	.942

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Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
06:15 AM	0	2	0	2	0	0	2	2	0	1	1	2	3	1	0	4	10
06:30 AM	0	3	0	3	1	1	0	2	0	3	1	4	7	0	0	7	16
06:45 AM	0	2	0	2	1	3	0	4	1	2	0	3	10	2	0	12	21
Total	0	9	0	9	2	4	2	8	1	9	2	12	20	3	0	23	52
07:00 AM	1	1	3	5	0	1	0	1	0	5	1	6	1	2	1	4	16
07:15 AM	0	4	0	4	0	0	0	0	2	2	1	5	2	2	1	5	14
07:30 AM	0	5	0	5	1	5	0	6	0	3	1	4	2	2	0	4	19
07:45 AM	0	4	1	5	3	3	2	8	1	1	0	2	1	1	0	2	17
Total	1	14	4	19	4	9	2	15	3	11	3	17	6	7	2	15	66
08:00 AM	1	7	1	9	0	1	1	2	1	4	0	5	0	1	1	2	18
08:15 AM	0	5	0	5	1	0	0	1	0	3	1	4	0	3	0	3	13
08:30 AM	1	3	2	6	3	2	1	6	0	4	1	5	0	0	3	3	20
08:45 AM	0	4	1	5	1	3	3	7	3	5	1	9	2	2	2	6	27
Total	2	19	4	25	5	6	5	16	4	16	3	23	2	6	6	14	78
Grand Total	3	42	8	53	11	19	9	39	8	36	8	52	28	16	8	52	196
Apprch %	5.7	79.2	15.1		28.2	48.7	23.1		15.4	69.2	15.4		53.8	30.8	15.4		
Total %	1.5	21.4	4.1	27	5.6	9.7	4.6	19.9	4.1	18.4	4.1	26.5	14.3	8.2	4.1	26.5	

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	4	0	4	0	0	0	0	**2**	2	**1**	**5**	**2**	**2**	**1**	**5**	14
07:30 AM	0	5	0	5	1	**5**	0	6	0	3	1	4	2	2	0	4	**19**
07:45 AM	0	4	**1**	5	**3**	3	**2**	**8**	1	1	0	2	1	1	0	2	17
08:00 AM	**1**	**7**	1	**9**	0	1	1	2	1	**4**	0	5	0	1	1	2	18
Total Volume	1	20	2	23	4	9	3	16	4	10	2	16	5	6	2	13	68
% App. Total	4.3	87	8.7		25	56.2	18.8		25	62.5	12.5		38.5	46.2	15.4		
PHF	.250	.714	.500	.639	.333	.450	.375	.500	.500	.625	.500	.800	.625	.750	.500	.650	.895

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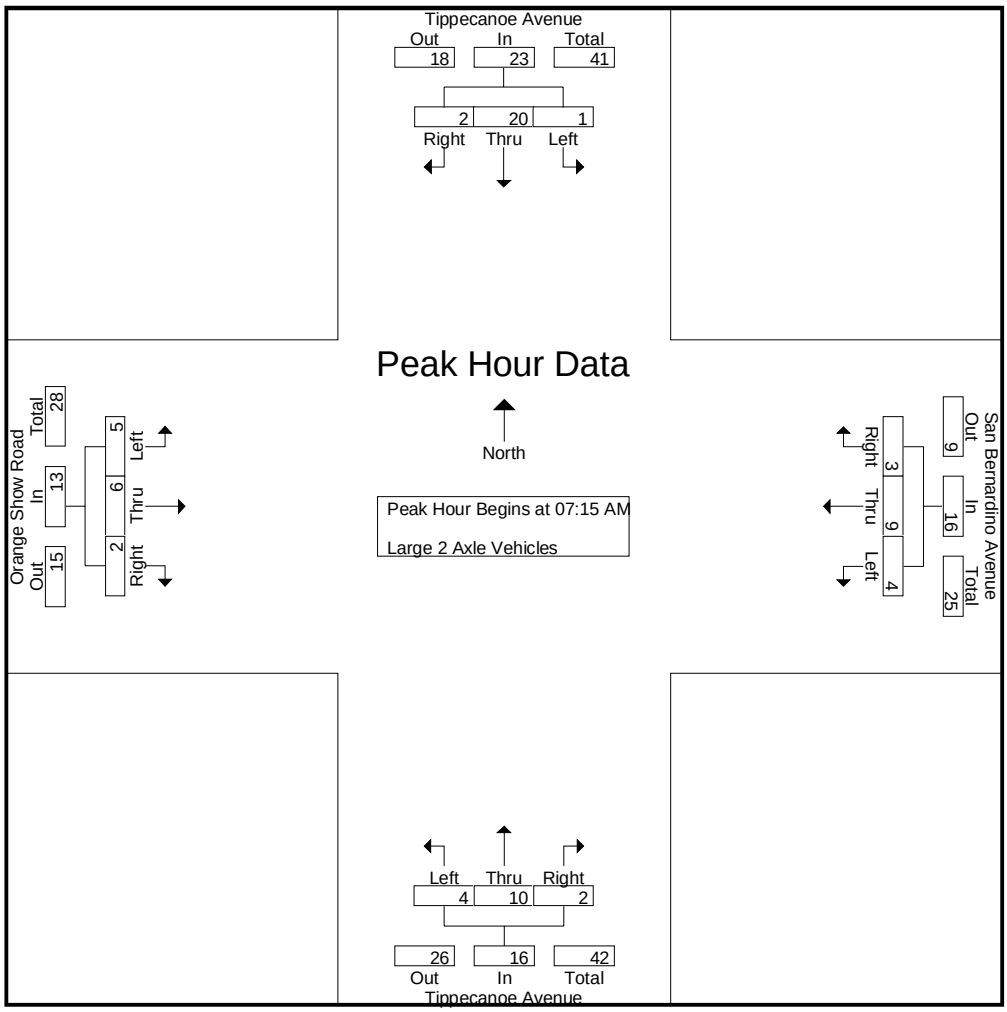
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino AM
Site Code : 99918385
Start Date : 5/17/2018



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	4	0	4	0	0	0	0	**2**	2	**1**	**5**	**2**	**2**	**1**	**5**
+15 mins.	0	5	0	5	1	**5**	0	6	0	3	1	4	2	2	0	4
+30 mins.	0	4	**1**	5	**3**	3	**2**	**8**	1	1	0	2	1	1	0	2
+45 mins.	**1**	**7**	1	**9**	0	1	1	2	1	**4**	0	5	0	1	1	2
Total Volume	1	20	2	23	4	9	3	16	4	10	2	16	5	6	2	13
% App. Total	4.3	87	8.7		25	56.2	18.8		25	62.5	12.5		38.5	46.2	15.4	
PHF	.250	.714	.500	.639	.333	.450	.375	.500	.500	.625	.500	.800	.625	.750	.500	.650

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City of San Bernardino
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E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino AM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	2	0	2	0	0	2	2	0	1	0	1	0	1	0	1	6
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
06:30 AM	2	0	0	2	0	0	1	1	0	1	0	1	2	1	0	3	7
06:45 AM	2	1	0	3	0	0	0	0	0	0	0	0	1	1	0	2	5
Total	4	3	0	7	0	0	3	3	0	2	0	2	3	5	0	8	20
07:00 AM	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1	1	4
07:30 AM	0	3	1	4	1	0	3	4	0	1	0	1	0	0	0	0	9
07:45 AM	1	0	0	1	1	1	0	2	0	2	0	2	0	0	0	0	5
Total	2	5	2	9	2	2	3	7	0	4	0	4	0	0	1	1	21
08:00 AM	0	2	0	2	0	0	3	3	0	2	0	2	0	0	0	0	7
08:15 AM	1	1	2	4	0	0	0	0	0	1	0	1	0	0	0	0	5
08:30 AM	2	2	0	4	0	1	0	1	0	1	0	1	0	1	1	2	8
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
Total	3	6	2	11	0	1	3	4	0	4	0	4	0	3	1	4	23
Grand Total	9	14	4	27	2	3	9	14	0	10	0	10	3	8	2	13	64
Apprch %	33.3	51.9	14.8		14.3	21.4	64.3		0	100	0		23.1	61.5	15.4		
Total %	14.1	21.9	6.2	42.2	3.1	4.7	14.1	21.9	0	15.6	0	15.6	4.7	12.5	3.1	20.3	

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	1	0	1	0	**1**	0	1	0	1	0	1	0	0	**1**	**1**	4
07:30 AM	0	**3**	**1**	**4**	**1**	0	**3**	**4**	0	1	0	1	0	0	0	0	**9**
07:45 AM	**1**	0	0	1	1	1	0	2	0	**2**	0	**2**	0	0	0	0	5
08:00 AM	0	2	0	2	0	0	3	3	0	2	0	2	0	0	0	0	7
Total Volume	1	6	1	8	2	2	6	10	0	6	0	6	0	0	1	1	25
% App. Total	12.5	75	12.5		20	20	60		0	100	0		0	0	100		
PHF	.250	.500	.250	.500	.500	.500	.500	.625	.000	.750	.000	.750	.000	.000	.250	.250	.694

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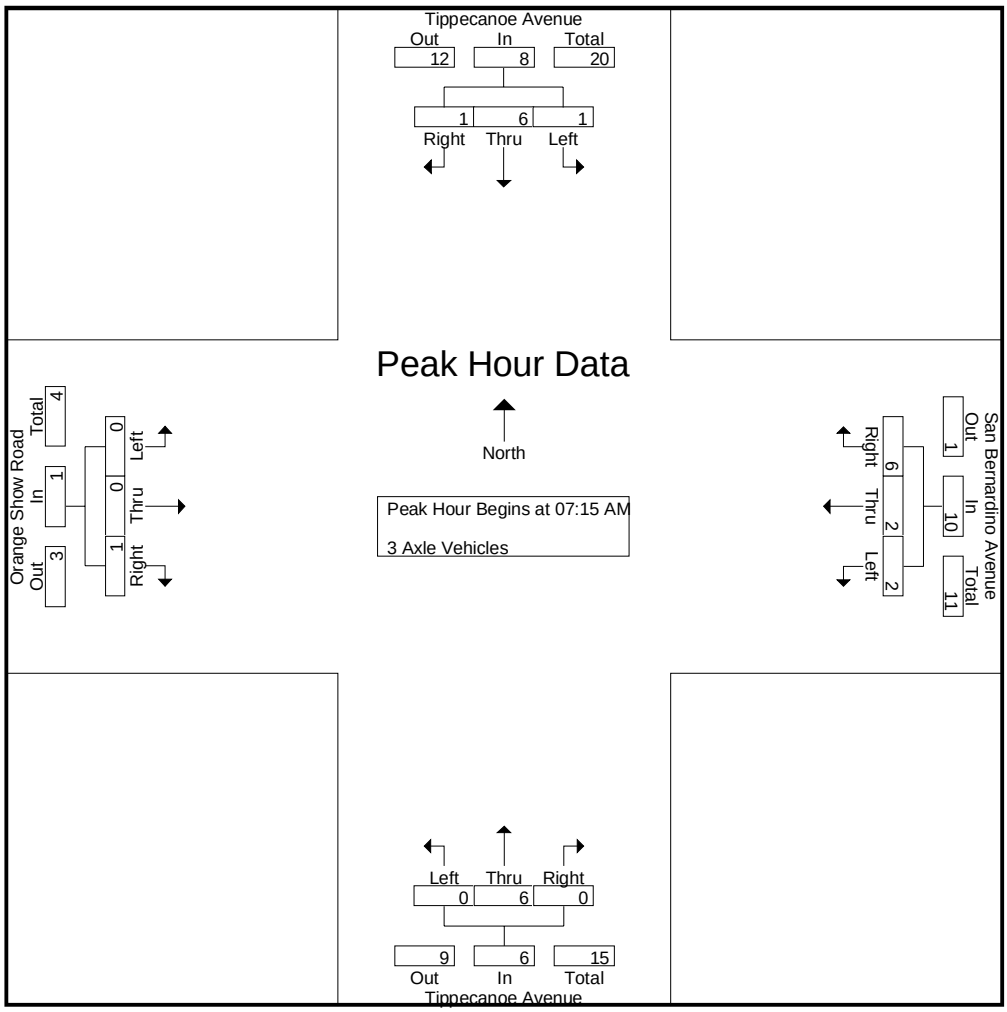
File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino AM
Site Code : 99918385
Start Date : 5/17/2018



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	1	0	1	0	**1**	0	1	0	1	0	1	0	0	**1**	**1**
+15 mins.	0	**3**	**1**	**4**	**1**	0	**3**	**4**	0	1	0	1	0	0	0	0
+30 mins.	**1**	0	0	1	1	1	0	2	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	2	0	2	0	0	3	3	0	2	0	2	0	0	0	0
Total Volume	1	6	1	8	2	2	6	10	0	6	0	6	0	0	1	1
% App. Total	12.5	75	12.5		20	20	60		0	100	0		0	0	100	
PHF	.250	.500	.250	.500	.500	.500	.500	.625	.000	.750	.000	.750	.000	.000	.250	.250

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File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino AM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	7	3	11	0	0	0	0	0	5	0	5	1	1	0	2	18
06:15 AM	0	0	0	0	0	1	1	2	0	6	0	6	2	0	0	2	10
06:30 AM	0	4	2	6	0	0	0	0	0	9	1	10	0	0	1	1	17
06:45 AM	1	3	0	4	1	1	0	2	0	5	1	6	1	0	0	1	13
Total	2	14	5	21	1	2	1	4	0	25	2	27	4	1	1	6	58
07:00 AM	0	5	1	6	1	0	0	1	0	8	0	8	2	0	1	3	18
07:15 AM	2	5	1	8	0	1	1	2	0	3	2	5	0	0	0	0	15
07:30 AM	0	5	0	5	1	0	0	1	1	11	2	14	0	1	0	1	21
07:45 AM	0	9	1	10	2	1	0	3	0	3	0	3	2	3	1	6	22
Total	2	24	3	29	4	2	1	7	1	25	4	30	4	4	2	10	76
08:00 AM	0	7	0	7	0	1	1	2	1	8	0	9	6	0	0	6	24
08:15 AM	0	4	2	6	1	0	1	2	0	3	1	4	0	0	0	0	12
08:30 AM	0	7	0	7	1	0	0	1	0	4	2	6	3	2	1	6	20
08:45 AM	0	10	1	11	1	1	1	3	0	4	0	4	1	0	0	1	19
Total	0	28	3	31	3	2	3	8	1	19	3	23	10	2	1	13	75
Grand Total	4	66	11	81	8	6	5	19	2	69	9	80	18	7	4	29	209
Apprch %	4.9	81.5	13.6		42.1	31.6	26.3		2.5	86.2	11.2		62.1	24.1	13.8		
Total %	1.9	31.6	5.3	38.8	3.8	2.9	2.4	9.1	1	33	4.3	38.3	8.6	3.3	1.9	13.9	

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	5	**1**	8	0	**1**	**1**	2	0	3	**2**	5	0	0	0	0	15
07:30 AM	0	5	0	5	1	0	0	1	**1**	**11**	2	**14**	0	1	0	1	21
07:45 AM	0	**9**	1	**10**	**2**	1	0	**3**	0	3	0	3	2	**3**	**1**	**6**	22
08:00 AM	0	7	0	7	0	1	1	2	1	8	0	9	**6**	0	0	6	**24**
Total Volume	2	26	2	30	3	3	2	8	2	25	4	31	8	4	1	13	82
% App. Total	6.7	86.7	6.7		37.5	37.5	25		6.5	80.6	12.9		61.5	30.8	7.7		
PHF	.250	.722	.500	.750	.375	.750	.500	.667	.500	.568	.500	.554	.333	.333	.250	.542	.854

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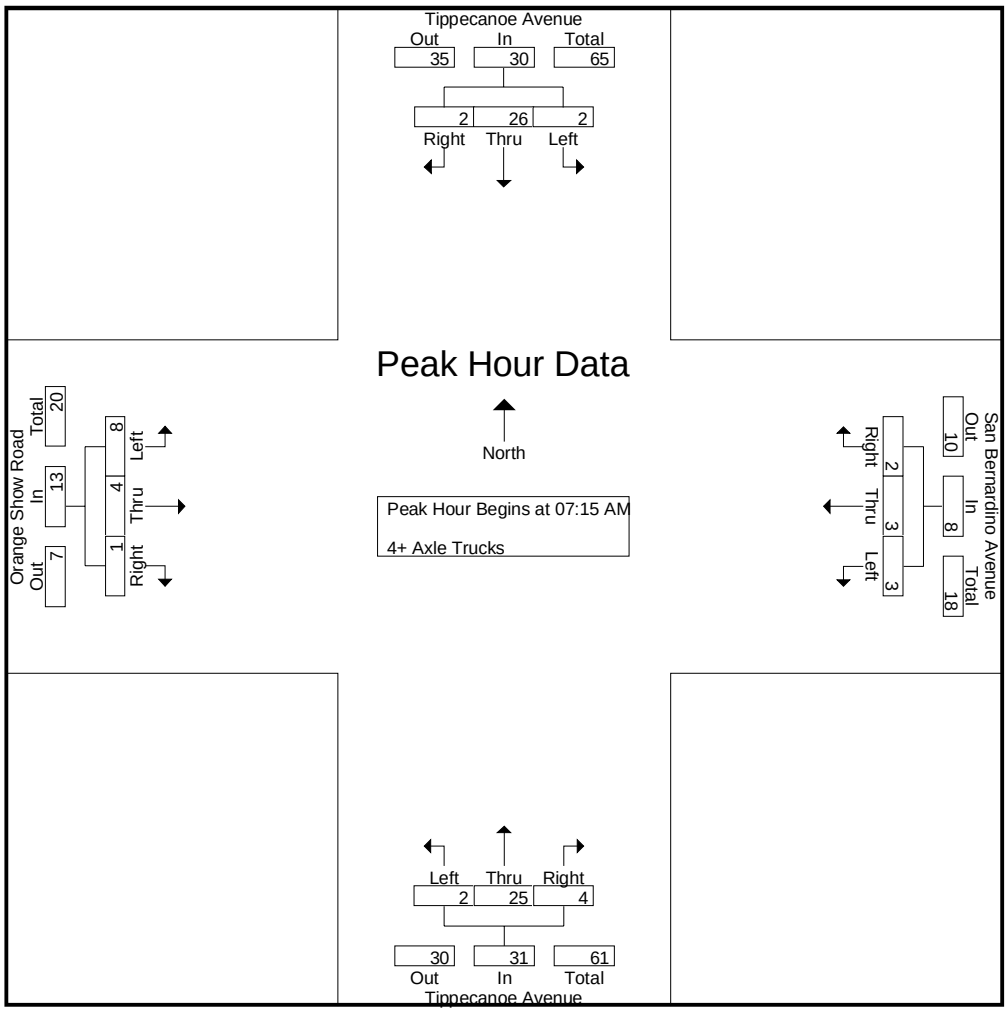
File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino AM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**2**	5	**1**	8	0	**1**	**1**	2	0	3	**2**	5	0	0	0	0
+15 mins.	0	5	0	5	1	0	0	1	**1**	**11**	2	**14**	0	1	0	1
+30 mins.	0	**9**	1	**10**	**2**	1	0	**3**	0	3	0	3	2	**3**	**1**	**6**
+45 mins.	0	7	0	7	0	1	1	2	1	8	0	9	**6**	0	0	6
Total Volume	2	26	2	30	3	3	2	8	2	25	4	31	8	4	1	13
% App. Total	6.7	86.7	6.7		37.5	37.5	25		6.5	80.6	12.9		61.5	30.8	7.7	
PHF	.250	.722	.500	.750	.375	.750	.500	.667	.500	.568	.500	.554	.333	.333	.250	.542

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File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino PM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 1

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

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	32	134	9	175	19	54	43	116	16	163	15	194	21	50	30	101	586
03:15 PM	40	135	15	190	18	49	35	102	16	142	14	172	25	56	25	106	570
03:30 PM	34	169	16	219	31	86	43	160	27	164	23	214	19	58	28	105	698
03:45 PM	46	173	17	236	23	71	41	135	30	150	16	196	26	69	32	127	694
Total	152	611	57	820	91	260	162	513	89	619	68	776	91	233	115	439	2548
04:00 PM	39	145	10	194	18	71	42	131	25	124	19	168	31	90	31	152	645
04:15 PM	48	150	13	211	12	59	29	100	24	143	14	181	31	94	36	161	653
04:30 PM	61	151	11	223	18	62	43	123	28	165	21	214	27	99	30	156	716
04:45 PM	50	147	11	208	18	59	35	112	22	149	34	205	30	128	32	190	715
Total	198	593	45	836	66	251	149	466	99	581	88	768	119	411	129	659	2729
05:00 PM	64	157	11	232	13	66	43	122	44	174	32	250	39	142	29	210	814
05:15 PM	71	156	12	239	29	133	36	198	33	168	24	225	44	153	46	243	905
05:30 PM	43	134	11	188	44	169	50	263	22	155	24	201	40	166	35	241	893
05:45 PM	36	134	9	179	58	125	41	224	30	131	21	182	41	170	30	241	826
Total	214	581	43	838	144	493	170	807	129	628	101	858	164	631	140	935	3438
Grand Total	564	1785	145	2494	301	1004	481	1786	317	1828	257	2402	374	1275	384	2033	8715
Apprch %	22.6	71.6	5.8		16.9	56.2	26.9		13.2	76.1	10.7		18.4	62.7	18.9		
Total %	6.5	20.5	1.7	28.6	3.5	11.5	5.5	20.5	3.6	21	2.9	27.6	4.3	14.6	4.4	23.3	
Passenger Vehicles	537	1681	116	2334	271	957	447	1675	297	1742	239	2278	327	1227	370	1924	8211
% Passenger Vehicles	95.2	94.2	80	93.6	90	95.3	92.9	93.8	93.7	95.3	93	94.8	87.4	96.2	96.4	94.6	94.2
Large 2 Axle Vehicles	11	24	10	45	7	16	12	35	7	27	6	40	12	18	6	36	156
% Large 2 Axle Vehicles	2	1.3	6.9	1.8	2.3	1.6	2.5	2	2.2	1.5	2.3	1.7	3.2	1.4	1.6	1.8	1.8
3 Axle Vehicles	2	17	7	26	3	9	9	21	6	14	4	24	11	5	2	18	89
% 3 Axle Vehicles	0.4	1	4.8	1	1	0.9	1.9	1.2	1.9	0.8	1.6	1	2.9	0.4	0.5	0.9	1
4+ Axle Trucks	14	63	12	89	20	22	13	55	7	45	8	60	24	25	6	55	259
% 4+ Axle Trucks	2.5	3.5	8.3	3.6	6.6	2.2	2.7	3.1	2.2	2.5	3.1	2.5	6.4	2	1.6	2.7	3

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	64	**157**	11	232	13	66	43	122	**44**	**174**	**32**	**250**	39	142	29	210	814
05:15 PM	**71**	156	**12**	**239**	29	133	36	198	33	168	24	225	**44**	153	**46**	**243**	**905**
05:30 PM	43	134	11	188	44	**169**	**50**	**263**	22	155	24	201	40	166	35	241	893
05:45 PM	36	134	9	179	**58**	125	41	224	30	131	21	182	41	**170**	30	241	826
Total Volume	214	581	43	838	144	493	170	807	129	628	101	858	164	631	140	935	3438
% App. Total	25.5	69.3	5.1		17.8	61.1	21.1		15	73.2	11.8		17.5	67.5	15		
PHF	.754	.925	.896	.877	.621	.729	.850	.767	.733	.902	.789	.858	.932	.928	.761	.962	.950

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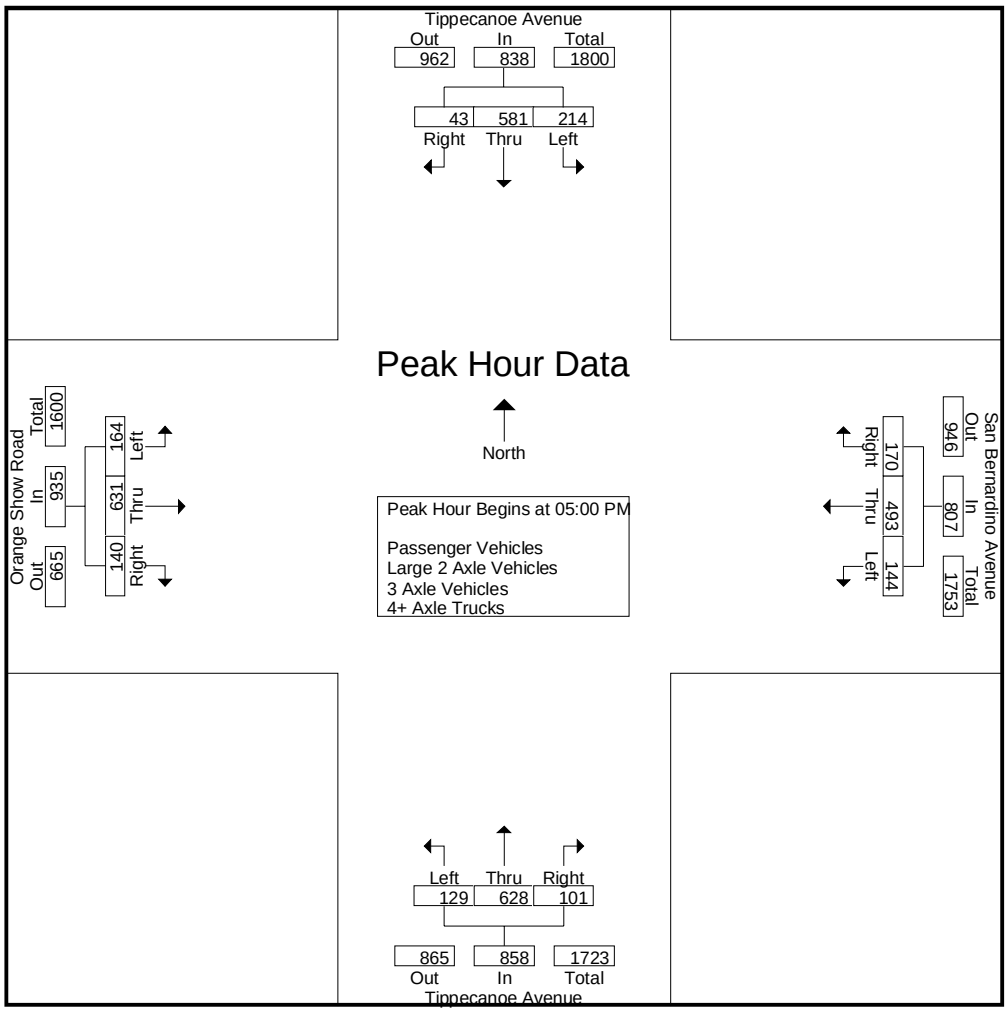
Site Code : 99918385
Start Date : 5/17/2018



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:30 PM				05:00 PM			
+0 mins.	61	151	11	223	13	66	43	122	28	165	21	214	39	142	29	210
+15 mins.	50	147	11	208	29	133	36	198	22	149	**34**	205	**44**	153	**46**	**243**
+30 mins.	64	**157**	11	232	44	**169**	**50**	**263**	**44**	**174**	32	**250**	40	166	35	241
+45 mins.	**71**	156	**12**	**239**	**58**	125	41	224	33	168	24	225	41	**170**	30	241
Total Volume	246	611	45	902	144	493	170	807	127	656	111	894	164	631	140	935
% App. Total	27.3	67.7	5		17.8	61.1	21.1		14.2	73.4	12.4		17.5	67.5	15	
PHF	.866	.973	.938	.944	.621	.729	.850	.767	.722	.943	.816	.894	.932	.928	.761	.962

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

City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino PM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	29	116	6	151	18	51	40	109	15	149	11	175	13	48	27	88	523
03:15 PM	34	125	13	172	16	47	30	93	11	136	10	157	18	49	24	91	513
03:30 PM	32	165	10	207	30	84	40	154	26	155	21	202	16	52	26	94	657
03:45 PM	44	167	13	224	23	61	35	119	29	141	15	185	23	66	30	119	647
Total	139	573	42	754	87	243	145	475	81	581	57	719	70	215	107	392	2340
04:00 PM	38	130	7	175	16	68	38	122	23	117	17	157	27	86	30	143	597
04:15 PM	47	144	9	200	10	56	28	94	18	139	14	171	26	93	35	154	619
04:30 PM	58	139	10	207	16	61	40	117	25	154	19	198	26	99	29	154	676
04:45 PM	47	141	8	196	14	51	34	99	21	146	33	200	24	125	32	181	676
Total	190	554	34	778	56	236	140	432	87	556	83	726	103	403	126	632	2568
05:00 PM	61	146	10	217	13	64	41	118	44	168	32	244	37	138	29	204	783
05:15 PM	70	152	11	233	21	130	33	184	33	166	23	222	42	147	44	233	872
05:30 PM	41	130	11	182	39	162	48	249	22	148	24	194	37	163	34	234	859
05:45 PM	36	126	8	170	55	122	40	217	30	123	20	173	38	161	30	229	789
Total	208	554	40	802	128	478	162	768	129	605	99	833	154	609	137	900	3303
Grand Total	537	1681	116	2334	271	957	447	1675	297	1742	239	2278	327	1227	370	1924	8211
Apprch %	23	72	5		16.2	57.1	26.7		13	76.5	10.5		17	63.8	19.2		
Total %	6.5	20.5	1.4	28.4	3.3	11.7	5.4	20.4	3.6	21.2	2.9	27.7	4	14.9	4.5	23.4	

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	61	146	10	217	13	64	41	118	**44**	**168**	**32**	**244**	37	138	29	204	783
05:15 PM	**70**	**152**	**11**	**233**	21	130	33	184	33	166	23	222	**42**	147	**44**	233	**872**
05:30 PM	41	130	11	182	39	**162**	**48**	**249**	22	148	24	194	37	**163**	34	**234**	859
05:45 PM	36	126	8	170	**55**	122	40	217	30	123	20	173	38	161	30	229	789
Total Volume	208	554	40	802	128	478	162	768	129	605	99	833	154	609	137	900	3303
% App. Total	25.9	69.1	5		16.7	62.2	21.1		15.5	72.6	11.9		17.1	67.7	15.2		
PHF	.743	.911	.909	.861	.582	.738	.844	.771	.733	.900	.773	.853	.917	.934	.778	.962	.947

Counts Unlimited
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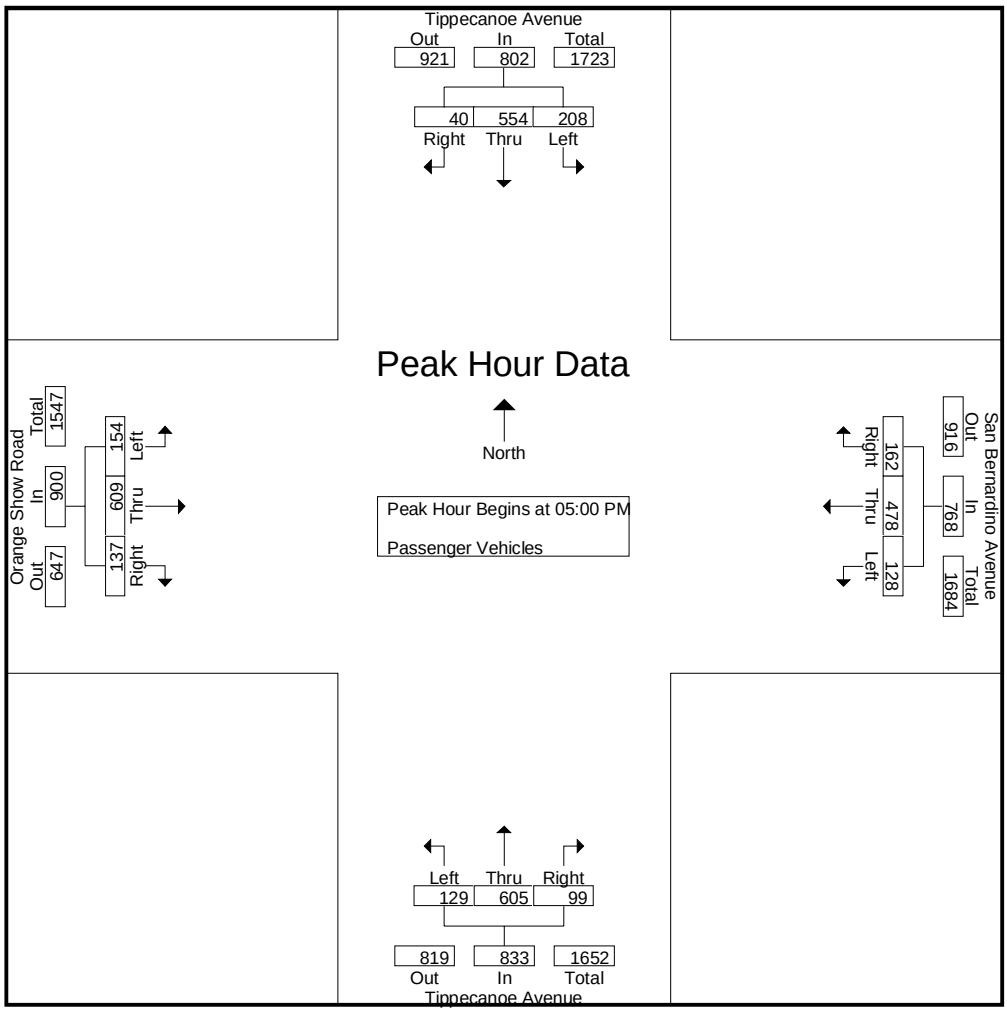
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino PM
Site Code : 99918385
Start Date : 5/17/2018



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	61	146	10	217	13	64	41	118	**44**	**168**	**32**	**244**	37	138	29	204
+15 mins.	**70**	**152**	**11**	**233**	21	130	33	184	33	166	23	222	**42**	147	**44**	233
+30 mins.	41	130	11	182	39	**162**	**48**	**249**	22	148	24	194	37	**163**	34	**234**
+45 mins.	36	126	8	170	**55**	122	40	217	30	123	20	173	38	161	30	229
Total Volume	208	554	40	802	128	478	162	768	129	605	99	833	154	609	137	900
% App. Total	25.9	69.1	5		16.7	62.2	21.1		15.5	72.6	11.9		17.1	67.7	15.2	
PHF	.743	.911	.909	.861	.582	.738	.844	.771	.733	.900	.773	.853	.917	.934	.778	.962

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino PM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	4	1	5	0	1	2	3	1	4	1	6	3	1	1	5	19
03:15 PM	2	3	1	6	1	0	2	3	3	3	3	9	1	1	0	2	20
03:30 PM	1	2	1	4	1	1	1	3	0	2	0	2	0	3	1	4	13
03:45 PM	1	1	2	4	0	5	4	9	0	3	0	3	0	2	0	2	18
Total	4	10	5	19	2	7	9	18	4	12	4	20	4	7	2	13	70
04:00 PM	1	3	1	5	0	0	0	0	1	2	1	4	2	1	1	4	13
04:15 PM	0	2	1	3	2	1	0	3	1	2	0	3	3	0	1	4	13
04:30 PM	2	2	0	4	0	0	1	1	1	2	0	3	0	0	1	1	9
04:45 PM	2	2	1	5	2	2	0	4	0	1	1	2	2	1	0	3	14
Total	5	9	3	17	4	3	1	8	3	7	2	12	7	2	3	12	49
05:00 PM	0	2	1	3	0	0	1	1	0	1	0	1	0	2	0	2	7
05:15 PM	1	0	0	1	1	0	0	1	0	1	0	1	0	3	1	4	7
05:30 PM	1	1	0	2	0	4	1	5	0	4	0	4	0	1	0	1	12
05:45 PM	0	2	1	3	0	2	0	2	0	2	0	2	1	3	0	4	11
Total	2	5	2	9	1	6	2	9	0	8	0	8	1	9	1	11	37
Grand Total	11	24	10	45	7	16	12	35	7	27	6	40	12	18	6	36	156
Apprch %	24.4	53.3	22.2		20	45.7	34.3		17.5	67.5	15		33.3	50	16.7		
Total %	7.1	15.4	6.4	28.8	4.5	10.3	7.7	22.4	4.5	17.3	3.8	25.6	7.7	11.5	3.8	23.1	

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**2**	**1**	**3**	0	0	**1**	1	0	1	0	1	0	2	0	2	7
05:15 PM	**1**	0	0	1	**1**	0	0	1	0	1	0	1	0	**3**	**1**	**4**	7
05:30 PM	1	1	0	2	0	**4**	1	**5**	0	**4**	0	**4**	0	1	0	1	**12**
05:45 PM	0	2	1	3	0	2	0	2	0	2	0	2	**1**	3	0	4	11
Total Volume	2	5	2	9	1	6	2	9	0	8	0	8	1	9	1	11	37
% App. Total	22.2	55.6	22.2		11.1	66.7	22.2		0	100	0		9.1	81.8	9.1		
PHF	.500	.625	.500	.750	.250	.375	.500	.450	.000	.500	.000	.500	.250	.750	.250	.688	.771

Counts Unlimited
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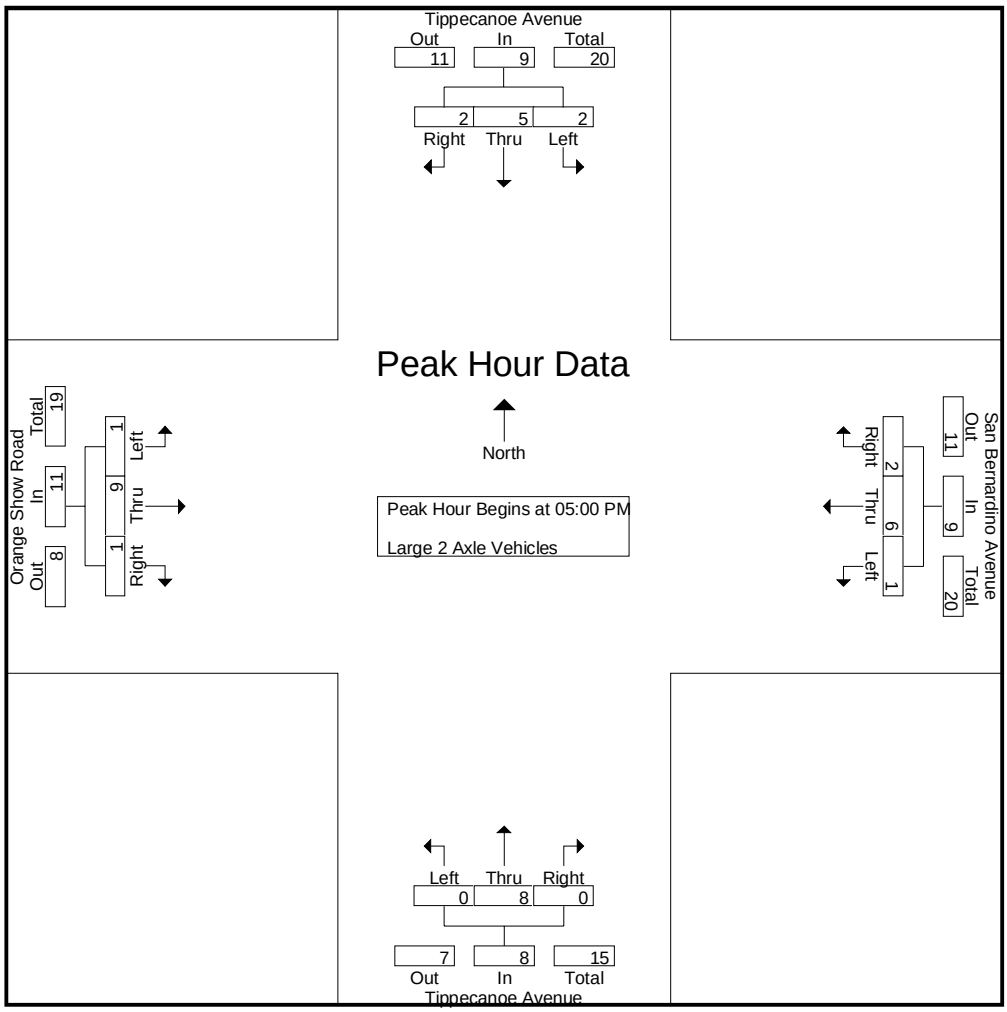
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino PM
Site Code : 99918385
Start Date : 5/17/2018



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**2**	**1**	**3**	0	0	**1**	1	0	1	0	1	0	2	0	2
+15 mins.	**1**	0	0	1	**1**	0	0	1	0	1	0	1	0	**3**	**1**	**4**
+30 mins.	1	1	0	2	0	**4**	1	**5**	0	**4**	0	**4**	0	1	0	1
+45 mins.	0	2	1	3	0	2	0	2	0	2	0	2	**1**	3	0	4
Total Volume	2	5	2	9	1	6	2	9	0	8	0	8	1	9	1	11
% App. Total	22.2	55.6	22.2		11.1	66.7	22.2		0	100	0		9.1	81.8	9.1	
PHF	.500	.625	.500	.750	.250	.375	.500	.450	.000	.500	.000	.500	.250	.750	.250	.688

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino PM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	1	1	3	0	0	0	0	0	2	0	2	3	0	0	3	8
03:15 PM	0	0	0	0	0	0	1	1	0	1	1	2	4	0	0	4	7
03:30 PM	1	1	1	3	0	1	1	2	1	1	1	3	1	0	1	2	10
03:45 PM	0	3	1	4	0	4	1	5	1	1	1	3	1	0	1	2	14
Total	2	5	3	10	0	5	3	8	2	5	3	10	9	0	2	11	39
04:00 PM	0	3	0	3	0	0	3	3	0	1	0	1	0	0	0	0	7
04:15 PM	0	1	2	3	0	1	0	1	2	0	0	2	0	0	0	0	6
04:30 PM	0	2	1	3	1	0	0	1	1	3	1	5	0	0	0	0	9
04:45 PM	0	0	0	0	0	1	1	2	1	1	0	2	2	1	0	3	7
Total	0	6	3	9	1	2	4	7	4	5	1	10	2	1	0	3	29
05:00 PM	0	3	0	3	0	1	0	1	0	2	0	2	0	1	0	1	7
05:15 PM	0	2	1	3	0	0	1	1	0	0	0	0	0	1	0	1	5
05:30 PM	0	0	0	0	2	1	1	4	0	1	0	1	0	1	0	1	6
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
Total	0	6	1	7	2	2	2	6	0	4	0	4	0	4	0	4	21
Grand Total	2	17	7	26	3	9	9	21	6	14	4	24	11	5	2	18	89
Apprch %	7.7	65.4	26.9		14.3	42.9	42.9		25	58.3	16.7		61.1	27.8	11.1		
Total %	2.2	19.1	7.9	29.2	3.4	10.1	10.1	23.6	6.7	15.7	4.5	27	12.4	5.6	2.2	20.2	

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**3**	0	**3**	0	**1**	0	1	0	**2**	0	**2**	0	**1**	0	**1**	**7**
05:15 PM	0	2	**1**	3	0	0	**1**	1	0	0	0	0	0	1	0	1	5
05:30 PM	0	0	0	0	**2**	1	1	**4**	0	1	0	1	0	1	0	1	6
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
Total Volume	0	6	1	7	2	2	2	6	0	4	0	4	0	4	0	4	21
% App. Total	0	85.7	14.3		33.3	33.3	33.3		0	100	0		0	100	0		
PHF	.000	.500	.250	.583	.250	.500	.500	.375	.000	.500	.000	.500	.000	1.00	.000	1.00	.750

Counts Unlimited
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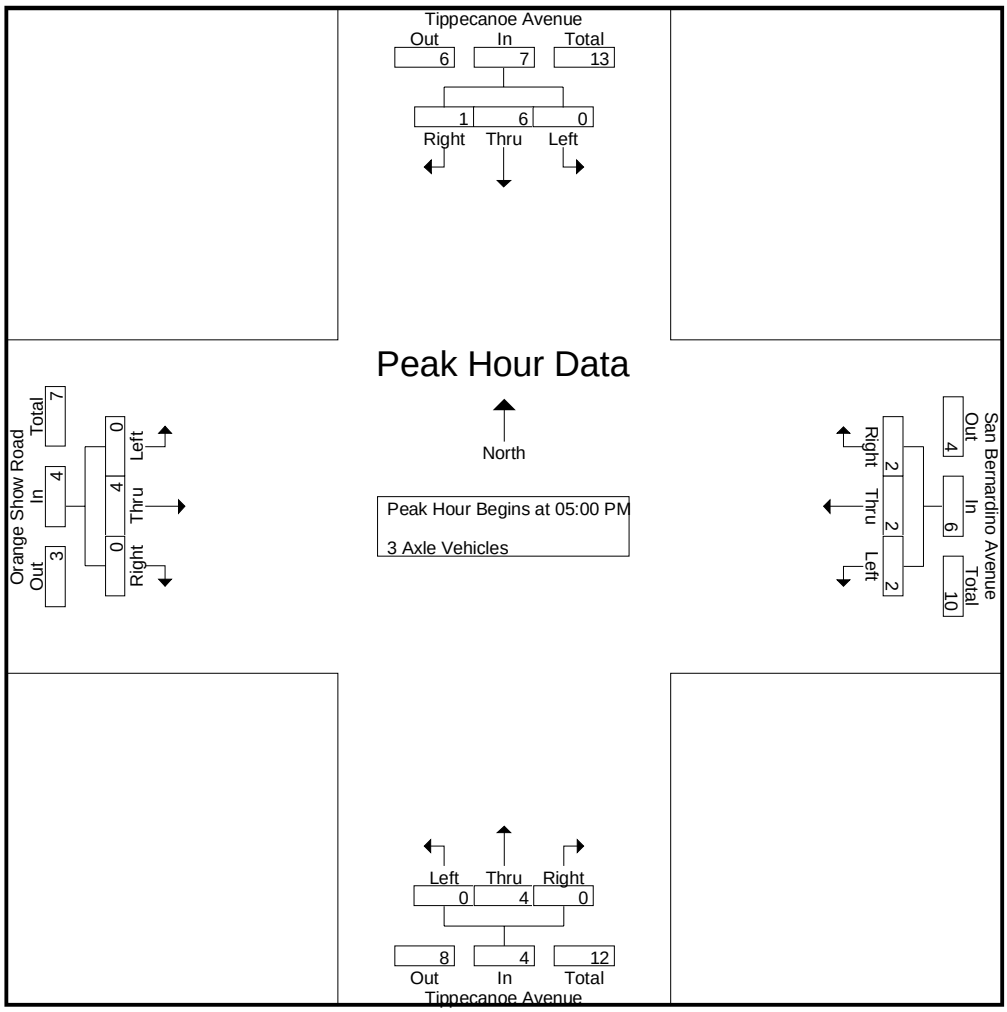
City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino PM
Site Code : 99918385
Start Date : 5/17/2018



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**3**	0	**3**	0	**1**	0	1	0	**2**	0	**2**	0	**1**	0	**1**
+15 mins.	0	2	**1**	3	0	0	**1**	1	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	**2**	1	1	**4**	0	1	0	1	0	1	0	1
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1
Total Volume	0	6	1	7	2	2	2	6	0	4	0	4	0	4	0	4
% App. Total	0	85.7	14.3		33.3	33.3	33.3		0	100	0		0	100	0	
PHF	.000	.500	.250	.583	.250	.500	.500	.375	.000	.500	.000	.500	.000	1.000	.000	1.000

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City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino PM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	2	13	1	16	1	2	1	4	0	8	3	11	2	1	2	5	36
03:15 PM	4	7	1	12	1	2	2	5	2	2	0	4	2	6	1	9	30
03:30 PM	0	1	4	5	0	0	1	1	0	6	1	7	2	3	0	5	18
03:45 PM	1	2	1	4	0	1	1	2	0	5	0	5	2	1	1	4	15
Total	7	23	7	37	2	5	5	12	2	21	4	27	8	11	4	23	99
04:00 PM	0	9	2	11	2	3	1	6	1	4	1	6	2	3	0	5	28
04:15 PM	1	3	1	5	0	1	1	2	3	2	0	5	2	1	0	3	15
04:30 PM	1	8	0	9	1	1	2	4	1	6	1	8	1	0	0	1	22
04:45 PM	1	4	2	7	2	5	0	7	0	1	0	1	2	1	0	3	18
Total	3	24	5	32	5	10	4	19	5	13	2	20	7	5	0	12	83
05:00 PM	3	6	0	9	0	1	1	2	0	3	0	3	2	1	0	3	17
05:15 PM	0	2	0	2	7	3	2	12	0	1	1	2	2	2	1	5	21
05:30 PM	1	3	0	4	3	2	0	5	0	2	0	2	3	1	1	5	16
05:45 PM	0	5	0	5	3	1	1	5	0	5	1	6	2	5	0	7	23
Total	4	16	0	20	13	7	4	24	0	11	2	13	9	9	2	20	77
Grand Total	14	63	12	89	20	22	13	55	7	45	8	60	24	25	6	55	259
Apprch %	15.7	70.8	13.5		36.4	40	23.6		11.7	75	13.3		43.6	45.5	10.9		
Total %	5.4	24.3	4.6	34.4	7.7	8.5	5	21.2	2.7	17.4	3.1	23.2	9.3	9.7	2.3	21.2	

	Tippecanoe Avenue Southbound				San Bernardino Avenue Westbound				Tippecanoe Avenue Northbound				Orange Show Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**3**	**6**	0	**9**	0	1	1	2	0	3	0	3	2	1	0	3	17
05:15 PM	0	2	0	2	**7**	**3**	**2**	**12**	0	1	**1**	2	2	2	**1**	5	21
05:30 PM	1	3	0	4	3	2	0	5	0	2	0	2	**3**	1	1	5	16
05:45 PM	0	5	0	5	3	1	1	5	0	**5**	1	**6**	2	**5**	0	**7**	**23**
Total Volume	4	16	0	20	13	7	4	24	0	11	2	13	9	9	2	20	77
% App. Total	20	80	0		54.2	29.2	16.7		0	84.6	15.4		45	45	10		
PHF	.333	.667	.000	.556	.464	.583	.500	.500	.000	.550	.500	.542	.750	.450	.500	.714	.837

Counts Unlimited
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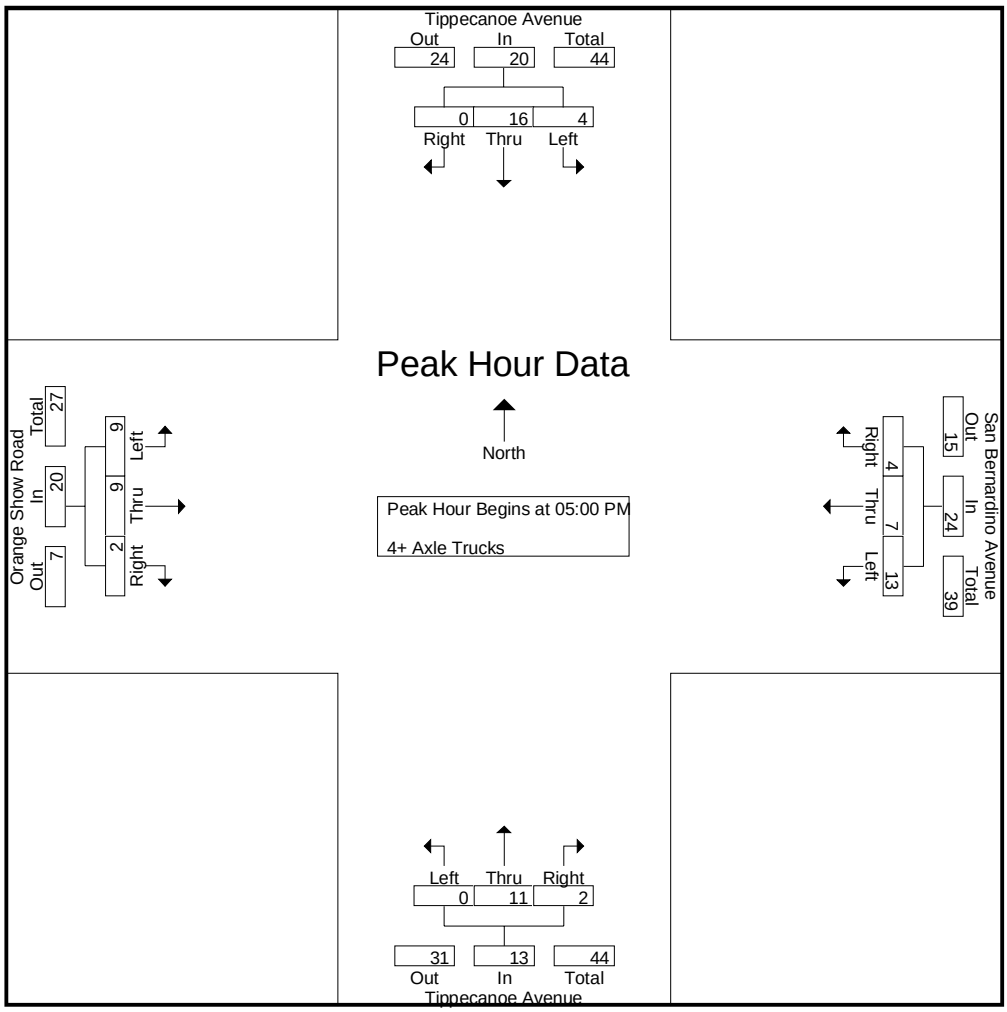
(951) 268-6268

City of San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave
Weather: Clear

File Name : 53_SBC_Tippecanoe_Orange Show_San Bernardino PM
Site Code : 99918385
Start Date : 5/17/2018
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**3**	**6**	0	**9**	0	1	1	2	0	3	0	3	2	1	0	3
+15 mins.	0	2	0	2	**7**	**3**	**2**	**12**	0	1	**1**	2	2	2	**1**	5
+30 mins.	1	3	0	4	3	2	0	5	0	2	0	2	**3**	1	1	5
+45 mins.	0	5	0	5	3	1	1	5	0	**5**	1	**6**	2	**5**	0	**7**
Total Volume	4	16	0	20	13	7	4	24	0	11	2	13	9	9	2	20
% App. Total	20	80	0		54.2	29.2	16.7		0	84.6	15.4		45	45	10	
PHF	.333	.667	.000	.556	.464	.583	.500	.500	.000	.550	.500	.542	.750	.450	.500	.714

Location: San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave

Date: 5/17/2018
Day: Thursday

PEDESTRIANS

	North Leg Tippecanoe Avenue	East Leg San Bernardino Avenue	South Leg Dead End	West Leg Orange Show Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
6:00 AM					2
6:15 AM					1
6:30 AM					0
6:45 AM					2
7:00 AM					0
7:15 AM					1
7:30 AM					6
7:45 AM					2
8:00 AM					6
8:15 AM					2
8:30 AM					7
8:45 AM					0
TOTAL VOLUMES:	22	2	1	4	29

	North Leg Tippecanoe Avenue	East Leg San Bernardino Avenue	South Leg Dead End	West Leg Orange Show Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM					1
3:15 PM					0
3:30 PM					14
3:45 PM					4
4:00 PM					0
4:15 PM					0
4:30 PM					1
4:45 PM					2
5:00 PM					2
5:15 PM					2
5:30 PM					0
5:45 PM					0
TOTAL VOLUMES:	12	3	1	10	26

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

Location: San Bernardino
N/S: Tippecanoe Avenue
E/W: Orange Show Rd/San Bernardino Ave

Date: 5/17/2018
Day: Thursday

BICYCLES

	Southbound Tippecanoe Avenue			Westbound San Bernardino Avenue			Northbound Dead End			Eastbound Orange Show Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM													1
6:15 AM													0
6:30 AM													1
6:45 AM													1
7:00 AM													0
7:15 AM													0
7:30 AM													0
7:45 AM													0
8:00 AM													1
8:15 AM													0
8:30 AM													2
8:45 AM													1
TOTAL VOLUMES:	0	2	0	1	0	0	1	1	0	0	1	1	7

	Southbound Tippecanoe Avenue			Westbound San Bernardino Avenue			Northbound Dead End			Eastbound Orange Show Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM													0
3:15 PM													0
3:30 PM													1
3:45 PM													0
4:00 PM													0
4:15 PM													2
4:30 PM													1
4:45 PM													0
5:00 PM													0
5:15 PM													4
5:30 PM													1
5:45 PM													0
TOTAL VOLUMES:	0	1	0	0	0	0	0	6	1	0	1	0	9

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Corona, CA 92878
951-268-6268

Prepared by National Data & Surveying Services

Tippecanoe Ave & Hospitality Ln

Peak Hour Turning Movement Count

ID: 19-06039-047
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Tippecanoe Ave – SOUTHBOUND

	Right	Thru	Left	U-Turn	Out
AM	41	480	36	13	810
NOON	0	0	0	0	0
PM	113	756	38	7	721
Lanes	0	3	1	0	

Hospitality Ln – EASTBOUND

	AM	NOON	PM	Lanes
Out	460	0	589	
U-Turn	0	0	3	0
Left	54	0	210	1.5
Thru	19	0	88	0.5
Right	53	0	296	1

Hospitality Ln – WESTBOUND

	Lanes	PM	NOON	AM
Right	0	23	0	39
Thru	1	65	0	53
Left	1	82	0	79
U-Turn	0	0	0	0
Out		204	0	94

Tippecanoe Ave – NORTHBOUND

	Out	U-Turn	Left	Thru	Right
Lanes		0	2	3	0
PM	1140	6	408	481	78
NOON	0	0	0	0	0
AM	612	0	366	704	39

CONTROL

Signalized

	AM	NOON	PM
TEV	1976	0	2654
PHF	0.96		0.95

Cars (AM)

Approach	Left	Thru	Right
Southbound	34	426	40
Eastbound	52	19	47
Westbound	79	53	39
Northbound	355	642	38

2axle (AM)

Approach	Left	Thru	Right
Southbound	2	13	0
Eastbound	2	0	1
Westbound	0	0	0
Northbound	3	18	1

Cars (NOON)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

2axle (NOON)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Cars (PM)

Approach	Left	Thru	Right
Southbound	38	720	112
Eastbound	210	88	289
Westbound	82	65	23
Northbound	400	458	78

2axle (PM)

Approach	Left	Thru	Right
Southbound	0	11	1
Eastbound	0	0	1
Westbound	0	0	0
Northbound	3	9	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg	0	0	0
South leg	0	0	0
East leg	0	0	0
West leg	0	0	0
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Hospitality Ln
City: San Bernardino
Control: Signalized

Project ID: 19-06039-047
Date: 3/19/2019

Total

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Hospitality Ln				Hospitality Ln				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	83	146	9	0	4	82	9	1	6	3	14	0	20	6	6	0	389
7:15 AM	87	195	11	0	9	122	8	4	17	5	12	0	12	21	10	0	513
7:30 AM	96	164	11	0	9	124	12	4	11	8	11	0	24	11	9	0	494
7:45 AM	89	190	9	0	9	116	12	3	14	3	18	0	21	9	15	0	508
8:00 AM	94	155	8	0	9	118	9	2	12	3	12	0	22	12	5	0	461
8:15 AM	68	136	13	0	12	120	10	7	13	3	25	0	23	9	13	0	452
8:30 AM	83	134	5	1	14	113	11	0	11	4	29	0	15	11	8	0	439
8:45 AM	89	123	11	0	4	99	15	1	14	6	20	1	14	12	9	0	418
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	689	1243	77	1	70	894	86	22	98	35	141	1	151	91	75	0	3674
APPROACH %'s :	34.28%	61.84%	3.83%	0.05%	6.53%	83.40%	8.02%	2.05%	35.64%	12.73%	51.27%	0.36%	47.63%	28.71%	23.66%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	366	704	39	0	36	480	41	13	54	19	53	0	79	53	39	0	1976
PEAK HR FACTOR :	0.953	0.903	0.886	0.000	1.000	0.968	0.854	0.813	0.794	0.594	0.736	0.000	0.823	0.631	0.650	0.000	0.963
	0.946				0.956				0.900				0.950				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	101	110	14	0	15	195	23	3	47	16	72	0	14	20	4	0	634
4:15 PM	100	118	20	0	12	146	27	1	34	21	93	1	11	20	8	0	612
4:30 PM	111	111	25	1	12	195	32	2	46	24	74	1	23	20	3	0	680
4:45 PM	91	131	17	4	8	169	32	1	54	7	67	0	24	14	5	0	624
5:00 PM	92	118	19	0	12	224	17	4	60	30	82	2	15	15	10	0	700
5:15 PM	114	121	17	1	6	168	32	0	50	27	73	0	20	16	5	0	650
5:30 PM	95	137	26	2	14	113	24	4	50	16	71	1	25	8	9	0	595
5:45 PM	127	164	24	0	11	128	25	1	47	13	77	0	20	21	5	0	663
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	831	1010	162	8	90	1338	212	16	388	154	609	5	152	134	49	0	5158
APPROACH %'s :	41.32%	50.22%	8.06%	0.40%	5.43%	80.80%	12.80%	0.97%	33.56%	13.32%	52.68%	0.43%	45.37%	40.00%	14.63%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	408	481	78	6	38	756	113	7	210	88	296	3	82	65	23	0	2654
PEAK HR FACTOR :	0.895	0.918	0.780	0.375	0.792	0.844	0.883	0.438	0.875	0.733	0.902	0.375	0.854	0.813	0.575	0.000	0.948
	0.961				0.889				0.858				0.924				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Hospitality Ln
City: San Bernardino
Control: Signalized

Project ID: 19-06039-047
Date: 3/19/2019

Cars

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Hospitality Ln				Hospitality Ln				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	81	141	9	0	4	68	8	1	6	3	12	0	20	6	6	0	365
7:15 AM	85	181	11	0	9	109	8	4	16	5	10	0	12	21	10	0	481
7:30 AM	94	151	10	0	9	109	11	4	11	8	10	0	24	11	9	0	461
7:45 AM	86	174	9	0	8	106	12	3	13	3	16	0	21	9	15	0	475
8:00 AM	90	136	8	0	8	102	9	2	12	3	11	0	22	12	5	0	420
8:15 AM	63	124	13	0	11	100	9	7	13	3	22	0	23	9	13	0	410
8:30 AM	82	117	5	1	14	90	10	0	11	4	26	0	15	11	8	0	394
8:45 AM	88	104	10	0	4	80	13	1	13	6	19	1	14	12	9	0	374
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	669	1128	75	1	67	764	80	22	95	35	126	1	151	91	75	0	3380
APPROACH %'s :	35.72%	60.22%	4.00%	0.05%	7.18%	81.89%	8.57%	2.36%	36.96%	13.62%	49.03%	0.39%	47.63%	28.71%	23.66%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	355	642	38	0	34	426	40	13	52	19	47	0	79	53	39	0	1837
PEAK HR FACTOR :	0.94	0.887	0.864	0.000	0.944	0.977	0.833	0.813	0.813	0.594	0.734	0.000	0.823	0.631	0.650	0.000	0.955
	0.934				0.964				0.922				0.950				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	99	105	14	0	15	184	23	3	47	16	71	0	14	20	4	0	615
4:15 PM	95	111	20	0	12	133	27	1	34	21	91	1	11	20	8	0	585
4:30 PM	109	104	25	1	12	188	31	2	46	24	71	1	23	20	3	0	660
4:45 PM	89	126	17	4	8	162	32	1	54	7	67	0	24	14	5	0	610
5:00 PM	89	111	19	0	12	216	17	4	60	30	80	2	15	15	10	0	680
5:15 PM	113	117	17	1	6	154	32	0	50	27	71	0	20	16	5	0	629
5:30 PM	92	124	26	2	14	102	24	4	49	16	69	1	25	8	9	0	565
5:45 PM	127	154	24	0	11	124	25	1	47	13	74	0	20	21	5	0	646
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	813	952	162	8	90	1263	211	16	387	154	594	5	152	134	49	0	4990
APPROACH %'s :	42.02%	49.20%	8.37%	0.41%	5.70%	79.94%	13.35%	1.01%	33.95%	13.51%	52.11%	0.44%	45.37%	40.00%	14.63%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	400	458	78	6	38	720	112	7	210	88	289	3	82	65	23	0	2579
PEAK HR FACTOR :	0.88	0.909	0.780	0.375	0.792	0.833	0.875	0.438	0.875	0.733	0.903	0.375	0.854	0.813	0.575	0.000	0.948
	0.950				0.881				0.858				0.924				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Hospitality Ln
City: San Bernardino
Control: Signalized

Project ID: 19-06039-047
Date: 3/19/2019

2axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Hospitality Ln				Hospitality Ln				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	2	0	0	0	2	1	0	0	0	0	0	0	0	0	0	6
7:15 AM	0	8	0	0	0	5	0	0	1	0	1	0	0	0	0	0	15
7:30 AM	0	3	1	0	0	3	0	0	0	0	0	0	0	0	0	0	7
7:45 AM	0	4	0	0	1	1	0	0	1	0	0	0	0	0	0	0	7
8:00 AM	3	3	0	0	1	4	0	0	0	0	0	0	0	0	0	0	11
8:15 AM	0	5	0	0	0	4	1	0	0	0	1	0	0	0	0	0	11
8:30 AM	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	14
8:45 AM	0	3	0	0	0	3	1	0	0	0	0	0	0	0	0	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	35	1	0	2	29	3	0	2	0	2	0	0	0	0	0	78
APPROACH %'s :	10.00%	87.50%	2.50%	0.00%	5.88%	85.29%	8.82%	0.00%	50.00%	0.00%	50.00%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	3	18	1	0	2	13	0	0	2	0	1	0	0	0	0	0	40
PEAK HR FACTOR :	0.250	0.563	0.250	0.000	0.500	0.650	0.000	0.000	0.500	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.667
	0.688				0.750				0.375								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	3	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	9
4:30 PM	2	3	0	0	0	1	1	0	0	0	1	0	0	0	0	0	8
4:45 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6
5:15 PM	1	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	8
5:30 PM	0	7	0	0	0	3	0	0	1	0	1	0	0	0	0	0	12
5:45 PM	0	4	0	0	0	2	0	0	0	0	1	0	0	0	0	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	6	23	0	0	0	22	1	0	1	0	3	0	0	0	0	0	56
APPROACH %'s :	20.69%	79.31%	0.00%	0.00%	0.00%	95.65%	4.35%	0.00%	25.00%	0.00%	75.00%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	3	9	0	0	0	11	1	0	0	0	1	0	0	0	0	0	25
PEAK HR FACTOR :	0.38	0.750	0.000	0.000	0.000	0.688	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.781
	0.600				0.750				0.250								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Hospitality Ln
City: San Bernardino
Control: Signalized

Project ID: 19-06039-047
Date: 3/19/2019

3axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Hospitality Ln				Hospitality Ln				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	0	0	0	0	5	0	0	0	0	2	0	0	0	0	0	8
7:15 AM	2	1	0	0	0	3	0	0	0	0	1	0	0	0	0	0	7
7:30 AM	2	0	0	0	0	3	1	0	0	0	1	0	0	0	0	0	7
7:45 AM	2	1	0	0	0	4	0	0	0	0	2	0	0	0	0	0	9
8:00 AM	1	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	5
8:15 AM	3	1	0	0	1	5	0	0	0	0	2	0	0	0	0	0	12
8:30 AM	1	2	0	0	0	3	1	0	0	0	2	0	0	0	0	0	9
8:45 AM	1	0	1	0	0	4	0	0	1	0	1	0	0	0	0	0	8
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	13	7	1	0	1	28	2	0	1	0	12	0	0	0	0	0	65
APPROACH %'s :	61.90%	33.33%	4.76%	0.00%	3.23%	90.32%	6.45%	0.00%	7.69%	0.00%	92.31%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	7	4	0	0	0	11	1	0	0	0	5	0	0	0	0	0	28
PEAK HR FACTOR :	0.875	0.500	0.000	0.000	0.000	0.688	0.250	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.778
	0.917				0.750				0.625								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	4
4:15 PM	2	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	5
4:30 PM	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0	4
4:45 PM	2	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
5:00 PM	2	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	5
5:15 PM	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	3
5:30 PM	3	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	5
5:45 PM	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	11	5	0	0	0	6	0	0	0	0	12	0	0	0	0	0	34
APPROACH %'s :	68.75%	31.25%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	4	4	0	0	0	3	0	0	0	0	6	0	0	0	0	0	17
PEAK HR FACTOR :	0.50	0.500	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.850
	0.500				0.750				0.750								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & Hospitality Ln
City: San Bernardino
Control: Signalized

Project ID: 19-06039-047
Date: 3/19/2019

4axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				Hospitality Ln				Hospitality Ln				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	3	0	0	0	7	0	0	0	0	0	0	0	0	0	0	10
7:15 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10
7:30 AM	0	10	0	0	0	9	0	0	0	0	0	0	0	0	0	0	19
7:45 AM	1	11	0	0	0	5	0	0	0	0	0	0	0	0	0	0	17
8:00 AM	0	14	0	0	0	11	0	0	0	0	0	0	0	0	0	0	25
8:15 AM	2	6	0	0	0	11	0	0	0	0	0	0	0	0	0	0	19
8:30 AM	0	8	0	0	0	13	0	0	0	0	1	0	0	0	0	0	22
8:45 AM	0	16	0	0	0	12	1	0	0	0	0	0	0	0	0	0	29
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	73	0	0	0	73	1	0	0	0	1	0	0	0	0	0	151
APPROACH %'s :	3.95%	96.05%	0.00%	0.00%	0.00%	98.65%	1.35%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	40	0	0	0	30	0	0	0	0	0	0	0	0	0	0	71
PEAK HR FACTOR :	0.250	0.714	0.000	0.000	0.000	0.682	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.710
	0.732				0.682												

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	1	3	0	0	1.5	0.5	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	4	0	0	0	8	0	0	0	0	0	0	0	0	0	0	12
4:15 PM	0	5	0	0	0	8	0	0	0	0	0	0	0	0	0	0	13
4:30 PM	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	8
4:45 PM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	1	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	9
5:15 PM	0	1	0	0	0	9	0	0	0	0	0	0	0	0	0	0	10
5:30 PM	0	6	0	0	0	7	0	0	0	0	0	0	0	0	0	0	13
5:45 PM	0	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	30	0	0	0	47	0	0	0	0	0	0	0	0	0	0	78
APPROACH %'s :	3.23%	96.77%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	10	0	0	0	22	0	0	0	0	0	0	0	0	0	0	33
PEAK HR FACTOR :	0.25	0.625	0.000	0.000	0.000	0.611	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.825
	0.550				0.611												

Prepared by National Data & Surveying Services

Tippecanoe Ave & I-10 WB Ramps/ Harriman Pl

Peak Hour Turning Movement Count

ID: 19-06039-048
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Tippecanoe Ave — SOUTHBOUND

	Right	Through	Left	U-Turn	Total (departing)
AM	58	619	0	0	1108
NOON	0	0	0	0	0
PM	177	1103	0	0	973
Lanes	0.5	3.5	0	0	

I-10 WB Ramps/Harriman Pl — EASTBOUND

	AM	NOON	PM	Lanes
Total (departing)	312	0	688	
U-Turn	0	0	1	0
Left	38	0	155	1
Through	0	0	0	0
Right	177	0	668	2

I-10 WB Ramps/Harriman Pl — WESTBOUND

	Lanes	PM	NOON	AM
Right	1.5	261	0	360
Through	0.5	211	0	134
Left	2	174	0	512
U-Turn	0	0	0	0
Total (departing)		498	0	382

Tippecanoe Ave — NORTHBOUND

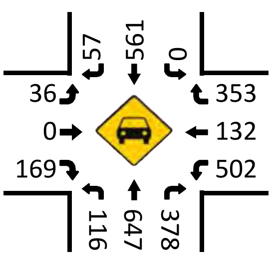
	Total (departing)	U-Turn	Left	Through	Right
Lanes		0	2	3	1
PM	1945	0	299	557	498
NOON	0	0	0	0	0
AM	1308	0	120	710	382

CONTROL

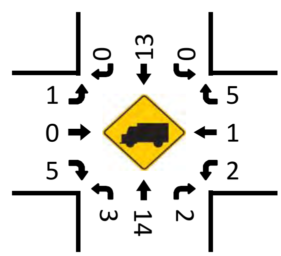
Signalized

	AM	NOON	PM
TEV	3110	0	4104
PHF	0.91		0.97

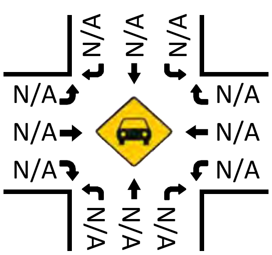
Cars (AM)



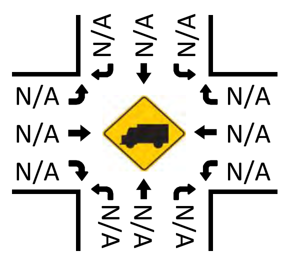
2axle (AM)



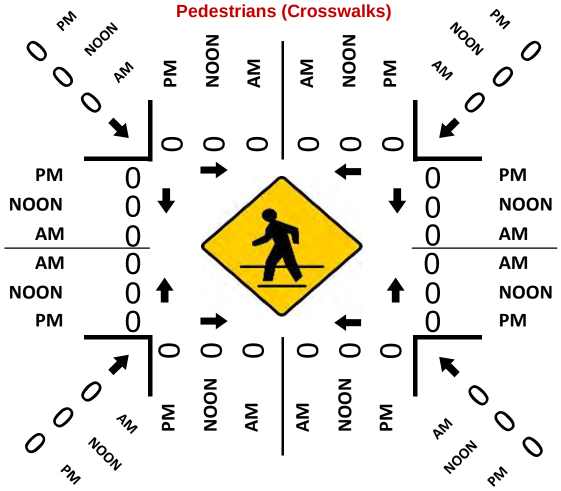
Cars (NOON)



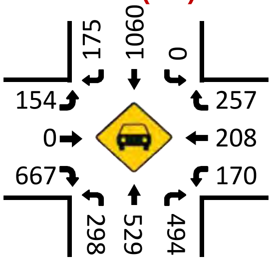
2axle (NOON)



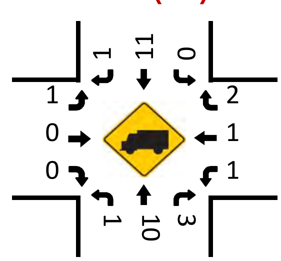
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 WB Ramps/Harriman Pl
City: San Bernardino
Control: Signalized

Project ID: 19-06039-048
Date: 3/19/2019

Total

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 WB Ramps/Harriman Pl				I-10 WB Ramps/Harriman Pl				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	25	161	67	0	0	152	8	0	7	0	39	0	110	22	86	0	677
7:15 AM	16	158	76	0	0	138	11	0	8	0	44	0	136	36	113	0	736
7:30 AM	39	184	93	0	0	142	16	0	9	0	44	0	156	23	79	0	785
7:45 AM	31	190	100	0	0	181	14	0	12	0	52	0	145	42	85	0	852
8:00 AM	34	178	113	0	0	158	17	0	9	0	37	0	75	33	83	0	737
8:15 AM	35	141	81	0	0	150	15	0	13	0	51	0	123	33	60	0	702
8:30 AM	40	150	70	0	0	176	6	0	5	0	55	0	91	27	79	0	699
8:45 AM	57	147	79	0	0	127	16	0	11	0	66	0	84	30	52	0	669
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	277	1309	679	0	0	1224	103	0	74	0	388	0	920	246	637	0	5857
APPROACH %'s :	12.23%	57.79%	29.98%	0.00%	0.00%	92.24%	7.76%	0.00%	16.02%	0.00%	83.98%	0.00%	51.03%	13.64%	35.33%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	120	710	382	0	0	619	58	0	38	0	177	0	512	134	360	0	3110
PEAK HR FACTOR :	0.769	0.934	0.845	0.000	0.000	0.855	0.853	0.000	0.792	0.000	0.851	0.000	0.821	0.798	0.796	0.000	0.913
	0.932				0.868				0.840				0.882				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	72	129	112	0	0	253	45	0	27	0	162	0	56	68	84	0	1008
4:15 PM	70	136	122	0	0	243	40	0	38	0	128	1	66	46	74	0	964
4:30 PM	63	143	131	0	0	278	48	0	41	0	160	0	35	54	72	0	1025
4:45 PM	82	149	121	0	0	261	36	0	29	0	150	0	65	47	49	0	989
5:00 PM	70	130	117	0	0	304	38	0	50	0	199	0	38	43	64	0	1053
5:15 PM	84	135	129	0	0	260	55	0	35	0	159	1	36	67	76	0	1037
5:30 PM	75	143	94	0	0	208	30	0	58	0	156	2	66	53	77	0	962
5:45 PM	82	178	93	0	0	231	36	0	50	0	156	0	62	47	66	0	1001
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	598	1143	919	0	0	2038	328	0	328	0	1270	4	424	425	562	0	8039
APPROACH %'s :	22.48%	42.97%	34.55%	0.00%	0.00%	86.14%	13.86%	0.00%	20.47%	0.00%	79.28%	0.25%	30.05%	30.12%	39.83%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	299	557	498	0	0	1103	177	0	155	0	668	1	174	211	261	0	4104
PEAK HR FACTOR :	0.890	0.935	0.950	0.000	0.000	0.907	0.805	0.000	0.775	0.000	0.839	0.250	0.669	0.787	0.859	0.000	0.974
	0.962				0.936				0.827				0.902				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 WB Ramps/Harriman Pl
City: San Bernardino
Control: Signalized

Project ID: 19-06039-048
Date: 3/19/2019

Cars

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 WB Ramps/Harriman Pl				I-10 WB Ramps/Harriman Pl				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	24	151	65	0	0	133	8	0	6	0	36	0	110	22	86	0	641
7:15 AM	15	145	76	0	0	127	11	0	8	0	42	0	132	36	113	0	705
7:30 AM	38	170	93	0	0	127	15	0	8	0	41	0	154	23	77	0	746
7:45 AM	31	174	99	0	0	167	14	0	11	0	50	0	143	41	84	0	814
8:00 AM	32	158	110	0	0	140	17	0	9	0	36	0	73	32	79	0	686
8:15 AM	34	130	79	0	0	129	15	0	12	0	51	0	119	32	58	0	659
8:30 AM	37	134	69	0	0	147	6	0	5	0	54	0	90	26	76	0	644
8:45 AM	57	131	75	0	0	110	16	0	10	0	62	0	82	29	47	0	619
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	268	1193	666	0	0	1080	102	0	69	0	372	0	903	241	620	0	5514
APPROACH %'s :	12.60%	56.09%	31.31%	0.00%	0.00%	91.37%	8.63%	0.00%	15.65%	0.00%	84.35%	0.00%	51.19%	13.66%	35.15%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	116	647	378	0	0	561	57	0	36	0	169	0	502	132	353	0	2951
PEAK HR FACTOR :	0.76	0.930	0.859	0.000	0.000	0.840	0.838	0.000	0.818	0.000	0.845	0.000	0.815	0.805	0.781	0.000	0.906
	0.938				0.854				0.840				0.878				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	72	123	109	0	0	241	45	0	27	0	162	0	56	68	84	0	987
4:15 PM	69	127	121	0	0	229	40	0	36	0	128	1	64	45	73	0	933
4:30 PM	63	135	131	0	0	267	48	0	40	0	160	0	34	53	69	0	1000
4:45 PM	82	144	119	0	0	255	36	0	29	0	150	0	64	46	49	0	974
5:00 PM	70	123	116	0	0	292	38	0	50	0	199	0	37	42	63	0	1030
5:15 PM	83	127	128	0	0	246	53	0	35	0	158	1	35	67	76	0	1009
5:30 PM	75	132	91	0	0	198	29	0	56	0	156	2	65	53	76	0	933
5:45 PM	82	170	93	0	0	222	36	0	50	0	156	0	62	46	64	0	981
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	596	1081	908	0	0	1950	325	0	323	0	1269	4	417	420	554	0	7847
APPROACH %'s :	23.06%	41.82%	35.13%	0.00%	0.00%	85.71%	14.29%	0.00%	20.24%	0.00%	79.51%	0.25%	29.98%	30.19%	39.83%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	298	529	494	0	0	1060	175	0	154	0	667	1	170	208	257	0	4013
PEAK HR FACTOR :	0.90	0.918	0.943	0.000	0.000	0.908	0.825	0.000	0.770	0.000	0.838	0.250	0.664	0.776	0.845	0.000	0.974
	0.957				0.936				0.825				0.892				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 WB Ramps/Harriman Pl
City: San Bernardino
Control: Signalized

Project ID: 19-06039-048
Date: 3/19/2019

2axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 WB Ramps/Harriman Pl				I-10 WB Ramps/Harriman Pl				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	5	2	0	0	3	0	0	1	0	2	0	0	0	0	0	14
7:15 AM	1	6	0	0	0	4	0	0	0	0	1	0	0	0	0	0	12
7:30 AM	1	2	0	0	0	4	0	0	1	0	2	0	0	0	1	0	11
7:45 AM	0	3	0	0	0	1	0	0	0	0	1	0	1	0	1	0	7
8:00 AM	1	3	2	0	0	4	0	0	0	0	1	0	1	1	3	0	16
8:15 AM	1	2	2	0	0	5	0	0	1	0	0	0	3	0	1	0	15
8:30 AM	2	4	1	0	0	8	0	0	0	0	1	0	0	1	3	0	20
8:45 AM	0	1	2	0	0	2	0	0	0	0	3	0	2	0	2	0	12
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	7	26	9	0	0	31	0	0	3	0	11	0	7	2	11	0	107
APPROACH %'s :	16.67%	61.90%	21.43%	0.00%	0.00%	100.00%	0.00%	0.00%	21.43%	0.00%	78.57%	0.00%	35.00%	10.00%	55.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	3	14	2	0	0	13	0	0	1	0	5	0	2	1	5	0	46
PEAK HR FACTOR :	0.750	0.583	0.250	0.000	0.000	0.813	0.000	0.000	0.250	0.000	0.625	0.000	0.500	0.250	0.417	0.000	0.719
	0.679				0.813				0.500				0.400				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
4:15 PM	1	3	1	0	0	4	0	0	2	0	0	0	0	1	0	0	12
4:30 PM	0	4	0	0	0	1	0	0	1	0	0	0	0	1	2	0	9
4:45 PM	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	1	1	0	0	5	0	0	0	0	0	0	1	0	0	0	8
5:15 PM	1	5	1	0	0	3	1	0	0	0	0	0	0	0	0	0	11
5:30 PM	0	3	2	0	0	4	1	0	2	0	0	0	0	0	1	0	13
5:45 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	1	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	19	8	0	0	23	2	0	5	0	0	0	1	2	4	0	66
APPROACH %'s :	6.90%	65.52%	27.59%	0.00%	0.00%	92.00%	8.00%	0.00%	100.00%	0.00%	0.00%	0.00%	14.29%	28.57%	57.14%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	10	3	0	0	11	1	0	1	0	0	0	1	1	2	0	31
PEAK HR FACTOR :	0.25	0.500	0.750	0.000	0.000	0.550	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.705
	0.500				0.600				0.250				0.333				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 WB Ramps/Harriman Pl
City: San Bernardino
Control: Signalized

Project ID: 19-06039-048
Date: 3/19/2019

3axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 WB Ramps/Harriman Pl				I-10 WB Ramps/Harriman Pl				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	8	0	0	0	0	0	0	0	0	0	0	9
7:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	3	0	0	0	9
7:30 AM	0	2	0	0	0	4	0	0	0	0	0	0	1	0	0	0	7
7:45 AM	0	3	0	0	0	7	0	0	0	0	0	0	1	0	0	0	11
8:00 AM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
8:15 AM	0	4	0	0	0	6	0	0	0	0	0	0	0	0	0	0	10
8:30 AM	1	3	0	0	0	6	0	0	0	0	0	0	0	0	0	0	10
8:45 AM	0	2	0	0	0	4	0	0	1	0	0	0	0	0	0	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	21	0	0	0	40	0	0	1	0	0	0	5	0	0	0	68
APPROACH %'s :	4.55%	95.45%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	11	0	0	0	16	0	0	0	0	0	0	5	0	0	0	32
PEAK HR FACTOR :	0.000	0.917	0.000	0.000	0.000	0.571	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.000	0.000	0.000	0.727
		0.917				0.571								0.417			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	5
4:15 PM	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5
4:30 PM	0	2	0	0	0	3	0	0	0	0	0	0	1	0	0	0	6
4:45 PM	0	3	1	0	0	1	0	0	0	0	0	0	0	1	0	0	6
5:00 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	1	1	0	5
5:15 PM	0	2	0	0	0	3	0	0	0	0	1	0	1	0	0	0	7
5:30 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	0	0	3	0	0	0	0	0	0	0	1	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	15	2	0	0	18	0	0	0	0	1	0	2	3	1	0	42
APPROACH %'s :	0.00%	88.24%	11.76%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	33.33%	50.00%	16.67%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	8	1	0	0	9	0	0	0	0	1	0	2	2	1	0	24
PEAK HR FACTOR :	0.00	0.667	0.250	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.500	0.250	0.000	0.857
		0.563				0.750					0.250			0.625			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 WB Ramps/Harriman Pl
City: San Bernardino
Control: Signalized

Project ID: 19-06039-048
Date: 3/19/2019

4axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 WB Ramps/Harriman Pl				I-10 WB Ramps/Harriman Pl				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	4	0	0	0	8	0	0	0	0	1	0	0	0	0	0	13
7:15 AM	0	4	0	0	0	4	0	0	0	0	1	0	1	0	0	0	10
7:30 AM	0	10	0	0	0	7	1	0	0	0	1	0	1	0	1	0	21
7:45 AM	0	10	1	0	0	6	0	0	1	0	1	0	0	1	0	0	20
8:00 AM	1	14	1	0	0	12	0	0	0	0	0	0	1	0	1	0	30
8:15 AM	0	5	0	0	0	10	0	0	0	0	0	0	1	1	1	0	18
8:30 AM	0	9	0	0	0	15	0	0	0	0	0	0	1	0	0	0	25
8:45 AM	0	13	2	0	0	11	0	0	0	0	1	0	0	1	3	0	31
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	69	4	0	0	73	1	0	1	0	5	0	5	3	6	0	168
APPROACH %'s :	1.35%	93.24%	5.41%	0.00%	0.00%	98.65%	1.35%	0.00%	16.67%	0.00%	83.33%	0.00%	35.71%	21.43%	42.86%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	38	2	0	0	29	1	0	1	0	3	0	3	1	2	0	81
PEAK HR FACTOR :	0.250	0.679	0.500	0.000	0.000	0.604	0.250	0.000	0.250	0.000	0.750	0.000	0.750	0.250	0.500	0.000	0.675
	0.641				0.625				0.500				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	0	3.5	0.5	0	1	0	2	0	2	0.5	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	4	0	0	0	8	0	0	0	0	0	0	0	0	0	0	12
4:15 PM	0	4	0	0	0	7	0	0	0	0	0	0	2	0	1	0	14
4:30 PM	0	2	0	0	0	7	0	0	0	0	0	0	0	0	1	0	10
4:45 PM	0	2	0	0	0	3	0	0	0	0	0	0	1	0	0	0	6
5:00 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10
5:15 PM	0	1	0	0	0	8	1	0	0	0	0	0	0	0	0	0	10
5:30 PM	0	6	1	0	0	5	0	0	0	0	0	0	1	0	0	0	13
5:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	1	0	9
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	28	1	0	0	47	1	0	0	0	0	0	4	0	3	0	84
APPROACH %'s :	0.00%	96.55%	3.45%	0.00%	0.00%	97.92%	2.08%	0.00%					57.14%	0.00%	42.86%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	10	0	0	0	23	1	0	0	0	0	0	1	0	1	0	36
PEAK HR FACTOR :	0.00	0.500	0.000	0.000	0.000	0.719	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.900
	0.500				0.667								0.500				

Prepared by National Data & Surveying Services

Tippecanoe Ave & I-10 EB Ramps

Peak Hour Turning Movement Count

ID: 19-06039-049
City: San Bernardino

Day: Tuesday
Date: 03/19/2019

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Tippecanoe Ave — SOUTHBOUND

AM	0	794	148	0	1214	AM
NOON	0	0	0	0	0	NOON
PM	0	636	670	0	1329	PM

I-10 EB Ramps — EASTBOUND

AM	NOON	PM		
0	0	0		
0	0	0	0	
594	0	393	1.5	
3	0	2	0.5	
596	0	294	2	
AM	NOON	PM		

WESTBOUND — I-10 EB Ramps

PM	NOON	AM		
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
1010	0	442		
PM	NOON	AM		

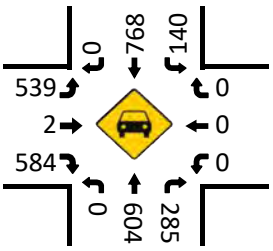
NORTHBOUND — Tippecanoe Ave

PM	930	0	0	936	338	PM
NOON	0	0	0	0	0	NOON
AM	1390	0	0	620	291	AM

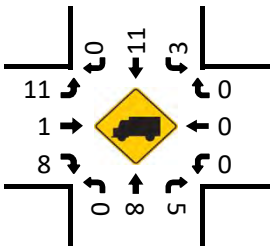
	0	2	2	0
	0	0	2	1

CONTROL			
Signalized			
TEV	3046 AM	0 NOON	3269 PM
PHF	0.91		0.97

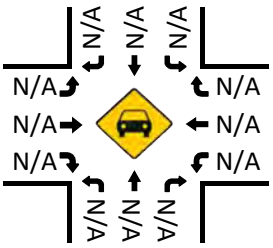
Cars (AM)



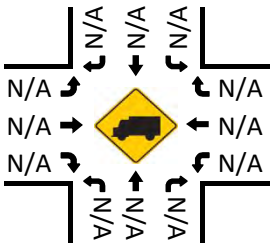
2axle (AM)



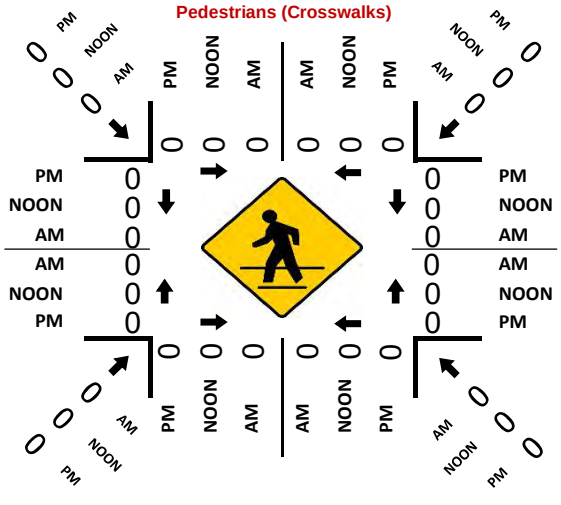
Cars (NOON)



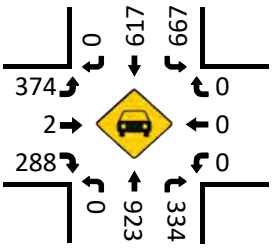
2axle (NOON)



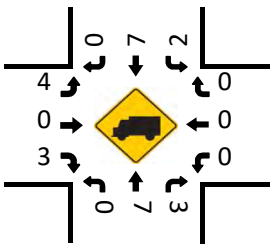
Pedestrians (Crosswalks)



Cars (PM)



2axle (PM)



National Data & Surveying Services.

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 EB Ramps
City: San Bernardino
Control: Signalized

Project ID: 19-06039-049
Date: 3/19/2019

Total

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 EB Ramps				I-10 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	124	38	0	30	182	0	0	127	0	149	0	0	0	0	0	650
7:15 AM	0	115	43	0	35	189	0	0	141	0	159	0	0	0	0	0	682
7:30 AM	0	146	84	0	30	202	0	0	164	2	160	0	0	0	0	0	788
7:45 AM	0	184	94	0	38	255	0	0	149	1	119	0	0	0	0	0	840
8:00 AM	0	175	70	0	45	148	0	0	140	0	158	0	0	0	0	0	736
8:15 AM	0	134	53	0	47	181	0	0	119	0	133	0	0	0	0	0	667
8:30 AM	0	127	52	0	45	163	0	0	138	2	159	0	0	0	0	0	686
8:45 AM	0	147	38	0	53	146	0	0	133	2	135	0	0	0	0	0	654
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1152	472	0	323	1466	0	0	1111	7	1172	0	0	0	0	0	5703
APPROACH %'s :	0.00%	70.94%	29.06%	0.00%	18.05%	81.95%	0.00%	0.00%	48.52%	0.31%	51.18%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	620	291	0	148	794	0	0	594	3	596	0	0	0	0	0	3046
PEAK HR FACTOR :	0.000	0.842	0.774	0.000	0.822	0.778	0.000	0.000	0.905	0.375	0.931	0.000	0.000	0.000	0.000	0.000	0.907
		0.819				0.804				0.915							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	212	80	0	145	171	0	0	110	4	82	0	0	0	0	0	804
4:15 PM	0	233	86	0	149	156	0	0	85	1	95	0	0	0	0	0	805
4:30 PM	0	239	85	0	159	160	0	0	102	0	62	0	0	0	0	0	807
4:45 PM	0	242	93	0	159	173	0	0	103	0	73	0	0	0	0	0	843
5:00 PM	0	222	74	0	203	147	0	0	103	1	64	0	0	0	0	0	814
5:15 PM	0	256	77	0	144	166	0	0	83	2	77	0	0	0	0	0	805
5:30 PM	0	206	62	0	135	151	0	0	121	1	111	0	0	0	0	0	787
5:45 PM	0	203	80	0	132	171	0	0	136	2	98	0	0	0	0	0	822
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1813	637	0	1226	1295	0	0	843	11	662	0	0	0	0	0	6487
APPROACH %'s :	0.00%	74.00%	26.00%	0.00%	48.63%	51.37%	0.00%	0.00%	55.61%	0.73%	43.67%	0.00%					
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	936	338	0	670	636	0	0	393	2	294	0	0	0	0	0	3269
PEAK HR FACTOR :	0.000	0.967	0.909	0.000	0.825	0.919	0.000	0.000	0.954	0.500	0.774	0.000	0.000	0.000	0.000	0.000	0.969
		0.951				0.933				0.952							

National Data & Surveying Services.

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 EB Ramps
City: San Bernardino
Control: Signalized

Project ID: 19-06039-049
Date: 3/19/2019

Cars

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 EB Ramps				I-10 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	119	38	0	27	178	0	0	119	0	139	0	0	0	0	0	620
7:15 AM	0	111	43	0	32	182	0	0	131	0	156	0	0	0	0	0	655
7:30 AM	0	144	84	0	28	195	0	0	151	1	156	0	0	0	0	0	759
7:45 AM	0	181	92	0	37	249	0	0	135	1	116	0	0	0	0	0	811
8:00 AM	0	168	66	0	43	142	0	0	122	0	156	0	0	0	0	0	697
8:15 AM	0	128	48	0	44	174	0	0	111	0	133	0	0	0	0	0	638
8:30 AM	0	120	52	0	43	156	0	0	125	2	158	0	0	0	0	0	656
8:45 AM	0	140	36	0	50	141	0	0	119	2	133	0	0	0	0	0	621
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1111	459	0	304	1417	0	0	1013	6	1147	0	0	0	0	0	5457
APPROACH %'s :	0.00%	70.76%	29.24%	0.00%	17.66%	82.34%	0.00%	0.00%	46.77%	0.28%	52.95%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	604	285	0	140	768	0	0	539	2	584	0	0	0	0	0	2922
PEAK HR FACTOR :	0.00	0.834	0.774	0.000	0.814	0.771	0.000	0.000	0.892	0.500	0.936	0.000	0.000	0.000	0.000	0.000	0.901
		0.814				0.794				0.913							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	205	78	0	144	168	0	0	106	4	81	0	0	0	0	0	786
4:15 PM	0	229	86	0	147	151	0	0	81	1	93	0	0	0	0	0	788
4:30 PM	0	236	83	0	159	155	0	0	97	0	60	0	0	0	0	0	790
4:45 PM	0	239	91	0	158	170	0	0	99	0	71	0	0	0	0	0	828
5:00 PM	0	219	74	0	203	141	0	0	97	1	64	0	0	0	0	0	799
5:15 PM	0	249	77	0	141	162	0	0	80	2	77	0	0	0	0	0	788
5:30 PM	0	201	61	0	134	148	0	0	112	1	110	0	0	0	0	0	767
5:45 PM	0	203	79	0	131	168	0	0	128	2	97	0	0	0	0	0	808
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1781	629	0	1217	1263	0	0	800	11	653	0	0	0	0	0	6354
APPROACH %'s :	0.00%	73.90%	26.10%	0.00%	49.07%	50.93%	0.00%	0.00%	54.64%	0.75%	44.60%	0.00%					
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	923	334	0	667	617	0	0	374	2	288	0	0	0	0	0	3205
PEAK HR FACTOR :	0.00	0.965	0.918	0.000	0.821	0.907	0.000	0.000	0.944	0.500	0.774	0.000	0.000	0.000	0.000	0.000	0.968
		0.952				0.933				0.949							

National Data & Surveying Services.

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 EB Ramps
City: San Bernardino
Control: Signalized

Project ID: 19-06039-049
Date: 3/19/2019

2axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 EB Ramps				I-10 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	4	0	0	1	1	0	0	4	0	7	0	0	0	0	0	17
7:15 AM	0	2	0	0	1	1	0	0	5	0	2	0	0	0	0	0	11
7:30 AM	0	1	0	0	1	4	0	0	2	1	3	0	0	0	0	0	12
7:45 AM	0	1	2	0	0	2	0	0	2	0	2	0	0	0	0	0	9
8:00 AM	0	4	3	0	1	4	0	0	2	0	1	0	0	0	0	0	15
8:15 AM	0	4	5	0	1	6	0	0	1	0	0	0	0	0	0	0	17
8:30 AM	0	4	0	0	1	2	0	0	3	0	1	0	0	0	0	0	11
8:45 AM	0	1	2	0	2	4	0	0	2	0	2	0	0	0	0	0	13
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	21	12	0	8	24	0	0	21	1	18	0	0	0	0	0	105
APPROACH %'s :	0.00%	63.64%	36.36%	0.00%	25.00%	75.00%	0.00%	0.00%	52.50%	2.50%	45.00%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	8	5	0	3	11	0	0	11	1	8	0	0	0	0	0	47
PEAK HR FACTOR :	0.000	0.500	0.417	0.000	0.750	0.688	0.000	0.000	0.550	0.250	0.667	0.000	0.000	0.000	0.000	0.000	0.783
		0.464				0.700				0.714							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	3	1	0	0	2	0	0	0	0	1	0	0	0	0	0	7
4:15 PM	0	3	0	0	2	1	0	0	1	0	2	0	0	0	0	0	9
4:30 PM	0	2	2	0	0	2	0	0	2	0	0	0	0	0	0	0	8
4:45 PM	0	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0	4
5:00 PM	0	1	0	0	0	3	0	0	1	0	0	0	0	0	0	0	5
5:15 PM	0	5	0	0	0	1	0	0	2	0	0	0	0	0	0	0	8
5:30 PM	0	3	1	0	0	2	0	0	2	0	1	0	0	0	0	0	9
5:45 PM	0	0	0	0	1	0	0	0	3	0	1	0	0	0	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	18	5	0	3	12	0	0	11	0	6	0	0	0	0	0	55
APPROACH %'s :	0.00%	78.26%	21.74%	0.00%	20.00%	80.00%	0.00%	0.00%	64.71%	0.00%	35.29%	0.00%					
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	7	3	0	2	7	0	0	4	0	3	0	0	0	0	0	26
PEAK HR FACTOR :	0.00	0.583	0.375	0.000	0.250	0.583	0.000	0.000	0.500	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.722
		0.625				0.750				0.583							

National Data & Surveying Services.

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 EB Ramps
City: San Bernardino
Control: Signalized

Project ID: 19-06039-049
Date: 3/19/2019

3axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 EB Ramps				I-10 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	2	0	0	0	0	2	0	0	0	0	0	5
7:15 AM	0	2	0	0	0	4	0	0	1	0	0	0	0	0	0	0	7
7:30 AM	0	1	0	0	0	2	0	0	1	0	1	0	0	0	0	0	5
7:45 AM	0	2	0	0	0	3	0	0	1	0	1	0	0	0	0	0	7
8:00 AM	0	2	1	0	0	1	0	0	1	0	1	0	0	0	0	0	6
8:15 AM	0	2	0	0	0	1	0	0	2	0	0	0	0	0	0	0	5
8:30 AM	0	3	0	0	0	3	0	0	1	0	0	0	0	0	0	0	7
8:45 AM	0	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	16	1	0	1	17	0	0	7	0	5	0	0	0	0	0	47
APPROACH %'s :	0.00%	94.12%	5.88%	0.00%	5.56%	94.44%	0.00%	0.00%	58.33%	0.00%	41.67%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	7	1	0	0	10	0	0	4	0	3	0	0	0	0	0	25
PEAK HR FACTOR :	0.000	0.875	0.250	0.000	0.000	0.625	0.000	0.000	1.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.893
		0.667				0.625				0.875							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	1	0	0	0	2	0	0	1	0	0	0	0	0	0	0	4
4:30 PM	0	1	0	0	0	3	0	0	1	0	2	0	0	0	0	0	7
4:45 PM	0	2	1	0	0	0	0	0	2	0	1	0	0	0	0	0	6
5:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
5:15 PM	0	2	0	0	1	3	0	0	0	0	0	0	0	0	0	0	6
5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	12	1	0	1	14	0	0	5	0	3	0	0	0	0	0	36
APPROACH %'s :	0.00%	92.31%	7.69%	0.00%	6.67%	93.33%	0.00%	0.00%	62.50%	0.00%	37.50%	0.00%					
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	6	1	0	0	7	0	0	4	0	3	0	0	0	0	0	21
PEAK HR FACTOR :	0.00	0.750	0.250	0.000	0.000	0.583	0.000	0.000	0.500	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.750
		0.583				0.583				0.583							

National Data & Surveying Services.

Intersection Turning Movement Count

Location: Tippecanoe Ave & I-10 EB Ramps
City: San Bernardino
Control: Signalized

Project ID: 19-06039-049
Date: 3/19/2019

4axle

NS/EW Streets:	Tippecanoe Ave				Tippecanoe Ave				I-10 EB Ramps				I-10 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	2	1	0	0	4	0	1	0	0	0	0	0	8
7:15 AM	0	0	0	0	2	2	0	0	4	0	1	0	0	0	0	0	9
7:30 AM	0	0	0	0	1	1	0	0	10	0	0	0	0	0	0	0	12
7:45 AM	0	0	0	0	1	1	0	0	11	0	0	0	0	0	0	0	13
8:00 AM	0	1	0	0	1	1	0	0	15	0	0	0	0	0	0	0	18
8:15 AM	0	0	0	0	2	0	0	0	5	0	0	0	0	0	0	0	7
8:30 AM	0	0	0	0	1	2	0	0	9	0	0	0	0	0	0	0	12
8:45 AM	0	3	0	0	0	0	0	0	12	0	0	0	0	0	0	0	15
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	4	0	0	10	8	0	0	70	0	2	0	0	0	0	0	94
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	55.56%	44.44%	0.00%	0.00%	97.22%	0.00%	2.78%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1	0	0	5	5	0	0	40	0	1	0	0	0	0	0	52
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.625	0.625	0.000	0.000	0.667	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.722
	0.250				0.625				0.683								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	2	2	0	0	1.5	0.5	2	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	2	1	0	1	0	0	0	4	0	0	0	0	0	0	0	8
4:15 PM	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	1	2	0	0	2	0	0	0	0	0	0	0	5
5:00 PM	0	0	0	0	0	1	0	0	5	0	0	0	0	0	0	0	6
5:15 PM	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	1	1	0	0	7	0	0	0	0	0	0	0	9
5:45 PM	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2	2	0	5	6	0	0	27	0	0	0	0	0	0	0	42
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	45.45%	54.55%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	1	5	0	0	11	0	0	0	0	0	0	0	17
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.250	0.625	0.000	0.000	0.550	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.708
					0.500				0.550								

Prepared by National Data & Surveying Services

CLASSIFICATION

Waterman Ave Bet. Baseline St & 6th St

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_009

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	138	24	0	4	1	0	0	0	0	0	0	0	167
01:00	0	107	21	0	1	0	0	0	1	0	0	0	0	130
02:00	0	70	8	1	1	0	0	0	0	0	0	0	0	80
03:00	0	112	23	0	1	0	0	0	1	0	0	0	0	137
04:00	0	155	38	1	4	0	0	0	1	0	0	0	0	199
05:00	0	261	83	7	6	1	0	0	0	0	0	0	0	358
06:00	0	367	113	15	22	3	0	1	4	0	0	0	0	525
07:00	0	672	179	18	38	3	0	0	1	0	0	0	0	911
08:00	1	766	193	17	39	2	0	2	3	0	0	0	0	1023
09:00	1	866	252	12	43	4	1	3	2	0	0	0	0	1184
10:00	3	955	209	8	37	2	0	1	0	0	0	0	0	1215
11:00	3	1130	248	12	47	5	0	0	1	0	0	0	0	1446
12:00 PM	4	1238	283	13	47	1	0	1	1	0	0	0	0	1588
13:00	2	1156	258	13	49	2	0	0	1	0	0	0	0	1481
14:00	4	1251	268	13	59	2	0	2	3	0	0	0	0	1602
15:00	6	1330	301	14	54	2	1	2	2	0	0	0	0	1712
16:00	5	1332	292	15	47	4	0	1	1	0	0	0	0	1697
17:00	3	1250	281	12	43	0	0	1	1	0	0	0	0	1591
18:00	3	961	225	12	24	1	0	0	1	0	0	0	0	1227
19:00	0	756	143	9	13	1	1	0	0	0	0	0	0	923
20:00	0	545	111	7	11	0	0	0	1	0	0	0	0	675
21:00	0	408	82	7	8	0	0	0	1	0	0	0	0	506
22:00	0	332	58	3	9	1	0	0	0	0	0	0	0	403
23:00	0	222	37	0	7	0	0	1	0	0	0	0	0	267
Totals	35	16380	3730	209	614	35	3	15	26					21047
% of Totals	0%	78%	18%	1%	3%	0%	0%	0%	0%					100%
		16415			4553	35				44				
		1.0			2.0	2.5				3.0				
		16415			**9106**	**88**				**132**				**25741**

AM Volumes	8	5599	1391	91	243	21	1	7	14	0	0	0	0	7375
% AM	0%	27%	7%	0%	1%	0%	0%	0%	0%					35%
AM Peak Hour	10:00	11:00	09:00	07:00	11:00	11:00	09:00	09:00	06:00					11:00
Volume	3	1130	252	18	47	5	1	3	4					1446
PM Volumes	27	10781	2339	118	371	14	2	8	12	0	0	0	0	13672
% PM	0%	51%	11%	1%	2%	0%	0%	0%	0%					65%
PM Peak Hour	15:00	16:00	15:00	16:00	14:00	16:00	15:00	14:00	14:00					15:00
Volume	6	1332	301	15	59	4	1	2	3					1712

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1934		9%	3069		15%	3288		16%	12756		61%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Waterman Ave Bet. 6th St & 3rd St

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_010

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	132	45	0	5	0	0	1	0	0	0	0	0	183
01:00	0	104	22	0	1	0	0	1	1	0	0	0	0	129
02:00	0	77	14	1	1	0	0	0	0	0	0	0	0	93
03:00	0	120	33	0	6	0	0	0	0	0	0	0	0	159
04:00	0	179	48	1	6	0	0	0	1	0	0	0	0	235
05:00	1	270	79	3	11	2	0	0	0	0	0	0	0	366
06:00	0	408	135	8	30	6	0	2	0	0	0	0	0	589
07:00	0	768	222	9	43	3	0	2	2	0	0	0	0	1049
08:00	1	795	244	10	44	8	1	3	2	0	0	0	0	1108
09:00	0	911	271	7	52	4	0	2	1	0	0	0	0	1248
10:00	3	983	277	4	49	4	0	3	1	0	0	0	0	1324
11:00	1	1101	317	6	49	5	0	3	4	0	0	0	0	1486
12:00 PM	0	1255	322	10	42	5	1	3	7	0	0	0	0	1645
13:00	0	1135	329	4	60	9	2	4	2	0	0	0	0	1545
14:00	1	1218	341	13	66	3	2	4	3	0	0	0	0	1651
15:00	2	1263	361	8	58	7	2	1	0	0	0	0	0	1702
16:00	1	1329	358	9	51	6	1	3	3	0	0	0	0	1761
17:00	3	1212	340	8	40	3	0	2	0	0	0	0	0	1608
18:00	0	895	261	3	26	4	1	1	0	0	0	0	0	1191
19:00	0	674	174	6	20	3	0	1	0	0	0	0	0	878
20:00	0	528	153	3	12	0	0	0	0	0	0	0	0	696
21:00	1	402	95	3	13	0	0	1	0	0	0	0	0	515
22:00	0	335	79	2	12	0	0	0	0	0	0	0	0	428
23:00	0	235	47	0	8	0	0	1	0	0	0	0	0	291
Totals	14	16329	4567	118	705	72	10	38	27					21880
% of Totals	0%	75%	21%	1%	3%	0%	0%	0%	0%					100%
		16343			5390	72				75				
		1.0			2.0	2.5				3.0				
		16343			**10780**	**180**				**225**				**27528**

AM Volumes	6	5848	1707	49	297	32	1	17	12	0	0	0	0	7969
% AM	0%	27%	8%	0%	1%	0%	0%	0%	0%					36%
AM Peak Hour	10:00	11:00	11:00	08:00	09:00	08:00	08:00	08:00	11:00					11:00
Volume	3	1101	317	10	52	8	1	3	4					1486
PM Volumes	8	10481	2860	69	408	40	9	21	15	0	0	0	0	13911
% PM	0%	48%	13%	0%	2%	0%	0%	0%	0%					64%
PM Peak Hour	17:00	16:00	15:00	14:00	14:00	13:00	13:00	13:00	12:00					16:00
Volume	3	1329	361	13	66	9	2	4	7					1761

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	2157		10%	3190		15%	3369		15%	13164		60%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Tippecanoe Ave Bet. Baseline St & 9th St

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_011

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	54	8	0	0	1	0	0	0	0	0	0	0	63
01:00	0	55	8	0	0	0	0	0	0	0	0	0	0	63
02:00	0	25	7	0	1	0	0	0	0	0	0	0	0	33
03:00	0	85	8	1	1	0	0	0	0	0	0	0	0	95
04:00	0	93	22	2	2	0	0	0	0	0	0	0	0	119
05:00	0	172	36	1	2	0	0	0	2	0	0	0	0	213
06:00	0	231	53	0	6	0	0	0	0	0	0	0	0	290
07:00	0	519	117	6	16	2	0	0	0	0	0	0	0	660
08:00	0	413	120	2	13	3	0	0	0	0	0	0	0	551
09:00	1	340	70	3	6	0	0	0	2	0	0	0	0	422
10:00	1	381	88	3	5	0	0	1	1	0	0	0	0	480
11:00	0	407	89	3	9	1	0	0	2	0	0	0	0	511
12:00 PM	0	466	118	2	20	2	0	0	1	0	0	0	0	609
13:00	1	534	122	4	11	2	0	0	3	0	0	0	0	677
14:00	1	595	150	4	19	0	0	0	4	0	0	0	0	773
15:00	2	623	150	1	25	1	0	0	1	0	0	0	0	803
16:00	2	629	162	2	21	2	0	0	0	0	0	0	0	818
17:00	0	696	163	1	9	2	0	0	0	0	0	0	0	871
18:00	1	441	95	0	6	0	0	0	2	0	0	0	0	545
19:00	0	327	81	1	4	0	0	0	0	0	0	0	0	413
20:00	0	275	66	0	1	0	0	0	2	0	0	0	0	344
21:00	0	204	31	0	4	0	0	0	1	0	0	0	0	240
22:00	0	157	32	0	2	0	0	0	0	0	0	0	0	191
23:00	0	98	18	0	1	0	0	0	1	0	0	0	0	118
Totals	**9**	**7820**	**1814**	**36**	**184**	**16**		**1**	**22**					**9902**
% of Totals	0%	79%	18%	0%	2%	0%		0%	0%					100%
		7829			2034	16				23				
		1.0			2.0	2.5				3.0				
		7829			**4068**	**40**				**69**				**12006**

AM Volumes	2	2775	626	21	61	7	0	1	7	0	0	0	0	3500
% AM	0%	28%	6%	0%	1%	0%		0%	0%					35%
AM Peak Hour	09:00	07:00	08:00	07:00	07:00	08:00		10:00	05:00					07:00
Volume	1	519	120	6	16	3		1	2					660
PM Volumes	7	5045	1188	15	123	9	0	0	15	0	0	0	0	6402
% PM	0%	51%	12%	0%	1%	0%			0%					65%
PM Peak Hour	15:00	17:00	17:00	13:00	15:00	12:00			14:00					17:00
Volume	2	696	163	4	25	2			4					871

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	1211		12%	1286		13%	1689		17%	5716		58%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Tippecanoe Ave Bet. 6th St & 3rd St

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_012

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	66	10	0	0	0	0	0	0	0	0	0	0	76
01:00	0	54	9	1	0	0	0	0	0	0	0	0	0	64
02:00	0	36	8	0	0	0	0	0	0	0	0	0	0	44
03:00	0	86	13	2	1	0	0	0	1	0	0	0	0	103
04:00	0	152	28	2	5	1	0	0	1	0	0	0	0	189
05:00	0	249	56	0	4	3	0	0	3	0	0	0	0	315
06:00	1	342	72	1	7	0	0	1	3	0	0	0	0	427
07:00	1	715	130	2	21	6	0	0	2	0	0	0	0	877
08:00	0	491	115	4	19	3	0	0	2	0	0	0	0	634
09:00	0	396	83	2	17	2	0	2	1	0	0	0	0	503
10:00	1	423	92	6	15	3	0	5	2	0	0	0	0	547
11:00	2	462	115	2	13	2	1	3	3	0	0	0	0	603
12:00 PM	1	572	126	0	22	5	0	1	6	0	0	0	0	733
13:00	0	637	126	7	20	5	1	2	1	0	0	0	0	799
14:00	1	750	152	6	30	3	0	1	4	0	0	0	0	947
15:00	1	714	175	7	36	6	0	1	1	0	0	0	0	941
16:00	1	720	160	7	16	3	0	0	2	0	0	0	0	909
17:00	2	794	164	4	18	2	0	2	0	0	0	0	0	986
18:00	0	530	112	1	11	2	0	1	0	0	0	0	0	657
19:00	0	389	71	1	9	1	0	0	1	0	0	0	0	472
20:00	0	297	51	0	7	1	0	0	3	0	0	0	0	359
21:00	0	230	34	0	7	0	0	0	1	0	0	0	0	272
22:00	0	205	37	0	6	1	0	2	0	0	0	0	0	251
23:00	0	104	18	0	2	0	0	0	2	0	0	0	0	126
Totals	11	9414	1957	55	286	49	2	21	39					11834
% of Totals	0%	80%	17%	0%	2%	0%	0%	0%	0%					100%
		9425			2298	49				62				
		1.0			2.0	2.5				3.0				
		9425			**4596**	**123**				**186**				**14330**

AM Volumes	5	3472	731	22	102	20	1	11	18	0	0	0	0	4382
% AM	0%	29%	6%	0%	1%	0%	0%	0%	0%					37%
AM Peak Hour	11:00	07:00	07:00	10:00	07:00	07:00	11:00	10:00	05:00					07:00
Volume	2	715	130	6	21	6	1	5	3					877
PM Volumes	6	5942	1226	33	184	29	1	10	21	0	0	0	0	7452
% PM	0%	50%	10%	0%	2%	0%	0%	0%	0%					63%
PM Peak Hour	17:00	17:00	15:00	13:00	15:00	15:00	13:00	13:00	12:00					17:00
Volume	2	794	175	7	36	6	1	2	6					986

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1511		13%	1532		13%	1895		16%	6896		58%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Tippecanoe Ave Bet. Mill St & Orange Show Rd/San Bernardino Ave

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_013

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	203	36	0	10	2	1	2	8	0	0	0	0	262
01:00	0	194	30	2	7	2	0	3	11	0	0	0	0	249
02:00	0	193	36	0	7	1	0	5	12	0	0	0	0	254
03:00	1	231	42	0	11	1	0	1	11	0	0	0	0	298
04:00	0	364	69	0	15	3	0	3	22	0	0	0	0	476
05:00	0	563	98	2	25	2	0	7	28	0	0	0	0	725
06:00	2	799	147	7	33	3	0	15	36	0	0	0	0	1042
07:00	2	1124	210	5	47	5	0	6	61	0	0	0	0	1460
08:00	2	880	160	3	41	6	0	6	60	0	0	0	0	1158
09:00	2	821	154	4	40	7	0	10	52	0	0	0	0	1090
10:00	0	892	184	14	49	7	2	13	77	0	0	0	0	1238
11:00	2	1042	204	6	47	7	0	20	87	0	0	0	0	1415
12:00 PM	1	1127	221	9	44	6	0	9	83	0	0	0	0	1500
13:00	1	1234	225	8	54	7	1	14	90	0	0	0	0	1634
14:00	5	1315	254	9	63	3	0	16	76	0	0	0	0	1741
15:00	4	1344	268	7	63	6	0	22	94	0	0	0	0	1808
16:00	5	1490	272	5	69	7	2	17	84	0	0	0	0	1951
17:00	8	1515	277	6	75	3	0	19	79	0	0	0	0	1982
18:00	0	962	181	4	44	2	0	12	63	0	0	0	0	1268
19:00	1	715	124	3	26	4	0	7	49	0	0	0	0	929
20:00	0	750	127	5	33	7	0	12	57	0	0	0	0	991
21:00	2	466	72	0	17	2	0	5	38	0	0	0	0	602
22:00	0	402	76	0	17	0	0	3	35	0	0	0	0	533
23:00	0	324	54	0	16	1	0	2	26	0	0	0	0	423
Totals	38	18950	3521	99	853	94	6	229	1239					25029
% of Totals	0%	76%	14%	0%	3%	0%	0%	1%	5%					100%
		18988			4473	94				1474				
		1.0			2.0	2.5				3.0				
		18988			**8946**	**235**				**4422**				**32591**

AM Volumes	11	7306	1370	43	332	46	3	91	465	0	0	0	0	9667
% AM	0%	29%	5%	0%	1%	0%	0%	0%	2%					39%
AM Peak Hour	06:00	07:00	07:00	10:00	10:00	09:00	10:00	11:00	11:00					07:00
Volume	2	1124	210	14	49	7	2	20	87					1460
PM Volumes	27	11644	2151	56	521	48	3	138	774	0	0	0	0	15362
% PM	0%	47%	9%	0%	2%	0%	0%	1%	3%					61%
PM Peak Hour	17:00	17:00	17:00	12:00	17:00	13:00	16:00	15:00	15:00					17:00
Volume	8	1515	277	9	75	7	2	22	94					1982

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	2618		10%	3134		13%	3933		16%	15344		61%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Tippecanoe Ave Bet. Orange Show Rd/San Bernardino Ave & Harriman Pl/I-10 WB Ramps

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_014

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	176	35	0	8	1	0	2	13	0	0	0	0	235
01:00	0	139	30	2	10	1	0	0	8	0	0	0	0	190
02:00	0	133	20	0	7	0	0	5	13	0	0	0	0	178
03:00	0	134	24	0	7	0	0	2	8	0	0	0	0	175
04:00	0	227	41	0	8	0	0	2	9	0	0	0	0	287
05:00	0	351	75	2	14	2	0	4	20	0	0	0	0	468
06:00	3	618	111	2	23	1	0	11	25	0	0	0	0	794
07:00	2	836	158	4	15	7	0	8	35	0	0	0	0	1065
08:00	3	822	182	8	20	9	0	9	39	0	0	0	0	1092
09:00	5	735	133	9	29	6	0	15	56	0	0	0	0	988
10:00	0	812	171	8	21	11	0	10	46	0	0	0	0	1079
11:00	2	883	166	10	20	9	0	6	49	0	0	0	0	1145
12:00 PM	4	974	177	8	45	6	1	16	60	0	0	0	0	1291
13:00	4	931	195	11	37	11	0	20	46	0	0	0	0	1255
14:00	4	1092	253	7	33	9	1	17	47	0	0	0	0	1463
15:00	2	1153	228	11	39	9	1	18	53	0	0	0	0	1514
16:00	4	1174	231	6	47	5	0	7	37	0	0	0	0	1511
17:00	2	1241	201	8	59	2	0	9	36	0	0	0	0	1558
18:00	3	796	134	2	31	6	0	8	31	0	0	0	0	1011
19:00	5	553	110	2	17	3	0	12	34	0	0	0	0	736
20:00	2	479	82	4	17	4	0	4	31	0	0	0	0	623
21:00	0	403	65	1	19	1	0	1	16	0	0	0	0	506
22:00	0	345	55	1	9	2	0	1	21	0	0	0	0	434
23:00	0	214	40	1	7	1	0	1	12	0	0	0	0	276
Totals	45	15221	2917	107	542	106	3	188	745					19874
% of Totals	0%	77%	15%	1%	3%	1%	0%	1%	4%					100%
		15266			3566	106				936				
		1.0			2.0	2.5				3.0				
		15266			7132	265				2808				25471

AM Volumes	15	5866	1146	45	182	47	0	74	321	0	0	0	0	7696
% AM	0%	30%	6%	0%	1%	0%		0%	2%					39%
AM Peak Hour	09:00	11:00	08:00	11:00	09:00	10:00		09:00	09:00					11:00
Volume	5	883	182	10	29	11		15	56					1145
PM Volumes	30	9355	1771	62	360	59	3	114	424	0	0	0	0	12178
% PM	0%	47%	9%	0%	2%	0%	0%	1%	2%					61%
PM Peak Hour	19:00	17:00	14:00	13:00	17:00	13:00	12:00	13:00	12:00					17:00
Volume	5	1241	253	11	59	11	1	20	60					1558

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	2157		11%	2546		13%	3069		15%	12102		61%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Del Rosa Ave Bet. SR-210 EB Ramps & Highland Ave

Day: Thursday
Date: 3/21/2019

City: San Bernardino
Project #: CA19_6038_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	155	19	0	4	0	0	0	2	0	0	0	0	180
01:00	2	113	24	1	4	1	0	0	2	0	0	0	0	147
02:00	0	131	27	0	7	0	0	0	5	0	0	0	0	170
03:00	0	161	36	0	8	0	0	0	1	0	0	0	0	206
04:00	1	258	84	1	29	2	1	0	2	0	1	0	0	379
05:00	3	365	108	1	38	2	0	0	6	0	2	0	0	525
06:00	0	678	181	0	49	6	0	2	17	0	2	0	0	935
07:00	0	778	173	0	45	9	0	2	21	0	1	0	0	1029
08:00	1	722	180	2	46	8	1	2	12	0	0	0	0	974
09:00	0	670	159	2	46	4	1	3	11	0	0	0	0	896
10:00	4	639	159	1	46	8	1	0	19	0	1	0	0	878
11:00	1	787	193	0	52	10	2	3	19	1	2	0	0	1070
12:00 PM	3	881	228	3	61	2	1	0	19	0	1	0	0	1199
13:00	0	816	185	6	50	5	0	0	10	1	3	0	0	1076
14:00	0	903	225	1	52	4	1	1	11	0	2	0	0	1200
15:00	1	1052	249	1	63	4	0	3	12	0	2	0	0	1387
16:00	2	1179	276	0	67	5	0	0	6	0	0	0	0	1535
17:00	1	1222	271	0	51	5	0	0	9	0	0	0	0	1559
18:00	2	797	158	0	30	1	0	0	4	0	0	0	0	992
19:00	2	646	121	1	25	1	0	0	5	0	0	0	0	801
20:00	0	456	91	1	19	1	0	1	4	0	0	0	0	573
21:00	2	394	73	0	15	3	0	0	6	0	0	0	0	493
22:00	0	351	77	0	18	0	0	0	3	0	0	0	0	449
23:00	1	218	49	0	14	2	0	0	4	0	0	0	0	288
Totals	26	14372	3346	21	839	83	8	17	210	2	17			18941
% of Totals	0%	76%	18%	0%	4%	0%	0%	0%	1%	0%	0%			100%
		14398			4206	83				254				
		1.0			2.0	2.5				3.0				
		14398			**8412**	**208**				**762**				**23780**

AM Volumes	12	5457	1343	8	374	50	6	12	117	1	9	0	0	7389
% AM	0%	29%	7%	0%	2%	0%	0%	0%	1%	0%	0%			39%
AM Peak Hour	10:00	11:00	11:00	08:00	11:00	11:00	11:00	09:00	07:00	11:00	05:00			11:00
Volume	4	787	193	2	52	10	2	3	21	1	2			1070
PM Volumes	14	8915	2003	13	465	33	2	5	93	1	8	0	0	11552
% PM	0%	47%	11%	0%	2%	0%	0%	0%	0%	0%	0%			61%
PM Peak Hour	12:00	17:00	16:00	13:00	16:00	13:00	12:00	15:00	12:00	13:00	13:00			17:00
Volume	3	1222	276	6	67	5	1	3	19	1	3			1559

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	2003	⟷	11%	2275	⟷	12%	3094	⟷	16%	11569	⟷	61%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Del Rosa Ave Bet. Highland Ave & Pacific St

Day: Thursday
Date: 3/14/2019

City: San Bernardino
Project #: CA19_6038_002

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	1	157	15	1	3	1	0	0	0	0	0	0	0	178
01:00	0	121	12	0	1	0	0	0	1	0	0	0	0	135
02:00	0	89	7	0	0	0	0	1	3	0	0	0	0	100
03:00	0	105	12	1	0	1	0	0	3	0	0	0	0	122
04:00	1	143	22	0	2	0	0	0	2	0	0	0	0	170
05:00	0	223	49	5	7	1	1	0	1	0	0	0	0	287
06:00	0	365	79	5	17	6	0	1	3	0	0	0	0	476
07:00	0	854	105	8	22	1	0	2	1	0	0	0	0	993
08:00	2	669	92	11	22	3	0	3	0	0	0	0	0	802
09:00	0	530	111	5	17	4	0	0	4	0	0	0	0	671
10:00	0	594	87	8	13	9	0	2	6	0	0	0	0	719
11:00	0	653	114	9	18	7	0	2	7	0	0	0	0	810
12:00 PM	2	776	117	8	20	7	0	3	5	0	0	0	0	938
13:00	0	736	126	8	16	4	0	0	2	0	0	0	0	892
14:00	3	895	147	10	20	6	0	1	1	0	0	0	0	1083
15:00	2	900	143	8	13	7	0	0	1	0	0	0	0	1074
16:00	1	902	136	11	16	1	0	0	1	0	0	0	0	1068
17:00	0	952	125	6	5	2	0	0	5	0	0	0	0	1095
18:00	0	777	108	5	8	1	0	0	3	0	0	0	0	902
19:00	1	684	84	4	8	0	0	0	0	0	0	0	0	781
20:00	0	594	87	3	5	0	0	0	0	0	0	0	0	689
21:00	0	414	62	3	3	1	0	0	2	0	0	0	0	485
22:00	0	364	53	2	2	0	0	0	1	0	0	0	0	422
23:00	0	218	26	0	1	0	0	0	0	0	0	0	0	245
Totals	13	12715	1919	121	239	62	1	15	52					15137
% of Totals	0%	84%	13%	1%	2%	0%	0%	0%	0%					100%
		12728			2279	62				68				
		1.0			2.0	2.5				3.0				
		12728			**4558**	**155**				**204**				**17645**

AM Volumes	4	4503	705	53	122	33	1	11	31	0	0	0	0	5463
% AM	0%	30%	5%	0%	1%	0%	0%	0%	0%					36%
AM Peak Hour	08:00	07:00	11:00	08:00	07:00	10:00	05:00	08:00	11:00					07:00
Volume	2	854	114	11	22	9	1	3	7					993
PM Volumes	9	8212	1214	68	117	29	0	4	21	0	0	0	0	9674
% PM	0%	54%	8%	0%	1%	0%		0%	0%					64%
PM Peak Hour	14:00	17:00	14:00	16:00	12:00	12:00		12:00	12:00					17:00
Volume	3	952	147	11	20	7		3	5					1095

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1795		12%	1830		12%	2163		14%	9349		62%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Del Rosa Dr Bet. Pacific St & Baseline St

Day: Thursday
Date: 3/14/2019

City: San Bernardino
Project #: CA19_6038_003

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	92	9	0	1	0	0	0	0	0	0	0	0	102
01:00	0	68	2	0	0	0	0	0	0	0	0	0	0	70
02:00	1	55	4	1	0	0	0	0	0	0	0	0	0	61
03:00	0	71	8	2	1	0	0	0	2	0	0	0	0	84
04:00	0	89	11	0	2	0	0	0	1	0	0	0	0	103
05:00	0	156	26	1	5	0	0	1	0	0	0	0	0	189
06:00	0	277	43	0	13	3	0	1	2	0	0	0	0	339
07:00	0	577	83	1	14	3	0	1	1	0	0	0	0	680
08:00	1	452	72	5	12	1	0	1	2	0	0	0	0	546
09:00	0	375	69	1	12	3	0	0	0	0	0	0	0	460
10:00	0	426	58	0	10	3	0	0	5	0	0	0	0	502
11:00	0	475	85	2	14	2	1	2	4	0	0	0	0	585
12:00 PM	1	556	84	1	13	3	0	1	6	0	0	0	0	665
13:00	1	516	83	3	12	2	0	0	1	0	0	0	0	618
14:00	2	655	110	2	17	5	0	0	3	0	0	0	0	794
15:00	2	647	98	2	17	4	1	0	2	0	0	0	0	773
16:00	2	670	98	4	18	3	0	0	2	0	0	0	0	797
17:00	3	723	98	1	12	2	1	1	5	0	0	0	0	846
18:00	3	611	74	1	8	0	0	1	2	0	0	0	0	700
19:00	2	446	60	0	6	0	0	0	0	0	0	0	0	514
20:00	1	381	61	0	3	0	0	0	0	0	0	0	0	446
21:00	0	273	36	0	2	0	0	0	0	0	0	0	0	311
22:00	0	206	40	0	6	0	0	0	1	0	0	0	0	253
23:00	0	150	17	0	3	0	0	0	0	0	0	0	0	170
Totals	**19**	**8947**	**1329**	**27**	**201**	**34**	**3**	**9**	**39**					**10608**
% of Totals	0%	84%	13%	0%	2%	0%	0%	0%	0%					100%
		8966			1557	34				51				
		1.0			2.0	2.5				3.0				
		8966			**3114**	**85**				**153**				**12318**

AM Volumes	2	3113	470	13	84	15	1	6	17	0	0	0	0	3721
% AM	0%	29%	4%	0%	1%	0%	0%	0%	0%					35%
AM Peak Hour	02:00	07:00	11:00	08:00	07:00	06:00	11:00	11:00	10:00					07:00
Volume	1	577	85	5	14	3	1	2	5					680
PM Volumes	17	5834	859	14	117	19	2	3	22	0	0	0	0	6887
% PM	0%	55%	8%	0%	1%	0%	0%	0%	0%					65%
PM Peak Hour	17:00	17:00	14:00	16:00	16:00	14:00	15:00	12:00	12:00					17:00
Volume	3	723	110	4	18	5	1	1	6					846

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	1226		12%	1283		12%	1643		15%	6456		61%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Del Rosa Dr Bet. Baseline St & 9th St

Day: Thursday
Date: 3/14/2019

City: San Bernardino
Project #: CA19_6038_004

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	59	10	1	1	0	0	0	0	0	0	0	0	71
01:00	0	51	5	0	0	0	0	0	0	0	0	0	0	56
02:00	0	33	5	1	0	0	0	1	0	0	0	0	0	40
03:00	0	42	7	1	0	0	0	0	1	0	0	0	0	51
04:00	0	69	12	0	1	0	0	0	0	0	0	0	0	82
05:00	0	111	17	1	2	0	0	0	1	0	0	0	0	132
06:00	0	256	40	1	10	2	0	0	1	0	0	0	0	310
07:00	0	820	117	12	18	6	0	0	2	0	0	0	0	975
08:00	0	405	57	5	16	3	0	1	0	0	0	0	0	487
09:00	0	265	36	1	2	1	0	0	3	0	0	0	0	308
10:00	0	296	39	1	6	5	0	1	2	0	0	0	0	350
11:00	0	321	56	2	11	5	0	1	3	0	0	0	0	399
12:00 PM	2	376	59	3	8	2	0	1	1	0	0	0	0	452
13:00	0	408	70	7	12	3	0	0	2	0	0	0	0	502
14:00	1	611	87	5	13	9	0	2	1	0	0	0	0	729
15:00	1	527	77	3	9	7	0	0	1	0	0	0	0	625
16:00	0	555	73	3	8	5	0	0	1	0	0	0	0	645
17:00	0	577	71	1	5	2	0	0	2	0	0	0	0	658
18:00	0	483	53	2	6	0	0	0	0	0	0	0	0	544
19:00	1	325	40	0	5	0	0	0	0	0	0	0	0	371
20:00	1	257	32	0	3	0	0	0	2	0	0	0	0	295
21:00	0	204	32	0	1	0	0	0	2	0	0	0	0	239
22:00	0	145	17	0	0	0	0	0	1	0	0	0	0	163
23:00	0	104	14	0	2	0	0	0	1	0	0	0	0	121
Totals	**6**	**7300**	**1026**	**50**	**139**	**50**		**7**	**27**					**8605**
% of Totals	0%	85%	12%	1%	2%	1%		0%	0%					100%
		7306			1215	50				34				
		1.0			2.0	2.5				3.0				
		7306			**2430**	**125**				**102**				**9963**

AM Volumes	0	2728	401	26	67	22	0	4	13	0	0	0	0	3261
% AM		32%	5%	0%	1%	0%		0%	0%					38%
AM Peak Hour		07:00	07:00	07:00	07:00	07:00		02:00	09:00					07:00
Volume		820	117	12	18	6		1	3					975
PM Volumes	6	4572	625	24	72	28	0	3	14	0	0	0	0	5344
% PM	0%	53%	7%	0%	1%	0%		0%	0%					62%
PM Peak Hour	12:00	14:00	14:00	13:00	14:00	14:00		14:00	13:00					14:00
Volume	2	611	87	7	13	9		2	2					729

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1462		17%	954		11%	1303		15%	4886		57%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Del Rosa Dr Bet. 9th St & 6th St

Day: Thursday
Date: 3/14/2019

City: San Bernardino
Project #: CA19_6038_005

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	55	5	0	0	0	0	0	0	0	0	0	0	60
01:00	0	41	4	0	0	0	0	0	0	0	0	0	0	45
02:00	0	28	4	1	1	0	0	0	0	0	0	0	0	34
03:00	0	44	6	0	0	0	0	0	0	0	0	0	0	50
04:00	0	75	11	0	0	0	0	0	0	0	0	0	0	86
05:00	0	101	11	2	1	1	0	0	0	0	0	0	0	116
06:00	0	296	47	3	6	3	0	0	0	0	0	0	0	355
07:00	1	969	124	6	15	5	0	0	0	0	0	0	0	1120
08:00	0	453	54	11	14	2	0	0	0	0	0	0	0	534
09:00	0	264	36	4	0	1	1	0	1	0	0	0	0	307
10:00	0	253	34	4	7	3	0	0	2	0	0	0	0	303
11:00	0	304	42	4	6	4	0	0	0	0	0	0	0	360
12:00 PM	2	348	44	2	4	4	0	0	1	0	0	0	0	405
13:00	1	387	63	4	10	1	0	0	1	0	0	0	0	467
14:00	3	679	91	5	13	9	0	0	1	0	0	0	0	801
15:00	1	594	79	9	14	2	1	0	0	0	0	0	0	700
16:00	2	551	70	6	12	2	0	0	1	0	0	0	0	644
17:00	2	595	70	5	9	1	0	0	0	0	0	0	0	682
18:00	0	463	49	5	4	0	0	0	0	0	0	0	0	521
19:00	0	284	43	7	3	0	0	0	0	0	0	0	0	337
20:00	0	232	31	3	0	0	0	0	0	0	0	0	0	266
21:00	1	178	17	1	0	0	0	0	1	0	0	0	0	198
22:00	0	123	16	2	0	0	0	0	1	0	0	0	0	142
23:00	0	81	10	0	2	0	0	0	0	0	0	0	0	93
Totals	13	7398	961	84	121	38	2		9					8626
% of Totals	0%	86%	11%	1%	1%	0%	0%		0%					100%
		7411			1166	38				11				
		1.0			2.0	2.5				3.0				
		7411			2332	95				33				9871

AM Volumes	1	2883	378	35	50	19	1	0	3	0	0	0	0	3370
% AM	0%	33%	4%	0%	1%	0%	0%		0%					39%
AM Peak Hour	07:00	07:00	07:00	08:00	07:00	07:00	09:00		10:00					07:00
Volume	1	969	124	11	15	5	1		2					1120
PM Volumes	12	4515	583	49	71	19	1	0	6	0	0	0	0	5256
% PM	0%	52%	7%	1%	1%	0%	0%		0%					61%
PM Peak Hour	14:00	14:00	14:00	15:00	15:00	14:00	15:00		12:00					14:00
Volume	3	679	91	9	14	9	1		1					801

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	1654		19%	872		10%	1326		15%	4774		55%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Counts Unlimited, Inc.

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

City of San Bernardino
Del Rosa Drive
B/ 3rd Street - Harry Shepard Boulevard
24 Hour Directional Volume Count

SBC057
Site Code: 999-18385

Start Time	22-May-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		3	42			5	49				
12:15		10	52			3	58				
12:30		12	85			2	**78**				
12:45		3	76	28	255	4	**65**	14	250	42	505
01:00		6	57			2	**57**				
01:15		14	79			3	**62**				
01:30		5	65			2	49				
01:45		8	58	33	259	1	54	8	222	41	481
02:00		2	59			3	46				
02:15		8	83			4	57				
02:30		6	84			1	51				
02:45		6	83	22	309	4	42	12	196	34	505
03:00		4	82			3	42				
03:15		2	103			16	50				
03:30		13	102			16	52				
03:45		15	98	34	385	6	57	41	201	75	586
04:00		6	88			22	34				
04:15		19	111			15	61				
04:30		14	**115**			17	56				
04:45		20	**158**	59	472	13	41	67	192	126	664
05:00		7	**117**			27	42				
05:15		20	**149**			32	44				
05:30		9	94			55	49				
05:45		18	95	54	455	39	44	153	179	207	634
06:00		16	62			51	29				
06:15		24	51			85	18				
06:30		34	36			124	30				
06:45		54	52	128	201	**101**	25	361	102	489	303
07:00		45	62			**148**	28				
07:15		43	41			**99**	30				
07:30		44	45			**126**	38				
07:45		44	55	176	203	60	22	433	118	609	321
08:00		38	36			61	24				
08:15		27	48			49	19				
08:30		25	25			46	20				
08:45		34	52	124	161	36	17	192	80	316	241
09:00		27	30			28	16				
09:15		17	22			31	15				
09:30		25	11			44	14				
09:45		33	28	102	91	26	7	129	52	231	143
10:00		32	27			37	11				
10:15		31	23			39	12				
10:30		25	13			26	3				
10:45		36	11	124	74	28	3	130	29	254	103
11:00		**36**	9			28	9				
11:15		**49**	7			48	3				
11:30		**43**	13			42	3				
11:45		**67**	12	195	41	42	1	160	16	355	57
Total		1079	2906	1079	2906	1700	1637	1700	1637	2779	4543
Combined Total		3985		3985		3337		3337		7322	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	195	-	-	-	474	-	-	-	-	-
P.H.F.		0.728				0.801					
PM Peak	-	-	04:30	-	-	-	00:30	-	-	-	-
Vol.	-	-	539	-	-	-	262	-	-	-	-
P.H.F.			0.853				0.840				
Percentage		27.1%	72.9%			50.9%	49.1%				
ADT/AADT		ADT 7,322		AADT 7,322							

Prepared by National Data & Surveying Services

CLASSIFICATION

Del Rosa Dr Bet. 6th St & 3rd St

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_006

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	52	9	0	0	2	0	0	0	0	0	0	0	63
01:00	0	37	7	0	0	0	0	0	0	0	0	0	0	44
02:00	0	37	5	0	0	1	0	0	0	0	0	0	0	43
03:00	0	48	8	1	0	0	0	0	0	0	0	0	0	57
04:00	0	77	9	1	0	1	0	0	0	0	0	0	0	88
05:00	0	113	17	3	1	0	0	0	1	0	0	0	0	135
06:00	0	232	37	2	2	1	0	0	1	0	0	0	0	275
07:00	0	736	108	4	12	4	0	0	1	0	0	0	0	865
08:00	0	374	48	5	10	1	0	0	0	0	0	0	0	438
09:00	0	269	38	5	6	3	0	0	2	0	0	0	0	323
10:00	1	258	49	2	6	0	0	0	1	0	0	0	0	317
11:00	0	334	53	2	10	1	0	0	0	0	0	0	0	400
12:00 PM	0	374	62	3	14	1	0	1	1	0	0	0	0	456
13:00	1	378	74	2	17	1	0	0	1	0	0	0	0	474
14:00	0	575	81	5	13	4	0	1	2	0	0	0	0	681
15:00	2	537	95	3	16	1	0	0	0	0	0	0	0	654
16:00	1	505	81	3	19	3	0	0	0	0	0	0	0	612
17:00	0	560	84	1	16	1	0	0	0	0	0	0	0	662
18:00	0	398	64	3	9	4	0	2	0	0	0	0	0	480
19:00	1	281	45	1	4	1	0	0	2	0	0	0	0	335
20:00	0	251	44	1	3	0	0	0	0	0	0	0	0	299
21:00	0	184	34	0	3	0	0	1	0	0	0	0	0	222
22:00	0	144	19	1	0	0	0	0	0	0	0	0	0	164
23:00	0	93	15	0	2	1	0	0	0	0	0	0	0	111
Totals	**6**	**6847**	**1086**	**48**	**163**	**31**		**5**	**12**					**8198**
% of Totals	0%	84%	13%	1%	2%	0%		0%	0%					100%
		6853			1297	31				17				
		1.0			2.0	2.5				3.0				
		6853			**2594**	**78**				**51**				**9576**

AM Volumes	1	2567	388	25	47	14	0	0	6	0	0	0	0	3048
% AM	0%	31%	5%	0%	1%	0%			0%					37%
AM Peak Hour	10:00	07:00	07:00	08:00	07:00	07:00			09:00					07:00
Volume	1	736	108	5	12	4			2					865
PM Volumes	5	4280	698	23	116	17	0	5	6	0	0	0	0	5150
% PM	0%	52%	9%	0%	1%	0%		0%	0%					63%
PM Peak Hour	15:00	14:00	15:00	14:00	16:00	14:00		18:00	14:00					14:00
Volume	2	575	95	5	19	4		2	2					681

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1303		16%	930		11%	1274		16%	4691		57%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Sterling Ave Bet. Baseline St & 9th St

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_007

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	82	6	0	0	0	0	0	0	0	0	0	0	88
01:00	0	58	9	0	1	0	0	0	0	0	0	0	0	68
02:00	0	50	8	0	0	0	0	0	0	0	0	0	0	58
03:00	0	65	6	0	2	0	0	0	0	0	0	0	0	73
04:00	0	107	13	0	0	0	0	0	0	0	0	0	0	120
05:00	0	154	23	0	2	0	0	0	0	0	0	0	0	179
06:00	0	246	35	0	5	0	0	1	0	0	0	0	0	287
07:00	1	671	100	2	21	2	0	0	1	0	0	0	0	798
08:00	1	666	95	0	18	1	0	1	0	0	0	0	0	782
09:00	1	433	65	0	8	3	0	0	1	0	0	0	0	511
10:00	0	382	57	0	12	1	0	0	0	0	0	0	0	452
11:00	0	528	80	1	12	2	0	0	0	0	0	0	0	623
12:00 PM	2	593	84	0	9	0	1	0	0	0	0	0	0	689
13:00	0	562	72	0	15	0	0	0	1	0	0	0	0	650
14:00	0	715	102	0	18	2	0	0	0	0	0	0	0	837
15:00	1	861	117	0	18	2	0	0	0	0	0	0	0	999
16:00	1	803	116	0	22	2	0	0	0	0	0	0	0	944
17:00	0	820	114	0	21	0	0	0	0	0	0	0	0	955
18:00	2	651	92	0	10	1	0	0	0	0	0	0	0	756
19:00	0	470	57	0	10	0	0	0	0	0	0	0	0	537
20:00	0	418	62	0	13	1	0	0	0	0	0	0	0	494
21:00	0	307	47	0	9	0	0	0	0	0	0	0	0	363
22:00	0	199	28	0	11	0	0	0	0	0	0	0	0	238
23:00	0	137	27	0	5	0	0	0	0	0	0	0	0	169
Totals	9	9978	1415	3	242	17	1	2	3					11670
% of Totals	0%	86%	12%	0%	2%	0%	0%	0%	0%					100%
		9987			1660	17				6				
		1.0			2.0	2.5				3.0				
		9987			3320	43				18				13368

AM Volumes	3	3442	497	3	81	9	0	2	2	0	0	0	0	4039
% AM	0%	29%	4%	0%	1%	0%		0%	0%					35%
AM Peak Hour	07:00	07:00	07:00	07:00	07:00	09:00		06:00	07:00					07:00
Volume	1	671	100	2	21	3		1	1					798
PM Volumes	6	6536	918	0	161	8	1	0	1	0	0	0	0	7631
% PM	0%	56%	8%		1%	0%	0%		0%					65%
PM Peak Hour	12:00	15:00	15:00		16:00	14:00	12:00		13:00					15:00
Volume	2	861	117		22	2	1		1					999

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1580		14%	1339		11%	1899		16%	6852		59%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Sterling Ave Bet. 9th St & 6th St

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_008

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	58	10	0	1	0	0	0	0	0	0	0	0	69
01:00	1	47	11	1	1	0	0	0	0	0	0	0	0	61
02:00	0	43	9	0	0	0	0	0	0	0	0	0	0	52
03:00	0	49	17	0	1	0	0	0	0	0	0	0	0	67
04:00	0	87	20	0	3	0	0	0	0	0	0	0	0	110
05:00	0	127	37	0	1	0	0	0	0	0	0	0	0	165
06:00	0	240	58	0	3	0	0	0	0	0	0	0	0	301
07:00	0	483	107	0	12	0	0	0	0	0	0	0	0	602
08:00	1	392	81	0	12	3	0	0	0	0	0	0	0	489
09:00	0	280	69	0	14	0	0	0	0	0	0	0	0	363
10:00	0	295	68	1	7	2	0	0	1	0	0	0	0	374
11:00	1	364	82	0	9	1	1	0	1	0	0	0	0	459
12:00 PM	2	377	95	0	9	3	0	0	0	0	0	0	0	486
13:00	0	416	96	0	12	2	0	0	0	0	0	0	0	526
14:00	3	519	116	0	18	0	0	0	0	0	0	0	0	656
15:00	2	524	141	0	25	1	0	0	0	0	0	0	0	693
16:00	3	567	125	1	19	0	0	0	0	0	0	0	0	715
17:00	1	602	128	0	14	1	0	0	0	0	0	0	0	746
18:00	2	432	94	0	8	0	0	1	0	0	0	0	0	537
19:00	0	325	59	1	3	0	0	0	0	0	0	0	0	388
20:00	0	290	61	0	7	0	0	0	0	0	0	0	0	358
21:00	0	212	43	0	6	0	0	0	0	0	0	0	0	261
22:00	0	151	32	0	4	0	0	0	0	0	0	0	0	187
23:00	0	106	25	0	4	0	0	0	0	0	0	0	0	135
Totals	16	6986	1584	4	193	13	1	1	2					8800
% of Totals	0%	79%	18%	0%	2%	0%	0%	0%	0%					100%
		7002			1781	13				4				
		1.0			2.0	2.5				3.0				
		7002			3562	33				12				10609

AM Volumes	3	2465	569	2	64	6	1	0	2	0	0	0	0	3112
% AM	0%	28%	6%	0%	1%	0%	0%		0%					35%
AM Peak Hour	01:00	07:00	07:00	01:00	09:00	08:00	11:00		10:00					07:00
Volume	1	483	107	1	14	3	1		1					602
PM Volumes	13	4521	1015	2	129	7	0	1	0	0	0	0	0	5688
% PM	0%	51%	12%	0%	1%	0%		0%						65%
PM Peak Hour	14:00	17:00	15:00	16:00	15:00	12:00		18:00						17:00
Volume	3	602	141	1	25	3		1						746

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1091		12%	1012		12%	1461		17%	5236		60%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Counts Unlimited, Inc.

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City of San Bernardino
Sterling Avenue
B/ 5th Street - 3rd Street
24 Hour Directional Volume Count

SBC059
Site Code: 999-18385

Start Time	24-May-18 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		14	39			4	58				
12:15		4	47			4	60				
12:30		10	35			2	43				
12:45		6	42	34	163	5	54	15	215	49	378
01:00		5	46			3	36				
01:15		8	38			5	31				
01:30		13	47			2	46				
01:45		5	35	31	166	4	51	14	164	45	330
02:00		6	40			4	37				
02:15		8	49			2	42				
02:30		2	52			2	70				
02:45		3	71	19	212	5	43	13	192	32	404
03:00		5	87			9	**51**				
03:15		6	67			16	**63**				
03:30		3	44			21	**68**				
03:45		7	89	21	287	5	**51**	51	233	72	520
04:00		5	69			14	46				
04:15		7	75			23	47				
04:30		11	71			22	61				
04:45		4	66	27	281	17	54	76	208	103	489
05:00		9	**94**			26	50				
05:15		9	**102**			44	49				
05:30		6	**98**			49	63				
05:45		8	**82**	32	376	23	37	142	199	174	575
06:00		11	76			38	45				
06:15		8	59			46	46				
06:30		11	56			80	35				
06:45		20	51	50	242	**79**	28	243	154	293	396
07:00		44	49			**95**	36				
07:15		31	33			**107**	20				
07:30		24	32			**99**	27				
07:45		31	32	130	146	51	22	352	105	482	251
08:00		42	31			59	15				
08:15		29	40			45	27				
08:30		23	30			48	26				
08:45		29	37	123	138	41	17	193	85	316	223
09:00		32	31			45	31				
09:15		25	40			43	20				
09:30		21	34			42	16				
09:45		31	17	109	122	39	9	169	76	278	198
10:00		34	28			41	4				
10:15		36	22			24	17				
10:30		30	20			36	15				
10:45		22	19	122	89	36	9	137	45	259	134
11:00		**36**	22			27	10				
11:15		**34**	7			42	8				
11:30		**29**	14			38	7				
11:45		**39**	18	138	61	42	3	149	28	287	89
Total		836	2283	836	2283	1554	1704	1554	1704	2390	3987
Combined Total		3119		3119		3258		3258		6377	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	138	-	-	-	380	-	-	-	-	-
P.H.F.		0.885				0.888					
PM Peak	-	-	05:00	-	-	-	03:00	-	-	-	-
Vol.	-	-	376	-	-	-	233	-	-	-	-
P.H.F.			0.922				0.857				
Percentage		26.8%	73.2%			47.7%	52.3%				
ADT/AADT		ADT 6,377		AADT 6,377							

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City of Highland
Victoria Avenue
B/ Highland Avenue - Pacific Street
24 Hour Directional Classification Count

HLD003
Site Code: 057-16653

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	1	44	11	0	0	0	0	0	0	0	0	0	0	56
01:00	0	30	6	0	1	1	0	0	0	0	0	0	0	38
02:00	0	30	11	0	0	1	0	0	0	0	0	0	0	42
03:00	0	51	10	0	4	0	0	0	0	0	0	0	0	65
04:00	0	74	16	0	1	0	0	0	0	0	0	0	0	91
05:00	0	89	26	1	6	0	0	0	0	0	0	0	0	122
06:00	1	139	38	0	8	0	0	0	0	0	0	0	0	186
07:00	**2**	**372**	**92**	**13**	**19**	**2**	0	**3**	**2**	0	0	0	0	**505**
08:00	1	237	74	1	12	1	0	1	1	0	0	0	0	328
09:00	1	231	47	2	13	2	0	1	0	0	0	0	0	297
10:00	2	188	62	1	9	1	0	0	0	0	0	0	0	263
11:00	0	253	63	1	10	1	0	2	0	0	0	0	0	330
12 PM	2	273	74	1	11	0	0	**3**	**2**	0	0	0	0	366
13:00	1	267	56	**9**	7	0	0	0	0	0	0	0	0	340
14:00	1	**357**	**89**	1	15	**1**	0	1	0	**1**	0	0	0	**466**
15:00	1	309	86	2	17	0	0	0	0	0	0	0	0	415
16:00	2	352	86	2	**18**	1	0	2	2	0	0	0	0	465
17:00	**3**	355	80	1	9	0	0	2	1	0	0	0	0	451
18:00	1	288	70	2	10	0	0	1	0	0	0	0	0	372
19:00	2	204	44	0	6	0	0	0	0	0	0	0	0	256
20:00	0	171	40	0	4	1	0	1	0	0	0	0	0	217
21:00	0	162	23	0	4	0	0	0	1	0	0	0	0	190
22:00	0	106	23	0	4	0	0	0	0	0	0	0	0	133
23:00	0	76	14	0	2	0	0	0	0	0	0	0	0	92
Total	21	4658	1141	37	190	12	0	17	9	1	0	0	0	6086
Percent	0.3%	76.5%	18.7%	0.6%	3.1%	0.2%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	07:00		07:00	07:00					07:00
Vol.	2	372	92	13	19	2		3	2					505
PM Peak	17:00	14:00	14:00	13:00	16:00	14:00		12:00	12:00	14:00				14:00
Vol.	3	357	89	9	18	1		3	2	1				466
Grand Total	21	4658	1141	37	190	12	0	17	9	1	0	0	0	6086
Percent	0.3%	76.5%	18.7%	0.6%	3.1%	0.2%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Victoria Avenue
B/ Highland Avenue - Pacific Street
24 Hour Directional Classification Count

HLD003
Site Code: 057-16653

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	78	7	0	1	0	0	0	0	0	0	0	0	86
01:00	1	48	8	0	0	0	0	0	0	0	0	0	0	57
02:00	0	45	7	0	1	0	0	0	0	0	0	0	0	53
03:00	0	36	8	0	1	0	0	0	0	0	0	0	0	45
04:00	0	45	3	0	0	0	0	0	0	0	0	0	0	48
05:00	0	60	13	0	4	0	0	0	0	0	0	0	0	77
06:00	0	107	20	1	6	0	0	0	0	0	0	0	0	134
07:00	**2**	**316**	**67**	**5**	**18**	0	0	**3**	0	0	**1**	0	0	**412**
08:00	1	221	43	2	7	**1**	0	1	0	0	0	0	0	276
09:00	0	186	41	4	9	0	0	0	0	0	0	0	0	240
10:00	0	180	36	2	8	0	0	1	0	0	0	0	0	227
11:00	0	205	42	0	7	1	0	1	0	0	0	0	0	256
12 PM	0	227	48	**2**	9	**1**	0	0	**2**	0	0	0	0	289
13:00	0	247	43	0	5	0	0	0	0	0	0	0	0	295
14:00	0	360	60	2	16	1	0	**3**	0	0	0	0	0	442
15:00	0	**368**	68	1	7	0	0	2	1	0	0	0	0	**447**
16:00	1	337	62	2	**17**	0	0	2	0	0	0	0	0	421
17:00	2	328	**73**	2	9	0	0	0	0	0	0	0	0	414
18:00	1	276	53	1	5	1	0	1	0	0	0	0	0	338
19:00	**4**	203	37	0	3	1	0	0	0	0	0	0	0	248
20:00	0	222	39	0	4	0	0	1	0	0	0	0	0	266
21:00	0	160	31	0	3	1	0	0	0	0	0	0	0	195
22:00	0	143	28	0	2	0	0	0	0	0	0	0	0	173
23:00	1	132	8	0	2	0	0	0	0	0	0	0	0	143
Total	13	4530	845	24	144	7	0	15	3	0	1	0	0	5582
Percent	0.2%	81.2%	15.1%	0.4%	2.6%	0.1%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	08:00		07:00			07:00			07:00
Vol.	2	316	67	5	18	1		3			1			412
PM Peak	19:00	15:00	17:00	12:00	16:00	12:00		14:00	12:00					15:00
Vol.	4	368	73	2	17	1		3	2					447
Grand Total	13	4530	845	24	144	7	0	15	3	0	1	0	0	5582
Percent	0.2%	81.2%	15.1%	0.4%	2.6%	0.1%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Victoria Avenue
B/ Highland Avenue - Pacific Street
24 Hour Directional Classification Count

HLD003
Site Code: 057-16653

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	1	122	18	0	1	0	0	0	0	0	0	0	0	142
01:00	1	78	14	0	1	1	0	0	0	0	0	0	0	95
02:00	0	75	18	0	1	1	0	0	0	0	0	0	0	95
03:00	0	87	18	0	5	0	0	0	0	0	0	0	0	110
04:00	0	119	19	0	1	0	0	0	0	0	0	0	0	139
05:00	0	149	39	1	10	0	0	0	0	0	0	0	0	199
06:00	1	246	58	1	14	0	0	0	0	0	0	0	0	320
07:00	**4**	**688**	**159**	**18**	**37**	**2**	0	**6**	**2**	0	**1**	0	0	**917**
08:00	2	458	117	3	19	2	0	2	1	0	0	0	0	604
09:00	1	417	88	6	22	2	0	1	0	0	0	0	0	537
10:00	2	368	98	3	17	1	0	1	0	0	0	0	0	490
11:00	0	458	105	1	17	2	0	3	0	0	0	0	0	586
12 PM	2	500	122	3	20	1	0	3	**4**	0	0	0	0	655
13:00	1	514	99	**9**	12	0	0	0	0	0	0	0	0	635
14:00	1	**717**	149	3	31	**2**	0	**4**	0	**1**	0	0	0	**908**
15:00	1	677	**154**	3	24	0	0	2	1	0	0	0	0	862
16:00	3	689	148	4	**35**	1	0	4	2	0	0	0	0	886
17:00	5	683	153	3	18	0	0	2	1	0	0	0	0	865
18:00	2	564	123	3	15	1	0	2	0	0	0	0	0	710
19:00	**6**	407	81	0	9	1	0	0	0	0	0	0	0	504
20:00	0	393	79	0	8	1	0	2	0	0	0	0	0	483
21:00	0	322	54	0	7	1	0	0	1	0	0	0	0	385
22:00	0	249	51	0	6	0	0	0	0	0	0	0	0	306
23:00	1	208	22	0	4	0	0	0	0	0	0	0	0	235
Total	34	9188	1986	61	334	19	0	32	12	1	1	0	0	11668
Percent	0.3%	78.7%	17.0%	0.5%	2.9%	0.2%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	07:00		07:00	07:00		07:00			07:00
Vol.	4	688	159	18	37	2		6	2		1			917
PM Peak	19:00	14:00	15:00	13:00	16:00	14:00		14:00	12:00	14:00				14:00
Vol.	6	717	154	9	35	2		4	4	1				908
Grand Total	34	9188	1986	61	334	19	0	32	12	1	1	0	0	11668
Percent	0.3%	78.7%	17.0%	0.5%	2.9%	0.2%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

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City of San Bernardino
Victoria Avenue
B/ Highland Aveue - State Route 210
24 Hour Directional Volume Count

SBC066
Site Code: 999-18385

Start	22-May-18	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		6	51			26	94				
12:15		9	58			18	85				
12:30		6	61			19	92				
12:45		3	53	24	223	14	62	77	333	101	556
01:00		8	57			12	62				
01:15		1	62			14	79				
01:30		7	73			17	62				
01:45		3	107	19	299	19	76	62	279	81	578
02:00		8	98			16	**147**				
02:15		4	73			18	**135**				
02:30		13	67			12	**81**				
02:45		5	55	30	293	13	**88**	59	451	89	744
03:00		11	74			11	108				
03:15		8	82			8	81				
03:30		13	80			17	104				
03:45		12	83	44	319	11	106	47	399	91	718
04:00		12	73			15	99				
04:15		15	**88**			17	101				
04:30		22	**98**			13	100				
04:45		22	**82**	71	341	16	83	61	383	132	724
05:00		22	**88**			17	95				
05:15		21	78			20	86				
05:30		19	69			20	104				
05:45		23	87	85	322	30	80	87	365	172	687
06:00		42	68			25	73				
06:15		32	66			29	83				
06:30		**48**	65			44	79				
06:45		**70**	47	192	246	**69**	89	167	324	359	570
07:00		**107**	58			**100**	74				
07:15		**96**	64			**127**	69				
07:30		45	41			**78**	73				
07:45		55	65	303	228	51	69	356	285	659	513
08:00		58	42			59	76				
08:15		52	58			62	53				
08:30		64	41			57	64				
08:45		45	51	219	192	53	62	231	255	450	447
09:00		36	33			48	71				
09:15		41	43			34	56				
09:30		35	37			50	60				
09:45		47	33	159	146	63	58	195	245	354	391
10:00		46	33			56	62				
10:15		39	35			69	56				
10:30		51	24			56	50				
10:45		56	23	192	115	60	44	241	212	433	327
11:00		60	16			67	43				
11:15		54	16			75	43				
11:30		43	20			70	30				
11:45		66	13	223	65	79	32	291	148	514	213
Total		1561	2789	1561	2789	1874	3679	1874	3679	3435	6468
Combined Total		4350		4350		5553		5553		9903	
AM Peak	-	06:30	-	-	-	06:45	-	-	-	-	-
Vol.	-	321	-	-	-	374	-	-	-	-	-
P.H.F.		0.750				0.736					
PM Peak	-	-	04:15	-	-	-	02:00	-	-	-	-
Vol.	-	-	356	-	-	-	451	-	-	-	-
P.H.F.			0.832				0.767				
Percentage		35.9%	64.1%			33.7%	66.3%				
ADT/AADT		ADT 9,903		AADT 9,903							

Counts Unlimited, Inc.

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City of San Bernardino
Victoria Avenue
B/ Pacific Street - Baseline Street
24 Hour Directional Volume Count

SBC068
Site Code: 999-18385

Start Time	22-May-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		13	77			25	113				
12:15		13	84			21	90				
12:30		17	92			14	109				
12:45		5	88	48	341	19	79	79	391	127	732
01:00		14	90			13	96				
01:15		6	100			12	94				
01:30		14	126			17	78				
01:45		12	120	46	436	13	88	55	356	101	792
02:00		12	136			13	**144**				
02:15		9	114			16	**173**				
02:30		17	122			10	**125**				
02:45		4	103	42	475	14	**124**	53	566	95	1041
03:00		16	108			9	118				
03:15		14	151			16	123				
03:30		22	134			22	139				
03:45		26	127	78	520	12	132	59	512	137	1032
04:00		21	127			15	127				
04:15		29	**125**			24	119				
04:30		28	**144**			21	129				
04:45		40	**158**	118	554	21	119	81	494	199	1048
05:00		45	**142**			26	135				
05:15		48	123			33	124				
05:30		37	122			37	124				
05:45		36	140	166	527	34	108	130	491	296	1018
06:00		61	100			32	108				
06:15		63	98			49	106				
06:30		**74**	84			70	118				
06:45		**132**	83	330	365	**108**	94	259	426	589	791
07:00		**161**	91			**158**	96				
07:15		**110**	79			**161**	68				
07:30		71	72			**104**	82				
07:45		91	82	433	324	62	81	485	327	918	651
08:00		95	74			102	79				
08:15		98	74			87	70				
08:30		86	73			91	67				
08:45		73	68	352	289	68	67	348	283	700	572
09:00		70	76			63	79				
09:15		78	60			53	63				
09:30		54	65			70	62				
09:45		74	59	276	260	71	54	257	258	533	518
10:00		79	68			71	56				
10:15		78	55			73	60				
10:30		86	33			76	56				
10:45		88	33	331	189	65	40	285	212	616	401
11:00		89	26			86	35				
11:15		81	32			88	35				
11:30		68	22			76	24				
11:45		96	28	334	108	96	31	346	125	680	233
Total		2554	4388	2554	4388	2437	4441	2437	4441	4991	8829
Combined Total		6942		6942		6878		6878		13820	
AM Peak	-	06:30	-	-	-	06:45	-	-	-	-	-
Vol.	-	477	-	-	-	531	-	-	-	-	-
P.H.F.		0.741				0.825					
PM Peak	-	-	04:15	-	-	-	02:00	-	-	-	-
Vol.	-	-	569	-	-	-	566	-	-	-	-
P.H.F.			0.900				0.818				
Percentage		36.8%	63.2%			35.4%	64.6%				
ADT/AADT		ADT 13,820		AADT 13,820							

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City of San Bernardino
Victoria Avenue
B/ Baseline Street - 9th Street
24 Hour Directional Volume Count

SBC069
Site Code: 999-18385

Start	24-May-18	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		6	70			23	79				
12:15		13	77			14	67				
12:30		8	65			9	79				
12:45		11	69	38	281	9	35	55	260	93	541
01:00		14	55			16	68				
01:15		5	66			12	66				
01:30		5	77			13	57				
01:45		9	86	33	284	4	56	45	247	78	531
02:00		4	72			13	89				
02:15		5	112			4	104				
02:30		9	82			6	85				
02:45		8	83	26	349	9	76	32	354	58	703
03:00		11	104			10	93				
03:15		5	112			15	104				
03:30		10	127			17	**95**				
03:45		15	100	41	443	6	**101**	48	393	89	836
04:00		13	95			16	**104**				
04:15		20	102			17	**119**				
04:30		14	**119**			12	82				
04:45		18	**111**	65	427	13	84	58	389	123	816
05:00		23	**124**			17	87				
05:15		23	**117**			31	108				
05:30		19	107			43	107				
05:45		19	102	84	450	24	86	115	388	199	838
06:00		29	82			31	86				
06:15		33	75			43	82				
06:30		49	74			45	66				
06:45		**67**	79	178	310	**67**	84	186	318	364	628
07:00		**104**	61			**101**	76				
07:15		**61**	61			**104**	56				
07:30		**52**	69			**83**	63				
07:45		56	64	273	255	62	59	350	254	623	509
08:00		67	51			76	82				
08:15		98	67			79	46				
08:30		62	47			69	44				
08:45		51	51	278	216	61	45	285	217	563	433
09:00		52	55			67	61				
09:15		51	51			68	35				
09:30		46	33			62	32				
09:45		50	39	199	178	57	43	254	171	453	349
10:00		65	46			50	40				
10:15		71	37			51	33				
10:30		49	28			41	31				
10:45		66	31	251	142	53	28	195	132	446	274
11:00		58	26			65	25				
11:15		78	15			66	26				
11:30		66	12			66	13				
11:45		72	11	274	64	77	11	274	75	548	139
Total		1740	3399	1740	3399	1897	3198	1897	3198	3637	6597
Combined Total		5139		5139		5095		5095		10234	
AM Peak	-	06:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	284	-	-	-	355	-	-	-	-	-
P.H.F.		0.683				0.853					
PM Peak	-	-	04:30	-	-	-	03:30	-	-	-	-
Vol.	-	-	471	-	-	-	419	-	-	-	-
P.H.F.			0.950				0.880				
Percentage		33.9%	66.1%			37.2%	62.8%				
ADT/AADT		ADT 10,234		AADT 10,234							

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City of San Bernardino
Victoria Avenue
B/ 9th Street - 5th Street
24 Hour Directional Volume Count

SBC070
Site Code: 999-18385

Start Time	24-May-18 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		12	52			11	55				
12:15		9	55			4	60				
12:30		8	49			5	29				
12:45		7	43	36	199	13	49	33	193	69	392
01:00		4	53			4	53				
01:15		0	71			5	46				
01:30		9	54			3	46				
01:45		9	52	22	230	4	62	16	207	38	437
02:00		6	93			11	76				
02:15		8	76			3	54				
02:30		5	86			9	54				
02:45		7	86	26	341	16	67	39	251	65	592
03:00		2	83			12	60				
03:15		7	86			20	**71**				
03:30		6	84			9	**67**				
03:45		10	88	25	341	17	**80**	58	278	83	619
04:00		8	**98**			29	**76**				
04:15		9	**103**			24	60				
04:30		7	**98**			20	60				
04:45		10	**98**	34	397	25	59	98	255	132	652
05:00		13	96			41	74				
05:15		13	87			72	74				
05:30		14	85			24	53				
05:45		17	75	57	343	40	52	177	253	234	596
06:00		14	52			64	47				
06:15		26	55			54	48				
06:30		34	60			**76**	37				
06:45		46	53	120	220	**88**	46	282	178	402	398
07:00		43	48			**78**	35				
07:15		45	45			**77**	40				
07:30		35	69			51	35				
07:45		44	43	167	205	48	45	254	155	421	360
08:00		40	44			58	21				
08:15		39	40			61	30				
08:30		40	34			47	22				
08:45		41	32	160	150	52	35	218	108	378	258
09:00		41	29			54	18				
09:15		27	19			48	24				
09:30		34	32			43	24				
09:45		39	42	141	122	35	24	180	90	321	212
10:00		54	26			36	24				
10:15		36	20			39	19				
10:30		35	19			30	23				
10:45		49	16	174	81	45	12	150	78	324	159
11:00		**50**	14			45	13				
11:15		**39**	11			41	11				
11:30		**59**	11			63	4				
11:45		**51**	12	199	48	62	11	211	39	410	87
Total		1161	2677	1161	2677	1716	2085	1716	2085	2877	4762
Combined Total		3838		3838		3801		3801		7639	
AM Peak	-	11:00	-	-	-	06:30	-	-	-	-	-
Vol.	-	199	-	-	-	319	-	-	-	-	-
P.H.F.		0.843				0.906					
PM Peak	-	-	04:00	-	-	-	03:15	-	-	-	-
Vol.	-	-	397	-	-	-	294	-	-	-	-
P.H.F.			0.964				0.919				
Percentage		30.3%	69.7%			45.1%	54.9%				
ADT/AADT		ADT 7,639		AADT 7,639							

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City of San Bernardino
Victoria Avenue
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

SBC071
Site Code: 999-18385

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/22/18	0	18	4	0	0	1	0	0	1	0	0	0	0	24
01:00	0	13	3	0	0	1	**1**	0	0	0	0	0	0	18
02:00	0	9	2	0	1	0	0	0	1	**2**	0	0	0	15
03:00	0	11	4	1	0	0	0	0	0	0	0	0	0	16
04:00	0	10	4	0	0	2	0	0	**2**	0	0	0	0	18
05:00	0	29	6	0	2	2	0	0	1	0	0	0	0	40
06:00	0	30	6	**2**	0	2	0	0	0	1	0	0	0	41
07:00	0	40	**22**	1	4	0	1	0	2	0	0	0	0	70
08:00	**1**	60	13	1	**6**	**4**	0	0	0	0	0	0	0	85
09:00	0	47	8	0	4	3	0	**1**	1	0	0	0	0	64
10:00	0	69	14	0	4	3	0	0	0	0	0	0	0	90
11:00	0	**76**	13	2	3	1	0	0	0	0	0	0	0	**95**
12 PM	1	87	27	1	4	1	0	0	1	0	0	0	0	122
13:00	0	110	30	**3**	10	1	0	0	1	0	0	0	0	155
14:00	0	118	32	1	4	1	0	0	0	0	0	0	0	156
15:00	2	176	46	0	8	2	0	**1**	0	0	0	0	0	235
16:00	**3**	221	53	1	5	**5**	0	1	2	0	0	0	0	291
17:00	0	**248**	**70**	0	**19**	1	0	1	1	0	0	0	0	**340**
18:00	1	135	24	0	6	3	0	0	1	0	0	0	0	170
19:00	0	83	19	0	1	1	0	0	0	0	0	0	0	104
20:00	0	75	10	2	1	2	0	0	1	0	0	0	0	91
21:00	1	65	12	0	4	2	0	0	**3**	0	0	0	0	87
22:00	0	47	8	0	0	1	0	0	0	0	0	0	0	56
23:00	0	32	4	0	0	1	0	0	0	0	0	0	0	37
Total	9	1809	434	15	86	40	2	4	18	3	0	0	0	2420
Percent	0.4%	74.8%	17.9%	0.6%	3.6%	1.7%	0.1%	0.2%	0.7%	0.1%	0.0%	0.0%	0.0%	
AM Peak	08:00	11:00	07:00	06:00	08:00	08:00	01:00	09:00	04:00	02:00				11:00
Vol.	1	76	22	2	6	4	1	1	2	2				95
PM Peak	16:00	17:00	17:00	13:00	17:00	16:00		15:00	21:00					17:00
Vol.	3	248	70	3	19	5		1	3					340
Grand Total	9	1809	434	15	86	40	2	4	18	3	0	0	0	2420
Percent	0.4%	74.8%	17.9%	0.6%	3.6%	1.7%	0.1%	0.2%	0.7%	0.1%	0.0%	0.0%	0.0%	

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City of San Bernardino
Victoria Avenue
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

SBC071
Site Code: 999-18385

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/22/18	0	17	5	0	2	1	0	0	0	0	0	0	0	25
01:00	0	11	2	1	0	1	0	0	0	0	0	0	0	15
02:00	0	17	4	0	1	1	0	0	0	0	0	0	0	23
03:00	2	39	8	0	1	4	**1**	0	0	0	0	0	0	55
04:00	0	42	19	0	2	3	0	0	0	0	0	0	0	66
05:00	0	99	25	0	11	3	0	0	0	0	0	0	0	138
06:00	4	216	51	0	12	**5**	0	0	0	0	0	0	0	288
07:00	**9**	**408**	**96**	**2**	**25**	4	1	**1**	0	0	0	0	0	**546**
08:00	4	189	47	2	17	4	1	1	0	0	0	0	0	265
09:00	1	103	26	1	6	5	0	1	0	0	0	0	0	143
10:00	0	110	28	0	7	5	0	0	0	0	0	0	0	150
11:00	3	109	32	1	6	5	1	0	0	0	0	0	0	157
12 PM	2	149	43	0	9	1	0	2	0	0	0	0	0	206
13:00	3	144	43	0	**19**	4	0	0	0	0	0	0	0	**213**
14:00	4	**150**	**44**	0	8	**5**	1	0	0	0	0	0	0	212
15:00	**6**	137	33	1	12	5	**4**	**3**	0	0	0	0	0	201
16:00	1	137	34	0	16	1	0	2	0	0	0	0	0	191
17:00	2	123	23	**3**	8	2	1	0	0	0	0	0	0	162
18:00	3	103	22	0	10	5	0	0	0	0	0	0	0	143
19:00	2	70	19	0	6	0	0	1	0	0	0	0	0	98
20:00	0	56	26	0	7	0	0	0	0	0	0	0	0	89
21:00	1	55	16	0	3	3	0	0	**1**	0	0	0	0	79
22:00	0	45	9	0	1	1	0	0	0	0	0	0	0	56
23:00	0	26	5	0	1	3	1	0	1	0	0	0	0	37
Total	47	2555	660	11	190	71	11	11	2	0	0	0	0	3558
Percent	1.3%	71.8%	18.5%	0.3%	5.3%	2.0%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	06:00	03:00	07:00						07:00
Vol.	9	408	96	2	25	5	1	1						546
PM Peak	15:00	14:00	14:00	17:00	13:00	14:00	15:00	15:00	21:00					13:00
Vol.	6	150	44	3	19	5	4	3	1					213
Grand Total	47	2555	660	11	190	71	11	11	2	0	0	0	0	3558
Percent	1.3%	71.8%	18.5%	0.3%	5.3%	2.0%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

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

City of San Bernardino
Victoria Avenue
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

SBC071
Site Code: 999-18385

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/22/18	0	35	9	0	2	2	0	0	1	0	0	0	0	49
01:00	0	24	5	1	0	2	1	0	0	0	0	0	0	33
02:00	0	26	6	0	2	1	0	0	1	**2**	0	0	0	38
03:00	2	50	12	1	1	4	1	0	0	0	0	0	0	71
04:00	0	52	23	0	2	5	0	0	**2**	0	0	0	0	84
05:00	0	128	31	0	13	5	0	0	1	0	0	0	0	178
06:00	4	246	57	2	12	7	0	0	0	1	0	0	0	329
07:00	**9**	**448**	**118**	**3**	**29**	4	**2**	1	2	0	0	0	0	**616**
08:00	5	249	60	3	23	**8**	1	1	0	0	0	0	0	350
09:00	1	150	34	1	10	8	0	**2**	1	0	0	0	0	207
10:00	0	179	42	0	11	8	0	0	0	0	0	0	0	240
11:00	3	185	45	3	9	6	1	0	0	0	0	0	0	252
12 PM	3	236	70	1	13	2	0	2	1	0	0	0	0	328
13:00	3	254	73	**3**	**29**	5	0	0	1	0	0	0	0	368
14:00	4	268	76	1	12	6	1	0	0	0	0	0	0	368
15:00	**8**	313	79	1	20	7	**4**	**4**	0	0	0	0	0	436
16:00	4	358	87	1	21	6	0	3	2	0	0	0	0	482
17:00	2	**371**	**93**	3	27	3	1	1	1	0	0	0	0	**502**
18:00	4	238	46	0	16	**8**	0	0	1	0	0	0	0	313
19:00	2	153	38	0	7	1	0	1	0	0	0	0	0	202
20:00	0	131	36	2	8	2	0	0	1	0	0	0	0	180
21:00	2	120	28	0	7	5	0	0	**4**	0	0	0	0	166
22:00	0	92	17	0	1	2	0	0	0	0	0	0	0	112
23:00	0	58	9	0	1	4	1	0	1	0	0	0	0	74
Total	56	4364	1094	26	276	111	13	15	20	3	0	0	0	5978
Percent	0.9%	73.0%	18.3%	0.4%	4.6%	1.9%	0.2%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	08:00	07:00	09:00	04:00	02:00				07:00
Vol.	9	448	118	3	29	8	2	2	2	2				616
PM Peak	15:00	17:00	17:00	13:00	13:00	18:00	15:00	15:00	21:00					17:00
Vol.	8	371	93	3	29	8	4	4	4					502
Grand Total	56	4364	1094	26	276	111	13	15	20	3	0	0	0	5978
Percent	0.9%	73.0%	18.3%	0.4%	4.6%	1.9%	0.2%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	

Prepared by National Data & Surveying Services

CLASSIFICATION

6th St Bet. Del Rosa Dr & Tippecanoe Ave

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_015

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	30	2	0	2	0	0	0	1	0	0	0	0	35
01:00	0	15	2	0	1	0	0	0	0	0	0	0	0	18
02:00	0	12	1	0	0	0	0	0	0	0	0	0	0	13
03:00	0	16	3	1	0	0	0	0	0	0	0	0	0	20
04:00	0	40	3	1	2	1	0	0	0	0	0	0	0	47
05:00	0	42	15	1	1	1	0	0	0	0	0	0	0	60
06:00	0	56	14	0	0	1	0	0	0	0	0	0	0	71
07:00	0	83	18	3	4	1	0	0	1	0	0	0	0	110
08:00	0	92	17	0	7	0	0	0	1	0	0	0	0	117
09:00	1	106	26	0	8	0	0	1	0	0	0	0	0	142
10:00	1	105	26	0	3	0	0	1	0	0	0	0	0	136
11:00	0	124	16	1	5	0	0	0	0	0	0	0	0	146
12:00 PM	0	118	22	0	0	0	0	0	1	0	0	0	0	141
13:00	0	140	21	2	5	2	0	0	0	0	0	0	0	170
14:00	2	147	31	0	8	0	0	1	0	0	0	0	0	189
15:00	2	163	28	0	5	0	0	0	0	0	0	0	0	198
16:00	1	179	28	0	6	1	0	0	0	0	0	0	0	215
17:00	0	193	37	1	3	0	0	0	0	0	0	0	0	234
18:00	0	211	27	2	4	0	0	0	1	0	0	0	0	245
19:00	0	136	17	0	0	0	0	0	0	0	0	0	0	153
20:00	0	114	6	3	4	0	0	0	0	0	0	0	0	127
21:00	0	60	9	0	0	0	0	0	0	0	0	0	0	69
22:00	0	51	1	0	0	0	0	0	0	0	0	0	0	52
23:00	0	49	6	0	0	0	0	0	0	0	0	0	0	55
Totals	**7**	**2282**	**376**	**15**	**68**	**7**		**3**	**5**					**2763**
% of Totals	0%	83%	14%	1%	2%	0%		0%	0%					100%
		2289			459	7				8				
		1.0			2.0	2.5				3.0				
		2289			**918**	**18**				**24**				**3249**

AM Volumes	2	721	143	7	33	4	0	2	3	0	0	0	0	915
% AM	0%	26%	5%	0%	1%	0%		0%	0%					33%
AM Peak Hour	09:00	11:00	09:00	07:00	09:00	04:00		09:00						11:00
Volume	1	124	26	3	8	1		1	1					146
PM Volumes	5	1561	233	8	35	3	0	1	2	0	0	0	0	1848
% PM	0%	56%	8%	0%	1%	0%		0%	0%					67%
PM Peak Hour	14:00	18:00	17:00	20:00	14:00	13:00		14:00	12:00					18:00
Volume	2	211	37	3	8	2		1	1					245

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	227		8%	311		11%	449		16%	1776		64%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Sixth St Bet. Del Rosa Dr & Sterling Ave

Day: Thursday
Date: 3/14/2019

City: San Bernardino
Project #: CA19_6038_016

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	29	4	0	1	0	0	0	0	0	0	0	0	34
01:00	0	23	2	1	0	0	0	0	0	0	0	0	0	26
02:00	0	19	1	0	0	2	0	0	0	0	0	0	0	22
03:00	0	15	3	0	0	1	0	0	0	0	0	0	0	19
04:00	0	41	4	0	0	0	0	0	0	0	0	0	0	45
05:00	1	79	13	0	2	1	0	0	0	0	0	0	0	96
06:00	0	117	20	1	2	2	0	0	0	0	0	0	0	142
07:00	1	319	52	2	8	1	1	0	0	0	0	0	0	384
08:00	1	190	30	5	9	2	0	0	0	0	0	0	0	237
09:00	0	128	16	1	5	0	0	0	1	0	0	0	0	151
10:00	1	117	20	0	2	0	0	0	2	0	0	0	0	142
11:00	0	120	32	0	4	1	0	0	3	0	0	0	0	160
12:00 PM	1	158	26	0	4	1	1	0	3	0	0	0	0	194
13:00	1	181	20	0	7	0	0	0	1	0	0	0	0	210
14:00	1	272	39	1	13	3	0	0	0	0	0	0	0	329
15:00	3	253	51	5	11	1	0	0	0	0	0	0	0	324
16:00	1	219	40	3	7	3	0	0	0	0	0	0	0	273
17:00	3	281	49	0	7	2	0	0	0	0	0	0	0	342
18:00	0	239	38	0	4	0	0	0	0	0	0	0	0	281
19:00	0	176	21	0	7	0	0	0	0	0	0	0	0	204
20:00	0	131	17	0	2	0	0	0	1	0	0	0	0	151
21:00	0	98	12	0	3	0	0	0	0	0	0	0	0	113
22:00	0	73	5	0	1	1	0	0	0	0	0	0	0	80
23:00	0	56	3	0	1	0	0	0	0	0	0	0	0	60
Totals	14	3334	518	19	100	21	2		11					4019
% of Totals	0%	83%	13%	0%	2%	1%	0%		0%					100%
		3348			637	21				13				
		1.0			2.0	2.5				3.0				
		3348			**1274**	**53**				**39**				**4714**

AM Volumes	4	1197	197	10	33	10	1	0	6	0	0	0	0	1458
% AM	0%	30%	5%	0%	1%	0%	0%		0%					36%
AM Peak Hour	05:00	07:00	07:00	08:00	08:00	02:00	07:00		11:00					07:00
Volume	1	319	52	5	9	2	1		3					384
PM Volumes	10	2137	321	9	67	11	1	0	5	0	0	0	0	2561
% PM	0%	53%	8%	0%	2%	0%	0%		0%					64%
PM Peak Hour	15:00	17:00	15:00	15:00	14:00	14:00	12:00		12:00					17:00
Volume	3	281	51	5	13	3	1		3					342

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	621		15%	404		10%	615		15%	2379		59%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by NDS/ATD

VOLUME

6th St E/O Victoria Ave

Day: Thursday
Date: 3/8/2018

City: Highland
Project #: CA18_6028_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	840	529	1,369

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		0		1		12:00			14		8		22	
00:15			1		1		2		12:15			10		10		20	
00:30			2		1		3		12:30			7		1		8	
00:45			1	5	1	3	2	8	12:45			13	44	9	28	22	72
01:00			2		1		3		13:00			14		11		25	
01:15			2		1		3		13:15			13		5		18	
01:30			0		0		0		13:30			9		3		12	
01:45			1	5	0	2	1	7	13:45			10	46	8	27	18	73
02:00			0		0		0		14:00			12		10		22	
02:15			1		0		1		14:15			19		12		31	
02:30			2		0		2		14:30			22		18		40	
02:45			4	7	2	2	6	9	14:45			34	87	7	47	41	134
03:00			1		0		1		15:00			22		4		26	
03:15			0		1		1		15:15			22		13		35	
03:30			4		2		6		15:30			15		11		26	
03:45			2	7	1	4	3	11	15:45			17	76	8	36	25	112
04:00			0		2		2		16:00			13		10		23	
04:15			2		1		3		16:15			15		8		23	
04:30			1		2		3		16:30			23		8		31	
04:45			1	4	3	8	4	12	16:45			13	64	11	37	24	101
05:00			2		2		4		17:00			13		8		21	
05:15			3		2		5		17:15			14		10		24	
05:30			2		3		5		17:30			15		8		23	
05:45			6	13	2	9	8	22	17:45			16	58	8	34	24	92
06:00			3		3		6		18:00			18		11		29	
06:15			3		3		6		18:15			23		6		29	
06:30			2		1		3		18:30			14		12		26	
06:45			8	16	5	12	13	28	18:45			9	64	13	42	22	106
07:00			4		5		9		19:00			13		12		25	
07:15			21		12		33		19:15			12		6		18	
07:30			16		12		28		19:30			11		6		17	
07:45			14	55	10	39	24	94	19:45			8	44	4	28	12	72
08:00			6		12		18		20:00			12		5		17	
08:15			11		8		19		20:15			12		4		16	
08:30			9		12		21		20:30			5		6		11	
08:45			10	36	8	40	18	76	20:45			11	40	6	21	17	61
09:00			14		5		19		21:00			8		4		12	
09:15			6		5		11		21:15			7		4		11	
09:30			8		8		16		21:30			8		2		10	
09:45			7	35	10	28	17	63	21:45			7	30	3	13	10	43
10:00			10		5		15		22:00			7		2		9	
10:15			10		10		20		22:15			8		3		11	
10:30			11		6		17		22:30			3		2		5	
10:45			5	36	6	27	11	63	22:45			4	22	3	10	7	32
11:00			3		3		6		23:00			1		4		5	
11:15			11		6		17		23:15			3		0		3	
11:30			11		6		17		23:30			2		2		4	
11:45			13	38	10	25	23	63	23:45			2	8	1	7	3	15
TOTALS				257		199		456	TOTALS				583		330		913
SPLIT %				56.4%		43.6%		33.3%	SPLIT %				63.9%		36.1%		66.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	840	529	1,369

AM Peak Hour			07:15	07:15	07:15	PM Peak Hour			14:30	13:45	14:30
AM Pk Volume			57	46	103	PM Pk Volume			100	48	142
Pk Hr Factor			0.679	0.958	0.780	Pk Hr Factor			0.735	0.667	0.866
7 - 9 Volume	0	0	91	79	170	4 - 6 Volume	0	0	122	71	193
7 - 9 Peak Hour			07:15	07:15	07:15	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	57	46	103	4 - 6 Pk Volume	0	0	64	37	101
Pk Hr Factor	0.000	0.000	0.679	0.958	0.780	Pk Hr Factor	0.000	0.000	0.696	0.841	0.815

Prepared by National Data & Surveying Services

CLASSIFICATION

6th St Bet. Sterling Ave & Victoria Ave

Day: Thursday
Date: 3/14/2019

City: San Bernardino
Project #: CA19_6038_017

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	16	4	0	1	0	0	0	0	0	0	0	0	21
01:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
02:00	0	10	2	0	1	0	0	0	0	0	0	0	0	13
03:00	0	13	1	0	0	0	0	0	0	0	0	0	0	14
04:00	0	24	1	0	0	0	0	0	0	0	0	0	0	25
05:00	0	50	6	0	2	1	0	0	0	0	0	0	0	59
06:00	1	78	15	1	5	3	0	0	0	0	0	0	0	103
07:00	0	222	31	0	6	0	0	0	0	0	0	0	0	259
08:00	0	169	28	2	6	0	0	0	1	0	0	0	0	206
09:00	0	105	9	0	5	0	0	0	1	0	0	0	0	120
10:00	1	97	12	0	4	0	0	0	2	0	0	0	0	116
11:00	0	82	13	0	7	2	0	0	3	0	0	0	0	107
12:00 PM	0	129	20	0	2	0	0	0	3	0	0	0	0	154
13:00	1	141	21	0	1	0	0	0	1	0	0	0	0	165
14:00	2	194	28	0	5	2	0	0	0	0	0	0	0	231
15:00	0	213	42	1	3	0	0	0	0	0	0	0	0	259
16:00	0	164	33	1	3	1	0	0	0	0	0	0	0	202
17:00	0	198	30	0	9	2	0	0	0	0	0	0	0	239
18:00	0	184	25	0	4	0	0	0	0	0	0	0	0	213
19:00	1	145	15	0	3	0	0	0	0	0	0	0	0	164
20:00	0	97	26	0	2	0	0	0	0	0	0	0	0	125
21:00	0	108	8	0	1	0	0	0	0	0	0	0	0	117
22:00	0	47	4	0	1	0	0	0	0	0	0	0	0	52
23:00	0	50	2	0	1	0	0	0	0	0	0	0	0	53
Totals	**6**	**2546**	**376**	**5**	**72**	**11**			**11**					**3027**
% of Totals	0%	84%	12%	0%	2%	0%			0%					100%
		2552			453	11				11				
		1.0			2.0	2.5				3.0				
		2552			**906**	**28**				**33**				**3519**

AM Volumes	2	876	122	3	37	6	0	0	7	0	0	0	0	1053
% AM	0%	29%	4%	0%	1%	0%			0%					35%
AM Peak Hour	06:00	07:00	07:00	08:00	11:00	06:00			11:00					07:00
Volume	1	222	31	2	7	3			3					259
PM Volumes	4	1670	254	2	35	5	0	0	4	0	0	0	0	1974
% PM	0%	55%	8%	0%	1%	0%			0%					65%
PM Peak Hour	14:00	15:00	15:00	15:00	17:00	14:00			12:00					15:00
Volume	2	213	42	1	9	2			3					259

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	465		15%	319		11%	441		15%	1802		60%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

5th St Bet. I-215 NB Ramps & E St

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_018

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	199	46	0	11	0	0	0	1	0	0	0	0	257
01:00	0	137	35	1	3	0	0	0	2	0	0	0	0	178
02:00	1	103	19	1	3	0	0	0	0	0	0	0	0	127
03:00	0	145	33	1	8	0	0	0	1	0	0	0	0	188
04:00	1	223	57	6	12	1	0	0	0	0	0	0	0	300
05:00	0	432	120	5	18	0	0	0	4	0	0	0	0	579
06:00	3	750	168	6	33	2	0	1	3	0	0	0	0	966
07:00	0	1204	236	12	45	3	1	0	5	0	0	0	0	1506
08:00	2	1171	259	9	50	1	1	2	9	0	0	0	0	1504
09:00	0	1191	299	9	46	6	3	0	4	0	0	0	0	1558
10:00	1	1131	295	10	55	1	1	1	6	0	0	0	0	1501
11:00	2	1268	333	9	57	4	3	1	4	0	0	0	0	1681
12:00 PM	1	1193	310	8	46	9	4	1	2	0	0	0	0	1574
13:00	0	1211	321	12	43	2	0	0	6	0	0	0	0	1595
14:00	2	1251	315	13	53	5	0	0	3	0	0	0	0	1642
15:00	0	1361	333	10	55	3	0	0	5	0	0	0	0	1767
16:00	1	1337	362	8	53	2	0	1	4	0	0	0	0	1768
17:00	2	1354	335	9	48	3	0	5	7	0	0	0	0	1763
18:00	0	1002	240	5	27	2	1	0	1	0	0	0	0	1278
19:00	0	767	195	8	26	0	0	1	2	0	0	0	0	999
20:00	0	666	167	4	23	0	0	0	1	0	0	0	0	861
21:00	0	504	117	3	15	0	0	1	2	0	0	0	0	642
22:00	0	390	87	1	9	0	0	1	1	0	0	0	0	489
23:00	0	267	58	1	10	0	0	0	2	0	0	0	0	338
Totals	16	19257	4740	151	749	44	14	15	75					25061
% of Totals	0%	77%	19%	1%	3%	0%	0%	0%	0%					100%
		19273			5640	44				104				
		1.0			2.0	2.5				3.0				
		19273			**11280**	**110**				**312**				**30975**

AM Volumes	10	7954	1900	69	341	18	9	5	39	0	0	0	0	10345
% AM	0%	32%	8%	0%	1%	0%	0%	0%	0%					41%
AM Peak Hour	06:00	11:00	11:00	07:00	11:00	09:00	09:00	08:00	08:00					11:00
Volume	3	1268	333	12	57	6	3	2	9					1681
PM Volumes	6	11303	2840	82	408	26	5	10	36	0	0	0	0	14716
% PM	0%	45%	11%	0%	2%	0%	0%	0%	0%					59%
PM Peak Hour	14:00	15:00	16:00	14:00	15:00	12:00	12:00	17:00	17:00					16:00
Volume	2	1361	362	13	55	9	4	5	7					1768

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	3010		12%	3169		13%	3531		14%	15351		61%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

5th St Bet. E St & Waterman Ave

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_019

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	114	29	0	6	0	0	0	2	0	0	0	0	151
01:00	0	85	16	0	0	1	0	0	1	0	0	0	0	103
02:00	0	49	10	1	0	0	0	0	0	0	0	0	0	60
03:00	0	101	23	0	2	0	0	0	1	0	0	0	0	127
04:00	0	169	40	2	10	0	0	0	0	0	0	0	0	221
05:00	0	293	85	2	16	0	0	0	4	0	0	0	0	400
06:00	0	453	120	0	25	4	0	0	3	0	0	0	0	605
07:00	0	738	187	3	31	2	0	0	1	0	0	0	0	962
08:00	0	720	171	1	33	2	0	1	4	0	0	0	0	932
09:00	1	722	197	1	37	2	0	0	2	0	0	0	0	962
10:00	0	673	178	0	37	1	0	0	1	0	0	0	0	890
11:00	0	792	219	1	43	1	0	1	5	0	0	0	0	1062
12:00 PM	1	836	217	1	31	0	0	1	6	0	0	0	0	1093
13:00	0	851	222	0	41	2	0	3	4	0	0	0	0	1123
14:00	1	899	216	5	43	2	0	0	6	0	0	0	0	1172
15:00	1	970	240	0	41	1	0	0	6	0	0	0	0	1259
16:00	1	924	238	1	42	0	0	0	6	0	0	0	0	1212
17:00	1	877	218	0	38	2	0	0	4	0	0	0	0	1140
18:00	0	642	161	1	25	1	0	0	1	0	0	0	0	831
19:00	0	432	100	1	15	0	0	1	1	0	0	0	0	550
20:00	0	373	89	0	12	0	0	0	1	0	0	0	0	475
21:00	1	299	65	0	13	0	0	0	2	0	0	0	0	380
22:00	0	216	53	0	10	0	0	0	0	0	0	0	0	279
23:00	1	160	40	0	6	1	0	0	2	0	0	0	0	210
Totals	8	12388	3134	20	557	22		7	63					16199
% of Totals	0%	76%	19%	0%	3%	0%		0%	0%					100%
		12396			3711	22				70				
		1.0			2.0	2.5				3.0				
		12396			**7422**	**55**				**210**				**20083**

AM Volumes	1	4909	1275	11	240	13	0	2	24	0	0	0	0	6475
% AM	0%	30%	8%	0%	1%	0%		0%	0%					40%
AM Peak Hour	09:00	11:00	11:00	07:00	11:00	06:00		08:00	11:00					11:00
Volume	1	792	219	3	43	4		1	5					1062
PM Volumes	7	7479	1859	9	317	9	0	5	39	0	0	0	0	9724
% PM	0%	46%	11%	0%	2%	0%		0%	0%					60%
PM Peak Hour	12:00	15:00	15:00	14:00	14:00	13:00		13:00	12:00					15:00
Volume	1	970	240	5	43	2		3	6					1259

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1894		12%	2216		14%	2352		15%	9737		60%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

CLASSIFICATION

5th St Bet. Waterman Ave & Tippecanoe Ave

Day: Thursday
Date: 3/14/2019

City: San Bernardino
Project #: CA19_6038_020e

East Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	25	3	0	1	0	0	0	0	0	0	0	0	29
01:00	0	18	1	0	0	0	0	0	0	0	0	0	0	19
02:00	0	5	1	0	1	1	0	0	0	0	0	0	0	8
03:00	0	22	2	0	1	0	0	0	1	0	0	0	0	26
04:00	0	34	8	0	1	0	0	0	0	0	0	0	0	43
05:00	0	42	12	0	2	2	0	0	1	0	0	0	0	59
06:00	1	92	26	1	5	2	0	0	1	0	0	0	0	128
07:00	0	150	39	5	8	1	0	1	0	0	0	0	0	204
08:00	1	120	31	2	10	2	0	0	1	0	0	0	0	167
09:00	1	94	20	2	8	0	0	0	1	0	0	0	0	126
10:00	0	136	26	0	7	3	0	0	4	0	0	0	0	176
11:00	0	171	51	1	5	2	0	0	3	0	0	0	0	233
12:00 PM	2	194	45	0	9	2	0	0	2	0	0	0	0	254
13:00	0	181	42	1	8	3	0	0	1	0	0	0	0	236
14:00	1	221	52	2	8	1	0	0	3	0	0	0	0	288
15:00	2	258	62	0	11	2	0	0	3	0	0	0	0	338
16:00	0	342	89	0	16	4	0	1	1	0	0	0	0	453
17:00	3	404	79	1	8	5	0	1	2	0	0	0	0	503
18:00	0	246	68	0	12	1	0	0	2	0	0	0	0	329
19:00	3	146	34	3	6	1	0	0	1	0	0	0	0	194
20:00	1	128	12	1	1	0	0	0	0	0	0	0	0	143
21:00	0	86	10	0	0	0	0	0	1	0	0	0	0	97
22:00	0	64	11	0	1	0	0	0	0	0	0	0	0	76
23:00	0	34	6	0	1	0	0	0	0	0	0	0	0	41
Totals	**15**	**3213**	**730**	**19**	**130**	**32**		**3**	**28**					**4170**
% of Totals	0%	77%	18%	0%	3%	1%		0%	1%					100%
		3228			879	32				31				
		1.0			2.0	2.5				3.0				
		3228			**1758**	**80**				**93**				**5159**

AM Volumes	3	909	220	11	49	13	0	1	12	0	0	0	0	1218
% AM	0%	22%	5%	0%	1%	0%		0%	0%					29%
AM Peak Hour	06:00	11:00	11:00	07:00	08:00	10:00		07:00	10:00					11:00
Volume	1	171	51	5	10	3		1	4					233
PM Volumes	12	2304	510	8	81	19	0	2	16	0	0	0	0	2952
% PM	0%	55%	12%	0%	2%	0%		0%	0%					71%
PM Peak Hour	17:00	17:00	16:00	19:00	16:00	17:00		16:00	14:00					17:00
Volume	3	404	89	3	16	5		1	3					503

Directional Peak Periods	**AM 7-9**			**NOON 12-2**			**PM 4-6**			**Off Peak Volumes**		
All Classes	Volume		%	Volume		%	Volume		%	Volume		%
	371	⟷	9%	490	⟷	12%	956	⟷	23%	2353	⟷	56%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by NDS/ATD

VOLUME

5th St Bet. Tippecanoe Ave & Del Rosa Dr

Day: Thursday
Date: 3/8/2018

City: San Bernardino
Project #: CA18_6028_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,889	3,147	7,036

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			6		4		10		12:00			40		48		88	
00:15			2		6		8		12:15			48		29		77	
00:30			8		10		18		12:30			65		40		105	
00:45			4	20	4	24	8	44	12:45			50	203	57	174	107	377
01:00			8		2		10		13:00			58		51		109	
01:15			6		3		9		13:15			46		54		100	
01:30			2		1		3		13:30			60		59		119	
01:45			7	23	0	6	7	29	13:45			70	234	44	208	114	442
02:00			6		5		11		14:00			68		58		126	
02:15			9		6		15		14:15			60		54		114	
02:30			3		4		7		14:30			70		63		133	
02:45			4	22	3	18	7	40	14:45			73	271	58	233	131	504
03:00			6		1		7		15:00			86		52		138	
03:15			3		2		5		15:15			87		60		147	
03:30			7		1		8		15:30			112		60		172	
03:45			2	18	5	9	7	27	15:45			80	365	54	226	134	591
04:00			4		9		13		16:00			110		47		157	
04:15			3		4		7		16:15			111		56		167	
04:30			6		4		10		16:30			129		56		185	
04:45			12	25	7	24	19	49	16:45			107	457	58	217	165	674
05:00			7		8		15		17:00			171		52		223	
05:15			10		11		21		17:15			161		40		201	
05:30			12		5		17		17:30			120		49		169	
05:45			11	40	16	40	27	80	17:45			91	543	48	189	139	732
06:00			6		10		16		18:00			96		45		141	
06:15			12		24		36		18:15			75		45		120	
06:30			24		40		64		18:30			73		36		109	
06:45			29	71	57	131	86	202	18:45			68	312	28	154	96	466
07:00			36		75		111		19:00			48		30		78	
07:15			56		119		175		19:15			49		19		68	
07:30			33		107		140		19:30			40		21		61	
07:45			38	163	114	415	152	578	19:45			25	162	24	94	49	256
08:00			34		82		116		20:00			41		18		59	
08:15			37		76		113		20:15			20		18		38	
08:30			34		58		92		20:30			28		19		47	
08:45			45	150	55	271	100	421	20:45			24	113	16	71	40	184
09:00			27		22		49		21:00			23		20		43	
09:15			29		47		76		21:15			26		22		48	
09:30			43		39		82		21:30			25		21		46	
09:45			32	131	41	149	73	280	21:45			21	95	12	75	33	170
10:00			47		41		88		22:00			24		7		31	
10:15			47		35		82		22:15			12		15		27	
10:30			47		56		103		22:30			9		12		21	
10:45			42	183	42	174	84	357	22:45			13	58	11	45	24	103
11:00			40		39		79		23:00			14		10		24	
11:15			42		40		82		23:15			9		7		16	
11:30			52		51		103		23:30			11		10		21	
11:45			50	184	35	165	85	349	23:45			12	46	8	35	20	81
TOTALS				1030		1426		2456	TOTALS				2859		1721		4580
SPLIT %				41.9%		58.1%		34.9%	SPLIT %				62.4%		37.6%		65.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,889	3,147	7,036

AM Peak Hour			11:45	07:15	07:15	PM Peak Hour			16:30	14:00	16:30
AM Pk Volume			203	422	583	PM Pk Volume			568	233	774
Pk Hr Factor			0.781	0.887	0.833	Pk Hr Factor			0.830	0.925	0.868
7 - 9 Volume	0	0	313	686	999	4 - 6 Volume	0	0	1000	406	1406
7 - 9 Peak Hour			07:00	07:15	07:15	4 - 6 Peak Hour			16:30	16:15	16:30
7 - 9 Pk Volume	0	0	163	422	583	4 - 6 Pk Volume	0	0	568	222	774
Pk Hr Factor	0.000	0.000	0.728	0.887	0.833	Pk Hr Factor	0.000	0.000	0.830	0.957	0.868

Prepared by National Data & Surveying Services

CLASSIFICATION

5th St Bet. Del Rosa Dr & Sterling Ave

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_021

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	23	1	0	1	0	0	0	0	0	0	0	0	25
01:00	0	15	1	1	2	0	0	0	1	0	0	0	0	20
02:00	0	18	2	0	1	0	0	0	0	0	0	0	0	21
03:00	0	17	6	0	1	0	0	0	0	0	0	0	0	24
04:00	0	25	11	0	1	1	0	0	0	0	0	0	0	38
05:00	0	29	15	0	1	0	0	0	0	0	0	0	0	45
06:00	1	92	25	2	8	1	0	0	1	0	0	0	0	130
07:00	0	262	51	3	11	1	0	0	0	0	0	0	0	328
08:00	0	209	55	1	15	1	0	1	1	0	0	0	0	283
09:00	0	139	47	2	9	2	0	0	1	0	0	0	0	200
10:00	1	171	37	1	10	0	0	1	2	0	0	0	0	223
11:00	0	189	49	1	13	0	0	1	0	0	0	0	0	253
12:00 PM	0	225	55	0	12	2	0	2	1	0	0	0	0	297
13:00	1	225	58	1	8	2	1	0	3	0	0	0	0	299
14:00	0	232	55	2	15	0	0	0	1	0	0	0	0	305
15:00	0	289	77	0	18	1	0	0	2	0	0	0	0	387
16:00	0	292	81	0	13	1	0	0	0	0	0	0	0	387
17:00	1	367	71	0	9	1	0	3	0	0	0	0	0	452
18:00	0	224	44	0	4	2	2	0	2	0	0	0	0	278
19:00	0	128	31	0	5	1	1	0	2	0	0	0	0	168
20:00	0	104	17	0	5	0	0	1	0	0	0	0	0	127
21:00	0	76	15	0	7	0	0	1	1	0	0	0	0	100
22:00	0	68	7	0	0	0	0	0	0	0	0	0	0	75
23:00	0	38	2	0	3	0	0	0	0	0	0	0	0	43
Totals	**4**	**3457**	**813**	**14**	**172**	**16**	**4**	**10**	**18**					**4508**
% of Totals	0%	77%	18%	0%	4%	0%	0%	0%	0%					100%
		3461			999	16				32				
		1.0			2.0	2.5				3.0				
		3461			**1998**	**40**				**96**				**5595**

AM Volumes	2	1189	300	11	73	6	0	3	6	0	0	0	0	1590
% AM	0%	26%	7%	0%	2%	0%		0%	0%					35%
AM Peak Hour	06:00	07:00	08:00	07:00	08:00	09:00		08:00	10:00					07:00
Volume	1	262	55	3	15	2		1	2					328
PM Volumes	2	2268	513	3	99	10	4	7	12	0	0	0	0	2918
% PM	0%	50%	11%	0%	2%	0%	0%	0%	0%					65%
PM Peak Hour	13:00	17:00	16:00	14:00	15:00	12:00	18:00	17:00	13:00					17:00
Volume	1	367	81	2	18	2	2	3	3					452

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	611		14%	596		13%	839		19%	2462		55%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by NDS/ATD

VOLUME

5th St E/O Victoria Ave

Day: Thursday
Date: 3/8/2018

City: Highland
Project #: CA18_6028_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,271	4,279	8,550

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			10		8		18		12:00			66		65		131	
00:15			6		8		14		12:15			58		59		117	
00:30			10		7		17		12:30			63		71		134	
00:45			7	33	9	32	16	65	12:45			57	244	69	264	126	508
01:00			7		6		13		13:00			52		74		126	
01:15			2		3		5		13:15			58		66		124	
01:30			7		5		12		13:30			72		79		151	
01:45			5	21	7	21	12	42	13:45			57	239	64	283	121	522
02:00			9		6		15		14:00			69		84		153	
02:15			11		4		15		14:15			66		72		138	
02:30			6		4		10		14:30			69		76		145	
02:45			3	29	5	19	8	48	14:45			66	270	94	326	160	596
03:00			4		2		6		15:00			92		55		147	
03:15			5		1		6		15:15			92		75		167	
03:30			15		5		20		15:30			111		66		177	
03:45			8	32	8	16	16	48	15:45			90	385	71	267	161	652
04:00			9		11		20		16:00			101		60		161	
04:15			11		12		23		16:15			121		77		198	
04:30			21		10		31		16:30			121		82		203	
04:45			16	57	10	43	26	100	16:45			130	473	77	296	207	769
05:00			13		9		22		17:00			174		57		231	
05:15			22		7		29		17:15			191		70		261	
05:30			25		14		39		17:30			127		78		205	
05:45			22	82	24	54	46	136	17:45			98	590	73	278	171	868
06:00			23		27		50		18:00			91		73		164	
06:15			28		27		55		18:15			76		51		127	
06:30			32		58		90		18:30			70		48		118	
06:45			30	113	75	187	105	300	18:45			52	289	60	232	112	521
07:00			49		99		148		19:00			49		36		85	
07:15			37		123		160		19:15			63		43		106	
07:30			48		116		164		19:30			47		53		100	
07:45			55	189	134	472	189	661	19:45			29	188	41	173	70	361
08:00			51		104		155		20:00			30		36		66	
08:15			43		100		143		20:15			20		32		52	
08:30			55		62		117		20:30			23		29		52	
08:45			51	200	62	328	113	528	20:45			21	94	40	137	61	231
09:00			37		41		78		21:00			11		30		41	
09:15			35		53		88		21:15			43		25		68	
09:30			44		33		77		21:30			19		24		43	
09:45			51	167	44	171	95	338	21:45			16	89	32	111	48	200
10:00			50		45		95		22:00			11		20		31	
10:15			41		53		94		22:15			18		23		41	
10:30			53		63		116		22:30			10		14		24	
10:45			45	189	38	199	83	388	22:45			17	56	13	70	30	126
11:00			38		48		86		23:00			14		15		29	
11:15			63		53		116		23:15			11		17		28	
11:30			53		75		128		23:30			9		12		21	
11:45			44	198	74	250	118	448	23:45			10	44	6	50	16	94
TOTALS				1310		1792		3102	TOTALS				2961		2487		5448
SPLIT %				42.2%		57.8%		36.3%	SPLIT %				54.4%		45.6%		63.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,271	4,279	8,550

AM Peak Hour			11:45	07:15	07:15	PM Peak Hour			16:45	14:00	16:45
AM Pk Volume			231	477	668	PM Pk Volume			622	326	904
Pk Hr Factor			0.875	0.890	0.884	Pk Hr Factor			0.814	0.867	0.866
7 - 9 Volume	0	0	389	800	1189	4 - 6 Volume	0	0	1063	574	1637
7 - 9 Peak Hour			07:45	07:15	07:15	4 - 6 Peak Hour			16:45	16:00	16:45
7 - 9 Pk Volume	0	0	204	477	668	4 - 6 Pk Volume	0	0	622	296	904
Pk Hr Factor	0.000	0.000	0.927	0.890	0.884	Pk Hr Factor	0.000	0.000	0.814	0.902	0.866

Counts Unlimited, Inc.

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

City of San Bernardino
5th Street
B/ Central Avenue - Victoria Avenue
24 Hour Directional Volume Count

SBC014
Site Code: 999-18385

Start	5/22/2018	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		11	65			11	74				
12:15		9	62			14	72				
12:30		6	58			6	76				
12:45		6	57	32	242	8	74	39	296	71	538
01:00		4	50			10	70				
01:15		8	47			6	53				
01:30		10	57			9	59				
01:45		2	54	24	208	7	67	32	249	56	457
02:00		3	66			3	**93**				
02:15		3	48			8	**85**				
02:30		6	54			7	**100**				
02:45		7	50	19	218	8	**85**	26	363	45	581
03:00		8	70			6	73				
03:15		11	79			4	85				
03:30		10	95			8	75				
03:45		12	82	41	326	15	67	33	300	74	626
04:00		21	96			9	56				
04:15		24	**115**			19	71				
04:30		11	**111**			9	71				
04:45		23	**159**	79	481	13	79	50	277	129	758
05:00		27	**132**			12	57				
05:15		31	110			19	68				
05:30		32	86			32	57				
05:45		30	72	120	400	39	66	102	248	222	648
06:00		32	64			48	51				
06:15		32	52			78	58				
06:30		42	41			108	51				
06:45		46	49	152	206	**134**	37	368	197	520	403
07:00		29	55			**135**	40				
07:15		56	33			**152**	46				
07:30		45	35			**153**	42				
07:45		48	26	178	149	101	35	541	163	719	312
08:00		41	40			75	42				
08:15		56	30			73	51				
08:30		48	36			47	55				
08:45		42	31	187	137	48	35	243	183	430	320
09:00		49	48			57	44				
09:15		46	35			55	39				
09:30		41	18			48	32				
09:45		39	8	175	109	45	40	205	155	380	264
10:00		39	24			52	26				
10:15		37	17			43	23				
10:30		40	9			42	16				
10:45		46	12	162	62	56	23	193	88	355	150
11:00		**54**	12			48	18				
11:15		**60**	16			53	17				
11:30		**43**	4			60	19				
11:45		**50**	8	207	40	53	7	214	61	421	101
Total		1376	2578	1376	2578	2046	2580	2046	2580	3422	5158
Combined Total		3954		3954		4626		4626		8580	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	207	-	-	-	574	-	-	-	-	-
P.H.F.		0.863				0.938					
PM Peak	-	-	04:15	-	-	-	02:00	-	-	-	-
Vol.	-	-	517	-	-	-	363	-	-	-	-
P.H.F.			0.813				0.908				
Percentage		34.8%	65.2%			44.2%	55.8%				
ADT/AADT		ADT 8,580		AADT 8,580							

Prepared by National Data & Surveying Services

CLASSIFICATION

5th St Bet. Sterling Ave & Victoria Ave

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_022

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	12	2	0	0	0	0	0	0	0	0	0	0	14
01:00	0	2	1	0	1	0	0	0	0	0	0	0	0	4
02:00	2	0	1	1	1	1	0	0	0	0	0	0	0	6
03:00	2	7	0	0	0	0	0	0	0	0	0	0	0	9
04:00	0	10	4	0	0	0	0	0	0	0	0	0	0	14
05:00	0	16	7	1	1	1	0	0	0	0	0	0	0	26
06:00	0	35	12	0	4	0	0	1	1	0	0	0	0	53
07:00	5	84	21	1	1	1	3	0	0	0	0	0	0	116
08:00	4	75	23	0	10	3	4	0	1	0	0	0	0	120
09:00	3	108	31	1	15	14	4	0	3	0	0	0	0	179
10:00	3	80	43	4	18	0	0	0	1	0	0	0	0	149
11:00	6	90	63	1	9	1	0	2	0	0	0	0	0	172
12:00 PM	4	132	48	0	14	2	1	1	1	0	0	0	0	203
13:00	3	130	46	0	7	0	0	0	1	0	0	0	0	187
14:00	2	154	66	0	12	2	0	1	2	0	0	0	0	239
15:00	1	151	54	0	13	0	0	1	0	0	0	0	0	220
16:00	1	242	62	1	12	2	0	0	1	0	0	0	0	321
17:00	2	336	104	1	14	1	0	0	1	0	0	0	0	459
18:00	2	170	29	0	5	1	0	3	0	0	0	0	0	210
19:00	1	78	26	0	2	1	0	0	0	0	0	0	0	108
20:00	1	71	7	0	1	0	0	0	1	0	0	0	0	81
21:00	0	27	11	0	3	0	0	0	0	0	0	0	0	41
22:00	0	24	3	0	0	0	0	0	1	0	0	0	0	28
23:00	2	15	1	0	0	0	0	0	0	0	0	0	0	18
Totals	44	2049	665	11	143	30	12	9	14					2977
% of Totals	1%	69%	22%	0%	5%	1%	0%	0%	0%					100%
		2093			819	30				35				
		1.0			2.0	2.5				3.0				
		2093			**1638**	**75**				**105**				**3911**

AM Volumes	25	519	208	9	60	21	11	3	6	0	0	0	0	862
% AM	1%	17%	7%	0%	2%	1%	0%	0%	0%					29%
AM Peak Hour	11:00	09:00	11:00	10:00	10:00	09:00	08:00	11:00	09:00					09:00
Volume	6	108	63	4	18	14	4	2	3					179
PM Volumes	19	1530	457	2	83	9	1	6	8	0	0	0	0	2115
% PM	1%	51%	15%	0%	3%	0%	0%	0%	0%					71%
PM Peak Hour	12:00	17:00	17:00	16:00	12:00	12:00	12:00	18:00	14:00					17:00
Volume	4	336	104	1	14	2	1	3	2					459

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	236		8%	390		13%	780		26%	1571		53%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

CLASSIFICATION

5th St Bet. Palm Ave & SR-210 EB Ramps

Day: Tuesday
Date: 3/19/2019

City: San Bernardino
Project #: CA19_6038_023e

East Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	70	25	0	13	0	0	0	1	0	0	0	0	109
01:00	0	66	15	0	10	1	0	0	6	0	0	0	0	98
02:00	0	79	12	0	6	5	0	0	4	0	0	0	0	106
03:00	0	69	17	1	8	0	0	0	3	0	0	0	0	98
04:00	0	137	54	1	19	5	0	1	11	0	0	0	0	228
05:00	0	198	64	1	30	7	0	0	9	0	2	0	0	311
06:00	3	270	88	1	34	25	0	0	11	0	2	0	0	434
07:00	2	294	84	0	34	12	0	0	9	0	1	0	0	436
08:00	0	346	82	1	35	9	0	0	8	0	0	0	0	481
09:00	0	328	86	1	30	14	0	1	10	0	1	0	0	471
10:00	2	338	94	2	37	8	0	1	17	0	1	0	0	500
11:00	0	437	120	0	49	15	0	0	10	2	0	0	0	633
12:00 PM	2	482	129	0	41	13	0	1	7	0	1	0	0	676
13:00	6	485	112	1	49	17	3	0	9	0	0	0	0	682
14:00	4	498	129	1	37	10	4	0	4	0	2	0	0	689
15:00	1	675	161	0	54	6	1	0	3	0	0	0	0	901
16:00	2	854	175	0	61	4	0	1	3	0	0	0	0	1100
17:00	3	915	191	0	53	2	1	0	1	0	0	0	0	1166
18:00	3	458	108	0	28	2	1	0	0	0	0	0	0	600
19:00	0	388	79	0	15	1	0	0	5	0	0	0	0	488
20:00	0	263	53	0	24	3	0	0	1	0	1	0	0	345
21:00	0	205	44	0	10	2	0	0	4	0	1	0	0	266
22:00	0	157	38	1	13	1	0	0	3	0	0	0	0	213
23:00	0	88	32	0	16	2	0	1	0	0	1	0	0	140
Totals	28	8100	1992	11	706	164	10	6	139	2	13			11171
% of Totals	0%	73%	18%	0%	6%	1%	0%	0%	1%	0%	0%			100%
		8128			2709	164				170				
		1.0			2.0	2.5				3.0				
		8128			5418	410				510				14466

AM Volumes	7	2632	741	8	305	101	0	3	99	2	7	0	0	3905
% AM	0%	24%	7%	0%	3%	1%		0%	1%	0%	0%			35%
AM Peak Hour	06:00	11:00	11:00	10:00	11:00	06:00		04:00	10:00	11:00	05:00			11:00
Volume	3	437	120	2	49	25		1	17	2	2			633
PM Volumes	21	5468	1251	3	401	63	10	3	40	0	6	0	0	7266
% PM	0%	49%	11%	0%	4%	1%	0%	0%	0%		0%			65%
PM Peak Hour	13:00	17:00	17:00	13:00	16:00	13:00	14:00	12:00	13:00		14:00			17:00
Volume	6	915	191	1	61	17	4	1	9		2			1166

Directional Peak Periods All Classes	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
	Volume		%	Volume		%	Volume		%	Volume		%
	917	⟷	8%	1358	⟷	12%	2266	⟷	20%	6630	⟷	59%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
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email: counts@countsunlimited.com

City of San Bernardino
3rd Street
B/ Leland Norton Way - Del Rosa Drive
24 Hour Directional Volume Count

SBC005
Site Code: 999-18385

Start Time	5/22/2018 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		14	129			9	103				
12:15		13	105			18	119				
12:30		21	119			13	121				
12:45		20	155	68	508	7	128	47	471	115	979
01:00		20	105			10	111				
01:15		27	149			9	111				
01:30		17	141			11	100				
01:45		20	133	84	528	8	100	38	422	122	950
02:00		22	141			26	94				
02:15		20	120			17	116				
02:30		10	163			17	105				
02:45		12	173	64	597	9	105	69	420	133	1017
03:00		20	164			16	98				
03:15		13	170			22	**142**				
03:30		27	195			39	**138**				
03:45		18	201	78	730	36	**122**	113	500	191	1230
04:00		8	231			37	**103**				
04:15		23	286			35	91				
04:30		29	**257**			50	128				
04:45		31	**376**	91	1150	43	96	165	418	256	1568
05:00		30	**300**			50	88				
05:15		39	**304**			62	90				
05:30		39	208			97	95				
05:45		25	206	133	1018	74	81	283	354	416	1372
06:00		30	148			110	94				
06:15		70	116			136	70				
06:30		70	111			186	68				
06:45		75	92	245	467	**183**	67	615	299	860	766
07:00		61	103			**270**	53				
07:15		75	90			**250**	45				
07:30		76	74			**280**	66				
07:45		82	86	294	353	169	40	969	204	1263	557
08:00		85	87			119	40				
08:15		84	88			107	47				
08:30		70	51			116	64				
08:45		92	80	331	306	85	51	427	202	758	508
09:00		64	76			93	38				
09:15		74	50			81	48				
09:30		81	44			93	46				
09:45		76	58	295	228	89	39	356	171	651	399
10:00		87	63			91	42				
10:15		83	46			84	36				
10:30		80	22			106	35				
10:45		91	38	341	169	79	33	360	146	701	315
11:00		**124**	23			86	20				
11:15		**108**	20			84	29				
11:30		**111**	30			104	21				
11:45		**139**	28	482	101	91	17	365	87	847	188
Total		2506	6155	2506	6155	3807	3694	3807	3694	6313	9849
Combined Total		8661		8661		7501		7501		16162	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	482	-	-	-	983	-	-	-	-	-
P.H.F.		0.867				0.878					
PM Peak	-	-	04:30	-	-	-	03:15	-	-	-	-
Vol.	-	-	1237	-	-	-	505	-	-	-	-
P.H.F.			0.822				0.889				
Percentage		28.9%	71.1%			50.8%	49.2%				
ADT/AADT		ADT 16,162		AADT 16,162							

Counts Unlimited, Inc.

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City of San Bernardino
3rd Street
B/ Sterling Avenue - Leland Norton Way
24 Hour Directional Volume Count

SBC004
Site Code: 999-18385

Start Time	5/24/2018 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		20	118			11	90				
12:15		15	111			17	125				
12:30		22	123			8	128				
12:45		15	117	72	469	14	102	50	445	122	914
01:00		8	117			10	113				
01:15		12	102			9	110				
01:30		21	132			12	81				
01:45		14	118	55	469	16	97	47	401	102	870
02:00		15	130			7	106				
02:15		14	106			8	93				
02:30		10	150			18	104				
02:45		11	161	50	547	10	127	43	430	93	977
03:00		11	201			7	**113**				
03:15		8	193			19	**106**				
03:30		14	201			29	**123**				
03:45		28	219	61	814	32	**139**	87	481	148	1295
04:00		14	247			17	101				
04:15		12	211			25	106				
04:30		28	310			49	127				
04:45		22	**290**	76	1058	47	107	138	441	214	1499
05:00		20	**428**			28	114				
05:15		24	**332**			44	88				
05:30		34	**335**			70	104				
05:45		26	235	104	1330	102	117	244	423	348	1753
06:00		31	198			56	77				
06:15		33	155			103	79				
06:30		59	129			131	73				
06:45		66	132	189	614	239	77	529	306	718	920
07:00		86	119			**201**	68				
07:15		56	94			**283**	67				
07:30		67	103			**260**	56				
07:45		63	71	272	387	**300**	57	1044	248	1316	635
08:00		109	89			167	51				
08:15		76	86			137	42				
08:30		76	76			128	47				
08:45		72	73	333	324	117	54	549	194	882	518
09:00		90	71			80	29				
09:15		79	76			107	55				
09:30		66	51			90	50				
09:45		81	40	316	238	102	33	379	167	695	405
10:00		84	55			89	37				
10:15		101	50			75	29				
10:30		85	54			72	31				
10:45		66	35	336	194	78	27	314	124	650	318
11:00		**97**	39			73	25				
11:15		**102**	22			67	22				
11:30		**101**	31			91	14				
11:45		**127**	35	427	127	102	15	333	76	760	203
Total		2291	6571	2291	6571	3757	3736	3757	3736	6048	10307
Combined Total		8862		8862		7493		7493		16355	
AM Peak	-	11:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	427	-	-	-	1044	-	-	-	-	-
P.H.F.		0.841				0.870					
PM Peak	-	-	04:45	-	-	-	03:00	-	-	-	-
Vol.	-	-	1385	-	-	-	481	-	-	-	-
P.H.F.			0.809				0.865				
Percentage		25.9%	74.1%			50.1%	49.9%				
ADT/AADT		ADT 16,355		AADT 16,355							

Prepared by NDS/ATD

VOLUME

3rd St E/O Victoria Ave

Day: Thursday
Date: 3/8/2018

City: Highland
Project #: CA18_6028_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,619	3,445	9,064

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			20		10		30		12:00			80		45		125	
00:15			12		9		21		12:15			83		38		121	
00:30			8		3		11		12:30			74		54		128	
00:45			8	48	9	31	17	79	12:45			76	313	74	211	150	524
01:00			7		14		21		13:00			87		63		150	
01:15			10		4		14		13:15			73		44		117	
01:30			12		10		22		13:30			63		36		99	
01:45			13	42	8	36	21	78	13:45			68	291	36	179	104	470
02:00			17		7		24		14:00			77		30		107	
02:15			7		7		14		14:15			74		40		114	
02:30			15		12		27		14:30			107		56		163	
02:45			6	45	7	33	13	78	14:45			99	357	65	191	164	548
03:00			7		6		13		15:00			105		62		167	
03:15			10		7		17		15:15			112		49		161	
03:30			24		10		34		15:30			125		76		201	
03:45			35	76	13	36	48	112	15:45			123	465	49	236	172	701
04:00			14		16		30		16:00			138		51		189	
04:15			12		15		27		16:15			144		53		197	
04:30			31		8		39		16:30			217		54		271	
04:45			37	94	15	54	52	148	16:45			179	678	53	211	232	889
05:00			26		17		43		17:00			252		57		309	
05:15			21		20		41		17:15			227		49		276	
05:30			48		33		81		17:30			175		74		249	
05:45			63	158	43	113	106	271	17:45			151	805	61	241	212	1046
06:00			24		24		48		18:00			114		51		165	
06:15			29		43		72		18:15			88		42		130	
06:30			41		53		94		18:30			82		35		117	
06:45			45	139	80	200	125	339	18:45			62	346	38	166	100	512
07:00			65		74		139		19:00			55		33		88	
07:15			50		92		142		19:15			46		35		81	
07:30			57		117		174		19:30			52		35		87	
07:45			71	243	110	393	181	636	19:45			58	211	27	130	85	341
08:00			37		82		119		20:00			49		20		69	
08:15			59		67		126		20:15			40		26		66	
08:30			59		55		114		20:30			30		19		49	
08:45			51	206	37	241	88	447	20:45			26	145	21	86	47	231
09:00			51		31		82		21:00			25		26		51	
09:15			34		30		64		21:15			43		13		56	
09:30			54		24		78		21:30			21		12		33	
09:45			47	186	37	122	84	308	21:45			17	106	30	81	47	187
10:00			52		37		89		22:00			23		28		51	
10:15			52		38		90		22:15			24		25		49	
10:30			51		29		80		22:30			45		23		68	
10:45			63	218	35	139	98	357	22:45			25	117	16	92	41	209
11:00			75		40		115		23:00			19		15		34	
11:15			53		46		99		23:15			21		19		40	
11:30			62		43		105		23:30			17		7		24	
11:45			70	260	45	174	115	434	23:45			13	70	8	49	21	119
TOTALS				1715		1572		3287	TOTALS				3904		1873		5777
SPLIT %				52.2%		47.8%		36.3%	SPLIT %				67.6%		32.4%		63.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,619	3,445	9,064

AM Peak Hour			11:45	07:15	07:00	PM Peak Hour			16:30	14:45	16:30
AM Pk Volume			307	401	636	PM Pk Volume			875	252	1088
Pk Hr Factor			0.925	0.857	0.878	Pk Hr Factor			0.868	0.829	0.880
7 - 9 Volume	0	0	449	634	1083	4 - 6 Volume	0	0	1483	452	1935
7 - 9 Peak Hour			07:00	07:15	07:00	4 - 6 Peak Hour			16:30	17:00	16:30
7 - 9 Pk Volume	0	0	243	401	636	4 - 6 Pk Volume	0	0	875	241	1088
Pk Hr Factor	0.000	0.000	0.856	0.857	0.878	Pk Hr Factor	0.000	0.000	0.868	0.814	0.880

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City of San Bernardino
3rd Street
B/ Lankershim Avenue - Victoria Avenue
24 Hour Directional Classification Count

SBC001
Site Code: 999-18352

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/01/18	0	27	9	0	2	1	0	**1**	0	0	0	0	0	40
01:00	1	17	4	0	0	0	0	0	1	0	0	0	0	23
02:00	0	29	8	0	5	0	0	0	0	0	0	0	0	42
03:00	0	31	8	0	2	0	0	0	2	0	**1**	0	0	44
04:00	1	40	18	0	6	6	0	0	1	0	0	0	0	72
05:00	1	74	22	0	6	2	0	0	1	0	0	0	0	106
06:00	0	101	31	2	20	4	0	0	0	0	0	0	0	158
07:00	0	162	52	1	12	1	0	1	2	0	0	0	0	231
08:00	0	193	44	**6**	14	2	**1**	1	2	0	0	0	0	263
09:00	1	166	39	2	15	6	0	1	4	0	0	0	0	234
10:00	0	185	31	1	15	3	1	0	**6**	0	0	0	0	242
11:00	**2**	**249**	**63**	2	**23**	**7**	0	1	0	0	0	0	0	**347**
12 PM	2	251	56	2	14	**8**	0	3	4	0	0	0	0	340
13:00	5	233	49	**6**	22	5	0	3	2	0	0	0	0	325
14:00	1	292	79	0	29	3	0	5	2	0	0	0	0	411
15:00	4	487	89	2	24	2	0	4	2	0	0	0	0	614
16:00	8	641	137	3	35	6	**2**	**8**	3	**1**	0	0	0	844
17:00	**13**	**836**	**143**	0	**40**	2	0	7	**5**	0	**1**	0	0	**1047**
18:00	2	341	51	0	16	3	0	0	2	0	0	0	0	415
19:00	1	180	31	2	6	0	0	0	0	1	0	0	0	221
20:00	0	152	30	0	12	1	0	0	2	0	0	0	0	197
21:00	1	86	16	1	5	1	0	0	0	0	0	0	0	110
22:00	0	69	7	0	3	1	0	0	1	0	0	0	0	81
23:00	1	39	6	0	0	1	0	0	0	0	0	0	0	47
Total	44	4881	1023	30	326	65	4	35	42	2	2	0	0	6454
Percent	0.7%	75.6%	15.9%	0.5%	5.1%	1.0%	0.1%	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	11:00	08:00	11:00	11:00	08:00	00:00	10:00		03:00			11:00
Vol.	2	249	63	6	23	7	1	1	6		1			347
PM Peak	17:00	17:00	17:00	13:00	17:00	12:00	16:00	16:00	17:00	16:00	17:00			17:00
Vol.	13	836	143	6	40	8	2	8	5	1	1			1047
Grand Total	44	4881	1023	30	326	65	4	35	42	2	2	0	0	6454
Percent	0.7%	75.6%	15.9%	0.5%	5.1%	1.0%	0.1%	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%	

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City of San Bernardino
3rd Street
B/ Lankershim Avenue - Victoria Avenue
24 Hour Directional Classification Count

SBC001
Site Code: 999-18352

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/01/18	1	26	6	0	1	1	0	0	1	0	0	0	0	36
01:00	0	13	5	2	0	2	0	0	0	0	0	0	0	22
02:00	0	29	3	1	1	0	0	0	0	0	0	0	0	34
03:00	1	24	4	0	2	1	0	0	0	0	0	0	0	32
04:00	0	57	19	0	5	1	0	0	0	0	0	0	0	82
05:00	0	87	27	0	22	2	0	0	1	0	0	0	0	139
06:00	**5**	220	108	1	30	**9**	0	3	0	0	0	0	0	376
07:00	5	**553**	**133**	**3**	**57**	2	0	**5**	1	0	0	0	0	**759**
08:00	2	283	89	2	38	4	0	4	**2**	0	0	0	0	424
09:00	2	153	39	1	18	5	0	1	1	0	0	0	0	220
10:00	3	145	44	3	16	7	0	1	1	0	0	0	0	220
11:00	0	152	54	2	17	2	0	1	1	0	0	0	0	229
12 PM	2	192	54	1	25	3	0	2	1	0	0	0	0	280
13:00	0	197	58	3	22	3	0	1	1	0	0	0	0	285
14:00	3	172	61	2	23	**5**	0	1	3	0	0	0	0	270
15:00	**5**	**224**	**73**	2	**35**	5	0	2	1	0	0	0	0	**347**
16:00	1	192	58	**5**	25	2	0	**3**	**4**	0	0	0	0	290
17:00	1	171	48	2	16	3	0	2	0	0	0	0	0	243
18:00	2	110	32	0	15	3	0	1	1	0	0	0	0	164
19:00	1	100	24	0	9	2	0	1	0	0	0	0	0	137
20:00	1	66	27	0	4	1	0	0	0	0	0	0	0	99
21:00	0	57	15	0	5	0	0	1	0	0	0	0	0	78
22:00	0	54	16	0	2	0	0	0	0	0	0	0	0	72
23:00	3	34	8	0	1	3	0	0	1	0	0	0	0	50
Total	38	3311	1005	30	389	66	0	29	20	0	0	0	0	4888
Percent	0.8%	67.7%	20.6%	0.6%	8.0%	1.4%	0.0%	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	07:00	07:00	07:00	07:00	06:00		07:00	08:00					07:00
Vol.	5	553	133	3	57	9		5	2					759
PM Peak	15:00	15:00	15:00	16:00	15:00	14:00		16:00	16:00					15:00
Vol.	5	224	73	5	35	5		3	4					347
Grand Total	38	3311	1005	30	389	66	0	29	20	0	0	0	0	4888
Percent	0.8%	67.7%	20.6%	0.6%	8.0%	1.4%	0.0%	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	

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24 Hour Directional Classification Count

SBC001
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Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/01/18	1	53	15	0	3	2	0	1	1	0	0	0	0	76
01:00	1	30	9	2	0	2	0	0	1	0	0	0	0	45
02:00	0	58	11	1	6	0	0	0	0	0	0	0	0	76
03:00	1	55	12	0	4	1	0	0	2	0	**1**	0	0	76
04:00	1	97	37	0	11	7	0	0	1	0	0	0	0	154
05:00	1	161	49	0	28	4	0	0	2	0	0	0	0	245
06:00	**5**	321	139	3	50	**13**	0	3	0	0	0	0	0	534
07:00	5	**715**	**185**	4	**69**	3	0	**6**	3	0	0	0	0	**990**
08:00	2	476	133	**8**	52	6	**1**	5	4	0	0	0	0	687
09:00	3	319	78	3	33	11	0	2	5	0	0	0	0	454
10:00	3	330	75	4	31	10	1	1	**7**	0	0	0	0	462
11:00	2	401	117	4	40	9	0	2	1	0	0	0	0	576
12 PM	4	443	110	3	39	**11**	0	5	5	0	0	0	0	620
13:00	5	430	107	**9**	44	8	0	4	3	0	0	0	0	610
14:00	4	464	140	2	52	8	0	6	5	0	0	0	0	681
15:00	9	711	162	4	59	7	0	6	3	0	0	0	0	961
16:00	9	833	**195**	8	**60**	8	**2**	**11**	**7**	**1**	0	0	0	1134
17:00	**14**	**1007**	191	2	56	5	0	9	5	0	**1**	0	0	**1290**
18:00	4	451	83	0	31	6	0	1	3	0	0	0	0	579
19:00	2	280	55	2	15	2	0	1	0	1	0	0	0	358
20:00	1	218	57	0	16	2	0	0	2	0	0	0	0	296
21:00	1	143	31	1	10	1	0	1	0	0	0	0	0	188
22:00	0	123	23	0	5	1	0	0	1	0	0	0	0	153
23:00	4	73	14	0	1	4	0	0	1	0	0	0	0	97
Total	82	8192	2028	60	715	131	4	64	62	2	2	0	0	11342
Percent	0.7%	72.2%	17.9%	0.5%	6.3%	1.2%	0.0%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	07:00	07:00	08:00	07:00	06:00	08:00	07:00	10:00		03:00			07:00
Vol.	5	715	185	8	69	13	1	6	7		1			990
PM Peak	17:00	17:00	16:00	13:00	16:00	12:00	16:00	16:00	16:00	16:00	17:00			17:00
Vol.	14	1007	195	9	60	11	2	11	7	1	1			1290
Grand Total	82	8192	2028	60	715	131	4	64	62	2	2	0	0	11342
Percent	0.7%	72.2%	17.9%	0.5%	6.3%	1.2%	0.0%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

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City of San Bernardino
3rd Street
B/ Palm Avenue - Victoria Avenue
24 Hour Directional Volume Count

SBC001
Site Code: 999-18385

Start	5/24/2018	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		22	85			15	44				
12:15		14	89			18	45				
12:30		17	77			20	58				
12:45		24	87	77	338	10	59	63	206	140	544
01:00		7	88			23	47				
01:15		19	93			11	45				
01:30		14	85			1	52				
01:45		13	75	53	341	16	43	51	187	104	528
02:00		14	104			14	53				
02:15		9	102			20	**68**				
02:30		11	88			5	**58**				
02:45		8	86	42	380	4	**58**	43	237	85	617
03:00		16	100			13	**57**				
03:15		35	112			12	68				
03:30		43	139			17	53				
03:45		19	128	113	479	33	59	75	237	188	716
04:00		22	117			8	51				
04:15		38	**165**			25	57				
04:30		42	**159**			28	54				
04:45		29	**211**	131	652	21	53	82	215	213	867
05:00		47	**169**			31	60				
05:15		74	147			27	52				
05:30		99	148			38	55				
05:45		54	104	274	568	38	51	134	218	408	786
06:00		42	82			43	40				
06:15		67	81			50	44				
06:30		84	75			60	27				
06:45		76	59	269	297	**69**	36	222	147	491	444
07:00		65	66			**81**	39				
07:15		77	59			**75**	48				
07:30		67	40			**87**	34				
07:45		59	52	268	217	63	31	306	152	574	369
08:00		52	44			44	24				
08:15		54	50			38	37				
08:30		68	41			40	30				
08:45		71	31	245	166	42	14	164	105	409	271
09:00		52	32			45	28				
09:15		64	36			28	19				
09:30		63	33			32	25				
09:45		64	28	243	129	43	30	148	102	391	231
10:00		57	33			46	38				
10:15		80	33			41	24				
10:30		60	25			51	23				
10:45		79	28	276	119	32	22	170	107	446	226
11:00		**71**	23			38	18				
11:15		**70**	9			53	14				
11:30		**79**	20			36	10				
11:45		**97**	13	317	65	47	12	174	54	491	119
Total		2308	3751	2308	3751	1632	1967	1632	1967	3940	5718
Combined Total		6059		6059		3599		3599		9658	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	317	-	-	-	312	-	-	-	-	-
P.H.F.		0.817				0.897					
PM Peak	-	-	04:15	-	-	-	02:15	-	-	-	-
Vol.	-	-	704	-	-	-	241	-	-	-	-
P.H.F.			0.834				0.886				
Percentage		38.1%	61.9%			45.3%	54.7%				
ADT/AADT		ADT 9,658		AADT 9,658							

Counts Unlimited, Inc.

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City of San Bernardino
3rd Street
B/ Lankershim Avenue - Sterling Avenue
24 Hour Directional Volume Count

SBC003
Site Code: 999-18385

Start	5/24/2018	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		18	114			12	62				
12:15		18	97			11	66				
12:30		18	98			13	68				
12:45		6	85	60	394	11	98	47	294	107	688
01:00		11	114			7	86				
01:15		10	92			8	85				
01:30		9	109			5	72				
01:45		7	95	37	410	4	79	24	322	61	732
02:00		7	105			6	75				
02:15		6	116			15	64				
02:30		10	112			11	96				
02:45		7	118	30	451	11	90	43	325	73	776
03:00		4	150			3	82				
03:15		13	120			12	66				
03:30		16	140			12	**105**				
03:45		24	182	57	592	20	**88**	47	341	104	933
04:00		10	178			32	**74**				
04:15		10	192			20	**82**				
04:30		25	**257**			23	65				
04:45		23	**212**	68	839	24	89	99	310	167	1149
05:00		20	**360**			18	64				
05:15		20	**243**			27	70				
05:30		50	234			42	65				
05:45		34	186	124	1023	61	68	148	267	272	1290
06:00		26	148			55	52				
06:15		30	107			69	55				
06:30		50	89			107	48				
06:45		60	84	166	428	139	47	370	202	536	630
07:00		61	68			**142**	45				
07:15		46	82			**215**	40				
07:30		77	58			**202**	36				
07:45		56	65	240	273	**214**	50	773	171	1013	444
08:00		58	62			135	28				
08:15		60	50			91	33				
08:30		60	55			71	31				
08:45		54	35	232	202	74	29	371	121	603	323
09:00		66	53			54	25				
09:15		57	51			67	24				
09:30		61	35			53	26				
09:45		64	29	248	168	59	33	233	108	481	276
10:00		68	27			68	35				
10:15		70	40			50	31				
10:30		66	36			58	28				
10:45		70	20	274	123	70	24	246	118	520	241
11:00		**81**	28			52	15				
11:15		**83**	13			57	20				
11:30		**80**	14			59	18				
11:45		**85**	16	329	71	77	15	245	68	574	139
Total		1865	4974	1865	4974	2646	2647	2646	2647	4511	7621
Combined Total		6839		6839		5293		5293		12132	
AM Peak	-	11:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	329	-	-	-	773	-	-	-	-	-
P.H.F.		0.968				0.899					
PM Peak	-	-	04:30	-	-	-	03:30	-	-	-	-
Vol.	-	-	1072	-	-	-	349	-	-	-	-
P.H.F.			0.744				0.831				
Percentage		27.3%	72.7%			50.0%	50.0%				
ADT/AADT		ADT 12,132		AADT 12,132							

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City of Redlands
Alabama Street
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

RED003
Site Code: 067-18128

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/21/18	0	53	9	0	2	4	0	3	1	0	6	0	0	78
01:00	1	39	3	0	1	4	0	1	1	0	3	0	0	53
02:00	3	69	13	0	2	8	0	0	0	0	2	0	0	97
03:00	2	53	13	1	2	9	0	0	4	0	6	0	0	90
04:00	2	103	19	1	2	10	0	3	**10**	0	9	0	0	159
05:00	4	76	14	2	4	12	**1**	0	1	0	**13**	0	0	127
06:00	5	113	22	2	14	**25**	0	10	1	0	9	0	0	201
07:00	**7**	229	44	**3**	**26**	15	0	**13**	0	0	8	0	0	345
08:00	4	162	43	1	22	12	0	8	2	0	7	0	0	261
09:00	3	190	40	2	14	9	0	3	1	0	7	0	0	269
10:00	4	222	64	2	15	14	0	3	2	0	13	0	0	339
11:00	5	**303**	**65**	0	19	16	0	9	3	0	10	0	0	**430**
12 PM	4	357	90	2	30	9	**2**	9	2	1	7	**1**	0	514
13:00	7	398	94	2	28	**20**	0	5	**6**	0	10	1	0	571
14:00	5	527	116	1	28	13	1	9	1	0	3	0	0	704
15:00	8	651	159	**3**	39	15	2	9	2	1	4	0	0	893
16:00	**10**	637	153	1	39	15	0	8	2	**2**	**14**	1	**2**	884
17:00	8	**740**	**163**	1	**44**	11	0	**10**	3	0	9	0	0	**989**
18:00	2	464	95	1	22	6	0	5	2	1	2	0	0	600
19:00	0	289	59	0	11	5	0	0	1	0	0	0	0	365
20:00	0	236	35	0	12	3	0	3	0	0	2	0	0	291
21:00	3	164	28	1	2	6	0	0	1	0	3	0	0	208
22:00	1	167	23	0	2	2	0	0	2	0	5	0	0	202
23:00	1	87	15	0	1	3	0	0	0	0	3	0	0	110
Total	89	6329	1379	26	381	246	6	111	48	5	155	3	2	8780
Percent	1.0%	72.1%	15.7%	0.3%	4.3%	2.8%	0.1%	1.3%	0.5%	0.1%	1.8%	0.0%	0.0%	
AM Peak	07:00	11:00	11:00	07:00	07:00	06:00	05:00	07:00	04:00		05:00			11:00
Vol.	7	303	65	3	26	25	1	13	10		13			430
PM Peak	16:00	17:00	17:00	15:00	17:00	13:00	12:00	17:00	13:00	16:00	16:00	12:00	16:00	17:00
Vol.	10	740	163	3	44	20	2	10	6	2	14	1	2	989
Grand Total	89	6329	1379	26	381	246	6	111	48	5	155	3	2	8780
Percent	1.0%	72.1%	15.7%	0.3%	4.3%	2.8%	0.1%	1.3%	0.5%	0.1%	1.8%	0.0%	0.0%	

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City of Redlands
Alabama Street
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

RED003
Site Code: 067-18128

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/21/18	1	19	5	0	0	4	0	0	2	0	4	0	0	35
01:00	0	18	1	0	0	3	0	0	3	0	1	0	0	26
02:00	1	16	4	0	1	3	0	0	**7**	0	8	0	0	40
03:00	2	92	11	0	2	7	**1**	0	5	0	**12**	0	0	132
04:00	**4**	122	25	0	9	9	0	2	4	0	11	0	0	186
05:00	2	175	45	1	10	8	1	2	2	0	7	0	0	253
06:00	3	303	64	0	16	8	1	2	0	0	6	0	0	403
07:00	3	**573**	**115**	0	**36**	**15**	1	**10**	0	**1**	6	0	0	**760**
08:00	2	299	62	**3**	25	14	0	4	4	0	5	0	0	418
09:00	1	198	55	2	8	14	0	3	0	0	8	0	0	289
10:00	3	239	48	1	16	10	0	1	3	0	8	0	0	329
11:00	4	200	55	3	15	14	1	4	3	1	2	0	0	302
12 PM	**6**	290	61	1	17	**17**	0	1	2	0	**8**	0	0	403
13:00	4	261	39	0	23	16	0	**7**	**10**	0	2	0	0	362
14:00	1	286	**66**	1	18	14	0	3	3	0	2	0	0	394
15:00	4	348	63	3	**26**	14	0	1	4	0	7	0	0	470
16:00	2	345	65	**4**	10	9	0	5	5	0	7	0	0	452
17:00	0	**410**	55	1	10	7	0	3	1	**1**	6	0	0	**494**
18:00	1	247	42	0	8	5	0	0	0	0	1	0	0	304
19:00	0	104	23	0	6	2	0	0	2	0	1	0	0	138
20:00	2	106	16	0	3	6	0	0	1	0	2	0	0	136
21:00	0	71	10	1	2	3	0	0	1	0	2	0	0	90
22:00	0	66	10	1	1	0	0	0	2	0	0	0	0	80
23:00	2	46	6	0	1	5	0	0	0	0	2	0	**1**	63
Total	48	4834	946	22	263	207	5	48	64	3	118	0	1	6559
Percent	0.7%	73.7%	14.4%	0.3%	4.0%	3.2%	0.1%	0.7%	1.0%	0.0%	1.8%	0.0%	0.0%	
AM Peak	04:00	07:00	07:00	08:00	07:00	07:00	03:00	07:00	02:00	07:00	03:00			07:00
Vol.	4	573	115	3	36	15	1	10	7	1	12			760
PM Peak	12:00	17:00	14:00	16:00	15:00	12:00		13:00	13:00	17:00	12:00		23:00	17:00
Vol.	6	410	66	4	26	17		7	10	1	8		1	494
Grand Total	48	4834	946	22	263	207	5	48	64	3	118	0	1	6559
Percent	0.7%	73.7%	14.4%	0.3%	4.0%	3.2%	0.1%	0.7%	1.0%	0.0%	1.8%	0.0%	0.0%	

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City of Redlands
Alabama Street
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

RED003
Site Code: 067-18128

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/21/18	1	72	14	0	2	8	0	3	3	0	10	0	0	113
01:00	1	57	4	0	1	7	0	1	4	0	4	0	0	79
02:00	4	85	17	0	3	11	0	0	7	0	10	0	0	137
03:00	4	145	24	1	4	16	1	0	9	0	18	0	0	222
04:00	6	225	44	1	11	19	0	5	**14**	0	20	0	0	345
05:00	6	251	59	3	14	20	**2**	2	3	0	20	0	0	380
06:00	8	416	86	2	30	**33**	1	12	1	0	15	0	0	604
07:00	**10**	**802**	**159**	3	**62**	30	1	**23**	0	**1**	14	0	0	**1105**
08:00	6	461	105	**4**	47	26	0	12	6	0	12	0	0	679
09:00	4	388	95	4	22	23	0	6	1	0	15	0	0	558
10:00	7	461	112	3	31	24	0	4	5	0	**21**	0	0	668
11:00	9	503	120	3	34	30	1	13	6	1	12	0	0	732
12 PM	10	647	151	3	47	26	**2**	10	4	1	15	**1**	0	917
13:00	11	659	133	2	51	**36**	0	12	**16**	0	12	1	0	933
14:00	6	813	182	2	46	27	1	12	4	0	5	0	0	1098
15:00	**12**	999	**222**	**6**	**65**	29	2	10	6	1	11	0	0	1363
16:00	12	982	218	5	49	24	0	**13**	7	**2**	**21**	1	**2**	1336
17:00	8	**1150**	218	2	54	18	0	13	4	1	15	0	0	**1483**
18:00	3	711	137	1	30	11	0	5	2	1	3	0	0	904
19:00	0	393	82	0	17	7	0	0	3	0	1	0	0	503
20:00	2	342	51	0	15	9	0	3	1	0	4	0	0	427
21:00	3	235	38	2	4	9	0	0	2	0	5	0	0	298
22:00	1	233	33	1	3	2	0	0	4	0	5	0	0	282
23:00	3	133	21	0	2	8	0	0	0	0	5	0	1	173
Total	137	11163	2325	48	644	453	11	159	112	8	273	3	3	15339
Percent	0.9%	72.8%	15.2%	0.3%	4.2%	3.0%	0.1%	1.0%	0.7%	0.1%	1.8%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	08:00	07:00	06:00	05:00	07:00	04:00	07:00	10:00			07:00
Vol.	10	802	159	4	62	33	2	23	14	1	21			1105
PM Peak	15:00	17:00	15:00	15:00	15:00	13:00	12:00	16:00	13:00	16:00	16:00	12:00	16:00	17:00
Vol.	12	1150	222	6	65	36	2	13	16	2	21	1	2	1483
Grand Total	137	11163	2325	48	644	453	11	159	112	8	273	3	3	15339
Percent	0.9%	72.8%	15.2%	0.3%	4.2%	3.0%	0.1%	1.0%	0.7%	0.1%	1.8%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ SR-210 Northbound Off Ramp - Victoria Avenue
24 Hour Directional Classification Count

HLD005
Site Code: 057-16653

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	2	350	36	0	6	0	0	0	0	0	0	0	0	394
01:00	0	224	42	0	5	0	0	0	1	0	0	0	0	272
02:00	0	240	35	0	0	0	0	0	0	0	0	0	0	275
03:00	1	156	36	0	3	0	0	0	1	0	0	0	0	197
04:00	0	210	50	1	6	0	0	1	0	0	0	0	0	268
05:00	2	295	65	2	15	3	0	2	**3**	0	0	0	0	387
06:00	2	504	107	5	32	**5**	0	1	1	**1**	0	0	0	658
07:00	**6**	680	150	11	43	5	0	**6**	1	0	**1**	0	0	903
08:00	4	747	148	10	37	2	0	4	2	0	0	0	0	954
09:00	4	761	156	**19**	40	0	0	3	1	0	0	0	0	984
10:00	5	812	**201**	14	36	2	0	3	3	1	0	0	0	1077
11:00	0	**884**	184	15	**48**	5	0	6	2	0	0	0	0	**1144**
12 PM	6	1036	203	**16**	**55**	**4**	**1**	**4**	0	0	0	0	0	**1325**
13:00	2	1001	190	9	47	1	0	2	0	0	0	0	0	1252
14:00	5	**1052**	**209**	7	43	2	0	2	**2**	0	0	0	0	1322
15:00	4	955	182	7	43	1	0	3	2	0	0	0	0	1197
16:00	**9**	924	181	11	39	4	0	1	1	0	0	0	0	1170
17:00	3	1035	195	9	38	0	0	0	0	0	0	0	0	1280
18:00	7	981	196	4	24	4	0	2	0	0	0	0	0	1218
19:00	4	852	156	12	30	2	0	1	0	0	0	0	0	1057
20:00	4	828	147	4	19	1	0	0	0	0	0	0	0	1003
21:00	3	728	142	5	19	1	0	2	0	0	0	0	0	900
22:00	4	633	116	3	8	3	0	2	0	0	0	0	0	769
23:00	0	455	60	0	7	1	0	0	0	0	0	0	0	523
Total	77	16343	3187	164	643	46	1	45	20	2	1	0	0	20529
Percent	0.4%	79.6%	15.5%	0.8%	3.1%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	11:00	10:00	09:00	11:00	06:00		07:00	05:00	06:00	07:00			11:00
Vol.	6	884	201	19	48	5		6	3	1	1			1144
PM Peak	16:00	14:00	14:00	12:00	12:00	12:00	12:00	12:00	14:00					12:00
Vol.	9	1052	209	16	55	4	1	4	2					1325
Grand Total	77	16343	3187	164	643	46	1	45	20	2	1	0	0	20529
Percent	0.4%	79.6%	15.5%	0.8%	3.1%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ SR-210 Northbound Off Ramp - Victoria Avenue
24 Hour Directional Classification Count

HLD005
Site Code: 057-16653

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	513	98	1	9	0	0	0	0	0	0	0	0	621
01:00	1	462	85	0	4	1	0	0	0	0	0	0	0	553
02:00	3	437	74	0	4	3	0	0	0	0	0	0	0	521
03:00	1	406	62	1	6	0	0	0	0	0	0	0	0	476
04:00	3	386	90	3	12	4	0	0	0	0	0	0	0	498
05:00	1	371	101	5	12	0	0	**3**	2	0	0	0	0	495
06:00	1	583	131	13	25	4	0	0	1	0	0	0	0	758
07:00	2	617	143	16	31	**5**	0	1	**5**	0	0	0	0	820
08:00	2	558	151	**20**	50	4	0	1	3	0	0	0	0	789
09:00	**5**	549	149	19	40	2	0	2	1	0	0	0	0	767
10:00	2	619	162	15	52	3	0	1	2	0	0	0	0	856
11:00	1	**707**	**215**	15	**55**	3	0	2	1	0	0	0	0	**999**
12 PM	3	862	197	15	70	**4**	0	3	**3**	0	0	0	0	1157
13:00	**6**	842	236	**22**	70	2	0	**4**	2	0	0	0	0	1184
14:00	4	1029	257	18	**72**	3	0	4	0	0	0	0	0	1387
15:00	5	965	247	18	58	3	0	3	0	0	0	0	0	1299
16:00	1	**1045**	**283**	15	59	3	0	2	2	0	**1**	0	0	**1411**
17:00	2	979	238	13	48	2	0	0	1	0	0	0	0	1283
18:00	3	922	225	14	43	0	0	0	0	0	0	0	0	1207
19:00	1	762	175	10	39	1	0	0	0	0	0	0	0	988
20:00	1	750	180	6	29	0	0	0	0	0	0	0	0	966
21:00	0	655	146	3	29	0	0	0	0	0	0	0	0	833
22:00	2	639	166	8	43	0	0	0	0	0	0	0	0	858
23:00	1	615	147	7	18	1	0	0	0	0	0	0	0	789
Total	51	16273	3958	257	878	48	0	26	23	0	1	0	0	21515
Percent	0.2%	75.6%	18.4%	1.2%	4.1%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	11:00	08:00	11:00	07:00		05:00	07:00					11:00
Vol.	5	707	215	20	55	5		3	5					999
PM Peak	13:00	16:00	16:00	13:00	14:00	12:00		13:00	12:00		16:00			16:00
Vol.	6	1045	283	22	72	4		4	3		1			1411
Grand Total	51	16273	3958	257	878	48	0	26	23	0	1	0	0	21515
Percent	0.2%	75.6%	18.4%	1.2%	4.1%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ SR-210 Northbound Off Ramp - Victoria Avenue
24 Hour Directional Classification Count

HLD005
Site Code: 057-16653

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	2	863	134	1	15	0	0	0	0	0	0	0	0	1015
01:00	1	686	127	0	9	1	0	0	1	0	0	0	0	825
02:00	3	677	109	0	4	3	0	0	0	0	0	0	0	796
03:00	2	562	98	1	9	0	0	0	1	0	0	0	0	673
04:00	3	596	140	4	18	4	0	1	0	0	0	0	0	766
05:00	3	666	166	7	27	3	0	5	5	0	0	0	0	882
06:00	3	1087	238	18	57	9	0	1	2	**1**	0	0	0	1416
07:00	8	1297	293	27	74	**10**	0	7	**6**	0	**1**	0	0	1723
08:00	6	1305	299	30	87	6	0	5	5	0	0	0	0	1743
09:00	**9**	1310	305	**38**	80	2	0	5	2	0	0	0	0	1751
10:00	7	1431	363	29	88	5	0	4	5	1	0	0	0	1933
11:00	1	**1591**	**399**	30	**103**	8	0	**8**	3	0	0	0	0	**2143**
12 PM	9	1898	400	**31**	**125**	**8**	**1**	**7**	**3**	0	0	0	0	2482
13:00	8	1843	426	31	117	3	0	6	2	0	0	0	0	2436
14:00	9	**2081**	**466**	25	115	5	0	6	2	0	0	0	0	**2709**
15:00	9	1920	429	25	101	4	0	6	2	0	0	0	0	2496
16:00	**10**	1969	464	26	98	7	0	3	3	0	**1**	0	0	2581
17:00	5	2014	433	22	86	2	0	0	1	0	0	0	0	2563
18:00	10	1903	421	18	67	4	0	2	0	0	0	0	0	2425
19:00	5	1614	331	22	69	3	0	1	0	0	0	0	0	2045
20:00	5	1578	327	10	48	1	0	0	0	0	0	0	0	1969
21:00	3	1383	288	8	48	1	0	2	0	0	0	0	0	1733
22:00	6	1272	282	11	51	3	0	2	0	0	0	0	0	1627
23:00	1	1070	207	7	25	2	0	0	0	0	0	0	0	1312
Total	128	32616	7145	421	1521	94	1	71	43	2	2	0	0	42044
Percent	0.3%	77.6%	17.0%	1.0%	3.6%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	11:00	09:00	11:00	07:00		11:00	07:00	06:00	07:00			11:00
Vol.	9	1591	399	38	103	10		8	6	1	1			2143
PM Peak	16:00	14:00	14:00	12:00	12:00	12:00	12:00	12:00	12:00		16:00			14:00
Vol.	10	2081	466	31	125	8	1	7	3		1			2709
Grand Total	128	32616	7145	421	1521	94	1	71	43	2	2	0	0	42044
Percent	0.3%	77.6%	17.0%	1.0%	3.6%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ Sterling Avenue - SR-210 Southbound Off Ramp
24 Hour Directional Classification Count

HLD004
Site Code: 057-16653

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	56	16	0	6	0	0	0	**1**	0	0	0	0	79
01:00	0	38	11	0	3	0	0	0	0	0	0	0	0	52
02:00	0	42	10	0	0	0	0	0	0	0	0	0	0	52
03:00	0	32	6	0	4	0	0	0	0	0	0	0	0	42
04:00	0	40	16	0	1	0	0	0	0	0	0	0	0	57
05:00	**2**	47	13	1	2	**2**	0	1	0	0	0	0	0	68
06:00	0	87	24	2	6	2	0	0	0	0	0	0	0	121
07:00	1	212	76	9	14	2	0	1	0	0	0	0	0	315
08:00	1	239	70	**13**	25	0	0	0	1	0	0	0	0	349
09:00	1	293	72	6	15	2	0	0	1	0	0	0	0	390
10:00	1	363	98	6	22	1	0	**2**	0	0	0	0	0	493
11:00	0	**389**	**126**	6	**27**	2	0	0	0	0	0	0	0	**550**
12 PM	0	492	115	**8**	26	**1**	0	1	0	0	0	0	0	643
13:00	1	460	103	8	30	0	0	1	0	0	0	0	0	603
14:00	1	543	140	6	**33**	0	0	**4**	0	0	0	0	0	727
15:00	**4**	541	**149**	6	19	0	0	1	**3**	0	0	0	0	723
16:00	0	**589**	113	6	28	0	0	1	0	0	0	0	0	**737**
17:00	0	564	94	5	18	1	0	0	0	0	0	0	0	682
18:00	1	404	106	6	17	1	0	1	0	0	0	0	0	536
19:00	1	361	78	4	15	0	0	0	0	0	0	0	0	459
20:00	0	309	58	2	12	0	0	0	0	0	0	0	0	381
21:00	0	222	41	3	8	0	0	0	0	0	0	0	0	274
22:00	0	142	29	2	2	0	0	1	0	0	0	0	0	176
23:00	0	101	14	0	2	0	0	0	0	0	0	0	0	117
Total	14	6566	1578	99	335	14	0	14	6	0	0	0	0	8626
Percent	0.2%	76.1%	18.3%	1.1%	3.9%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	05:00	11:00	11:00	08:00	11:00	05:00		10:00	00:00					11:00
Vol.	2	389	126	13	27	2		2	1					550
PM Peak	15:00	16:00	15:00	12:00	14:00	12:00		14:00	15:00					16:00
Vol.	4	589	149	8	33	1		4	3					737
Grand Total	14	6566	1578	99	335	14	0	14	6	0	0	0	0	8626
Percent	0.2%	76.1%	18.3%	1.1%	3.9%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ Sterling Avenue - SR-210 Southbound Off Ramp
24 Hour Directional Classification Count

HLD004
Site Code: 057-16653

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	92	13	0	0	0	0	0	0	0	0	0	0	105
01:00	0	62	5	0	0	0	0	1	0	0	0	0	0	68
02:00	1	54	9	1	0	0	0	0	0	0	0	0	0	65
03:00	**4**	51	9	0	0	0	0	0	0	0	0	0	0	64
04:00	0	65	12	3	0	1	0	0	1	0	0	0	0	82
05:00	0	93	8	5	4	0	0	0	1	0	0	0	0	111
06:00	1	132	26	7	6	0	0	0	1	0	0	0	0	173
07:00	2	300	69	9	10	**2**	0	1	0	0	0	0	0	393
08:00	2	381	66	**12**	**17**	0	0	2	**3**	0	0	0	0	483
09:00	1	406	70	9	12	0	0	0	0	0	0	0	0	498
10:00	3	375	**84**	9	13	1	0	0	0	0	0	0	0	485
11:00	3	**459**	82	9	14	1	0	**4**	0	0	0	0	0	**572**
12 PM	1	512	90	7	18	0	0	**1**	**1**	0	0	0	0	630
13:00	0	520	87	12	15	1	0	1	1	0	0	0	0	637
14:00	**4**	**589**	**119**	9	**19**	**4**	0	1	0	0	0	0	0	**745**
15:00	3	546	93	8	7	2	0	0	1	0	0	0	0	660
16:00	2	551	101	**15**	13	2	0	1	1	0	0	0	0	686
17:00	1	500	98	7	3	0	0	0	0	0	0	0	0	609
18:00	0	452	68	9	4	0	0	0	0	0	0	0	0	533
19:00	3	402	78	5	6	1	0	1	0	0	0	0	0	496
20:00	0	338	47	4	1	0	0	0	0	0	0	0	0	390
21:00	2	228	31	5	6	0	0	0	0	0	0	0	0	272
22:00	0	136	24	3	1	0	0	0	0	0	0	0	0	164
23:00	0	162	23	0	1	0	0	0	0	0	0	0	0	186
Total	33	7406	1312	148	170	15	0	13	10	0	0	0	0	9107
Percent	0.4%	81.3%	14.4%	1.6%	1.9%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	03:00	11:00	10:00	08:00	08:00	07:00		11:00	08:00					11:00
Vol.	4	459	84	12	17	2		4	3					572
PM Peak	14:00	14:00	14:00	16:00	14:00	14:00		12:00	12:00					14:00
Vol.	4	589	119	15	19	4		1	1					745
Grand Total	33	7406	1312	148	170	15	0	13	10	0	0	0	0	9107
Percent	0.4%	81.3%	14.4%	1.6%	1.9%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ Sterling Avenue - SR-210 Southbound Off Ramp
24 Hour Directional Classification Count

HLD004
Site Code: 057-16653

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	148	29	0	6	0	0	0	1	0	0	0	0	184
01:00	0	100	16	0	3	0	0	1	0	0	0	0	0	120
02:00	1	96	19	1	0	0	0	0	0	0	0	0	0	117
03:00	**4**	83	15	0	4	0	0	0	0	0	0	0	0	106
04:00	0	105	28	3	1	1	0	0	1	0	0	0	0	139
05:00	2	140	21	6	6	2	0	1	1	0	0	0	0	179
06:00	1	219	50	9	12	2	0	0	1	0	0	0	0	294
07:00	3	512	145	18	24	**4**	0	2	0	0	0	0	0	708
08:00	3	620	136	**25**	**42**	0	0	2	**4**	0	0	0	0	832
09:00	2	699	142	15	27	2	0	0	1	0	0	0	0	888
10:00	4	738	182	15	35	2	0	2	0	0	0	0	0	978
11:00	3	**848**	**208**	15	41	3	0	**4**	0	0	0	0	0	**1122**
12 PM	1	1004	205	15	44	1	0	2	1	0	0	0	0	1273
13:00	1	980	190	20	45	1	0	2	1	0	0	0	0	1240
14:00	5	1132	**259**	15	**52**	**4**	0	**5**	0	0	0	0	0	**1472**
15:00	**7**	1087	242	14	26	2	0	1	**4**	0	0	0	0	1383
16:00	2	**1140**	214	**21**	41	2	0	2	1	0	0	0	0	1423
17:00	1	1064	192	12	21	1	0	0	0	0	0	0	0	1291
18:00	1	856	174	15	21	1	0	1	0	0	0	0	0	1069
19:00	4	763	156	9	21	1	0	1	0	0	0	0	0	955
20:00	0	647	105	6	13	0	0	0	0	0	0	0	0	771
21:00	2	450	72	8	14	0	0	0	0	0	0	0	0	546
22:00	0	278	53	5	3	0	0	1	0	0	0	0	0	340
23:00	0	263	37	0	3	0	0	0	0	0	0	0	0	303
Total	47	13972	2890	247	505	29	0	27	16	0	0	0	0	17733
Percent	0.3%	78.8%	16.3%	1.4%	2.8%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	03:00	11:00	11:00	08:00	08:00	07:00		11:00	08:00					11:00
Vol.	4	848	208	25	42	4		4	4					1122
PM Peak	15:00	16:00	14:00	16:00	14:00	14:00		14:00	15:00					14:00
Vol.	7	1140	259	21	52	4		5	4					1472
Grand Total	47	13972	2890	247	505	29	0	27	16	0	0	0	0	17733
Percent	0.3%	78.8%	16.3%	1.4%	2.8%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of San Bernardino
3rd Street
B/ Palm Avenue - Victoria Avenue
24 Hour Directional Volume Count

SBC001
Site Code: 999-18385

Start	5/24/2018	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		22	85			15	44				
12:15		14	89			18	45				
12:30		17	77			20	58				
12:45		24	87	77	338	10	59	63	206	140	544
01:00		7	88			23	47				
01:15		19	93			11	45				
01:30		14	85			1	52				
01:45		13	75	53	341	16	43	51	187	104	528
02:00		14	104			14	53				
02:15		9	102			20	**68**				
02:30		11	88			5	**58**				
02:45		8	86	42	380	4	**58**	43	237	85	617
03:00		16	100			13	**57**				
03:15		35	112			12	68				
03:30		43	139			17	53				
03:45		19	128	113	479	33	59	75	237	188	716
04:00		22	117			8	51				
04:15		38	**165**			25	57				
04:30		42	**159**			28	54				
04:45		29	**211**	131	652	21	53	82	215	213	867
05:00		47	**169**			31	60				
05:15		74	147			27	52				
05:30		99	148			38	55				
05:45		54	104	274	568	38	51	134	218	408	786
06:00		42	82			43	40				
06:15		67	81			50	44				
06:30		84	75			60	27				
06:45		76	59	269	297	**69**	36	222	147	491	444
07:00		65	66			**81**	39				
07:15		77	59			**75**	48				
07:30		67	40			**87**	34				
07:45		59	52	268	217	63	31	306	152	574	369
08:00		52	44			44	24				
08:15		54	50			38	37				
08:30		68	41			40	30				
08:45		71	31	245	166	42	14	164	105	409	271
09:00		52	32			45	28				
09:15		64	36			28	19				
09:30		63	33			32	25				
09:45		64	28	243	129	43	30	148	102	391	231
10:00		57	33			46	38				
10:15		80	33			41	24				
10:30		60	25			51	23				
10:45		79	28	276	119	32	22	170	107	446	226
11:00		**71**	23			38	18				
11:15		**70**	9			53	14				
11:30		**79**	20			36	10				
11:45		**97**	13	317	65	47	12	174	54	491	119
Total		2308	3751	2308	3751	1632	1967	1632	1967	3940	5718
Combined Total		6059		6059		3599		3599		9658	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	317	-	-	-	312	-	-	-	-	-
P.H.F.		0.817				0.897					
PM Peak	-	-	04:15	-	-	-	02:15	-	-	-	-
Vol.	-	-	704	-	-	-	241	-	-	-	-
P.H.F.			0.834				0.886				
Percentage		38.1%	61.9%			45.3%	54.7%				
ADT/AADT		ADT 9,658		AADT 9,658							

Counts Unlimited, Inc.

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City of San Bernardino
3rd Street
B/ Lankershim Avenue - Victoria Avenue
24 Hour Directional Classification Count

SBC001
Site Code: 999-18352

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/01/18	0	27	9	0	2	1	0	**1**	0	0	0	0	0	40
01:00	1	17	4	0	0	0	0	0	1	0	0	0	0	23
02:00	0	29	8	0	5	0	0	0	0	0	0	0	0	42
03:00	0	31	8	0	2	0	0	0	2	0	**1**	0	0	44
04:00	1	40	18	0	6	6	0	0	1	0	0	0	0	72
05:00	1	74	22	0	6	2	0	0	1	0	0	0	0	106
06:00	0	101	31	2	20	4	0	0	0	0	0	0	0	158
07:00	0	162	52	1	12	1	0	1	2	0	0	0	0	231
08:00	0	193	44	**6**	14	2	**1**	1	2	0	0	0	0	263
09:00	1	166	39	2	15	6	0	1	4	0	0	0	0	234
10:00	0	185	31	1	15	3	1	0	**6**	0	0	0	0	242
11:00	**2**	**249**	**63**	2	**23**	**7**	0	1	0	0	0	0	0	**347**
12 PM	2	251	56	2	14	**8**	0	3	4	0	0	0	0	340
13:00	5	233	49	**6**	22	5	0	3	2	0	0	0	0	325
14:00	1	292	79	0	29	3	0	5	2	0	0	0	0	411
15:00	4	487	89	2	24	2	0	4	2	0	0	0	0	614
16:00	8	641	137	3	35	6	**2**	**8**	3	**1**	0	0	0	844
17:00	**13**	**836**	**143**	0	**40**	2	0	7	**5**	0	**1**	0	0	**1047**
18:00	2	341	51	0	16	3	0	0	2	0	0	0	0	415
19:00	1	180	31	2	6	0	0	0	0	1	0	0	0	221
20:00	0	152	30	0	12	1	0	0	2	0	0	0	0	197
21:00	1	86	16	1	5	1	0	0	0	0	0	0	0	110
22:00	0	69	7	0	3	1	0	0	1	0	0	0	0	81
23:00	1	39	6	0	0	1	0	0	0	0	0	0	0	47
Total	44	4881	1023	30	326	65	4	35	42	2	2	0	0	6454
Percent	0.7%	75.6%	15.9%	0.5%	5.1%	1.0%	0.1%	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	11:00	08:00	11:00	11:00	08:00	00:00	10:00		03:00			11:00
Vol.	2	249	63	6	23	7	1	1	6		1			347
PM Peak	17:00	17:00	17:00	13:00	17:00	12:00	16:00	16:00	17:00	16:00	17:00			17:00
Vol.	13	836	143	6	40	8	2	8	5	1	1			1047
Grand Total	44	4881	1023	30	326	65	4	35	42	2	2	0	0	6454
Percent	0.7%	75.6%	15.9%	0.5%	5.1%	1.0%	0.1%	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%	

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City of San Bernardino
3rd Street
B/ Lankershim Avenue - Victoria Avenue
24 Hour Directional Classification Count

SBC001
Site Code: 999-18352

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/01/18	1	26	6	0	1	1	0	0	1	0	0	0	0	36
01:00	0	13	5	2	0	2	0	0	0	0	0	0	0	22
02:00	0	29	3	1	1	0	0	0	0	0	0	0	0	34
03:00	1	24	4	0	2	1	0	0	0	0	0	0	0	32
04:00	0	57	19	0	5	1	0	0	0	0	0	0	0	82
05:00	0	87	27	0	22	2	0	0	1	0	0	0	0	139
06:00	**5**	220	108	1	30	**9**	0	3	0	0	0	0	0	376
07:00	5	**553**	**133**	**3**	**57**	2	0	**5**	1	0	0	0	0	**759**
08:00	2	283	89	2	38	4	0	4	**2**	0	0	0	0	424
09:00	2	153	39	1	18	5	0	1	1	0	0	0	0	220
10:00	3	145	44	3	16	7	0	1	1	0	0	0	0	220
11:00	0	152	54	2	17	2	0	1	1	0	0	0	0	229
12 PM	2	192	54	1	25	3	0	2	1	0	0	0	0	280
13:00	0	197	58	3	22	3	0	1	1	0	0	0	0	285
14:00	3	172	61	2	23	**5**	0	1	3	0	0	0	0	270
15:00	**5**	**224**	**73**	2	**35**	5	0	2	1	0	0	0	0	**347**
16:00	1	192	58	**5**	25	2	0	**3**	**4**	0	0	0	0	290
17:00	1	171	48	2	16	3	0	2	0	0	0	0	0	243
18:00	2	110	32	0	15	3	0	1	1	0	0	0	0	164
19:00	1	100	24	0	9	2	0	1	0	0	0	0	0	137
20:00	1	66	27	0	4	1	0	0	0	0	0	0	0	99
21:00	0	57	15	0	5	0	0	1	0	0	0	0	0	78
22:00	0	54	16	0	2	0	0	0	0	0	0	0	0	72
23:00	3	34	8	0	1	3	0	0	1	0	0	0	0	50
Total	38	3311	1005	30	389	66	0	29	20	0	0	0	0	4888
Percent	0.8%	67.7%	20.6%	0.6%	8.0%	1.4%	0.0%	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	07:00	07:00	07:00	07:00	06:00		07:00	08:00					07:00
Vol.	5	553	133	3	57	9		5	2					759
PM Peak	15:00	15:00	15:00	16:00	15:00	14:00		16:00	16:00					15:00
Vol.	5	224	73	5	35	5		3	4					347
Grand Total	38	3311	1005	30	389	66	0	29	20	0	0	0	0	4888
Percent	0.8%	67.7%	20.6%	0.6%	8.0%	1.4%	0.0%	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	

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City of San Bernardino
3rd Street
B/ Lankershim Avenue - Victoria Avenue
24 Hour Directional Classification Count

SBC001
Site Code: 999-18352

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/01/18	1	53	15	0	3	2	0	1	1	0	0	0	0	76
01:00	1	30	9	2	0	2	0	0	1	0	0	0	0	45
02:00	0	58	11	1	6	0	0	0	0	0	0	0	0	76
03:00	1	55	12	0	4	1	0	0	2	0	**1**	0	0	76
04:00	1	97	37	0	11	7	0	0	1	0	0	0	0	154
05:00	1	161	49	0	28	4	0	0	2	0	0	0	0	245
06:00	**5**	321	139	3	50	**13**	0	3	0	0	0	0	0	534
07:00	5	**715**	**185**	4	**69**	3	0	**6**	3	0	0	0	0	**990**
08:00	2	476	133	**8**	52	6	**1**	5	4	0	0	0	0	687
09:00	3	319	78	3	33	11	0	2	5	0	0	0	0	454
10:00	3	330	75	4	31	10	1	1	**7**	0	0	0	0	462
11:00	2	401	117	4	40	9	0	2	1	0	0	0	0	576
12 PM	4	443	110	3	39	**11**	0	5	5	0	0	0	0	620
13:00	5	430	107	**9**	44	8	0	4	3	0	0	0	0	610
14:00	4	464	140	2	52	8	0	6	5	0	0	0	0	681
15:00	9	711	162	4	59	7	0	6	3	0	0	0	0	961
16:00	9	833	**195**	8	**60**	8	**2**	**11**	**7**	**1**	0	0	0	1134
17:00	**14**	**1007**	191	2	56	5	0	9	5	0	**1**	0	0	**1290**
18:00	4	451	83	0	31	6	0	1	3	0	0	0	0	579
19:00	2	280	55	2	15	2	0	1	0	1	0	0	0	358
20:00	1	218	57	0	16	2	0	0	2	0	0	0	0	296
21:00	1	143	31	1	10	1	0	1	0	0	0	0	0	188
22:00	0	123	23	0	5	1	0	0	1	0	0	0	0	153
23:00	4	73	14	0	1	4	0	0	1	0	0	0	0	97
Total	82	8192	2028	60	715	131	4	64	62	2	2	0	0	11342
Percent	0.7%	72.2%	17.9%	0.5%	6.3%	1.2%	0.0%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	07:00	07:00	08:00	07:00	06:00	08:00	07:00	10:00		03:00			07:00
Vol.	5	715	185	8	69	13	1	6	7		1			990
PM Peak	17:00	17:00	16:00	13:00	16:00	12:00	16:00	16:00	16:00	16:00	17:00			17:00
Vol.	14	1007	195	9	60	11	2	11	7	1	1			1290
Grand Total	82	8192	2028	60	715	131	4	64	62	2	2	0	0	11342
Percent	0.7%	72.2%	17.9%	0.5%	6.3%	1.2%	0.0%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	

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City of San Bernardino
3rd Street
B/ Lankershim Avenue - Sterling Avenue
24 Hour Directional Volume Count

SBC003
Site Code: 999-18385

Start Time	5/24/2018 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		18	114			12	62				
12:15		18	97			11	66				
12:30		18	98			13	68				
12:45		6	85	60	394	11	98	47	294	107	688
01:00		11	114			7	86				
01:15		10	92			8	85				
01:30		9	109			5	72				
01:45		7	95	37	410	4	79	24	322	61	732
02:00		7	105			6	75				
02:15		6	116			15	64				
02:30		10	112			11	96				
02:45		7	118	30	451	11	90	43	325	73	776
03:00		4	150			3	82				
03:15		13	120			12	66				
03:30		16	140			12	**105**				
03:45		24	182	57	592	20	**88**	47	341	104	933
04:00		10	178			32	**74**				
04:15		10	192			20	**82**				
04:30		25	**257**			23	65				
04:45		23	**212**	68	839	24	89	99	310	167	1149
05:00		20	**360**			18	64				
05:15		20	**243**			27	70				
05:30		50	234			42	65				
05:45		34	186	124	1023	61	68	148	267	272	1290
06:00		26	148			55	52				
06:15		30	107			69	55				
06:30		50	89			107	48				
06:45		60	84	166	428	139	47	370	202	536	630
07:00		61	68			**142**	45				
07:15		46	82			**215**	40				
07:30		77	58			**202**	36				
07:45		56	65	240	273	**214**	50	773	171	1013	444
08:00		58	62			135	28				
08:15		60	50			91	33				
08:30		60	55			71	31				
08:45		54	35	232	202	74	29	371	121	603	323
09:00		66	53			54	25				
09:15		57	51			67	24				
09:30		61	35			53	26				
09:45		64	29	248	168	59	33	233	108	481	276
10:00		68	27			68	35				
10:15		70	40			50	31				
10:30		66	36			58	28				
10:45		70	20	274	123	70	24	246	118	520	241
11:00		**81**	28			52	15				
11:15		**83**	13			57	20				
11:30		**80**	14			59	18				
11:45		**85**	16	329	71	77	15	245	68	574	139
Total		1865	4974	1865	4974	2646	2647	2646	2647	4511	7621
Combined Total		6839		6839		5293		5293		12132	
AM Peak	-	11:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	329	-	-	-	773	-	-	-	-	-
P.H.F.		0.968				0.899					
PM Peak	-	-	04:30	-	-	-	03:30	-	-	-	-
Vol.	-	-	1072	-	-	-	349	-	-	-	-
P.H.F.			0.744				0.831				
Percentage		27.3%	72.7%			50.0%	50.0%				
ADT/AADT		ADT 12,132		AADT 12,132							

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City of San Bernardino
3rd Street
B/ Sterling Avenue - Leland Norton Way
24 Hour Directional Volume Count

SBC004
Site Code: 999-18385

Start	5/24/2018	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		20	118			11	90				
12:15		15	111			17	125				
12:30		22	123			8	128				
12:45		15	117	72	469	14	102	50	445	122	914
01:00		8	117			10	113				
01:15		12	102			9	110				
01:30		21	132			12	81				
01:45		14	118	55	469	16	97	47	401	102	870
02:00		15	130			7	106				
02:15		14	106			8	93				
02:30		10	150			18	104				
02:45		11	161	50	547	10	127	43	430	93	977
03:00		11	201			7	**113**				
03:15		8	193			19	**106**				
03:30		14	201			29	**123**				
03:45		28	219	61	814	32	**139**	87	481	148	1295
04:00		14	247			17	101				
04:15		12	211			25	106				
04:30		28	310			49	127				
04:45		22	**290**	76	1058	47	107	138	441	214	1499
05:00		20	**428**			28	114				
05:15		24	**332**			44	88				
05:30		34	**335**			70	104				
05:45		26	235	104	1330	102	117	244	423	348	1753
06:00		31	198			56	77				
06:15		33	155			103	79				
06:30		59	129			131	73				
06:45		66	132	189	614	239	77	529	306	718	920
07:00		86	119			**201**	68				
07:15		56	94			**283**	67				
07:30		67	103			**260**	56				
07:45		63	71	272	387	**300**	57	1044	248	1316	635
08:00		109	89			167	51				
08:15		76	86			137	42				
08:30		76	76			128	47				
08:45		72	73	333	324	117	54	549	194	882	518
09:00		90	71			80	29				
09:15		79	76			107	55				
09:30		66	51			90	50				
09:45		81	40	316	238	102	33	379	167	695	405
10:00		84	55			89	37				
10:15		101	50			75	29				
10:30		85	54			72	31				
10:45		66	35	336	194	78	27	314	124	650	318
11:00		**97**	39			73	25				
11:15		**102**	22			67	22				
11:30		**101**	31			91	14				
11:45		**127**	35	427	127	102	15	333	76	760	203
Total		2291	6571	2291	6571	3757	3736	3757	3736	6048	10307
Combined Total		8862		8862		7493		7493		16355	
AM Peak	-	11:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	427	-	-	-	1044	-	-	-	-	-
P.H.F.		0.841				0.870					
PM Peak	-	-	04:45	-	-	-	03:00	-	-	-	-
Vol.	-	-	1385	-	-	-	481	-	-	-	-
P.H.F.			0.809				0.865				
Percentage		25.9%	74.1%			50.1%	49.9%				
ADT/AADT		ADT 16,355		AADT 16,355							

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City of San Bernardino
3rd Street
B/ Leland Norton Way - Del Rosa Drive
24 Hour Directional Volume Count

SBC005
Site Code: 999-18385

Start Time	5/22/2018 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		14	129			9	103				
12:15		13	105			18	119				
12:30		21	119			13	121				
12:45		20	155	68	508	7	128	47	471	115	979
01:00		20	105			10	111				
01:15		27	149			9	111				
01:30		17	141			11	100				
01:45		20	133	84	528	8	100	38	422	122	950
02:00		22	141			26	94				
02:15		20	120			17	116				
02:30		10	163			17	105				
02:45		12	173	64	597	9	105	69	420	133	1017
03:00		20	164			16	98				
03:15		13	170			22	**142**				
03:30		27	195			39	**138**				
03:45		18	201	78	730	36	**122**	113	500	191	1230
04:00		8	231			37	**103**				
04:15		23	286			35	91				
04:30		29	**257**			50	128				
04:45		31	**376**	91	1150	43	96	165	418	256	1568
05:00		30	**300**			50	88				
05:15		39	**304**			62	90				
05:30		39	208			97	95				
05:45		25	206	133	1018	74	81	283	354	416	1372
06:00		30	148			110	94				
06:15		70	116			136	70				
06:30		70	111			186	68				
06:45		75	92	245	467	**183**	67	615	299	860	766
07:00		61	103			**270**	53				
07:15		75	90			**250**	45				
07:30		76	74			**280**	66				
07:45		82	86	294	353	169	40	969	204	1263	557
08:00		85	87			119	40				
08:15		84	88			107	47				
08:30		70	51			116	64				
08:45		92	80	331	306	85	51	427	202	758	508
09:00		64	76			93	38				
09:15		74	50			81	48				
09:30		81	44			93	46				
09:45		76	58	295	228	89	39	356	171	651	399
10:00		87	63			91	42				
10:15		83	46			84	36				
10:30		80	22			106	35				
10:45		91	38	341	169	79	33	360	146	701	315
11:00		**124**	23			86	20				
11:15		**108**	20			84	29				
11:30		**111**	30			104	21				
11:45		**139**	28	482	101	91	17	365	87	847	188
Total		2506	6155	2506	6155	3807	3694	3807	3694	6313	9849
Combined Total		8661		8661		7501		7501		16162	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	482	-	-	-	983	-	-	-	-	-
P.H.F.		0.867				0.878					
PM Peak	-	-	04:30	-	-	-	03:15	-	-	-	-
Vol.	-	-	1237	-	-	-	505	-	-	-	-
P.H.F.			0.822				0.889				
Percentage		28.9%	71.1%			50.8%	49.2%				
ADT/AADT		ADT 16,162		AADT 16,162							

Counts Unlimited, Inc.

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City of San Bernardino
5th Street
B/ Central Avenue - Victoria Avenue
24 Hour Directional Volume Count

SBC014
Site Code: 999-18385

Start	5/22/2018	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		11	65			11	74				
12:15		9	62			14	72				
12:30		6	58			6	76				
12:45		6	57	32	242	8	74	39	296	71	538
01:00		4	50			10	70				
01:15		8	47			6	53				
01:30		10	57			9	59				
01:45		2	54	24	208	7	67	32	249	56	457
02:00		3	66			3	**93**				
02:15		3	48			8	**85**				
02:30		6	54			7	**100**				
02:45		7	50	19	218	8	**85**	26	363	45	581
03:00		8	70			6	73				
03:15		11	79			4	85				
03:30		10	95			8	75				
03:45		12	82	41	326	15	67	33	300	74	626
04:00		21	96			9	56				
04:15		24	**115**			19	71				
04:30		11	**111**			9	71				
04:45		23	**159**	79	481	13	79	50	277	129	758
05:00		27	**132**			12	57				
05:15		31	110			19	68				
05:30		32	86			32	57				
05:45		30	72	120	400	39	66	102	248	222	648
06:00		32	64			48	51				
06:15		32	52			78	58				
06:30		42	41			108	51				
06:45		46	49	152	206	**134**	37	368	197	520	403
07:00		29	55			**135**	40				
07:15		56	33			**152**	46				
07:30		45	35			**153**	42				
07:45		48	26	178	149	101	35	541	163	719	312
08:00		41	40			75	42				
08:15		56	30			73	51				
08:30		48	36			47	55				
08:45		42	31	187	137	48	35	243	183	430	320
09:00		49	48			57	44				
09:15		46	35			55	39				
09:30		41	18			48	32				
09:45		39	8	175	109	45	40	205	155	380	264
10:00		39	24			52	26				
10:15		37	17			43	23				
10:30		40	9			42	16				
10:45		46	12	162	62	56	23	193	88	355	150
11:00		**54**	12			48	18				
11:15		**60**	16			53	17				
11:30		**43**	4			60	19				
11:45		**50**	8	207	40	53	7	214	61	421	101
Total		1376	2578	1376	2578	2046	2580	2046	2580	3422	5158
Combined Total		3954		3954		4626		4626		8580	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	207	-	-	-	574	-	-	-	-	-
P.H.F.		0.863				0.938					
PM Peak	-	-	04:15	-	-	-	02:00	-	-	-	-
Vol.	-	-	517	-	-	-	363	-	-	-	-
P.H.F.			0.813				0.908				
Percentage		34.8%	65.2%			44.2%	55.8%				
ADT/AADT		ADT 8,580		AADT 8,580							

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City of San Bernardino
Sterling Avenue
B/ 5th Street - 3rd Street
24 Hour Directional Volume Count

SBC059
Site Code: 999-18385

Start Time	24-May-18 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		14	39			4	58				
12:15		4	47			4	60				
12:30		10	35			2	43				
12:45		6	42	34	163	5	54	15	215	49	378
01:00		5	46			3	36				
01:15		8	38			5	31				
01:30		13	47			2	46				
01:45		5	35	31	166	4	51	14	164	45	330
02:00		6	40			4	37				
02:15		8	49			2	42				
02:30		2	52			2	70				
02:45		3	71	19	212	5	43	13	192	32	404
03:00		5	87			9	**51**				
03:15		6	67			16	**63**				
03:30		3	44			21	**68**				
03:45		7	89	21	287	5	**51**	51	233	72	520
04:00		5	69			14	46				
04:15		7	75			23	47				
04:30		11	71			22	61				
04:45		4	66	27	281	17	54	76	208	103	489
05:00		9	**94**			26	50				
05:15		9	**102**			44	49				
05:30		6	**98**			49	63				
05:45		8	**82**	32	376	23	37	142	199	174	575
06:00		11	76			38	45				
06:15		8	59			46	46				
06:30		11	56			80	35				
06:45		20	51	50	242	**79**	28	243	154	293	396
07:00		44	49			**95**	36				
07:15		31	33			**107**	20				
07:30		24	32			**99**	27				
07:45		31	32	130	146	51	22	352	105	482	251
08:00		42	31			59	15				
08:15		29	40			45	27				
08:30		23	30			48	26				
08:45		29	37	123	138	41	17	193	85	316	223
09:00		32	31			45	31				
09:15		25	40			43	20				
09:30		21	34			42	16				
09:45		31	17	109	122	39	9	169	76	278	198
10:00		34	28			41	4				
10:15		36	22			24	17				
10:30		30	20			36	15				
10:45		22	19	122	89	36	9	137	45	259	134
11:00		**36**	22			27	10				
11:15		**34**	7			42	8				
11:30		**29**	14			38	7				
11:45		**39**	18	138	61	42	3	149	28	287	89
Total		836	2283	836	2283	1554	1704	1554	1704	2390	3987
Combined Total		3119		3119		3258		3258		6377	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	138	-	-	-	380	-	-	-	-	-
P.H.F.		0.885				0.888					
PM Peak	-	-	05:00	-	-	-	03:00	-	-	-	-
Vol.	-	-	376	-	-	-	233	-	-	-	-
P.H.F.			0.922				0.857				
Percentage		26.8%	73.2%			47.7%	52.3%				
ADT/AADT		ADT 6,377		AADT 6,377							

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City of Highland
Highland Avenue
B/ Sterling Avenue - SR-210 Southbound Off Ramp
24 Hour Directional Classification Count

HLD004
Site Code: 057-16653

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	56	16	0	6	0	0	0	**1**	0	0	0	0	79
01:00	0	38	11	0	3	0	0	0	0	0	0	0	0	52
02:00	0	42	10	0	0	0	0	0	0	0	0	0	0	52
03:00	0	32	6	0	4	0	0	0	0	0	0	0	0	42
04:00	0	40	16	0	1	0	0	0	0	0	0	0	0	57
05:00	**2**	47	13	1	2	**2**	0	1	0	0	0	0	0	68
06:00	0	87	24	2	6	2	0	0	0	0	0	0	0	121
07:00	1	212	76	9	14	2	0	1	0	0	0	0	0	315
08:00	1	239	70	**13**	25	0	0	0	1	0	0	0	0	349
09:00	1	293	72	6	15	2	0	0	1	0	0	0	0	390
10:00	1	363	98	6	22	1	0	**2**	0	0	0	0	0	493
11:00	0	**389**	**126**	6	**27**	2	0	0	0	0	0	0	0	**550**
12 PM	0	492	115	**8**	26	**1**	0	1	0	0	0	0	0	643
13:00	1	460	103	8	30	0	0	1	0	0	0	0	0	603
14:00	1	543	140	6	**33**	0	0	**4**	0	0	0	0	0	727
15:00	**4**	541	**149**	6	19	0	0	1	**3**	0	0	0	0	723
16:00	0	**589**	113	6	28	0	0	1	0	0	0	0	0	**737**
17:00	0	564	94	5	18	1	0	0	0	0	0	0	0	682
18:00	1	404	106	6	17	1	0	1	0	0	0	0	0	536
19:00	1	361	78	4	15	0	0	0	0	0	0	0	0	459
20:00	0	309	58	2	12	0	0	0	0	0	0	0	0	381
21:00	0	222	41	3	8	0	0	0	0	0	0	0	0	274
22:00	0	142	29	2	2	0	0	1	0	0	0	0	0	176
23:00	0	101	14	0	2	0	0	0	0	0	0	0	0	117
Total	14	6566	1578	99	335	14	0	14	6	0	0	0	0	8626
Percent	0.2%	76.1%	18.3%	1.1%	3.9%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	05:00	11:00	11:00	08:00	11:00	05:00		10:00	00:00					11:00
Vol.	2	389	126	13	27	2		2	1					550
PM Peak	15:00	16:00	15:00	12:00	14:00	12:00		14:00	15:00					16:00
Vol.	4	589	149	8	33	1		4	3					737
Grand Total	14	6566	1578	99	335	14	0	14	6	0	0	0	0	8626
Percent	0.2%	76.1%	18.3%	1.1%	3.9%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ Sterling Avenue - SR-210 Southbound Off Ramp
24 Hour Directional Classification Count

HLD004
Site Code: 057-16653

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	92	13	0	0	0	0	0	0	0	0	0	0	105
01:00	0	62	5	0	0	0	0	1	0	0	0	0	0	68
02:00	1	54	9	1	0	0	0	0	0	0	0	0	0	65
03:00	**4**	51	9	0	0	0	0	0	0	0	0	0	0	64
04:00	0	65	12	3	0	1	0	0	1	0	0	0	0	82
05:00	0	93	8	5	4	0	0	0	1	0	0	0	0	111
06:00	1	132	26	7	6	0	0	0	1	0	0	0	0	173
07:00	2	300	69	9	10	**2**	0	1	0	0	0	0	0	393
08:00	2	381	66	**12**	**17**	0	0	2	**3**	0	0	0	0	483
09:00	1	406	70	9	12	0	0	0	0	0	0	0	0	498
10:00	3	375	**84**	9	13	1	0	0	0	0	0	0	0	485
11:00	3	**459**	82	9	14	1	0	**4**	0	0	0	0	0	**572**
12 PM	1	512	90	7	18	0	0	**1**	**1**	0	0	0	0	630
13:00	0	520	87	12	15	1	0	1	1	0	0	0	0	637
14:00	**4**	**589**	**119**	9	**19**	**4**	0	1	0	0	0	0	0	**745**
15:00	3	546	93	8	7	2	0	0	1	0	0	0	0	660
16:00	2	551	101	**15**	13	2	0	1	1	0	0	0	0	686
17:00	1	500	98	7	3	0	0	0	0	0	0	0	0	609
18:00	0	452	68	9	4	0	0	0	0	0	0	0	0	533
19:00	3	402	78	5	6	1	0	1	0	0	0	0	0	496
20:00	0	338	47	4	1	0	0	0	0	0	0	0	0	390
21:00	2	228	31	5	6	0	0	0	0	0	0	0	0	272
22:00	0	136	24	3	1	0	0	0	0	0	0	0	0	164
23:00	0	162	23	0	1	0	0	0	0	0	0	0	0	186
Total	33	7406	1312	148	170	15	0	13	10	0	0	0	0	9107
Percent	0.4%	81.3%	14.4%	1.6%	1.9%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	03:00	11:00	10:00	08:00	08:00	07:00		11:00	08:00					11:00
Vol.	4	459	84	12	17	2		4	3					572
PM Peak	14:00	14:00	14:00	16:00	14:00	14:00		12:00	12:00					14:00
Vol.	4	589	119	15	19	4		1	1					745
Grand Total	33	7406	1312	148	170	15	0	13	10	0	0	0	0	9107
Percent	0.4%	81.3%	14.4%	1.6%	1.9%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ Sterling Avenue - SR-210 Southbound Off Ramp
24 Hour Directional Classification Count

HLD004
Site Code: 057-16653

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	148	29	0	6	0	0	0	1	0	0	0	0	184
01:00	0	100	16	0	3	0	0	1	0	0	0	0	0	120
02:00	1	96	19	1	0	0	0	0	0	0	0	0	0	117
03:00	**4**	83	15	0	4	0	0	0	0	0	0	0	0	106
04:00	0	105	28	3	1	1	0	0	1	0	0	0	0	139
05:00	2	140	21	6	6	2	0	1	1	0	0	0	0	179
06:00	1	219	50	9	12	2	0	0	1	0	0	0	0	294
07:00	3	512	145	18	24	**4**	0	2	0	0	0	0	0	708
08:00	3	620	136	**25**	**42**	0	0	2	**4**	0	0	0	0	832
09:00	2	699	142	15	27	2	0	0	1	0	0	0	0	888
10:00	4	738	182	15	35	2	0	2	0	0	0	0	0	978
11:00	3	**848**	**208**	15	41	3	0	**4**	0	0	0	0	0	**1122**
12 PM	1	1004	205	15	44	1	0	2	1	0	0	0	0	1273
13:00	1	980	190	20	45	1	0	2	1	0	0	0	0	1240
14:00	5	1132	**259**	15	**52**	**4**	0	**5**	0	0	0	0	0	**1472**
15:00	**7**	1087	242	14	26	2	0	1	**4**	0	0	0	0	1383
16:00	2	**1140**	214	**21**	41	2	0	2	1	0	0	0	0	1423
17:00	1	1064	192	12	21	1	0	0	0	0	0	0	0	1291
18:00	1	856	174	15	21	1	0	1	0	0	0	0	0	1069
19:00	4	763	156	9	21	1	0	1	0	0	0	0	0	955
20:00	0	647	105	6	13	0	0	0	0	0	0	0	0	771
21:00	2	450	72	8	14	0	0	0	0	0	0	0	0	546
22:00	0	278	53	5	3	0	0	1	0	0	0	0	0	340
23:00	0	263	37	0	3	0	0	0	0	0	0	0	0	303
Total	47	13972	2890	247	505	29	0	27	16	0	0	0	0	17733
Percent	0.3%	78.8%	16.3%	1.4%	2.8%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	03:00	11:00	11:00	08:00	08:00	07:00		11:00	08:00					11:00
Vol.	4	848	208	25	42	4		4	4					1122
PM Peak	15:00	16:00	14:00	16:00	14:00	14:00		14:00	15:00					14:00
Vol.	7	1140	259	21	52	4		5	4					1472
Grand Total	47	13972	2890	247	505	29	0	27	16	0	0	0	0	17733
Percent	0.3%	78.8%	16.3%	1.4%	2.8%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ SR-210 Northbound Off Ramp - Victoria Avenue
24 Hour Directional Classification Count

HLD005
Site Code: 057-16653

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	2	350	36	0	6	0	0	0	0	0	0	0	0	394
01:00	0	224	42	0	5	0	0	0	1	0	0	0	0	272
02:00	0	240	35	0	0	0	0	0	0	0	0	0	0	275
03:00	1	156	36	0	3	0	0	0	1	0	0	0	0	197
04:00	0	210	50	1	6	0	0	1	0	0	0	0	0	268
05:00	2	295	65	2	15	3	0	2	**3**	0	0	0	0	387
06:00	2	504	107	5	32	**5**	0	1	1	**1**	0	0	0	658
07:00	**6**	680	150	11	43	5	0	**6**	1	0	**1**	0	0	903
08:00	4	747	148	10	37	2	0	4	2	0	0	0	0	954
09:00	4	761	156	**19**	40	0	0	3	1	0	0	0	0	984
10:00	5	812	**201**	14	36	2	0	3	3	1	0	0	0	1077
11:00	0	**884**	184	15	**48**	5	0	6	2	0	0	0	0	**1144**
12 PM	6	1036	203	**16**	**55**	**4**	**1**	**4**	0	0	0	0	0	**1325**
13:00	2	1001	190	9	47	1	0	2	0	0	0	0	0	1252
14:00	5	**1052**	**209**	7	43	2	0	2	**2**	0	0	0	0	1322
15:00	4	955	182	7	43	1	0	3	2	0	0	0	0	1197
16:00	**9**	924	181	11	39	4	0	1	1	0	0	0	0	1170
17:00	3	1035	195	9	38	0	0	0	0	0	0	0	0	1280
18:00	7	981	196	4	24	4	0	2	0	0	0	0	0	1218
19:00	4	852	156	12	30	2	0	1	0	0	0	0	0	1057
20:00	4	828	147	4	19	1	0	0	0	0	0	0	0	1003
21:00	3	728	142	5	19	1	0	2	0	0	0	0	0	900
22:00	4	633	116	3	8	3	0	2	0	0	0	0	0	769
23:00	0	455	60	0	7	1	0	0	0	0	0	0	0	523
Total	77	16343	3187	164	643	46	1	45	20	2	1	0	0	20529
Percent	0.4%	79.6%	15.5%	0.8%	3.1%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	11:00	10:00	09:00	11:00	06:00		07:00	05:00	06:00	07:00			11:00
Vol.	6	884	201	19	48	5		6	3	1	1			1144
PM Peak	16:00	14:00	14:00	12:00	12:00	12:00	12:00	12:00	14:00					12:00
Vol.	9	1052	209	16	55	4	1	4	2					1325
Grand Total	77	16343	3187	164	643	46	1	45	20	2	1	0	0	20529
Percent	0.4%	79.6%	15.5%	0.8%	3.1%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ SR-210 Northbound Off Ramp - Victoria Avenue
24 Hour Directional Classification Count

HLD005
Site Code: 057-16653

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	513	98	1	9	0	0	0	0	0	0	0	0	621
01:00	1	462	85	0	4	1	0	0	0	0	0	0	0	553
02:00	3	437	74	0	4	3	0	0	0	0	0	0	0	521
03:00	1	406	62	1	6	0	0	0	0	0	0	0	0	476
04:00	3	386	90	3	12	4	0	0	0	0	0	0	0	498
05:00	1	371	101	5	12	0	0	**3**	2	0	0	0	0	495
06:00	1	583	131	13	25	4	0	0	1	0	0	0	0	758
07:00	2	617	143	16	31	**5**	0	1	**5**	0	0	0	0	820
08:00	2	558	151	**20**	50	4	0	1	3	0	0	0	0	789
09:00	**5**	549	149	19	40	2	0	2	1	0	0	0	0	767
10:00	2	619	162	15	52	3	0	1	2	0	0	0	0	856
11:00	1	**707**	**215**	15	**55**	3	0	2	1	0	0	0	0	**999**
12 PM	3	862	197	15	70	**4**	0	3	**3**	0	0	0	0	1157
13:00	**6**	842	236	**22**	70	2	0	**4**	2	0	0	0	0	1184
14:00	4	1029	257	18	**72**	3	0	4	0	0	0	0	0	1387
15:00	5	965	247	18	58	3	0	3	0	0	0	0	0	1299
16:00	1	**1045**	**283**	15	59	3	0	2	2	0	**1**	0	0	**1411**
17:00	2	979	238	13	48	2	0	0	1	0	0	0	0	1283
18:00	3	922	225	14	43	0	0	0	0	0	0	0	0	1207
19:00	1	762	175	10	39	1	0	0	0	0	0	0	0	988
20:00	1	750	180	6	29	0	0	0	0	0	0	0	0	966
21:00	0	655	146	3	29	0	0	0	0	0	0	0	0	833
22:00	2	639	166	8	43	0	0	0	0	0	0	0	0	858
23:00	1	615	147	7	18	1	0	0	0	0	0	0	0	789
Total	51	16273	3958	257	878	48	0	26	23	0	1	0	0	21515
Percent	0.2%	75.6%	18.4%	1.2%	4.1%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	11:00	08:00	11:00	07:00		05:00	07:00					11:00
Vol.	5	707	215	20	55	5		3	5					999
PM Peak	13:00	16:00	16:00	13:00	14:00	12:00		13:00	12:00		16:00			16:00
Vol.	6	1045	283	22	72	4		4	3		1			1411
Grand Total	51	16273	3958	257	878	48	0	26	23	0	1	0	0	21515
Percent	0.2%	75.6%	18.4%	1.2%	4.1%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Highland Avenue
B/ SR-210 Northbound Off Ramp - Victoria Avenue
24 Hour Directional Classification Count

HLD005
Site Code: 057-16653

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	2	863	134	1	15	0	0	0	0	0	0	0	0	1015
01:00	1	686	127	0	9	1	0	0	1	0	0	0	0	825
02:00	3	677	109	0	4	3	0	0	0	0	0	0	0	796
03:00	2	562	98	1	9	0	0	0	1	0	0	0	0	673
04:00	3	596	140	4	18	4	0	1	0	0	0	0	0	766
05:00	3	666	166	7	27	3	0	5	5	0	0	0	0	882
06:00	3	1087	238	18	57	9	0	1	2	**1**	0	0	0	1416
07:00	8	1297	293	27	74	**10**	0	7	**6**	0	**1**	0	0	1723
08:00	6	1305	299	30	87	6	0	5	5	0	0	0	0	1743
09:00	**9**	1310	305	**38**	80	2	0	5	2	0	0	0	0	1751
10:00	7	1431	363	29	88	5	0	4	5	1	0	0	0	1933
11:00	1	**1591**	**399**	30	**103**	8	0	**8**	3	0	0	0	0	**2143**
12 PM	9	1898	400	**31**	**125**	**8**	**1**	**7**	**3**	0	0	0	0	2482
13:00	8	1843	426	31	117	3	0	6	2	0	0	0	0	2436
14:00	9	**2081**	**466**	25	115	5	0	6	2	0	0	0	0	**2709**
15:00	9	1920	429	25	101	4	0	6	2	0	0	0	0	2496
16:00	**10**	1969	464	26	98	7	0	3	3	0	**1**	0	0	2581
17:00	5	2014	433	22	86	2	0	0	1	0	0	0	0	2563
18:00	10	1903	421	18	67	4	0	2	0	0	0	0	0	2425
19:00	5	1614	331	22	69	3	0	1	0	0	0	0	0	2045
20:00	5	1578	327	10	48	1	0	0	0	0	0	0	0	1969
21:00	3	1383	288	8	48	1	0	2	0	0	0	0	0	1733
22:00	6	1272	282	11	51	3	0	2	0	0	0	0	0	1627
23:00	1	1070	207	7	25	2	0	0	0	0	0	0	0	1312
Total	128	32616	7145	421	1521	94	1	71	43	2	2	0	0	42044
Percent	0.3%	77.6%	17.0%	1.0%	3.6%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	11:00	11:00	09:00	11:00	07:00		11:00	07:00	06:00	07:00			11:00
Vol.	9	1591	399	38	103	10		8	6	1	1			2143
PM Peak	16:00	14:00	14:00	12:00	12:00	12:00	12:00	12:00	12:00		16:00			14:00
Vol.	10	2081	466	31	125	8	1	7	3		1			2709
Grand Total	128	32616	7145	421	1521	94	1	71	43	2	2	0	0	42044
Percent	0.3%	77.6%	17.0%	1.0%	3.6%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of San Bernardino
Victoria Avenue
B/ Highland Aveue - State Route 210
24 Hour Directional Volume Count

SBC066
Site Code: 999-18385

Start	22-May-18	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		6	51			26	94				
12:15		9	58			18	85				
12:30		6	61			19	92				
12:45		3	53	24	223	14	62	77	333	101	556
01:00		8	57			12	62				
01:15		1	62			14	79				
01:30		7	73			17	62				
01:45		3	107	19	299	19	76	62	279	81	578
02:00		8	98			16	**147**				
02:15		4	73			18	**135**				
02:30		13	67			12	**81**				
02:45		5	55	30	293	13	**88**	59	451	89	744
03:00		11	74			11	108				
03:15		8	82			8	81				
03:30		13	80			17	104				
03:45		12	83	44	319	11	106	47	399	91	718
04:00		12	73			15	99				
04:15		15	**88**			17	101				
04:30		22	**98**			13	100				
04:45		22	**82**	71	341	16	83	61	383	132	724
05:00		22	**88**			17	95				
05:15		21	78			20	86				
05:30		19	69			20	104				
05:45		23	87	85	322	30	80	87	365	172	687
06:00		42	68			25	73				
06:15		32	66			29	83				
06:30		**48**	65			44	79				
06:45		**70**	47	192	246	**69**	89	167	324	359	570
07:00		**107**	58			**100**	74				
07:15		**96**	64			**127**	69				
07:30		45	41			**78**	73				
07:45		55	65	303	228	51	69	356	285	659	513
08:00		58	42			59	76				
08:15		52	58			62	53				
08:30		64	41			57	64				
08:45		45	51	219	192	53	62	231	255	450	447
09:00		36	33			48	71				
09:15		41	43			34	56				
09:30		35	37			50	60				
09:45		47	33	159	146	63	58	195	245	354	391
10:00		46	33			56	62				
10:15		39	35			69	56				
10:30		51	24			56	50				
10:45		56	23	192	115	60	44	241	212	433	327
11:00		60	16			67	43				
11:15		54	16			75	43				
11:30		43	20			70	30				
11:45		66	13	223	65	79	32	291	148	514	213
Total		1561	2789	1561	2789	1874	3679	1874	3679	3435	6468
Combined Total		4350		4350		5553		5553		9903	
AM Peak	-	06:30	-	-	-	06:45	-	-	-	-	-
Vol.	-	321	-	-	-	374	-	-	-	-	-
P.H.F.		0.750				0.736					
PM Peak	-	-	04:15	-	-	-	02:00	-	-	-	-
Vol.	-	-	356	-	-	-	451	-	-	-	-
P.H.F.			0.832				0.767				
Percentage		35.9%	64.1%			33.7%	66.3%				
ADT/AADT		ADT 9,903		AADT 9,903							

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City of Highland
Victoria Avenue
B/ Highland Avenue - Pacific Street
24 Hour Directional Classification Count

HLD003
Site Code: 057-16653

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	1	44	11	0	0	0	0	0	0	0	0	0	0	56
01:00	0	30	6	0	1	1	0	0	0	0	0	0	0	38
02:00	0	30	11	0	0	1	0	0	0	0	0	0	0	42
03:00	0	51	10	0	4	0	0	0	0	0	0	0	0	65
04:00	0	74	16	0	1	0	0	0	0	0	0	0	0	91
05:00	0	89	26	1	6	0	0	0	0	0	0	0	0	122
06:00	1	139	38	0	8	0	0	0	0	0	0	0	0	186
07:00	**2**	**372**	**92**	**13**	**19**	**2**	0	**3**	**2**	0	0	0	0	**505**
08:00	1	237	74	1	12	1	0	1	1	0	0	0	0	328
09:00	1	231	47	2	13	2	0	1	0	0	0	0	0	297
10:00	2	188	62	1	9	1	0	0	0	0	0	0	0	263
11:00	0	253	63	1	10	1	0	2	0	0	0	0	0	330
12 PM	2	273	74	1	11	0	0	**3**	**2**	0	0	0	0	366
13:00	1	267	56	**9**	7	0	0	0	0	0	0	0	0	340
14:00	1	**357**	**89**	1	15	**1**	0	1	0	**1**	0	0	0	**466**
15:00	1	309	86	2	17	0	0	0	0	0	0	0	0	415
16:00	2	352	86	2	**18**	1	0	2	2	0	0	0	0	465
17:00	**3**	355	80	1	9	0	0	2	1	0	0	0	0	451
18:00	1	288	70	2	10	0	0	1	0	0	0	0	0	372
19:00	2	204	44	0	6	0	0	0	0	0	0	0	0	256
20:00	0	171	40	0	4	1	0	1	0	0	0	0	0	217
21:00	0	162	23	0	4	0	0	0	1	0	0	0	0	190
22:00	0	106	23	0	4	0	0	0	0	0	0	0	0	133
23:00	0	76	14	0	2	0	0	0	0	0	0	0	0	92
Total	21	4658	1141	37	190	12	0	17	9	1	0	0	0	6086
Percent	0.3%	76.5%	18.7%	0.6%	3.1%	0.2%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	07:00		07:00	07:00					07:00
Vol.	2	372	92	13	19	2		3	2					505
PM Peak	17:00	14:00	14:00	13:00	16:00	14:00		12:00	12:00	14:00				14:00
Vol.	3	357	89	9	18	1		3	2	1				466
Grand Total	21	4658	1141	37	190	12	0	17	9	1	0	0	0	6086
Percent	0.3%	76.5%	18.7%	0.6%	3.1%	0.2%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Victoria Avenue
B/ Highland Avenue - Pacific Street
24 Hour Directional Classification Count

HLD003
Site Code: 057-16653

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	0	78	7	0	1	0	0	0	0	0	0	0	0	86
01:00	1	48	8	0	0	0	0	0	0	0	0	0	0	57
02:00	0	45	7	0	1	0	0	0	0	0	0	0	0	53
03:00	0	36	8	0	1	0	0	0	0	0	0	0	0	45
04:00	0	45	3	0	0	0	0	0	0	0	0	0	0	48
05:00	0	60	13	0	4	0	0	0	0	0	0	0	0	77
06:00	0	107	20	1	6	0	0	0	0	0	0	0	0	134
07:00	**2**	**316**	**67**	**5**	**18**	0	0	**3**	0	0	**1**	0	0	**412**
08:00	1	221	43	2	7	**1**	0	1	0	0	0	0	0	276
09:00	0	186	41	4	9	0	0	0	0	0	0	0	0	240
10:00	0	180	36	2	8	0	0	1	0	0	0	0	0	227
11:00	0	205	42	0	7	1	0	1	0	0	0	0	0	256
12 PM	0	227	48	**2**	9	**1**	0	0	**2**	0	0	0	0	289
13:00	0	247	43	0	5	0	0	0	0	0	0	0	0	295
14:00	0	360	60	2	16	1	0	**3**	0	0	0	0	0	442
15:00	0	**368**	68	1	7	0	0	2	1	0	0	0	0	**447**
16:00	1	337	62	2	**17**	0	0	2	0	0	0	0	0	421
17:00	2	328	**73**	2	9	0	0	0	0	0	0	0	0	414
18:00	1	276	53	1	5	1	0	1	0	0	0	0	0	338
19:00	**4**	203	37	0	3	1	0	0	0	0	0	0	0	248
20:00	0	222	39	0	4	0	0	1	0	0	0	0	0	266
21:00	0	160	31	0	3	1	0	0	0	0	0	0	0	195
22:00	0	143	28	0	2	0	0	0	0	0	0	0	0	173
23:00	1	132	8	0	2	0	0	0	0	0	0	0	0	143
Total	13	4530	845	24	144	7	0	15	3	0	1	0	0	5582
Percent	0.2%	81.2%	15.1%	0.4%	2.6%	0.1%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	08:00		07:00			07:00			07:00
Vol.	2	316	67	5	18	1		3			1			412
PM Peak	19:00	15:00	17:00	12:00	16:00	12:00		14:00	12:00					15:00
Vol.	4	368	73	2	17	1		3	2					447
Grand Total	13	4530	845	24	144	7	0	15	3	0	1	0	0	5582
Percent	0.2%	81.2%	15.1%	0.4%	2.6%	0.1%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of Highland
Victoria Avenue
B/ Highland Avenue - Pacific Street
24 Hour Directional Classification Count

HLD003
Site Code: 057-16653

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12/07/16	1	122	18	0	1	0	0	0	0	0	0	0	0	142
01:00	1	78	14	0	1	1	0	0	0	0	0	0	0	95
02:00	0	75	18	0	1	1	0	0	0	0	0	0	0	95
03:00	0	87	18	0	5	0	0	0	0	0	0	0	0	110
04:00	0	119	19	0	1	0	0	0	0	0	0	0	0	139
05:00	0	149	39	1	10	0	0	0	0	0	0	0	0	199
06:00	1	246	58	1	14	0	0	0	0	0	0	0	0	320
07:00	**4**	**688**	**159**	**18**	**37**	**2**	0	**6**	**2**	0	**1**	0	0	**917**
08:00	2	458	117	3	19	2	0	2	1	0	0	0	0	604
09:00	1	417	88	6	22	2	0	1	0	0	0	0	0	537
10:00	2	368	98	3	17	1	0	1	0	0	0	0	0	490
11:00	0	458	105	1	17	2	0	3	0	0	0	0	0	586
12 PM	2	500	122	3	20	1	0	3	**4**	0	0	0	0	655
13:00	1	514	99	**9**	12	0	0	0	0	0	0	0	0	635
14:00	1	**717**	149	3	31	**2**	0	**4**	0	**1**	0	0	0	**908**
15:00	1	677	**154**	3	24	0	0	2	1	0	0	0	0	862
16:00	3	689	148	4	**35**	1	0	4	2	0	0	0	0	886
17:00	5	683	153	3	18	0	0	2	1	0	0	0	0	865
18:00	2	564	123	3	15	1	0	2	0	0	0	0	0	710
19:00	**6**	407	81	0	9	1	0	0	0	0	0	0	0	504
20:00	0	393	79	0	8	1	0	2	0	0	0	0	0	483
21:00	0	322	54	0	7	1	0	0	1	0	0	0	0	385
22:00	0	249	51	0	6	0	0	0	0	0	0	0	0	306
23:00	1	208	22	0	4	0	0	0	0	0	0	0	0	235
Total	34	9188	1986	61	334	19	0	32	12	1	1	0	0	11668
Percent	0.3%	78.7%	17.0%	0.5%	2.9%	0.2%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	07:00		07:00	07:00		07:00			07:00
Vol.	4	688	159	18	37	2		6	2		1			917
PM Peak	19:00	14:00	15:00	13:00	16:00	14:00		14:00	12:00	14:00				14:00
Vol.	6	717	154	9	35	2		4	4	1				908
Grand Total	34	9188	1986	61	334	19	0	32	12	1	1	0	0	11668
Percent	0.3%	78.7%	17.0%	0.5%	2.9%	0.2%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

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City of San Bernardino
Victoria Avenue
B/ Pacific Street - Baseline Street
24 Hour Directional Volume Count

SBC068
Site Code: 999-18385

Start Time	22-May-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		13	77			25	113				
12:15		13	84			21	90				
12:30		17	92			14	109				
12:45		5	88	48	341	19	79	79	391	127	732
01:00		14	90			13	96				
01:15		6	100			12	94				
01:30		14	126			17	78				
01:45		12	120	46	436	13	88	55	356	101	792
02:00		12	136			13	**144**				
02:15		9	114			16	**173**				
02:30		17	122			10	**125**				
02:45		4	103	42	475	14	**124**	53	566	95	1041
03:00		16	108			9	118				
03:15		14	151			16	123				
03:30		22	134			22	139				
03:45		26	127	78	520	12	132	59	512	137	1032
04:00		21	127			15	127				
04:15		29	**125**			24	119				
04:30		28	**144**			21	129				
04:45		40	**158**	118	554	21	119	81	494	199	1048
05:00		45	**142**			26	135				
05:15		48	123			33	124				
05:30		37	122			37	124				
05:45		36	140	166	527	34	108	130	491	296	1018
06:00		61	100			32	108				
06:15		63	98			49	106				
06:30		**74**	84			70	118				
06:45		**132**	83	330	365	**108**	94	259	426	589	791
07:00		**161**	91			**158**	96				
07:15		**110**	79			**161**	68				
07:30		71	72			**104**	82				
07:45		91	82	433	324	62	81	485	327	918	651
08:00		95	74			102	79				
08:15		98	74			87	70				
08:30		86	73			91	67				
08:45		73	68	352	289	68	67	348	283	700	572
09:00		70	76			63	79				
09:15		78	60			53	63				
09:30		54	65			70	62				
09:45		74	59	276	260	71	54	257	258	533	518
10:00		79	68			71	56				
10:15		78	55			73	60				
10:30		86	33			76	56				
10:45		88	33	331	189	65	40	285	212	616	401
11:00		89	26			86	35				
11:15		81	32			88	35				
11:30		68	22			76	24				
11:45		96	28	334	108	96	31	346	125	680	233
Total		2554	4388	2554	4388	2437	4441	2437	4441	4991	8829
Combined Total		6942		6942		6878		6878		13820	
AM Peak	-	06:30	-	-	-	06:45	-	-	-	-	-
Vol.	-	477	-	-	-	531	-	-	-	-	-
P.H.F.		0.741				0.825					
PM Peak	-	-	04:15	-	-	-	02:00	-	-	-	-
Vol.	-	-	569	-	-	-	566	-	-	-	-
P.H.F.			0.900				0.818				
Percentage		36.8%	63.2%			35.4%	64.6%				
ADT/AADT		ADT 13,820		AADT 13,820							

Counts Unlimited, Inc.

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City of San Bernardino
Victoria Avenue
B/ Baseline Street - 9th Street
24 Hour Directional Volume Count

SBC069
Site Code: 999-18385

Start Time	24-May-18 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		6	70			23	79				
12:15		13	77			14	67				
12:30		8	65			9	79				
12:45		11	69	38	281	9	35	55	260	93	541
01:00		14	55			16	68				
01:15		5	66			12	66				
01:30		5	77			13	57				
01:45		9	86	33	284	4	56	45	247	78	531
02:00		4	72			13	89				
02:15		5	112			4	104				
02:30		9	82			6	85				
02:45		8	83	26	349	9	76	32	354	58	703
03:00		11	104			10	93				
03:15		5	112			15	104				
03:30		10	127			17	**95**				
03:45		15	100	41	443	6	**101**	48	393	89	836
04:00		13	95			16	**104**				
04:15		20	102			17	**119**				
04:30		14	**119**			12	82				
04:45		18	**111**	65	427	13	84	58	389	123	816
05:00		23	**124**			17	87				
05:15		23	**117**			31	108				
05:30		19	107			43	107				
05:45		19	102	84	450	24	86	115	388	199	838
06:00		29	82			31	86				
06:15		33	75			43	82				
06:30		49	74			45	66				
06:45		**67**	79	178	310	**67**	84	186	318	364	628
07:00		**104**	61			**101**	76				
07:15		**61**	61			**104**	56				
07:30		**52**	69			**83**	63				
07:45		56	64	273	255	62	59	350	254	623	509
08:00		67	51			76	82				
08:15		98	67			79	46				
08:30		62	47			69	44				
08:45		51	51	278	216	61	45	285	217	563	433
09:00		52	55			67	61				
09:15		51	51			68	35				
09:30		46	33			62	32				
09:45		50	39	199	178	57	43	254	171	453	349
10:00		65	46			50	40				
10:15		71	37			51	33				
10:30		49	28			41	31				
10:45		66	31	251	142	53	28	195	132	446	274
11:00		58	26			65	25				
11:15		78	15			66	26				
11:30		66	12			66	13				
11:45		72	11	274	64	77	11	274	75	548	139
Total		1740	3399	1740	3399	1897	3198	1897	3198	3637	6597
Combined Total		5139		5139		5095		5095		10234	
AM Peak	-	06:45	-	-	-	06:45	-	-	-	-	-
Vol.	-	284	-	-	-	355	-	-	-	-	-
P.H.F.		0.683				0.853					
PM Peak	-	-	04:30	-	-	-	03:30	-	-	-	-
Vol.	-	-	471	-	-	-	419	-	-	-	-
P.H.F.			0.950				0.880				
Percentage		33.9%	66.1%			37.2%	62.8%				
ADT/AADT		ADT 10,234		AADT 10,234							

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City of San Bernardino
Victoria Avenue
B/ 9th Street - 5th Street
24 Hour Directional Volume Count

SBC070
Site Code: 999-18385

Start Time	24-May-18 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		12	52			11	55				
12:15		9	55			4	60				
12:30		8	49			5	29				
12:45		7	43	36	199	13	49	33	193	69	392
01:00		4	53			4	53				
01:15		0	71			5	46				
01:30		9	54			3	46				
01:45		9	52	22	230	4	62	16	207	38	437
02:00		6	93			11	76				
02:15		8	76			3	54				
02:30		5	86			9	54				
02:45		7	86	26	341	16	67	39	251	65	592
03:00		2	83			12	60				
03:15		7	86			20	**71**				
03:30		6	84			9	**67**				
03:45		10	88	25	341	17	**80**	58	278	83	619
04:00		8	**98**			29	**76**				
04:15		9	**103**			24	60				
04:30		7	**98**			20	60				
04:45		10	**98**	34	397	25	59	98	255	132	652
05:00		13	96			41	74				
05:15		13	87			72	74				
05:30		14	85			24	53				
05:45		17	75	57	343	40	52	177	253	234	596
06:00		14	52			64	47				
06:15		26	55			54	48				
06:30		34	60			**76**	37				
06:45		46	53	120	220	**88**	46	282	178	402	398
07:00		43	48			**78**	35				
07:15		45	45			**77**	40				
07:30		35	69			51	35				
07:45		44	43	167	205	48	45	254	155	421	360
08:00		40	44			58	21				
08:15		39	40			61	30				
08:30		40	34			47	22				
08:45		41	32	160	150	52	35	218	108	378	258
09:00		41	29			54	18				
09:15		27	19			48	24				
09:30		34	32			43	24				
09:45		39	42	141	122	35	24	180	90	321	212
10:00		54	26			36	24				
10:15		36	20			39	19				
10:30		35	19			30	23				
10:45		49	16	174	81	45	12	150	78	324	159
11:00		**50**	14			45	13				
11:15		**39**	11			41	11				
11:30		**59**	11			63	4				
11:45		**51**	12	199	48	62	11	211	39	410	87
Total		1161	2677	1161	2677	1716	2085	1716	2085	2877	4762
Combined Total		3838		3838		3801		3801		7639	
AM Peak	-	11:00	-	-	-	06:30	-	-	-	-	-
Vol.	-	199	-	-	-	319	-	-	-	-	-
P.H.F.		0.843				0.906					
PM Peak	-	-	04:00	-	-	-	03:15	-	-	-	-
Vol.	-	-	397	-	-	-	294	-	-	-	-
P.H.F.			0.964				0.919				
Percentage		30.3%	69.7%			45.1%	54.9%				
ADT/AADT		ADT 7,639		AADT 7,639							

Counts Unlimited, Inc.

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City of San Bernardino
Victoria Avenue
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

SBC071
Site Code: 999-18385

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/22/18	0	18	4	0	0	1	0	0	1	0	0	0	0	24
01:00	0	13	3	0	0	1	**1**	0	0	0	0	0	0	18
02:00	0	9	2	0	1	0	0	0	1	**2**	0	0	0	15
03:00	0	11	4	1	0	0	0	0	0	0	0	0	0	16
04:00	0	10	4	0	0	2	0	0	**2**	0	0	0	0	18
05:00	0	29	6	0	2	2	0	0	1	0	0	0	0	40
06:00	0	30	6	**2**	0	2	0	0	0	1	0	0	0	41
07:00	0	40	**22**	1	4	0	1	0	2	0	0	0	0	70
08:00	**1**	60	13	1	**6**	**4**	0	0	0	0	0	0	0	85
09:00	0	47	8	0	4	3	0	**1**	1	0	0	0	0	64
10:00	0	69	14	0	4	3	0	0	0	0	0	0	0	90
11:00	0	**76**	13	2	3	1	0	0	0	0	0	0	0	**95**
12 PM	1	87	27	1	4	1	0	0	1	0	0	0	0	122
13:00	0	110	30	**3**	10	1	0	0	1	0	0	0	0	155
14:00	0	118	32	1	4	1	0	0	0	0	0	0	0	156
15:00	2	176	46	0	8	2	0	**1**	0	0	0	0	0	235
16:00	**3**	221	53	1	5	**5**	0	1	2	0	0	0	0	291
17:00	0	**248**	**70**	0	**19**	1	0	1	1	0	0	0	0	**340**
18:00	1	135	24	0	6	3	0	0	1	0	0	0	0	170
19:00	0	83	19	0	1	1	0	0	0	0	0	0	0	104
20:00	0	75	10	2	1	2	0	0	1	0	0	0	0	91
21:00	1	65	12	0	4	2	0	0	**3**	0	0	0	0	87
22:00	0	47	8	0	0	1	0	0	0	0	0	0	0	56
23:00	0	32	4	0	0	1	0	0	0	0	0	0	0	37
Total	9	1809	434	15	86	40	2	4	18	3	0	0	0	2420
Percent	0.4%	74.8%	17.9%	0.6%	3.6%	1.7%	0.1%	0.2%	0.7%	0.1%	0.0%	0.0%	0.0%	
AM Peak	08:00	11:00	07:00	06:00	08:00	08:00	01:00	09:00	04:00	02:00				11:00
Vol.	1	76	22	2	6	4	1	1	2	2				95
PM Peak	16:00	17:00	17:00	13:00	17:00	16:00		15:00	21:00					17:00
Vol.	3	248	70	3	19	5		1	3					340
Grand Total	9	1809	434	15	86	40	2	4	18	3	0	0	0	2420
Percent	0.4%	74.8%	17.9%	0.6%	3.6%	1.7%	0.1%	0.2%	0.7%	0.1%	0.0%	0.0%	0.0%	

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City of San Bernardino
Victoria Avenue
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

SBC071
Site Code: 999-18385

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/22/18	0	17	5	0	2	1	0	0	0	0	0	0	0	25
01:00	0	11	2	1	0	1	0	0	0	0	0	0	0	15
02:00	0	17	4	0	1	1	0	0	0	0	0	0	0	23
03:00	2	39	8	0	1	4	**1**	0	0	0	0	0	0	55
04:00	0	42	19	0	2	3	0	0	0	0	0	0	0	66
05:00	0	99	25	0	11	3	0	0	0	0	0	0	0	138
06:00	4	216	51	0	12	**5**	0	0	0	0	0	0	0	288
07:00	**9**	**408**	**96**	**2**	**25**	4	1	**1**	0	0	0	0	0	**546**
08:00	4	189	47	2	17	4	1	1	0	0	0	0	0	265
09:00	1	103	26	1	6	5	0	1	0	0	0	0	0	143
10:00	0	110	28	0	7	5	0	0	0	0	0	0	0	150
11:00	3	109	32	1	6	5	1	0	0	0	0	0	0	157
12 PM	2	149	43	0	9	1	0	2	0	0	0	0	0	206
13:00	3	144	43	0	**19**	4	0	0	0	0	0	0	0	**213**
14:00	4	**150**	**44**	0	8	**5**	1	0	0	0	0	0	0	212
15:00	**6**	137	33	1	12	5	**4**	**3**	0	0	0	0	0	201
16:00	1	137	34	0	16	1	0	2	0	0	0	0	0	191
17:00	2	123	23	**3**	8	2	1	0	0	0	0	0	0	162
18:00	3	103	22	0	10	5	0	0	0	0	0	0	0	143
19:00	2	70	19	0	6	0	0	1	0	0	0	0	0	98
20:00	0	56	26	0	7	0	0	0	0	0	0	0	0	89
21:00	1	55	16	0	3	3	0	0	**1**	0	0	0	0	79
22:00	0	45	9	0	1	1	0	0	0	0	0	0	0	56
23:00	0	26	5	0	1	3	1	0	1	0	0	0	0	37
Total	47	2555	660	11	190	71	11	11	2	0	0	0	0	3558
Percent	1.3%	71.8%	18.5%	0.3%	5.3%	2.0%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	06:00	03:00	07:00						07:00
Vol.	9	408	96	2	25	5	1	1						546
PM Peak	15:00	14:00	14:00	17:00	13:00	14:00	15:00	15:00	21:00					13:00
Vol.	6	150	44	3	19	5	4	3	1					213
Grand Total	47	2555	660	11	190	71	11	11	2	0	0	0	0	3558
Percent	1.3%	71.8%	18.5%	0.3%	5.3%	2.0%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	

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City of San Bernardino
Victoria Avenue
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

SBC071
Site Code: 999-18385

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/22/18	0	35	9	0	2	2	0	0	1	0	0	0	0	49
01:00	0	24	5	1	0	2	1	0	0	0	0	0	0	33
02:00	0	26	6	0	2	1	0	0	1	**2**	0	0	0	38
03:00	2	50	12	1	1	4	1	0	0	0	0	0	0	71
04:00	0	52	23	0	2	5	0	0	**2**	0	0	0	0	84
05:00	0	128	31	0	13	5	0	0	1	0	0	0	0	178
06:00	4	246	57	2	12	7	0	0	0	1	0	0	0	329
07:00	**9**	**448**	**118**	**3**	**29**	4	**2**	1	2	0	0	0	0	**616**
08:00	5	249	60	3	23	**8**	1	1	0	0	0	0	0	350
09:00	1	150	34	1	10	8	0	**2**	1	0	0	0	0	207
10:00	0	179	42	0	11	8	0	0	0	0	0	0	0	240
11:00	3	185	45	3	9	6	1	0	0	0	0	0	0	252
12 PM	3	236	70	1	13	2	0	2	1	0	0	0	0	328
13:00	3	254	73	**3**	**29**	5	0	0	1	0	0	0	0	368
14:00	4	268	76	1	12	6	1	0	0	0	0	0	0	368
15:00	**8**	313	79	1	20	7	**4**	**4**	0	0	0	0	0	436
16:00	4	358	87	1	21	6	0	3	2	0	0	0	0	482
17:00	2	**371**	**93**	3	27	3	1	1	1	0	0	0	0	**502**
18:00	4	238	46	0	16	**8**	0	0	1	0	0	0	0	313
19:00	2	153	38	0	7	1	0	1	0	0	0	0	0	202
20:00	0	131	36	2	8	2	0	0	1	0	0	0	0	180
21:00	2	120	28	0	7	5	0	0	**4**	0	0	0	0	166
22:00	0	92	17	0	1	2	0	0	0	0	0	0	0	112
23:00	0	58	9	0	1	4	1	0	1	0	0	0	0	74
Total	56	4364	1094	26	276	111	13	15	20	3	0	0	0	5978
Percent	0.9%	73.0%	18.3%	0.4%	4.6%	1.9%	0.2%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	07:00	08:00	07:00	09:00	04:00	02:00				07:00
Vol.	9	448	118	3	29	8	2	2	2	2				616
PM Peak	15:00	17:00	17:00	13:00	13:00	18:00	15:00	15:00	21:00					17:00
Vol.	8	371	93	3	29	8	4	4	4					502
Grand Total	56	4364	1094	26	276	111	13	15	20	3	0	0	0	5978
Percent	0.9%	73.0%	18.3%	0.4%	4.6%	1.9%	0.2%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	

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City of Redlands
Alabama Street
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

RED003
Site Code: 067-18128

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/21/18	0	53	9	0	2	4	0	3	1	0	6	0	0	78
01:00	1	39	3	0	1	4	0	1	1	0	3	0	0	53
02:00	3	69	13	0	2	8	0	0	0	0	2	0	0	97
03:00	2	53	13	1	2	9	0	0	4	0	6	0	0	90
04:00	2	103	19	1	2	10	0	3	**10**	0	9	0	0	159
05:00	4	76	14	2	4	12	**1**	0	1	0	**13**	0	0	127
06:00	5	113	22	2	14	**25**	0	10	1	0	9	0	0	201
07:00	**7**	229	44	**3**	**26**	15	0	**13**	0	0	8	0	0	345
08:00	4	162	43	1	22	12	0	8	2	0	7	0	0	261
09:00	3	190	40	2	14	9	0	3	1	0	7	0	0	269
10:00	4	222	64	2	15	14	0	3	2	0	13	0	0	339
11:00	5	**303**	**65**	0	19	16	0	9	3	0	10	0	0	**430**
12 PM	4	357	90	2	30	9	**2**	9	2	1	7	**1**	0	514
13:00	7	398	94	2	28	**20**	0	5	**6**	0	10	1	0	571
14:00	5	527	116	1	28	13	1	9	1	0	3	0	0	704
15:00	8	651	159	**3**	39	15	2	9	2	1	4	0	0	893
16:00	**10**	637	153	1	39	15	0	8	2	**2**	**14**	1	**2**	884
17:00	8	**740**	**163**	1	**44**	11	0	**10**	3	0	9	0	0	**989**
18:00	2	464	95	1	22	6	0	5	2	1	2	0	0	600
19:00	0	289	59	0	11	5	0	0	1	0	0	0	0	365
20:00	0	236	35	0	12	3	0	3	0	0	2	0	0	291
21:00	3	164	28	1	2	6	0	0	1	0	3	0	0	208
22:00	1	167	23	0	2	2	0	0	2	0	5	0	0	202
23:00	1	87	15	0	1	3	0	0	0	0	3	0	0	110
Total	89	6329	1379	26	381	246	6	111	48	5	155	3	2	8780
Percent	1.0%	72.1%	15.7%	0.3%	4.3%	2.8%	0.1%	1.3%	0.5%	0.1%	1.8%	0.0%	0.0%	
AM Peak	07:00	11:00	11:00	07:00	07:00	06:00	05:00	07:00	04:00		05:00			11:00
Vol.	7	303	65	3	26	25	1	13	10		13			430
PM Peak	16:00	17:00	17:00	15:00	17:00	13:00	12:00	17:00	13:00	16:00	16:00	12:00	16:00	17:00
Vol.	10	740	163	3	44	20	2	10	6	2	14	1	2	989
Grand Total	89	6329	1379	26	381	246	6	111	48	5	155	3	2	8780
Percent	1.0%	72.1%	15.7%	0.3%	4.3%	2.8%	0.1%	1.3%	0.5%	0.1%	1.8%	0.0%	0.0%	

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City of Redlands
Alabama Street
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

RED003
Site Code: 067-18128

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/21/18	1	19	5	0	0	4	0	0	2	0	4	0	0	35
01:00	0	18	1	0	0	3	0	0	3	0	1	0	0	26
02:00	1	16	4	0	1	3	0	0	**7**	0	8	0	0	40
03:00	2	92	11	0	2	7	**1**	0	5	0	**12**	0	0	132
04:00	**4**	122	25	0	9	9	0	2	4	0	11	0	0	186
05:00	2	175	45	1	10	8	1	2	2	0	7	0	0	253
06:00	3	303	64	0	16	8	1	2	0	0	6	0	0	403
07:00	3	**573**	**115**	0	**36**	**15**	1	**10**	0	**1**	6	0	0	**760**
08:00	2	299	62	**3**	25	14	0	4	4	0	5	0	0	418
09:00	1	198	55	2	8	14	0	3	0	0	8	0	0	289
10:00	3	239	48	1	16	10	0	1	3	0	8	0	0	329
11:00	4	200	55	3	15	14	1	4	3	1	2	0	0	302
12 PM	**6**	290	61	1	17	**17**	0	1	2	0	**8**	0	0	403
13:00	4	261	39	0	23	16	0	**7**	**10**	0	2	0	0	362
14:00	1	286	**66**	1	18	14	0	3	3	0	2	0	0	394
15:00	4	348	63	3	**26**	14	0	1	4	0	7	0	0	470
16:00	2	345	65	**4**	10	9	0	5	5	0	7	0	0	452
17:00	0	**410**	55	1	10	7	0	3	1	**1**	6	0	0	**494**
18:00	1	247	42	0	8	5	0	0	0	0	1	0	0	304
19:00	0	104	23	0	6	2	0	0	2	0	1	0	0	138
20:00	2	106	16	0	3	6	0	0	1	0	2	0	0	136
21:00	0	71	10	1	2	3	0	0	1	0	2	0	0	90
22:00	0	66	10	1	1	0	0	0	2	0	0	0	0	80
23:00	2	46	6	0	1	5	0	0	0	0	2	0	**1**	63
Total	48	4834	946	22	263	207	5	48	64	3	118	0	1	6559
Percent	0.7%	73.7%	14.4%	0.3%	4.0%	3.2%	0.1%	0.7%	1.0%	0.0%	1.8%	0.0%	0.0%	
AM Peak	04:00	07:00	07:00	08:00	07:00	07:00	03:00	07:00	02:00	07:00	03:00			07:00
Vol.	4	573	115	3	36	15	1	10	7	1	12			760
PM Peak	12:00	17:00	14:00	16:00	15:00	12:00		13:00	13:00	17:00	12:00		23:00	17:00
Vol.	6	410	66	4	26	17		7	10	1	8		1	494
Grand Total	48	4834	946	22	263	207	5	48	64	3	118	0	1	6559
Percent	0.7%	73.7%	14.4%	0.3%	4.0%	3.2%	0.1%	0.7%	1.0%	0.0%	1.8%	0.0%	0.0%	

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City of Redlands
Alabama Street
B/ 5th Street - 3rd Street
24 Hour Directional Classification Count

RED003
Site Code: 067-18128

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/21/18	1	72	14	0	2	8	0	3	3	0	10	0	0	113
01:00	1	57	4	0	1	7	0	1	4	0	4	0	0	79
02:00	4	85	17	0	3	11	0	0	7	0	10	0	0	137
03:00	4	145	24	1	4	16	1	0	9	0	18	0	0	222
04:00	6	225	44	1	11	19	0	5	**14**	0	20	0	0	345
05:00	6	251	59	3	14	20	**2**	2	3	0	20	0	0	380
06:00	8	416	86	2	30	**33**	1	12	1	0	15	0	0	604
07:00	**10**	**802**	**159**	3	**62**	30	1	**23**	0	**1**	14	0	0	**1105**
08:00	6	461	105	**4**	47	26	0	12	6	0	12	0	0	679
09:00	4	388	95	4	22	23	0	6	1	0	15	0	0	558
10:00	7	461	112	3	31	24	0	4	5	0	**21**	0	0	668
11:00	9	503	120	3	34	30	1	13	6	1	12	0	0	732
12 PM	10	647	151	3	47	26	**2**	10	4	1	15	**1**	0	917
13:00	11	659	133	2	51	**36**	0	12	**16**	0	12	1	0	933
14:00	6	813	182	2	46	27	1	12	4	0	5	0	0	1098
15:00	**12**	999	**222**	**6**	**65**	29	2	10	6	1	11	0	0	1363
16:00	12	982	218	5	49	24	0	**13**	7	**2**	**21**	1	**2**	1336
17:00	8	**1150**	218	2	54	18	0	13	4	1	15	0	0	**1483**
18:00	3	711	137	1	30	11	0	5	2	1	3	0	0	904
19:00	0	393	82	0	17	7	0	0	3	0	1	0	0	503
20:00	2	342	51	0	15	9	0	3	1	0	4	0	0	427
21:00	3	235	38	2	4	9	0	0	2	0	5	0	0	298
22:00	1	233	33	1	3	2	0	0	4	0	5	0	0	282
23:00	3	133	21	0	2	8	0	0	0	0	5	0	1	173
Total	137	11163	2325	48	644	453	11	159	112	8	273	3	3	15339
Percent	0.9%	72.8%	15.2%	0.3%	4.2%	3.0%	0.1%	1.0%	0.7%	0.1%	1.8%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	08:00	07:00	06:00	05:00	07:00	04:00	07:00	10:00			07:00
Vol.	10	802	159	4	62	33	2	23	14	1	21			1105
PM Peak	15:00	17:00	15:00	15:00	15:00	13:00	12:00	16:00	13:00	16:00	16:00	12:00	16:00	17:00
Vol.	12	1150	222	6	65	36	2	13	16	2	21	1	2	1483
Grand Total	137	11163	2325	48	644	453	11	159	112	8	273	3	3	15339
Percent	0.9%	72.8%	15.2%	0.3%	4.2%	3.0%	0.1%	1.0%	0.7%	0.1%	1.8%	0.0%	0.0%	

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City of San Bernardino
Del Rosa Drive
B/ 3rd Street - Harry Shepard Boulevard
24 Hour Directional Volume Count

SBC057
Site Code: 999-18385

Start Time	22-May-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		3	42			5	49				
12:15		10	52			3	58				
12:30		12	85			2	**78**				
12:45		3	76	28	255	4	**65**	14	250	42	505
01:00		6	57			2	**57**				
01:15		14	79			3	**62**				
01:30		5	65			2	49				
01:45		8	58	33	259	1	54	8	222	41	481
02:00		2	59			3	46				
02:15		8	83			4	57				
02:30		6	84			1	51				
02:45		6	83	22	309	4	42	12	196	34	505
03:00		4	82			3	42				
03:15		2	103			16	50				
03:30		13	102			16	52				
03:45		15	98	34	385	6	57	41	201	75	586
04:00		6	88			22	34				
04:15		19	111			15	61				
04:30		14	**115**			17	56				
04:45		20	**158**	59	472	13	41	67	192	126	664
05:00		7	**117**			27	42				
05:15		20	**149**			32	44				
05:30		9	94			55	49				
05:45		18	95	54	455	39	44	153	179	207	634
06:00		16	62			51	29				
06:15		24	51			85	18				
06:30		34	36			124	30				
06:45		54	52	128	201	**101**	25	361	102	489	303
07:00		45	62			**148**	28				
07:15		43	41			**99**	30				
07:30		44	45			**126**	38				
07:45		44	55	176	203	60	22	433	118	609	321
08:00		38	36			61	24				
08:15		27	48			49	19				
08:30		25	25			46	20				
08:45		34	52	124	161	36	17	192	80	316	241
09:00		27	30			28	16				
09:15		17	22			31	15				
09:30		25	11			44	14				
09:45		33	28	102	91	26	7	129	52	231	143
10:00		32	27			37	11				
10:15		31	23			39	12				
10:30		25	13			26	3				
10:45		36	11	124	74	28	3	130	29	254	103
11:00		**36**	9			28	9				
11:15		**49**	7			48	3				
11:30		**43**	13			42	3				
11:45		**67**	12	195	41	42	1	160	16	355	57
Total		1079	2906	1079	2906	1700	1637	1700	1637	2779	4543
Combined Total		3985		3985		3337		3337		7322	
AM Peak	-	11:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	195	-	-	-	474	-	-	-	-	-
P.H.F.		0.728				0.801					
PM Peak	-	-	04:30	-	-	-	00:30	-	-	-	-
Vol.	-	-	539	-	-	-	262	-	-	-	-
P.H.F.			0.853				0.840				
Percentage		27.1%	72.9%			50.9%	49.1%				
ADT/AADT		ADT 7,322		AADT 7,322							

APPENDIX C

INTERSECTION ANALYSIS WORKSHEETS

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Del Rosa Ave / SR-210 WB Ramps	Signalized	HCM 6th Edition	NB Left	0.947	54.3	D
2	Del Rosa Ave / SR-210 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.742	31.6	C
3	Del Rosa Ave / Date St_Date Pl	Signalized	HCM 6th Edition	EB Left	0.387	14.6	B
4	Del Rosa Ave / Highland Ave	Signalized	HCM 6th Edition	NB Left	0.355	28.1	C
5	Highland Ave / SR-210 EB Off Ramp	Signalized	HCM 6th Edition	SB Left	0.449	23.0	C
6	Highland Ave / SR-210 WB Off Ramp	Signalized	HCM 6th Edition	EB Left	0.366	10.8	B
7	Victoria Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.567	28.3	C
8	Del Rosa Dr / Pacific St	Signalized	HCM 6th Edition	WB Left	0.420	30.1	C
9	Victoria Ave / Pacific St	Signalized	HCM 6th Edition	SB Left	0.569	36.4	D
10	Victoria Ave / 14th St	Signalized	HCM 6th Edition	SB Left	0.263	7.1	A
11	Tippecanoe Ave / Baseline St	Signalized	HCM 6th Edition	WB Left	0.437	21.2	C
12	Del Rosa Dr / Baseline St	Signalized	HCM 6th Edition	WB Left	0.403	31.7	C
13	Sterling Ave / Baseline St	Signalized	HCM 6th Edition	EB Left	0.419	30.7	C
14	Victoria Ave / Baseline St	Signalized	HCM 6th Edition	SB Left	0.366	29.8	C
15	Tippecanoe Ave / 9th St	Signalized	HCM 6th Edition	WB Left	0.438	31.2	C
16	Del Rosa Dr / 9th St	Signalized	HCM 6th Edition	SB Left	0.518	33.0	C
17	Sterling Ave / 9th St	Signalized	HCM 6th Edition	EB Left	0.390	29.1	C
			HCM 6th				

18	Victoria Ave / 9th St	Signalized	HCM 6th Edition	EB Left	0.254	27.1	C
19	Del Rosa Dr / 6th St	Signalized	HCM 6th Edition	NB Left	0.540	33.9	C
20	Sterling Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.269	53.8	F
21	Victoria Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.062	15.6	C
22	Central Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.085	10.7	B
23	I-215 SB Ramps / 5th St	Signalized	HCM 6th Edition	WB Left	0.513	24.6	C
24	I-215 NB Ramps / 5th St	Signalized	HCM 6th Edition	EB Left	0.425	28.9	C
25	E St / 5th St	Signalized	HCM 6th Edition	SB Thru	0.383	13.6	B
26	Arrowhead Ave / 5th St	Signalized	HCM 6th Edition	NB Left	0.288	12.2	B
27	Waterman Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.361	24.7	C
28	Tippecanoe Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.281	22.5	C
29	Del Rosa Dr / 5th St	Signalized	HCM 6th Edition	EB Left	0.330	19.0	B
30	Sterling Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.135	19.8	B
31	Victoria Ave / 5th St	Signalized	HCM 6th Edition	SB Right	0.335	13.0	B
32	Central Avenue / 5th Street	Signalized	HCM 6th Edition	NB Left	0.302	12.5	B
33	Palm Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.591	54.0	D
34	Church Ave / 5th St	Signalized	HCM 6th Edition	EB Left	0.441	10.5	B
35	SR-210 EB Ramps / 5th Street	Signalized	HCM 6th Edition	EB Right	0.661	25.5	C
36	SR-210 WB Ramps / 5th Street	Signalized	HCM 6th Edition	EB Left	0.488	24.4	C
37	Tippecanoe Ave / 3rd St	Signalized	HCM 6th Edition	NB Left	0.384	29.2	C
38	Del Rosa Dr / 3rd St	Signalized	HCM 6th Edition	EB Left	0.417	33.3	C

39	Sterling Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.476	19.6	B
40	Victoria Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.499	33.8	C
41	Central Ave / 3rd St	Two-way stop	HCM 6th Edition	SB Left	0.057	14.1	B
42	Palm Ave_Alabama St / 3rd St	Signalized	HCM 6th Edition	WB Left	0.447	17.7	B
43	Tippecanoe Ave / Rialto Ave	Signalized	HCM 6th Edition	NB Left	0.360	11.8	B
44	Tippecanoe Ave / Mill St	Signalized	HCM 6th Edition	NB Left	0.442	19.9	B
45	Tippecanoe Ave / Central Ave	Signalized	HCM 6th Edition	EB Left	0.406	24.5	C
46	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave	Signalized	HCM 6th Edition	NB Left	0.460	26.2	C
47	Tippecanoe Ave / Hospitality Ln_Coulston St	Signalized	HCM 6th Edition	SB Left	0.376	20.7	C
48	Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps	Signalized	HCM 6th Edition	EB Left	0.467	24.8	C
49	Anderson St / SR-10 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.524	23.1	C
308	Arden Ave / Highland Ave	Signalized	HCM 6th Edition	SB Left	0.460	32.2	C

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

Intersection Level Of Service Report
Intersection 1: Del Rosa Ave / SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	54.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.947

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No						No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Base Volume Input [veh/h]	587	543	0	0	443	664	0	0	0	125	0	121
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	587	543	0	0	443	664	0	0	0	125	0	121
Peak Hour Factor	0.9250	0.9250	1.0000	1.0000	0.9250	0.9250	1.0000	1.0000	1.0000	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	159	147	0	0	120	179	0	0	0	34	0	33
Total Analysis Volume [veh/h]	635	587	0	0	479	718	0	0	0	135	0	131
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	38	81	0	0	43	0	0	0	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Cycle Length [s]	100	100	100	100		100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	35	83	45	45		11	11
g / C, Green / Cycle	0.35	0.83	0.45	0.45		0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.39	0.17	0.27	0.47		0.08	0.09
s, saturation flow rate [veh/h]	1619	3427	1800	1530		1714	1530
c, Capacity [veh/h]	567	2852	814	692		185	165
d1, Uniform Delay [s]	32.50	1.70	20.45	27.39		43.20	43.52
k, delay calibration	0.50	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	75.48	0.16	3.11	44.43		5.44	8.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.12	0.21	0.59	1.04		0.73	0.79
d, Delay for Lane Group [s/veh]	107.98	1.86	23.56	71.83		48.64	51.84
Lane Group LOS	F	A	C	F		D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	25.11	0.69	8.74	24.09		3.49	3.52
50th-Percentile Queue Length [ft/ln]	627.70	17.23	218.60	602.29		87.27	88.02
95th-Percentile Queue Length [veh/ln]	35.90	1.24	13.59	33.06		6.28	6.34
95th-Percentile Queue Length [ft/ln]	897.42	31.02	339.83	826.43		157.08	158.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	107.98	1.86	0.00	0.00	23.56	71.83	0.00	0.00	0.00	48.64	48.64	51.84
Movement LOS	F	A			C	F				D	D	D
d_A, Approach Delay [s/veh]	57.01			52.51			0.00			50.21		
Approach LOS	E			D			A			D		
d_I, Intersection Delay [s/veh]	54.33											
Intersection LOS	D											
Intersection V/C	0.947											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.758	2.604	2.749	1.851
Crosswalk LOS	C	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1560	800	0	320
d_b, Bicycle Delay [s]	2.42	18.00	50.00	35.28
l_b,int, Bicycle LOS Score for Intersection	2.568	2.547	4.132	1.999
Bicycle LOS	B	B	D	A

Sequence

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

Intersection Level Of Service Report
Intersection 2: Del Rosa Ave / SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	31.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.742

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Base Volume Input [veh/h]	0	817	84	170	402	0	360	1	695	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	817	84	170	402	0	360	1	695	0	0	0
Peak Hour Factor	1.0000	0.9900	0.9900	0.9900	0.9900	1.0000	0.9900	0.9900	0.9900	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	206	21	43	102	0	91	0	176	0	0	0
Total Analysis Volume [veh/h]	0	825	85	172	406	0	364	1	702	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	14	35	0	0	65	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	31	31	11	45	49	49	
g / C, Green / Cycle	0.31	0.31	0.11	0.45	0.49	0.49	
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.11	0.12	0.21	0.46	
s, saturation flow rate [veh/h]	3427	1715	1619	3427	1715	1530	
c, Capacity [veh/h]	1070	535	178	1549	836	746	
d1, Uniform Delay [s]	28.75	28.74	44.31	17.03	16.66	24.23	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.29	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.18	4.30	24.05	0.41	0.36	14.26	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.57	0.57	0.97	0.26	0.44	0.94	
d, Delay for Lane Group [s/veh]	30.93	33.04	68.37	17.44	17.02	38.49	
Lane Group LOS	C	C	E	B	B	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.29	6.61	5.39	2.92	5.36	17.70	
50th-Percentile Queue Length [ft/ln]	157.34	165.20	134.81	73.07	133.89	442.62	
95th-Percentile Queue Length [veh/ln]	10.41	10.82	9.20	5.26	9.15	24.61	
95th-Percentile Queue Length [ft/ln]	260.19	270.59	230.02	131.52	228.77	615.14	

Movement, Approach, & Intersection Results

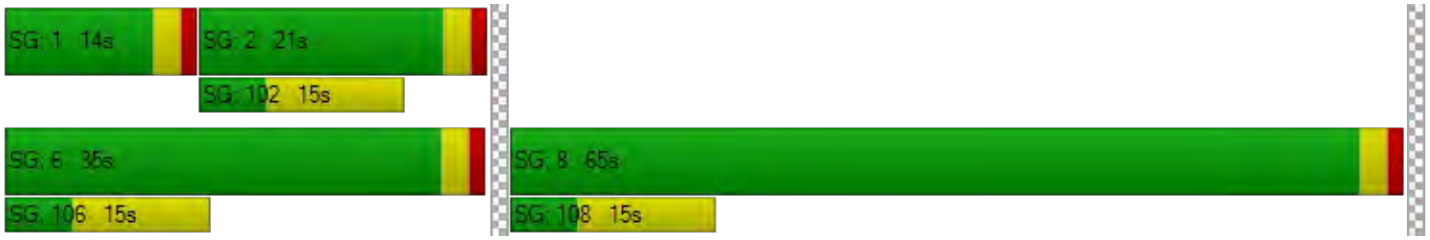
d_M, Delay for Movement [s/veh]	0.00	31.49	33.04	68.37	17.44	0.00	17.02	17.02	38.49	0.00	0.00	0.00
Movement LOS		C	C	E	B		B	B	D			
d_A, Approach Delay [s/veh]	31.63			32.59			31.15			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	31.65											
Intersection LOS	C											
Intersection V/C	0.742											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.787	2.747	2.242	1.682
Crosswalk LOS	C	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	640	1240	0
d_b, Bicycle Delay [s]	33.62	23.12	7.22	50.00
l_b,int, Bicycle LOS Score for Intersection	2.060	2.036	3.320	4.132
Bicycle LOS	B	B	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 3: Del Rosa Ave / Date St_Date Pl

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Base Volume Input [veh/h]	30	628	21	179	846	69	112	31	39	15	28	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	628	21	179	846	69	112	31	39	15	28	153
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	160	5	46	216	18	29	8	10	4	7	39
Total Analysis Volume [veh/h]	31	641	21	183	863	70	114	32	40	15	29	156
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	45	0	25	60	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	70	60	60	70	63	63	24	24	24	24
g / C, Green / Cycle	0.70	0.60	0.60	0.70	0.63	0.63	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.05	0.18	0.19	0.21	0.26	0.26	0.09	0.04	0.01	0.12
s, saturation flow rate [veh/h]	682	1800	1780	880	1800	1753	1218	1639	1349	1567
c, Capacity [veh/h]	506	1085	1073	653	1139	1109	208	388	314	371
d1, Uniform Delay [s]	5.35	9.67	9.67	5.49	9.15	9.16	43.55	30.45	34.08	33.01
k, delay calibration	0.50	0.50	0.50	0.24	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.73	0.74	0.52	1.12	1.15	2.25	0.23	0.06	1.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.31	0.31	0.28	0.42	0.42	0.55	0.19	0.05	0.50
d, Delay for Lane Group [s/veh]	5.58	10.40	10.41	6.01	10.27	10.30	45.81	30.68	34.14	34.05
Lane Group LOS	A	B	B	A	B	B	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.20	3.54	3.51	1.20	5.05	4.93	2.87	1.40	0.31	3.95
50th-Percentile Queue Length [ft/ln]	5.06	88.59	87.77	30.04	126.18	123.21	71.78	35.08	7.69	98.68
95th-Percentile Queue Length [veh/ln]	0.36	6.38	6.32	2.16	8.73	8.57	5.17	2.53	0.55	7.10
95th-Percentile Queue Length [ft/ln]	9.10	159.47	157.98	54.07	218.30	214.24	129.20	63.15	13.84	177.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.58	10.41	10.41	6.01	10.29	10.30	45.81	30.68	30.68	34.14	34.05	34.05
Movement LOS	A	B	B	A	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.19			9.59			39.95			34.06		
Approach LOS	B			A			D			C		
d_I, Intersection Delay [s/veh]	14.58											
Intersection LOS	B											
Intersection V/C	0.387											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.846	2.951	2.078	2.251
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	840	1140	540	540
d_b, Bicycle Delay [s]	16.82	9.25	26.65	26.65
l_b,int, Bicycle LOS Score for Intersection	2.131	2.480	1.867	1.890
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 4: Del Rosa Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	28.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.355

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	104	412	36	122	568	123	51	267	119	47	273	135
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	412	36	122	568	123	51	267	119	47	273	135
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	104	9	31	144	31	13	68	30	12	69	34
Total Analysis Volume [veh/h]	105	418	37	124	576	125	52	271	121	48	277	137
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	5	2	0	1	6	6	3	8	0	7	4	4
Auxiliary Signal Groups						6						4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	7
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	28	23	0	31	26	26	12	34	0	12	34	34
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	62	62	9	63	63	5	12	12	5	12	12
g / C, Green / Cycle	0.08	0.62	0.62	0.09	0.63	0.63	0.05	0.12	0.12	0.05	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.13	0.08	0.17	0.08	0.03	0.08	0.08	0.03	0.08	0.09
s, saturation flow rate [veh/h]	1619	1800	1749	1619	3427	1530	1619	3427	1530	1619	3427	1530
c, Capacity [veh/h]	132	1106	1075	154	2152	961	87	407	182	84	400	179
d1, Uniform Delay [s]	45.09	8.52	8.53	44.34	8.32	7.54	46.25	42.17	42.17	46.32	42.44	42.84
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.24	0.43	0.44	9.46	0.31	0.28	6.40	1.88	4.16	6.00	2.15	6.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.21	0.21	0.81	0.27	0.13	0.60	0.67	0.67	0.57	0.69	0.77
d, Delay for Lane Group [s/veh]	55.33	8.95	8.97	53.81	8.63	7.82	52.65	44.06	46.33	52.32	44.59	49.57
Lane Group LOS	E	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.92	2.19	2.14	3.39	2.66	1.09	1.41	3.29	3.05	1.30	3.38	3.59
50th-Percentile Queue Length [ft/ln]	72.94	54.74	53.60	84.86	66.56	27.14	35.30	82.14	76.22	32.51	84.59	89.84
95th-Percentile Queue Length [veh/ln]	5.25	3.94	3.86	6.11	4.79	1.95	2.54	5.91	5.49	2.34	6.09	6.47
95th-Percentile Queue Length [ft/ln]	131.29	98.53	96.48	152.75	119.80	48.86	63.55	147.86	137.20	58.51	152.26	161.70

Movement, Approach, & Intersection Results

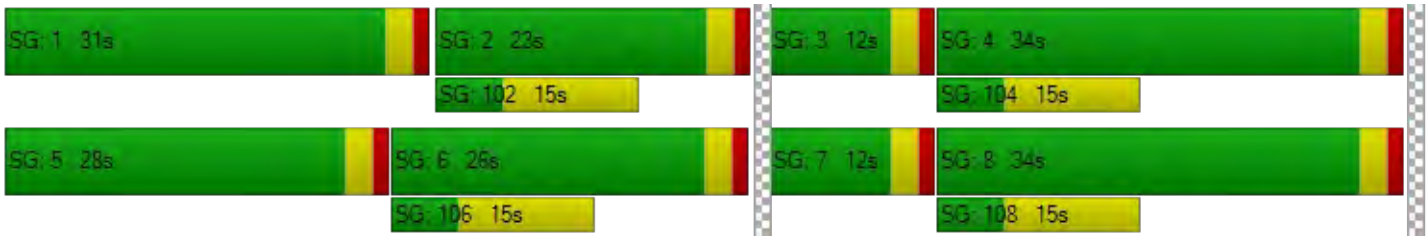
d_M, Delay for Movement [s/veh]	55.33	8.96	8.97	53.81	8.63	7.82	52.65	44.06	46.33	52.32	44.59	49.57
Movement LOS	E	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	17.66			15.30			45.68			46.87		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.13											
Intersection LOS	C											
Intersection V/C	0.355											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.561	2.800	2.614	2.725
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	460	620	620
d_b, Bicycle Delay [s]	32.00	29.65	23.81	23.81
l_b,int, Bicycle LOS Score for Intersection	2.022	2.240	1.926	1.941
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Highland Ave / SR-210 EB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	23.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

Intersection Setup

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Base Volume Input [veh/h]	911	160	0	293	329	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	911	160	0	293	329	0
Peak Hour Factor	0.8240	0.8240	1.0000	0.8240	0.8240	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	276	49	0	89	100	0
Total Analysis Volume [veh/h]	1106	194	0	356	399	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	2.0	0.0	0.0	2.0	2.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	77	0	0	23	23	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	0.0	1.0	1.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	38	38	56	56
g / C, Green / Cycle	0.38	0.38	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.33	0.13	0.10	0.12
s, saturation flow rate [veh/h]	3329	1530	3427	3427
c, Capacity [veh/h]	1257	577	1928	1928
d1, Uniform Delay [s]	29.02	22.19	10.68	10.83
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.19	0.34	0.21	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.34	0.18	0.21
d, Delay for Lane Group [s/veh]	31.20	22.53	10.89	11.07
Lane Group LOS	C	C	B	B
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	12.32	3.26	1.90	2.16
50th-Percentile Queue Length [ft/ln]	308.00	81.44	47.39	53.90
95th-Percentile Queue Length [veh/ln]	18.08	5.86	3.41	3.88
95th-Percentile Queue Length [ft/ln]	451.91	146.59	85.31	97.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.20	22.53	0.00	10.89	11.07	0.00
Movement LOS	C	C		B	B	
d_A, Approach Delay [s/veh]	29.91		10.89		11.07	
Approach LOS	C		B		B	
d_I, Intersection Delay [s/veh]	22.96					
Intersection LOS	C					
Intersection V/C	0.449					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.369	2.492	2.591
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.426	4.462
Bicycle LOS	D	E	E

Sequence

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

Intersection Level Of Service Report
Intersection 6: Highland Ave / SR-210 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.366

Intersection Setup

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	230	1	144	1	0	6	2	917	0	0	933	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1	144	1	0	6	2	917	0	0	933	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	0	36	0	0	2	1	229	0	0	233	2
Total Analysis Volume [veh/h]	230	1	144	1	0	6	2	917	0	0	933	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Permiss	Split	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	0	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	30	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	29	0	0	10	41	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	21	0	0	0	9	0	0	9	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	11	1	1	0	69	65	65
g / C, Green / Cycle	0.13	0.13	0.01	0.01	0.00	0.76	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.07	0.09	0.00	0.00	0.00	0.27	0.26	0.26
s, saturation flow rate [veh/h]	3329	1532	1714	1530	1714	3427	1800	1796
c, Capacity [veh/h]	418	192	23	21	7	2608	1302	1299
d1, Uniform Delay [s]	36.97	38.02	43.81	43.96	44.69	3.51	4.65	4.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	5.91	0.75	7.45	20.88	0.37	0.78	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.75	0.04	0.29	0.29	0.35	0.36	0.36
d, Delay for Lane Group [s/veh]	38.11	43.93	44.56	51.40	65.57	3.88	5.43	5.44
Lane Group LOS	D	D	D	D	E	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.41	3.36	0.03	0.17	0.08	2.06	2.83	2.83
50th-Percentile Queue Length [ft/ln]	60.26	83.88	0.67	4.35	2.12	51.54	70.68	70.76
95th-Percentile Queue Length [veh/ln]	4.34	6.04	0.05	0.31	0.15	3.71	5.09	5.09
95th-Percentile Queue Length [ft/ln]	108.48	150.99	1.20	7.84	3.81	92.76	127.22	127.36

Movement, Approach, & Intersection Results

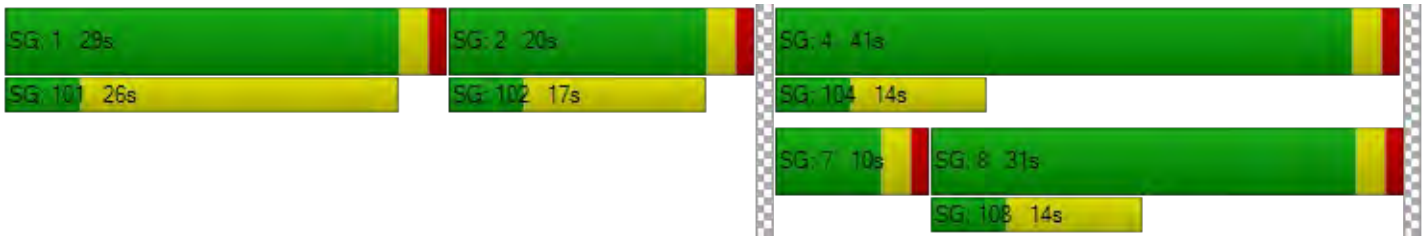
d_M, Delay for Movement [s/veh]	38.11	43.93	43.93	44.56	0.00	51.40	65.57	3.88	0.00	0.00	5.43	5.44
Movement LOS	D	D	D	D		D	E	A			A	A
d_A, Approach Delay [s/veh]	40.36			50.43			4.02			5.43		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	10.84											
Intersection LOS	B											
Intersection V/C	0.366											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.064	1.947	2.886	2.620
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	0	844	622
d_b, Bicycle Delay [s]	29.61	45.00	15.02	21.36
l_b,int, Bicycle LOS Score for Intersection	2.178	4.132	2.318	2.334
Bicycle LOS	B	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 7: Victoria Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

Intersection Setup

Name							Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Highland Ave			Highland Ave		
Base Volume Input [veh/h]	241	243	42	68	215	284	448	372	119	45	348	88
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	241	243	42	68	215	284	448	372	119	45	348	88
Peak Hour Factor	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	68	12	19	60	79	125	104	33	13	97	25
Total Analysis Volume [veh/h]	269	271	47	76	240	317	500	415	133	50	388	98
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	21	0	11	18	18	32	58	0	10	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	54	45	45	54	40	63	20	32	32	5	17	17
g / C, Green / Cycle	0.54	0.45	0.45	0.54	0.40	0.63	0.20	0.32	0.32	0.05	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.21	0.10	0.10	0.07	0.07	0.21	0.17	0.16	0.16	0.03	0.14	0.14
s, saturation flow rate [veh/h]	1261	1700	1614	1150	3427	1530	2959	1800	1652	1619	1800	1677
c, Capacity [veh/h]	719	760	721	648	1367	966	600	573	526	86	303	282
d1, Uniform Delay [s]	12.95	16.90	16.92	11.43	19.43	8.56	38.24	27.62	27.62	46.29	40.15	40.24
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.24	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.49	0.64	0.68	0.08	0.28	0.44	3.11	0.67	0.73	6.20	5.62	6.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.21	0.22	0.12	0.18	0.33	0.83	0.50	0.50	0.58	0.82	0.84
d, Delay for Lane Group [s/veh]	14.44	17.55	17.60	11.51	19.71	9.00	41.36	28.29	28.35	52.48	45.77	46.69
Lane Group LOS	B	B	B	B	B	A	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.49	2.37	2.28	0.80	1.83	3.05	6.06	5.56	5.12	1.36	6.34	6.06
50th-Percentile Queue Length [ft/ln]	87.31	59.32	57.00	20.11	45.83	76.25	151.40	139.07	127.95	33.90	158.59	151.61
95th-Percentile Queue Length [veh/ln]	6.29	4.27	4.10	1.45	3.30	5.49	10.09	9.43	8.83	2.44	10.47	10.10
95th-Percentile Queue Length [ft/ln]	157.16	106.78	102.59	36.19	82.49	137.26	252.29	235.77	220.70	61.02	261.86	252.58

Movement, Approach, & Intersection Results

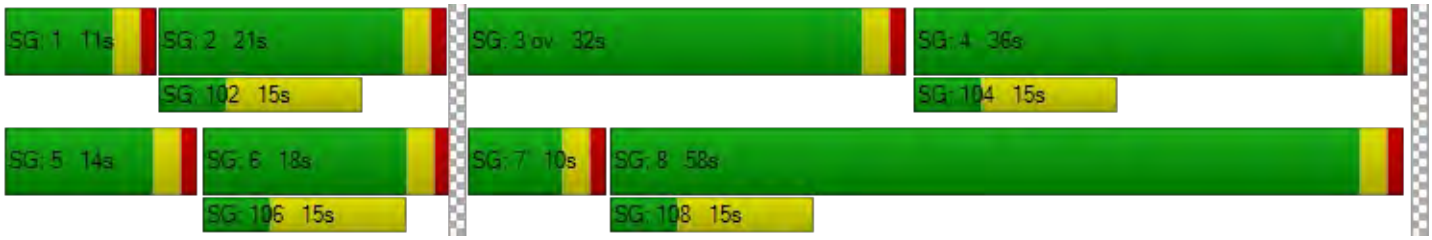
d_M, Delay for Movement [s/veh]	14.44	17.57	17.60	11.51	19.71	9.00	41.36	28.31	28.35	52.48	46.10	46.69
Movement LOS	B	B	B	B	B	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	16.14			13.36			34.54			46.80		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	28.25											
Intersection LOS	C											
Intersection V/C	0.567											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.503	2.704	2.949	2.566
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	300	1100	660
d_b, Bicycle Delay [s]	33.62	36.13	10.13	22.45
l_b,int, Bicycle LOS Score for Intersection	2.044	2.082	2.424	2.002
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: Del Rosa Dr / Pacific St

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.420

Intersection Setup

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Base Volume Input [veh/h]	44	214	28	38	342	200	154	236	27	69	280	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	214	28	38	342	200	154	236	27	69	280	42
Peak Hour Factor	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	60	8	11	96	56	43	66	8	19	78	12
Total Analysis Volume [veh/h]	49	239	31	43	383	224	172	264	30	77	313	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	54	38	0	34	18	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	58	58	5	57	57	13	19	19	6	13	13
g / C, Green / Cycle	0.05	0.58	0.58	0.05	0.57	0.57	0.13	0.19	0.19	0.06	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.02	0.03	0.18	0.18	0.11	0.08	0.08	0.05	0.10	0.10
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1581	1619	1800	1737	1619	1800	1719
c, Capacity [veh/h]	85	1035	880	79	1029	904	207	346	334	103	231	220
d1, Uniform Delay [s]	46.32	10.42	9.22	46.46	11.16	11.20	42.55	35.55	35.58	46.02	42.30	42.36
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.15	0.52	0.07	5.66	0.79	0.92	8.31	0.84	0.89	10.20	6.04	6.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.23	0.04	0.54	0.31	0.32	0.83	0.43	0.43	0.75	0.79	0.80
d, Delay for Lane Group [s/veh]	52.47	10.94	9.30	52.12	11.95	12.11	50.86	36.40	36.47	56.22	48.34	49.06
Lane Group LOS	D	B	A	D	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.33	2.60	0.30	1.16	3.74	3.37	4.59	3.25	3.18	2.16	4.73	4.62
50th-Percentile Queue Length [ft/ln]	33.23	65.07	7.50	29.11	93.50	84.21	114.71	81.35	79.40	54.10	118.26	115.56
95th-Percentile Queue Length [veh/ln]	2.39	4.69	0.54	2.10	6.73	6.06	8.10	5.86	5.72	3.90	8.30	8.15
95th-Percentile Queue Length [ft/ln]	59.81	117.13	13.50	52.39	168.29	151.58	202.54	146.44	142.92	97.38	207.43	203.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.47	10.94	9.30	52.12	11.98	12.11	50.86	36.43	36.47	56.22	48.64	49.06
Movement LOS	D	B	A	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	17.16			14.68			41.76			50.02		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	30.09											
Intersection LOS	C											
Intersection V/C	0.420											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.464	2.640	2.512	2.458
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	700	300
d_b, Bicycle Delay [s]	36.13	36.13	21.13	36.13
l_b,int, Bicycle LOS Score for Intersection	2.086	2.096	1.944	1.920
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 9: Victoria Ave / Pacific St

Control Type:	Signalized	Delay (sec / veh):	36.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.569

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	165	321	30	58	282	103	113	252	206	50	331	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	165	321	30	58	282	103	113	252	206	50	331	89
Peak Hour Factor	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	113	11	20	99	36	40	88	72	18	116	31
Total Analysis Volume [veh/h]	231	450	42	81	396	144	158	353	289	70	464	125
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	36	0	19	28	0	14	35	0	10	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	16	51	51	6	41	41	11	25	25	6	20	20
g / C, Green / Cycle	0.16	0.51	0.51	0.06	0.41	0.41	0.11	0.25	0.25	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.14	0.05	0.16	0.16	0.10	0.19	0.19	0.04	0.17	0.17
s, saturation flow rate [veh/h]	1619	1800	1747	1619	1800	1639	1619	1800	1536	1619	1800	1671
c, Capacity [veh/h]	264	917	890	104	739	673	178	443	378	97	354	328
d1, Uniform Delay [s]	40.88	13.97	13.97	46.10	20.57	20.62	43.89	35.15	35.19	46.16	38.85	38.91
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.16	0.16	0.11	0.14	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.99	0.73	0.76	11.85	1.49	1.66	13.55	4.38	5.27	9.50	8.02	9.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.27	0.27	0.78	0.38	0.38	0.89	0.78	0.78	0.72	0.86	0.87
d, Delay for Lane Group [s/veh]	49.87	14.70	14.73	57.95	22.06	22.28	57.44	39.54	40.46	55.66	46.87	48.05
Lane Group LOS	D	B	B	E	C	C	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.15	3.29	3.21	2.31	4.79	4.45	4.49	8.27	7.18	1.96	7.91	7.50
50th-Percentile Queue Length [ft/ln]	153.73	82.26	80.14	57.86	119.79	111.35	112.35	206.63	179.56	48.90	197.74	187.57
95th-Percentile Queue Length [veh/ln]	10.22	5.92	5.77	4.17	8.38	7.92	7.97	12.98	11.58	3.52	12.52	11.99
95th-Percentile Queue Length [ft/ln]	255.40	148.06	144.25	104.15	209.54	197.88	199.27	324.50	289.44	88.03	313.05	299.87

Movement, Approach, & Intersection Results

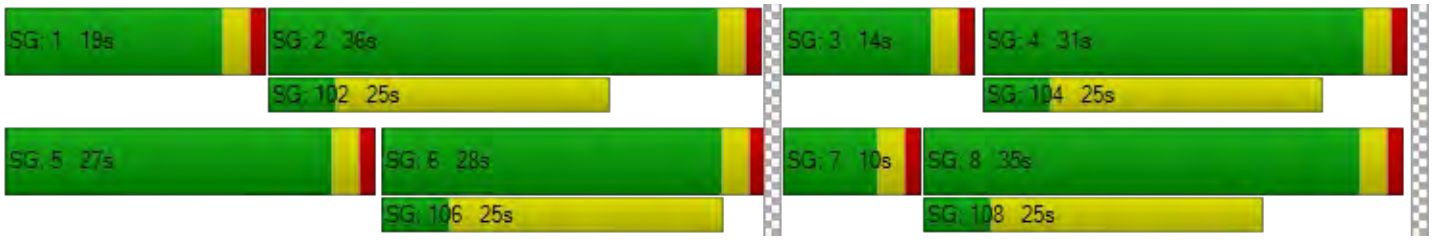
d_M, Delay for Movement [s/veh]	49.87	14.72	14.73	57.95	22.12	22.28	57.44	39.56	40.46	55.66	47.28	48.05
Movement LOS	D	B	B	E	C	C	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	25.95			26.83			43.41			48.31		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	36.39											
Intersection LOS	D											
Intersection V/C	0.569											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.595	2.571	2.626	2.528
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	500	640	560
d_b, Bicycle Delay [s]	22.45	28.13	23.12	25.92
l_b,int, Bicycle LOS Score for Intersection	2.156	2.072	2.220	2.103
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 10: Victoria Ave / 14th St

Control Type:	Signalized	Delay (sec / veh):	7.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.263

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	0	442	11	27	523	2	2	0	0	19	3	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	442	11	27	523	2	2	0	0	19	3	52
Peak Hour Factor	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	150	4	9	177	1	1	0	0	6	1	18
Total Analysis Volume [veh/h]	0	598	15	37	708	3	3	0	0	26	4	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	50	0	10	50	0	0	40	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	11	0	0	19	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	0	78	78	5	83	83	8	8
g / C, Green / Cycle	0.00	0.78	0.78	0.05	0.83	0.83	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.00	0.17	0.17	0.02	0.20	0.20	0.00	0.07
s, saturation flow rate [veh/h]	1619	1800	1785	1619	1800	1797	1032	1536
c, Capacity [veh/h]	1	1410	1397	73	1490	1488	156	171
d1, Uniform Delay [s]	0.00	2.84	2.84	46.65	1.85	1.85	42.29	45.04
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.36	0.36	5.33	0.38	0.38	0.05	3.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.22	0.22	0.51	0.24	0.24	0.02	0.58
d, Delay for Lane Group [s/veh]	0.00	3.19	3.20	51.98	2.23	2.23	42.33	48.19
Lane Group LOS	A	A	A	D	A	A	D	D
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	1.30	1.29	1.00	0.99	0.99	0.07	2.57
50th-Percentile Queue Length [ft/ln]	0.00	32.43	32.23	25.08	24.71	24.68	1.76	64.26
95th-Percentile Queue Length [veh/ln]	0.00	2.33	2.32	1.81	1.78	1.78	0.13	4.63
95th-Percentile Queue Length [ft/ln]	0.00	58.37	58.01	45.15	44.48	44.43	3.16	115.66

Movement, Approach, & Intersection Results

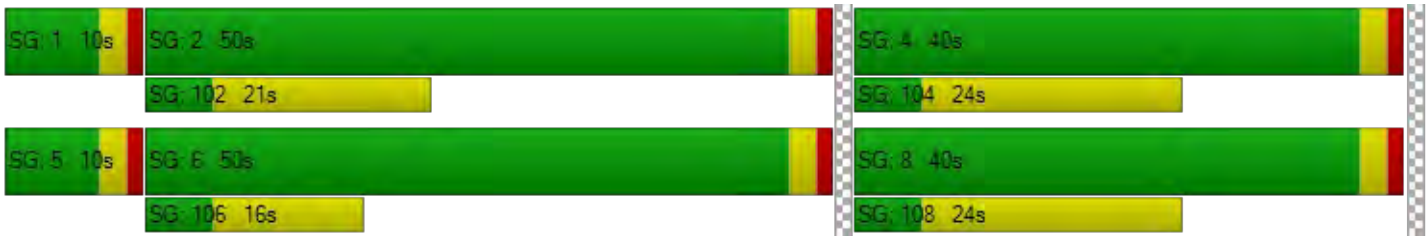
d_M, Delay for Movement [s/veh]	0.00	3.20	3.20	51.98	2.23	2.23	42.33	42.33	42.33	48.19	48.19	48.19
Movement LOS	A	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	3.20			4.69			42.33			48.19		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	7.11											
Intersection LOS	A											
Intersection V/C	0.263											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.606	2.587	1.726	1.796
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	940	940	740	740
d_b, Bicycle Delay [s]	14.05	14.05	19.85	19.85
l_b,int, Bicycle LOS Score for Intersection	2.065	2.177	1.565	1.725
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 11: Tippecanoe Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.437

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	167	161	306	198	191	446
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	167	161	306	198	191	446
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	46	87	56	54	127
Total Analysis Volume [veh/h]	190	184	349	226	218	509
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	2.0	0.0	2.0	0.0	2.0	2.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	29	0	41	0	30	71
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	0.0	1.0	1.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	15	15	61	61	16	79
g / C, Green / Cycle	0.15	0.15	0.61	0.61	0.16	0.79
(v / s)_i Volume / Saturation Flow Rate	0.11	0.12	0.16	0.18	0.13	0.15
s, saturation flow rate [veh/h]	1714	1530	1800	1581	1619	3427
c, Capacity [veh/h]	249	223	1095	961	253	2723
d1, Uniform Delay [s]	41.06	41.50	9.14	9.38	41.12	2.48
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.78	7.60	0.58	0.80	8.39	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.83	0.26	0.30	0.86	0.19
d, Delay for Lane Group [s/veh]	45.84	49.10	9.72	10.18	49.51	2.63
Lane Group LOS	D	D	A	B	D	A
Critical Lane Group	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.79	4.83	2.91	3.02	5.77	0.90
50th-Percentile Queue Length [ft/ln]	119.74	120.84	72.69	75.41	144.24	22.44
95th-Percentile Queue Length [veh/ln]	8.38	8.44	5.23	5.43	9.71	1.62
95th-Percentile Queue Length [ft/ln]	209.47	210.98	130.84	135.74	242.72	40.39

Movement, Approach, & Intersection Results

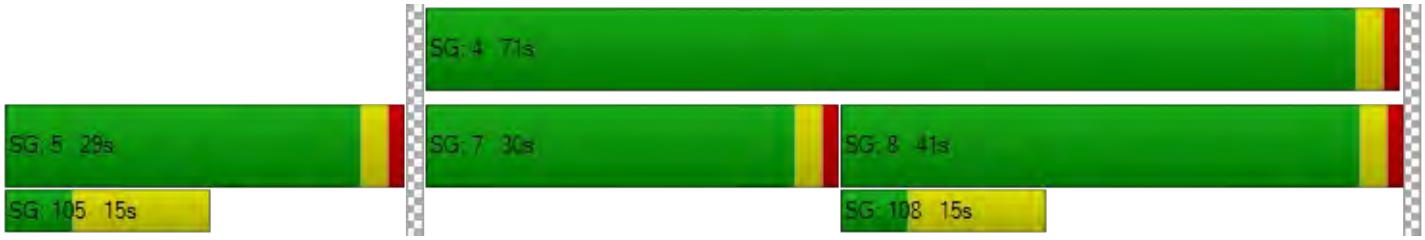
d_M, Delay for Movement [s/veh]	45.84	49.10	9.80	10.18	49.51	2.63
Movement LOS	D	D	A	B	D	A
d_A, Approach Delay [s/veh]	47.45		9.95		16.69	
Approach LOS	D		A		B	
d_I, Intersection Delay [s/veh]	21.24					
Intersection LOS	C					
Intersection V/C	0.437					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.337	2.448	2.552
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.607	4.732
Bicycle LOS	D	E	E

Sequence

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



Intersection Level Of Service Report
Intersection 12: Del Rosa Dr / Baseline St

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.403

Intersection Setup

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

Volumes

Name				Del Rosa Dr								
Base Volume Input [veh/h]	50	208	77	31	279	125	49	232	134	92	378	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	208	77	31	279	125	49	232	134	92	378	35
Peak Hour Factor	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	59	22	9	80	36	14	66	38	26	108	10
Total Analysis Volume [veh/h]	57	238	88	35	319	143	56	265	153	105	432	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	33	44	0	28	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	60	60	4	59	59	6	15	15	8	18	18
g / C, Green / Cycle	0.06	0.60	0.60	0.04	0.59	0.59	0.06	0.15	0.15	0.08	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.10	0.02	0.18	0.09	0.03	0.12	0.13	0.06	0.13	0.13
s, saturation flow rate [veh/h]	1619	1800	1639	1619	1800	1530	1619	1800	1585	1619	1800	1747
c, Capacity [veh/h]	90	1084	987	71	1062	903	93	275	242	132	319	309
d1, Uniform Delay [s]	46.21	8.73	8.76	46.73	10.21	9.27	46.04	40.88	41.07	45.09	39.05	39.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.08	0.30	0.35	5.25	0.73	0.37	6.23	5.27	6.89	10.24	3.54	3.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.15	0.16	0.49	0.30	0.16	0.61	0.80	0.82	0.79	0.75	0.75
d, Delay for Lane Group [s/veh]	53.29	9.04	9.11	51.98	10.94	9.64	52.27	46.15	47.96	55.33	42.59	42.79
Lane Group LOS	D	A	A	D	B	A	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.56	1.60	1.52	0.95	3.50	1.43	1.51	5.55	5.17	2.92	5.82	5.69
50th-Percentile Queue Length [ft/ln]	38.92	39.99	38.00	23.76	87.53	35.79	37.84	138.84	129.19	72.94	145.41	142.26
95th-Percentile Queue Length [veh/ln]	2.80	2.88	2.74	1.71	6.30	2.58	2.72	9.42	8.90	5.25	9.77	9.60
95th-Percentile Queue Length [ft/ln]	70.06	71.98	68.40	42.77	157.56	64.41	68.11	235.46	222.39	131.29	244.29	240.06

Movement, Approach, & Intersection Results

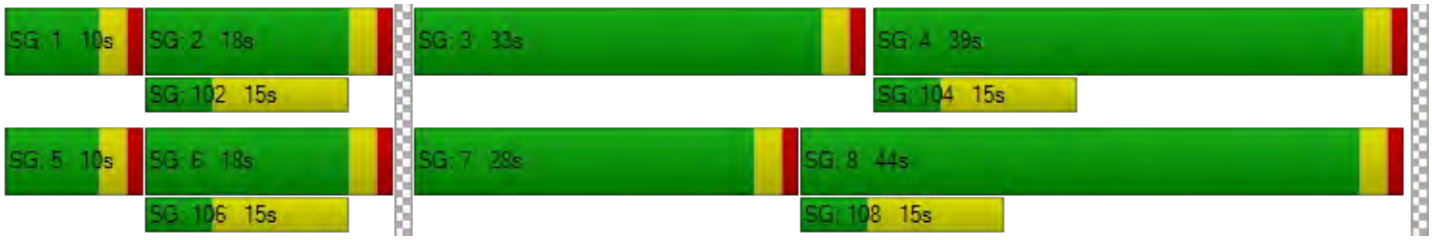
d_M, Delay for Movement [s/veh]	53.29	9.06	9.11	51.98	10.94	9.64	52.27	46.46	47.96	55.33	42.68	42.79
Movement LOS	D	A	A	D	B	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	15.65			13.46			47.63			44.99		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	31.70											
Intersection LOS	C											
Intersection V/C	0.403											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.494	2.469	2.522	2.495
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	820	720
d_b, Bicycle Delay [s]	36.13	36.13	17.41	20.48
l_b,int, Bicycle LOS Score for Intersection	1.876	2.380	1.951	2.036
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Sterling Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.419

Intersection Setup

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

Volumes

Name				Sterling Ave								
Base Volume Input [veh/h]	28	252	35	163	398	66	60	225	40	44	338	195
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	252	35	163	398	66	60	225	40	44	338	195
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	70	10	45	110	18	17	62	11	12	94	54
Total Analysis Volume [veh/h]	31	279	39	181	441	73	66	249	44	49	374	216
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	29	0	20	39	0	10	41	0	10	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	65	49	49	13	58	58	6	21	21	5	20	20
g / C, Green / Cycle	0.65	0.49	0.49	0.13	0.58	0.58	0.06	0.21	0.21	0.05	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.03	0.09	0.09	0.11	0.15	0.15	0.04	0.08	0.08	0.03	0.17	0.18
s, saturation flow rate [veh/h]	957	1800	1724	1619	1800	1712	1619	1800	1708	1619	1800	1583
c, Capacity [veh/h]	648	875	838	211	1036	986	95	380	361	85	368	324
d1, Uniform Delay [s]	6.73	14.50	14.52	42.58	10.54	10.55	46.16	33.92	33.98	46.30	38.27	38.39
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	0.46	0.49	9.66	0.59	0.62	8.58	0.66	0.72	6.10	5.42	6.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.18	0.19	0.86	0.25	0.25	0.69	0.39	0.40	0.58	0.85	0.86
d, Delay for Lane Group [s/veh]	6.87	14.96	15.02	52.23	11.13	11.17	54.74	34.58	34.70	52.40	43.69	45.02
Lane Group LOS	A	B	B	D	B	B	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	2.12	2.08	4.90	2.90	2.78	1.83	3.16	3.07	1.33	7.80	7.08
50th-Percentile Queue Length [ft/ln]	6.10	53.09	51.97	122.55	72.62	69.61	45.70	78.96	76.73	33.20	195.12	177.12
95th-Percentile Queue Length [veh/ln]	0.44	3.82	3.74	8.53	5.23	5.01	3.29	5.68	5.52	2.39	12.39	11.45
95th-Percentile Queue Length [ft/ln]	10.97	95.56	93.54	213.32	130.72	125.30	82.26	142.12	138.12	59.77	309.66	286.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.87	14.98	15.02	52.23	11.15	11.17	54.74	34.62	34.70	52.40	43.92	45.02
Movement LOS	A	B	B	D	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	14.27			21.85			38.33			44.94		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	30.68											
Intersection LOS	C											
Intersection V/C	0.419											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.479	2.664	2.496	2.523
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	720	760	760
d_b, Bicycle Delay [s]	27.38	20.48	19.22	19.22
l_b,int, Bicycle LOS Score for Intersection	1.848	2.133	1.856	2.087
Bicycle LOS	A	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 14: Victoria Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	29.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.366

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	48	265	20	85	329	122	105	211	30	33	245	74
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	265	20	85	329	122	105	211	30	33	245	74
Peak Hour Factor	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	76	6	24	94	35	30	60	9	9	70	21
Total Analysis Volume [veh/h]	55	303	23	97	376	140	120	241	34	38	280	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	31	0	14	30	0	26	45	0	10	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	22	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	58	58	7	60	60	9	18	18	5	13	13
g / C, Green / Cycle	0.06	0.58	0.58	0.07	0.60	0.60	0.09	0.18	0.18	0.05	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.09	0.09	0.06	0.15	0.15	0.07	0.08	0.08	0.02	0.10	0.11
s, saturation flow rate [veh/h]	1619	1800	1756	1619	1800	1637	1619	1800	1724	1619	1800	1660
c, Capacity [veh/h]	90	1046	1021	120	1080	982	149	321	308	74	239	220
d1, Uniform Delay [s]	46.19	9.64	9.65	45.58	9.39	9.41	44.54	36.57	36.61	46.62	41.99	42.13
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.65	0.32	0.33	11.89	0.55	0.62	9.83	0.92	0.99	5.37	5.63	6.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.16	0.16	0.81	0.25	0.25	0.81	0.43	0.44	0.51	0.79	0.81
d, Delay for Lane Group [s/veh]	52.85	9.96	9.99	57.47	9.94	10.03	54.37	37.49	37.61	51.99	47.62	48.97
Lane Group LOS	D	A	A	E	A	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.50	1.67	1.65	2.75	2.75	2.56	3.30	3.10	3.02	1.03	4.81	4.64
50th-Percentile Queue Length [ft/ln]	37.39	41.77	41.22	68.82	68.85	63.91	82.58	77.43	75.48	25.75	120.30	115.93
95th-Percentile Queue Length [veh/ln]	2.69	3.01	2.97	4.96	4.96	4.60	5.95	5.58	5.43	1.85	8.41	8.17
95th-Percentile Queue Length [ft/ln]	67.31	75.19	74.19	123.88	123.92	115.04	148.64	139.38	135.87	46.35	210.24	204.22

Movement, Approach, & Intersection Results

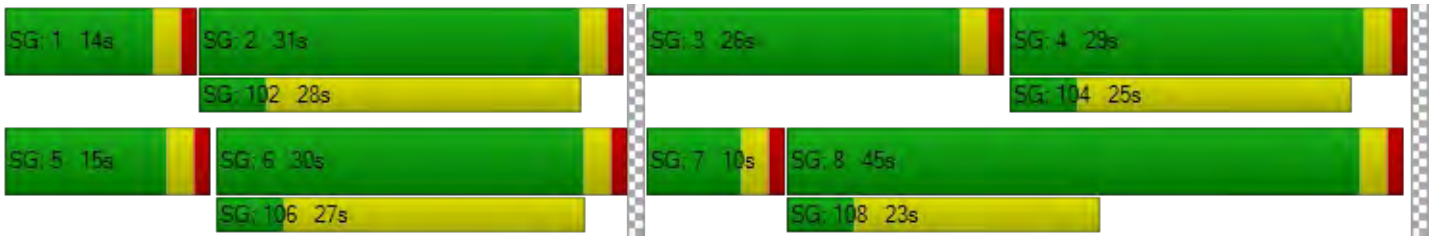
d_M, Delay for Movement [s/veh]	52.85	9.97	9.99	57.47	9.97	10.03	54.37	37.54	37.61	51.99	48.07	48.97
Movement LOS	D	A	A	E	A	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.16			17.50			42.66			48.63		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.76											
Intersection LOS	C											
Intersection V/C	0.366											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.468	2.525	2.476	2.455
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	540	840	520
d_b, Bicycle Delay [s]	25.92	26.65	16.82	27.38
l_b,int, Bicycle LOS Score for Intersection	1.874	2.065	1.885	1.892
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 15: Tippecanoe Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

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

Volumes

Name	Tippacanoe Avenue											
Base Volume Input [veh/h]	111	251	76	24	349	23	27	351	81	72	295	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	251	76	24	349	23	27	351	81	72	295	21
Peak Hour Factor	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	80	24	8	112	7	9	112	26	23	94	7
Total Analysis Volume [veh/h]	142	321	97	31	446	29	35	449	104	92	377	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	37	0	11	34	0	11	39	0	13	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	10	58	58	4	52	52	4	19	19	7	21	21
g / C, Green / Cycle	0.10	0.58	0.58	0.04	0.52	0.52	0.04	0.19	0.19	0.07	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.09	0.12	0.12	0.02	0.13	0.13	0.02	0.16	0.16	0.06	0.11	0.11
s, saturation flow rate [veh/h]	1619	1800	1659	1619	1800	1762	1619	1800	1685	1619	1800	1758
c, Capacity [veh/h]	169	1045	963	66	931	911	71	338	316	115	386	377
d1, Uniform Delay [s]	43.98	10.00	10.02	46.88	13.44	13.45	46.70	39.18	39.25	45.78	34.80	34.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.65	0.45	0.50	5.02	0.67	0.69	5.13	5.65	6.36	12.20	1.12	1.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.21	0.21	0.47	0.26	0.26	0.49	0.84	0.85	0.80	0.53	0.53
d, Delay for Lane Group [s/veh]	54.62	10.45	10.51	51.90	14.10	14.13	51.82	44.83	45.61	57.98	35.93	35.99
Lane Group LOS	D	B	B	D	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.92	2.28	2.14	0.84	3.07	3.03	0.95	7.18	6.86	2.63	4.48	4.40
50th-Percentile Queue Length [ft/ln]	98.08	56.90	53.57	21.09	76.86	75.75	23.72	179.44	171.38	65.63	111.89	110.07
95th-Percentile Queue Length [veh/ln]	7.06	4.10	3.86	1.52	5.53	5.45	1.71	11.57	11.15	4.73	7.95	7.84
95th-Percentile Queue Length [ft/ln]	176.55	102.42	96.43	37.96	138.34	136.35	42.69	289.28	278.73	118.13	198.63	196.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.62	10.47	10.51	51.90	14.12	14.13	51.82	45.12	45.61	57.98	35.96	35.99
Movement LOS	D	B	B	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	21.67			16.43			45.60			40.04		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	31.22											
Intersection LOS	C											
Intersection V/C	0.438											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.541	2.480	2.528	2.516
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	620	720	760
d_b, Bicycle Delay [s]	21.78	23.81	20.48	19.22
l_b,int, Bicycle LOS Score for Intersection	2.022	1.977	2.045	1.969
Bicycle LOS	B	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 16: Del Rosa Dr / 9th St

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	78	119	137	130	199	70	48	421	123	31	233	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	119	137	130	199	70	48	421	123	31	233	44
Peak Hour Factor	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	36	42	40	61	21	15	129	38	9	71	13
Total Analysis Volume [veh/h]	96	146	168	159	244	86	59	516	151	38	286	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	18	0	14	20	0	10	58	0	10	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	41	41	11	45	45	6	31	31	5	30	30
g / C, Green / Cycle	0.07	0.41	0.41	0.11	0.45	0.45	0.06	0.31	0.31	0.05	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.06	0.08	0.11	0.10	0.09	0.10	0.04	0.29	0.10	0.02	0.16	0.04
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1643	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	119	738	628	178	804	734	92	564	480	75	545	464
d1, Uniform Delay [s]	45.62	18.93	19.54	43.92	16.92	16.95	46.16	33.04	26.15	46.56	28.88	25.18
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.97	0.60	1.05	14.08	0.60	0.68	7.23	6.33	0.37	5.18	0.78	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.20	0.27	0.89	0.21	0.22	0.64	0.91	0.31	0.51	0.52	0.12
d, Delay for Lane Group [s/veh]	57.59	19.53	20.59	57.99	17.52	17.63	53.39	39.37	26.52	51.74	29.66	25.29
Lane Group LOS	E	B	C	E	B	B	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.73	2.26	2.73	4.55	2.48	2.34	1.61	12.71	2.76	1.03	5.73	0.94
50th-Percentile Queue Length [ft/ln]	68.21	56.62	68.15	113.67	62.11	58.40	40.32	317.73	69.08	25.68	143.16	23.43
95th-Percentile Queue Length [veh/ln]	4.91	4.08	4.91	8.04	4.47	4.20	2.90	18.56	4.97	1.85	9.65	1.69
95th-Percentile Queue Length [ft/ln]	122.78	101.91	122.67	201.09	111.80	105.12	72.57	463.90	124.35	46.22	241.27	42.18

Movement, Approach, & Intersection Results

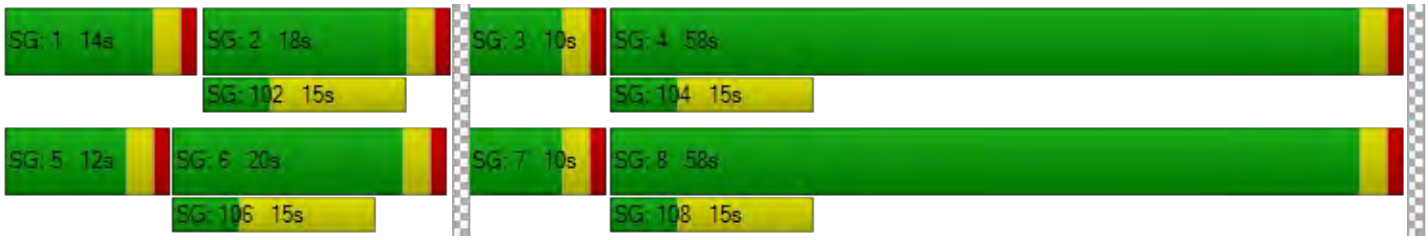
d_M, Delay for Movement [s/veh]	57.59	19.53	20.59	57.99	17.55	17.63	53.39	39.37	26.52	51.74	29.66	25.29
Movement LOS	E	B	C	E	B	B	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	28.88			30.72			37.84			31.25		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	33.02											
Intersection LOS	C											
Intersection V/C	0.518											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.471	2.452	2.539	2.435
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	340	1100	1100
d_b, Bicycle Delay [s]	36.13	34.45	10.13	10.13
l_b,int, Bicycle LOS Score for Intersection	1.898	1.963	2.758	2.183
Bicycle LOS	A	A	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 17: Sterling Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.390

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	22	171	36	55	362	83	80	172	22	52	256	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	171	36	55	362	83	80	172	22	52	256	85
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	50	11	16	106	24	23	50	6	15	75	25
Total Analysis Volume [veh/h]	26	200	42	64	423	97	93	201	26	61	299	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	27	0	10	27	0	10	45	0	18	53	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	19	0	0	22	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	56	56	6	58	58	7	20	20	6	19	19
g / C, Green / Cycle	0.04	0.56	0.56	0.06	0.58	0.58	0.07	0.20	0.20	0.06	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.07	0.04	0.15	0.15	0.06	0.11	0.02	0.04	0.17	0.06
s, saturation flow rate [veh/h]	1619	1800	1695	1619	1800	1686	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	59	1009	950	94	1049	982	113	366	311	94	344	292
d1, Uniform Delay [s]	47.20	10.36	10.38	46.17	10.23	10.24	45.88	35.74	32.29	46.12	39.24	34.98
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.16	0.25	0.27	8.23	0.59	0.63	13.45	1.29	0.11	7.40	6.75	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.12	0.13	0.68	0.25	0.26	0.82	0.55	0.08	0.65	0.87	0.34
d, Delay for Lane Group [s/veh]	52.35	10.60	10.65	54.40	10.81	10.88	59.33	37.02	32.41	53.52	45.99	35.66
Lane Group LOS	D	B	B	D	B	B	E	D	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.72	1.30	1.27	1.77	2.90	2.76	2.69	4.49	0.52	1.67	7.67	2.13
50th-Percentile Queue Length [ft/ln]	17.88	32.39	31.64	44.17	72.48	68.98	67.20	112.15	12.97	41.73	191.78	53.23
95th-Percentile Queue Length [veh/ln]	1.29	2.33	2.28	3.18	5.22	4.97	4.84	7.96	0.93	3.00	12.21	3.83
95th-Percentile Queue Length [ft/ln]	32.19	58.31	56.96	79.50	130.46	124.17	120.95	198.99	23.35	75.12	305.33	95.82

Movement, Approach, & Intersection Results

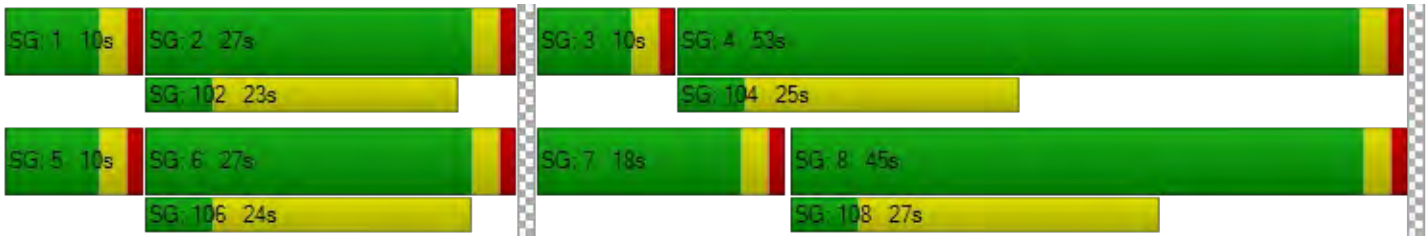
d_M, Delay for Movement [s/veh]	52.35	10.62	10.65	54.40	10.84	10.88	59.33	37.02	32.41	53.52	45.99	35.66
Movement LOS	D	B	B	D	B	B	E	D	C	D	D	D
d_A, Approach Delay [s/veh]	14.68			15.62			43.13			44.76		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.06											
Intersection LOS	C											
Intersection V/C	0.390											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.586	2.497	2.319	2.324
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	480	840	1000
d_b, Bicycle Delay [s]	28.88	28.88	16.82	12.50
l_b,int, Bicycle LOS Score for Intersection	1.781	2.041	2.088	2.317
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 18: Victoria Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.254

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	45	161	16	44	249	65	54	91	40	32	99	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	161	16	44	249	65	54	91	40	32	99	55
Peak Hour Factor	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	49	5	13	76	20	17	28	12	10	30	17
Total Analysis Volume [veh/h]	55	197	20	54	305	80	66	112	49	39	121	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	27	0	11	28	0	10	52	0	10	52	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	68	68	5	68	68	6	10	10	5	9	9
g / C, Green / Cycle	0.05	0.68	0.68	0.05	0.68	0.68	0.06	0.10	0.10	0.05	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.06	0.03	0.11	0.11	0.04	0.06	0.03	0.02	0.07	0.04
s, saturation flow rate [veh/h]	1619	1800	1743	1619	1800	1674	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	89	1217	1179	88	1217	1132	95	185	157	75	163	138
d1, Uniform Delay [s]	46.23	5.58	5.58	46.24	5.90	5.91	46.17	42.92	41.58	46.59	44.36	43.27
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.84	0.15	0.15	6.70	0.29	0.32	8.66	3.17	1.12	5.45	6.59	2.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.09	0.09	0.61	0.16	0.17	0.69	0.61	0.31	0.52	0.74	0.48
d, Delay for Lane Group [s/veh]	53.08	5.72	5.74	52.95	6.18	6.23	54.83	46.09	42.70	52.04	50.94	45.89
Lane Group LOS	D	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.50	0.76	0.75	1.47	1.45	1.39	1.83	2.80	1.16	1.06	3.20	1.67
50th-Percentile Queue Length [ft/ln]	37.49	18.96	18.73	36.76	36.25	34.71	45.74	69.91	29.12	26.43	80.07	41.75
95th-Percentile Queue Length [veh/ln]	2.70	1.37	1.35	2.65	2.61	2.50	3.29	5.03	2.10	1.90	5.77	3.01
95th-Percentile Queue Length [ft/ln]	67.47	34.13	33.71	66.17	65.25	62.47	82.33	125.84	52.42	47.57	144.13	75.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.08	5.73	5.74	52.95	6.20	6.23	54.83	46.09	42.70	52.04	50.94	45.89
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.30			11.95			47.90			49.64		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.08											
Intersection LOS	C											
Intersection V/C	0.254											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.568	2.456	2.255	2.238
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	500	980	980
d_b, Bicycle Delay [s]	28.88	28.13	13.01	13.01
l_b,int, Bicycle LOS Score for Intersection	1.784	1.922	1.934	1.934
Bicycle LOS	A	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 19: Del Rosa Dr / 6th St

Control Type:	Signalized	Delay (sec / veh):	33.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name							6th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							6th Street					
Base Volume Input [veh/h]	71	199	37	43	274	95	155	144	53	86	144	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	199	37	43	274	95	155	144	53	86	144	43
Peak Hour Factor	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	75	14	16	104	36	59	55	20	33	55	16
Total Analysis Volume [veh/h]	108	302	56	65	416	144	235	219	80	131	219	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	21	0	10	18	0	31	37	0	32	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	47	47	6	45	45	17	25	10	19
g / C, Green / Cycle	0.08	0.47	0.47	0.06	0.45	0.45	0.17	0.25	0.10	0.19
(v / s)_i Volume / Saturation Flow Rate	0.07	0.10	0.10	0.04	0.16	0.16	0.15	0.17	0.08	0.16
s, saturation flow rate [veh/h]	1619	1800	1704	1619	1800	1645	1619	1719	1619	1730
c, Capacity [veh/h]	132	843	798	95	801	732	269	434	163	323
d1, Uniform Delay [s]	45.17	15.74	15.76	46.16	18.37	18.41	40.67	33.84	43.99	39.54
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.41	0.59	0.63	8.38	1.28	1.42	8.66	1.96	8.82	7.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.22	0.22	0.68	0.36	0.37	0.87	0.69	0.80	0.88
d, Delay for Lane Group [s/veh]	56.57	16.33	16.40	54.54	19.64	19.83	49.33	35.80	52.81	47.15
Lane Group LOS	E	B	B	D	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.04	2.55	2.46	1.80	4.63	4.31	6.22	6.71	3.55	7.38
50th-Percentile Queue Length [ft/ln]	75.94	63.73	61.51	44.92	115.67	107.74	155.61	167.70	88.82	184.52
95th-Percentile Queue Length [veh/ln]	5.47	4.59	4.43	3.23	8.15	7.71	10.32	10.96	6.39	11.84
95th-Percentile Queue Length [ft/ln]	136.69	114.71	110.72	80.85	203.86	192.86	257.90	273.89	159.87	295.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.57	16.35	16.40	54.54	19.70	19.83	49.33	35.80	35.80	52.81	47.15	47.15
Movement LOS	E	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	25.68			23.35			41.75			48.93		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.91											
Intersection LOS	C											
Intersection V/C	0.540											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.520	2.546	2.273	2.192
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	300	680	700
d_b, Bicycle Delay [s]	33.62	36.13	21.78	21.13
l_b,int, Bicycle LOS Score for Intersection	1.944	2.075	2.441	2.244
Bicycle LOS	A	B	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 20: Sterling Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	53.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.269

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	12	138	9	24	469	43	37	102	12	9	116	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	138	9	24	469	43	37	102	12	9	116	14
Peak Hour Factor	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	41	3	7	140	13	11	31	4	3	35	4
Total Analysis Volume [veh/h]	14	165	11	29	561	51	44	122	14	11	139	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.01	0.00	0.27	0.41	0.02	0.04	0.49	0.02
d_M, Delay for Movement [s/veh]	8.74	0.00	0.00	7.60	0.00	0.00	53.83	43.86	36.79	33.21	31.82	22.76
Movement LOS	A	A	A	A	A	A	F	E	E	D	D	C
95th-Percentile Queue Length [veh/ln]	0.04	0.02	0.00	0.06	0.03	0.00	4.67	4.67	4.67	3.16	3.16	3.16
95th-Percentile Queue Length [ft/ln]	1.09	0.55	0.00	1.57	0.79	0.00	116.78	116.78	116.78	78.90	78.90	78.90
d_A, Approach Delay [s/veh]	0.64			0.34			45.75			30.99		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	11.67											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 21: Victoria Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	31	120	1	13	299	23	23	33	41	9	32	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	120	1	13	299	23	23	33	41	9	32	18
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	33	0	4	82	6	6	9	11	2	9	5
Total Analysis Volume [veh/h]	34	131	1	14	326	25	25	36	45	10	35	20
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.00	0.00	0.06	0.08	0.05	0.02	0.08	0.02
d_M, Delay for Movement [s/veh]	8.04	0.00	0.00	7.48	0.00	0.00	15.57	15.12	10.86	13.88	14.74	9.65
Movement LOS	A	A	A	A	A	A	C	C	B	B	B	A
95th-Percentile Queue Length [veh/ln]	0.09	0.04	0.00	0.03	0.01	0.00	0.73	0.73	0.73	0.43	0.43	0.43
95th-Percentile Queue Length [ft/ln]	2.15	1.08	0.00	0.72	0.36	0.00	18.35	18.35	18.35	10.81	10.81	10.81
d_A, Approach Delay [s/veh]	1.65			0.29			13.42			13.04		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.77											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 22: Central Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.085

Intersection Setup

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

Volumes

Name	Central Avenue					
Base Volume Input [veh/h]	9	80	107	33	44	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	80	107	33	44	27
Peak Hour Factor	0.7450	0.7450	0.7450	0.7450	0.7450	0.7450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	27	36	11	15	9
Total Analysis Volume [veh/h]	12	107	144	44	59	36
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.09	0.04
d_M, Delay for Movement [s/veh]	7.60	0.00	0.00	0.00	10.69	9.25
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.28	0.13
95th-Percentile Queue Length [ft/ln]	0.65	0.65	0.00	0.00	6.97	3.18
d_A, Approach Delay [s/veh]	0.77		0.00		10.14	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.62					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 23: I-215 SB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

Intersection Setup

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	532	5	193	0	442	350	315	504	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	532	5	193	0	442	350	315	504	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9580	0.9580	0.9580	1.0000	0.9580	0.9580	0.9580	0.9580	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	139	1	50	0	115	91	82	132	0
Total Analysis Volume [veh/h]	0	0	0	555	5	201	0	461	365	329	526	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	32	0	0	48	0	20	68	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	C	L	C
C, Cycle Length [s]		100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		19	19	19	58	58	14	75
g / C, Green / Cycle		0.19	0.19	0.19	0.58	0.58	0.14	0.75
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.13	0.09	0.24	0.11	0.15
s, saturation flow rate [veh/h]		1714	1716	1530	4903	1530	2959	3427
c, Capacity [veh/h]		334	334	298	2838	886	404	2554
d1, Uniform Delay [s]		38.75	38.74	37.32	9.79	11.65	41.96	3.83
k, delay calibration		0.13	0.13	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.61	6.59	2.66	0.12	1.42	4.05	0.18
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.84	0.84	0.67	0.16	0.41	0.82	0.21
d, Delay for Lane Group [s/veh]		45.36	45.34	39.98	9.91	13.07	46.01	4.02
Lane Group LOS		D	D	D	A	B	D	A
Critical Lane Group		Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		7.14	7.14	4.73	1.52	4.56	4.13	1.36
50th-Percentile Queue Length [ft/ln]		178.43	178.48	118.31	38.09	114.08	103.35	34.05
95th-Percentile Queue Length [veh/ln]		11.52	11.52	8.30	2.74	8.07	7.44	2.45
95th-Percentile Queue Length [ft/ln]		287.96	288.03	207.50	68.56	201.66	186.03	61.29

Movement, Approach, & Intersection Results

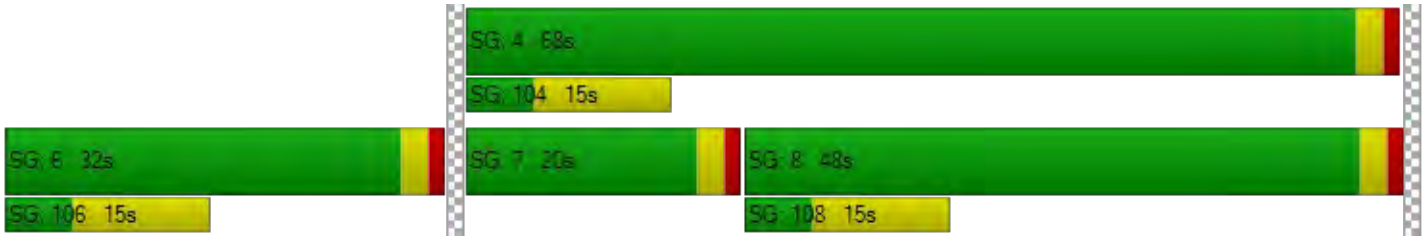
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	45.35	45.34	39.98	0.00	9.91	13.07	46.01	4.02	0.00
Movement LOS				D	D	D		A	B	D	A	
d_A, Approach Delay [s/veh]	0.00			43.93			11.31			20.17		
Approach LOS	A			D			B			C		
d_I, Intersection Delay [s/veh]	24.58											
Intersection LOS	C											
Intersection V/C	0.513											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.062	2.194	2.712	2.960
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	580	900	1300
d_b, Bicycle Delay [s]	50.00	25.21	15.13	6.13
l_b,int, Bicycle LOS Score for Intersection	4.132	2.815	1.900	2.265
Bicycle LOS	D	C	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 24: I-215 NB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.425

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	290	0	542	0	0	0	150	840	0	0	509	148
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	290	0	542	0	0	0	150	840	0	0	509	148
Peak Hour Factor	0.9940	0.9940	0.9940	0.9940	1.0000	0.9940	0.9940	0.9940	1.0000	1.0000	0.9940	0.9940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	73	0	136	0	0	0	38	211	0	0	128	37
Total Analysis Volume [veh/h]	292	0	545	0	0	0	151	845	0	0	512	149
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	44	0	0	0	0	11	56	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	67	67	67		7	27	17	17
g / C, Green / Cycle	0.67	0.67	0.67		0.07	0.27	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.17	0.18	0.18		0.05	0.25	0.08	0.10
s, saturation flow rate [veh/h]	1714	1531	1530		2959	3427	6538	1530
c, Capacity [veh/h]	1147	1025	1024		206	928	1119	262
d1, Uniform Delay [s]	6.58	6.66	6.66		45.62	35.30	37.26	38.05
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	0.64	0.64		5.02	3.91	0.29	1.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.27	0.27		0.73	0.91	0.46	0.57
d, Delay for Lane Group [s/veh]	7.11	7.29	7.30		50.65	39.21	37.56	39.99
Lane Group LOS	A	A	A		D	D	D	D
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.36	2.28	2.28		1.97	10.25	2.82	3.47
50th-Percentile Queue Length [ft/ln]	59.05	56.94	56.92		49.27	256.33	70.52	86.68
95th-Percentile Queue Length [veh/ln]	4.25	4.10	4.10		3.55	15.50	5.08	6.24
95th-Percentile Queue Length [ft/ln]	106.30	102.49	102.46		88.68	387.61	126.93	156.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.12	7.29	7.30	0.00	0.00	0.00	50.65	39.21	0.00	0.00	37.56	39.99
Movement LOS	A	A	A				D	D			D	D
d_A, Approach Delay [s/veh]	7.23			0.00			40.94			38.11		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	28.88											
Intersection LOS	C											
Intersection V/C	0.425											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.219	1.868	2.951	2.886
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	820	0	1060	840
d_b, Bicycle Delay [s]	17.41	50.00	11.05	16.82
l_b,int, Bicycle LOS Score for Intersection	2.941	4.132	2.381	1.832
Bicycle LOS	C	D	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 25: E St / 5th St

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.383

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	27	102	20	10	132	17	75	937	37	7	421	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	102	20	10	132	17	75	937	37	7	421	7
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	26	5	3	34	4	19	240	9	2	108	2
Total Analysis Volume [veh/h]	28	105	21	10	135	17	77	961	38	7	432	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	9	9	0	9	9	0	0	9	0	0	9	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	2.0	0.0	1.0	2.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	43	0	13	43	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	21	0	0	20	0	0	19	0	0	22	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	4.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	2.00	4.00	3.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	5	10	2	10	61	61	61	63	63	63
g / C, Green / Cycle	0.05	0.11	0.02	0.11	0.67	0.67	0.67	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.01	0.09	0.08	0.28	0.28	0.02	0.12	0.12
s, saturation flow rate [veh/h]	1619	1749	1619	1765	965	1800	1776	464	1800	1790
c, Capacity [veh/h]	82	194	37	196	655	1209	1193	376	1259	1252
d1, Uniform Delay [s]	41.26	38.32	43.24	38.91	7.97	6.74	6.74	5.01	4.63	4.63
k, delay calibration	0.11	0.15	0.11	0.15	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.43	5.11	3.90	8.97	0.37	1.06	1.07	0.09	0.30	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.65	0.27	0.78	0.12	0.42	0.42	0.02	0.17	0.17
d, Delay for Lane Group [s/veh]	43.69	43.43	47.14	47.88	8.33	7.79	7.81	5.10	4.93	4.93
Lane Group LOS	D	D	D	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.65	2.90	0.26	3.71	0.67	4.06	4.01	0.04	1.26	1.25
50th-Percentile Queue Length [ft/ln]	16.24	72.60	6.42	92.69	16.69	101.40	100.18	1.05	31.47	31.37
95th-Percentile Queue Length [veh/ln]	1.17	5.23	0.46	6.67	1.20	7.30	7.21	0.08	2.27	2.26
95th-Percentile Queue Length [ft/ln]	29.23	130.68	11.55	166.85	30.05	182.51	180.33	1.88	56.64	56.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.69	43.43	43.43	47.14	47.88	47.88	8.33	7.80	7.81	5.10	4.93	4.93
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	43.48			47.83			7.84			4.93		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13.64											
Intersection LOS	B											
Intersection V/C	0.383											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.055	2.163	2.914	2.580
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	822	644	644
d_b, Bicycle Delay [s]	15.61	15.61	20.67	20.67
l_b,int, Bicycle LOS Score for Intersection	1.814	1.827	2.447	1.928
Bicycle LOS	A	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 26: Arrowhead Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.288

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	38	98	32	26	174	24	43	628	131	39	394	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	98	32	26	174	24	43	628	131	39	394	12
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	26	8	7	46	6	11	165	34	10	103	3
Total Analysis Volume [veh/h]	40	103	34	27	183	25	45	659	137	41	413	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	4	0	1	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	18	0	0	18	0	0	17	0	0	17	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	61	0	0	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	62	62	62	62	62	62
g / C, Green / Cycle	0.20	0.20	0.20	0.20	0.20	0.20	0.69	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.03	0.04	0.04	0.02	0.06	0.06	0.05	0.23	0.23	0.06	0.12	0.12
s, saturation flow rate [veh/h]	1192	1800	1653	1272	1800	1726	977	1800	1694	693	1800	1781
c, Capacity [veh/h]	241	363	333	272	363	348	682	1237	1164	471	1237	1224
d1, Uniform Delay [s]	34.87	29.84	29.91	33.13	30.47	30.51	6.95	5.70	5.70	9.06	4.99	4.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	0.25	0.30	0.16	0.44	0.47	0.19	0.72	0.77	0.36	0.30	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.19	0.20	0.10	0.29	0.30	0.07	0.33	0.33	0.09	0.17	0.17
d, Delay for Lane Group [s/veh]	35.19	30.10	30.21	33.29	30.90	30.98	7.14	6.41	6.46	9.43	5.30	5.30
Lane Group LOS	D	C	C	C	C	C	A	A	A	A	A	A
Critical Lane Group	No	No	No	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.80	1.26	1.23	0.52	1.95	1.92	0.35	2.85	2.70	0.39	1.29	1.29
50th-Percentile Queue Length [ft/ln]	19.97	31.55	30.78	12.96	48.75	48.00	8.77	71.27	67.53	9.87	32.37	32.16
95th-Percentile Queue Length [veh/ln]	1.44	2.27	2.22	0.93	3.51	3.46	0.63	5.13	4.86	0.71	2.33	2.32
95th-Percentile Queue Length [ft/ln]	35.94	56.78	55.40	23.33	87.74	86.40	15.78	128.28	121.55	17.77	58.27	57.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.19	30.13	30.21	33.29	30.94	30.98	7.14	6.43	6.46	9.43	5.30	5.30
Movement LOS	D	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	31.29			31.21			6.48			5.66		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	12.19											
Intersection LOS	B											
Intersection V/C	0.288											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.465	2.443	2.613	2.569
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	533	1244	1244
d_b, Bicycle Delay [s]	24.20	24.20	6.42	6.42
l_b,int, Bicycle LOS Score for Intersection	1.706	1.753	2.253	1.945
Bicycle LOS	A	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 27: Waterman Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	24.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.361

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	117	382	48	14	519	110	70	169	153	76	297	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	382	48	14	519	110	70	169	153	76	297	16
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	102	13	4	139	29	19	45	41	20	79	4
Total Analysis Volume [veh/h]	125	408	51	15	554	118	75	181	163	81	317	17
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	36.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	5.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	36	0	12	31	0	9	33	0	9	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	4.00	2.00	4.00	4.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	9	52	52	2	45	45	21	12	12	21	13	13
g / C, Green / Cycle	0.09	0.58	0.58	0.02	0.50	0.50	0.23	0.14	0.14	0.23	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.08	0.12	0.03	0.01	0.13	0.13	0.06	0.10	0.11	0.07	0.09	0.01
s, saturation flow rate [veh/h]	1619	3427	1530	1619	3427	1645	1245	1800	1530	1236	3427	1530
c, Capacity [veh/h]	154	1987	887	30	1724	828	323	246	209	307	482	215
d1, Uniform Delay [s]	39.94	9.02	8.22	43.76	12.79	12.84	27.91	37.27	37.52	28.15	36.61	33.60
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.81	0.23	0.12	12.37	0.37	0.79	0.36	4.22	6.14	0.45	1.53	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.21	0.06	0.50	0.26	0.27	0.23	0.73	0.78	0.26	0.66	0.08
d, Delay for Lane Group [s/veh]	49.75	9.26	8.35	56.12	13.16	13.63	28.27	41.50	43.67	28.60	38.15	33.76
Lane Group LOS	D	A	A	E	B	B	C	D	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.09	1.82	0.43	0.43	2.56	2.62	1.31	4.05	3.77	1.42	3.35	0.33
50th-Percentile Queue Length [ft/ln]	77.35	45.59	10.78	10.77	63.90	65.48	32.77	101.36	94.28	35.60	83.84	8.23
95th-Percentile Queue Length [veh/ln]	5.57	3.28	0.78	0.78	4.60	4.71	2.36	7.30	6.79	2.56	6.04	0.59
95th-Percentile Queue Length [ft/ln]	139.23	82.06	19.41	19.39	115.02	117.87	58.98	182.45	169.71	64.09	150.92	14.82

Movement, Approach, & Intersection Results

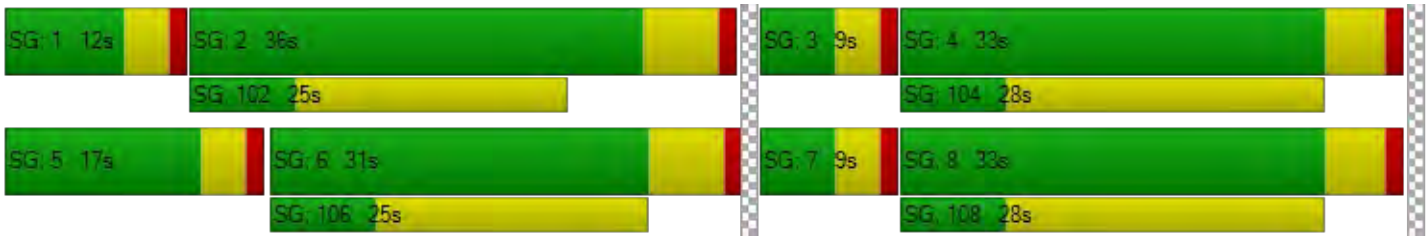
d_M, Delay for Movement [s/veh]	49.75	9.26	8.35	56.12	13.25	13.63	28.27	41.50	43.67	28.60	38.15	33.76
Movement LOS	D	A	A	E	B	B	C	D	D	C	D	C
d_A, Approach Delay [s/veh]	17.84			14.25			39.97			36.10		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	24.68											
Intersection LOS	C											
Intersection V/C	0.361											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.804	2.663	2.490	2.560
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	622	622
d_b, Bicycle Delay [s]	20.00	23.47	21.36	21.36
l_b,int, Bicycle LOS Score for Intersection	2.041	1.937	1.905	1.902
Bicycle LOS	B	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 28: Tippecanoe Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.281

Intersection Setup

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	36	176	11	17	360	41	17	55	32	20	193	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	176	11	17	360	41	17	55	32	20	193	19
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	47	3	5	96	11	5	15	8	5	51	5
Total Analysis Volume [veh/h]	38	187	12	18	382	44	18	58	34	21	205	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	10	18	0	54	62	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	69	69	3	67	67	3	13	13	3	14	14
g / C, Green / Cycle	0.05	0.69	0.69	0.03	0.67	0.67	0.03	0.13	0.13	0.03	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.06	0.01	0.12	0.12	0.01	0.03	0.02	0.01	0.11	0.01
s, saturation flow rate [veh/h]	1619	1800	1762	1619	1800	1736	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	74	1239	1213	45	1206	1163	45	236	201	53	245	209
d1, Uniform Delay [s]	46.63	5.15	5.15	47.80	6.18	6.19	47.80	38.99	38.59	47.39	42.09	37.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.40	0.13	0.13	5.69	0.32	0.34	5.69	0.53	0.39	4.71	7.31	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.08	0.08	0.40	0.18	0.18	0.40	0.25	0.17	0.40	0.84	0.10
d, Delay for Lane Group [s/veh]	52.03	5.27	5.28	53.49	6.50	6.53	53.49	39.53	38.99	52.09	49.39	37.98
Lane Group LOS	D	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.03	0.65	0.65	0.51	1.64	1.61	0.51	1.31	0.76	0.58	5.38	0.44
50th-Percentile Queue Length [ft/ln]	25.76	16.34	16.23	12.75	41.11	40.22	12.75	32.69	19.01	14.51	134.57	10.98
95th-Percentile Queue Length [veh/ln]	1.85	1.18	1.17	0.92	2.96	2.90	0.92	2.35	1.37	1.04	9.19	0.79
95th-Percentile Queue Length [ft/ln]	46.37	29.42	29.22	22.95	73.99	72.40	22.95	58.84	34.21	26.11	229.70	19.77

Movement, Approach, & Intersection Results

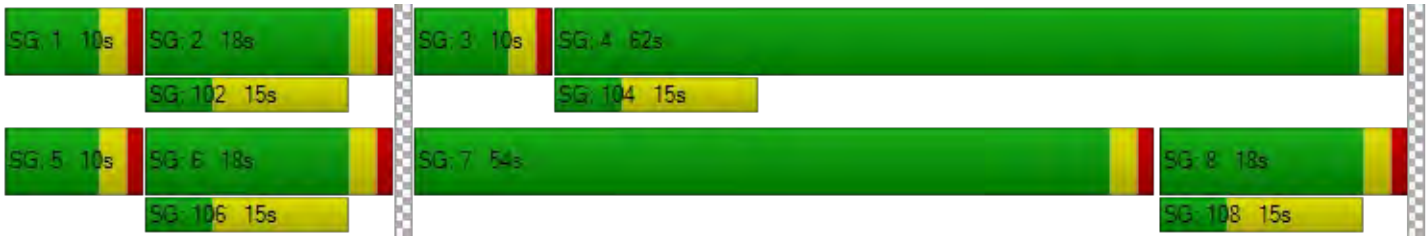
d_M, Delay for Movement [s/veh]	52.03	5.28	5.28	53.49	6.52	6.53	53.49	39.53	38.99	52.09	49.39	37.98
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.77			8.42			41.64			48.69		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	22.49											
Intersection LOS	C											
Intersection V/C	0.281											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.438	2.437	2.384	2.372
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	300	1180
d_b, Bicycle Delay [s]	36.13	36.13	36.13	8.41
l_b,int, Bicycle LOS Score for Intersection	1.755	1.926	1.741	1.966
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 29: Del Rosa Dr / 5th St

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.330

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	8	192	7	32	316	49	64	69	16	27	284	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	192	7	32	316	49	64	69	16	27	284	47
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	59	2	10	98	15	20	21	5	8	88	15
Total Analysis Volume [veh/h]	10	237	9	40	391	61	79	85	20	33	351	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	71	0	0	71	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	C	C	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	70	70	70	70	24	24	24	24
g / C, Green / Cycle	0.70	0.70	0.70	0.70	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.15	0.15	0.18	0.07	0.13	0.13
s, saturation flow rate [veh/h]	1717	1617	1668	1567	447	1585	1742	1561
c, Capacity [veh/h]	1239	1130	1208	1095	180	382	461	376
d1, Uniform Delay [s]	4.89	4.90	5.28	5.34	43.17	30.84	33.12	33.23
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.19	0.40	0.45	1.69	0.39	0.87	1.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.11	0.21	0.22	0.44	0.27	0.51	0.55
d, Delay for Lane Group [s/veh]	5.07	5.10	5.68	5.79	44.86	31.23	33.99	34.49
Lane Group LOS	A	A	A	A	D	C	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.85	0.79	1.76	1.67	1.96	2.09	5.01	4.50
50th-Percentile Queue Length [ft/ln]	21.20	19.79	44.12	41.72	49.03	52.16	125.26	112.38
95th-Percentile Queue Length [veh/ln]	1.53	1.42	3.18	3.00	3.53	3.76	8.68	7.97
95th-Percentile Queue Length [ft/ln]	38.16	35.61	79.41	75.09	88.26	93.89	217.03	199.31

Movement, Approach, & Intersection Results

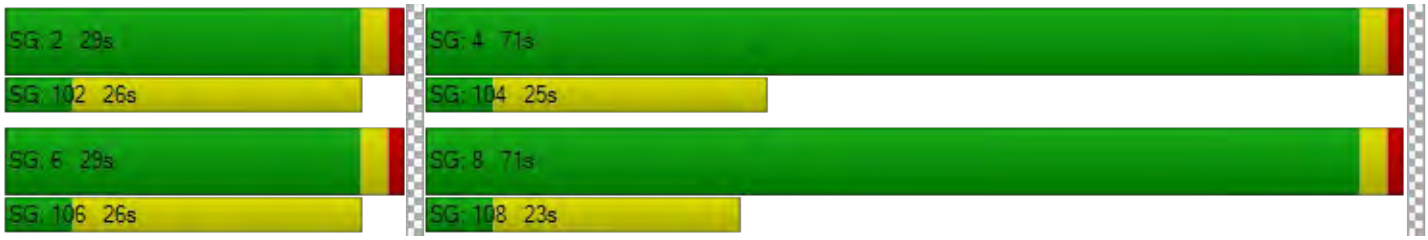
d_M, Delay for Movement [s/veh]	5.07	5.08	5.10	5.68	5.73	5.79	44.86	31.23	31.23	33.99	34.20	34.49
Movement LOS	A	A	A	A	A	A	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	5.08			5.73			37.08			34.23		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	18.98											
Intersection LOS	B											
Intersection V/C	0.330											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.355	2.461	2.300	2.476
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	520	1360	1360
d_b, Bicycle Delay [s]	27.38	27.38	5.12	5.12
l_b,int, Bicycle LOS Score for Intersection	1.771	1.966	1.711	1.924
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 30: Sterling Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.135

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	8	97	2	9	330	55	22	73	11	24	269	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	97	2	9	330	55	22	73	11	24	269	10
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	27	1	3	92	15	6	20	3	7	75	3
Total Analysis Volume [veh/h]	9	108	2	10	367	61	24	81	12	27	300	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	24	0	0	65	0	0	52	0	0	52	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	6	0	0	6	0	0	6	0	0	6	0
Pedestrian Clearance [s]	0	13	0	0	13	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		Yes			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	0.00	0.00	0.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	0.00	0.00	0.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	74	74	74	0	0	0	15	15	15	15	15	15
g / C, Green / Cycle	0.74	0.74	0.74	0.00	0.00	0.00	0.15	0.15	0.15	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.03	0.01	0.12	0.12	0.10	0.04	0.01	0.10	0.10	0.01
s, saturation flow rate [veh/h]	975	1800	1789	920	1800	1712	345	1638	1530	1603	1638	1530
c, Capacity [veh/h]	773	1336	1328	72	0	0	112	242	226	279	242	226
d1, Uniform Delay [s]	3.97	3.42	3.42	50.00	0.00	0.00	41.81	37.97	36.61	40.28	40.26	36.59
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.06	0.06	3.99	0.00	0.00	1.50	0.67	0.10	2.07	3.08	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.04	0.04	0.14	10000.0	10000.0	0.30	0.29	0.05	0.60	0.66	0.05
d, Delay for Lane Group [s/veh]	4.00	3.48	3.48	53.99	0.00	0.00	43.31	38.63	36.71	42.34	43.34	36.68
Lane Group LOS	A	A	A	D	F	F	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.05	0.26	0.26	0.33	0.00	0.00	0.87	1.59	0.26	4.03	3.90	0.24
50th-Percentile Queue Length [ft/ln]	1.26	6.57	6.57	8.29	0.00	0.00	21.87	39.66	6.44	100.73	97.43	5.90
95th-Percentile Queue Length [veh/ln]	0.09	0.47	0.47	0.60	0.00	0.00	1.57	2.86	0.46	7.25	7.02	0.43
95th-Percentile Queue Length [ft/ln]	2.26	11.83	11.82	14.92	0.00	0.00	39.37	71.39	11.60	181.31	175.38	10.63

Movement, Approach, & Intersection Results

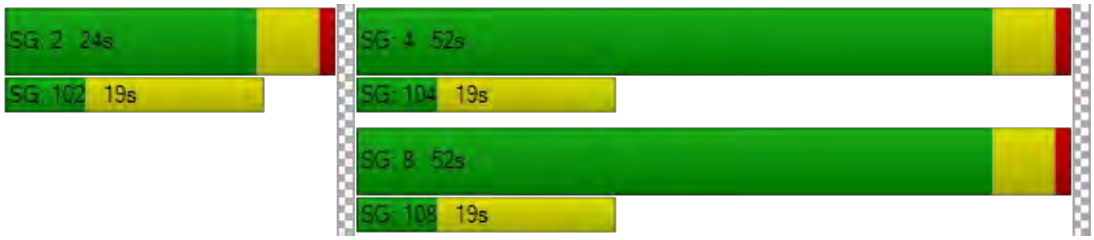
d_M, Delay for Movement [s/veh]	4.00	3.48	3.48	53.99	0.00	0.00	43.31	39.22	36.71	42.34	42.87	36.68
Movement LOS	A	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	3.52			1.23			39.80			42.63		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	19.79											
Intersection LOS	B											
Intersection V/C	0.135											

Other Modes

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	40.50	40.50	40.50	40.50
l_p,int, Pedestrian LOS Score for Intersection	2.582	2.453	2.413	2.404
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	370	0	930	930
d_b, Bicycle Delay [s]	33.21	50.00	14.31	14.31
l_b,int, Bicycle LOS Score for Intersection	1.658	1.921	1.656	1.838
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 31: Victoria Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.335

Intersection Setup

Name										5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name										5th Street		
Base Volume Input [veh/h]	1	74	13	76	230	30	9	60	3	257	266	78
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	74	13	76	230	30	9	60	3	257	266	78
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	3	20	61	8	2	16	1	68	71	21
Total Analysis Volume [veh/h]	1	79	14	81	244	32	10	64	3	273	283	83
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.8	0.0	0.0	4.8	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	28	0	0	28	0
Vehicle Extension [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.8	0.0	0.0	3.8	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		Yes			Yes			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.80	5.80	5.80	5.80	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.80	3.80	3.80	3.80	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	10	10	10	10	34	34	34	34
g / C, Green / Cycle	0.17	0.17	0.17	0.17	0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.12	0.10	0.01	0.04	0.20	0.21
s, saturation flow rate [veh/h]	1692	1554	1543	1584	1032	1786	1355	1731
c, Capacity [veh/h]	362	271	363	277	578	1091	852	1057
d1, Uniform Delay [s]	19.25	19.30	21.38	20.93	8.93	4.33	7.53	5.28
k, delay calibration	0.15	0.15	0.15	0.15	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.41	1.68	2.97	0.05	0.11	0.99	0.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.17	0.53	0.60	0.02	0.06	0.32	0.35
d, Delay for Lane Group [s/veh]	19.49	19.72	23.06	23.91	8.99	4.43	8.53	6.18
Lane Group LOS	B	B	C	C	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.51	0.49	2.29	2.04	0.07	0.25	1.69	1.68
50th-Percentile Queue Length [ft/ln]	12.64	12.28	57.27	50.95	1.68	6.13	42.20	41.99
95th-Percentile Queue Length [veh/ln]	0.91	0.88	4.12	3.67	0.12	0.44	3.04	3.02
95th-Percentile Queue Length [ft/ln]	22.74	22.10	103.08	91.72	3.02	11.03	75.96	75.58

Movement, Approach, & Intersection Results

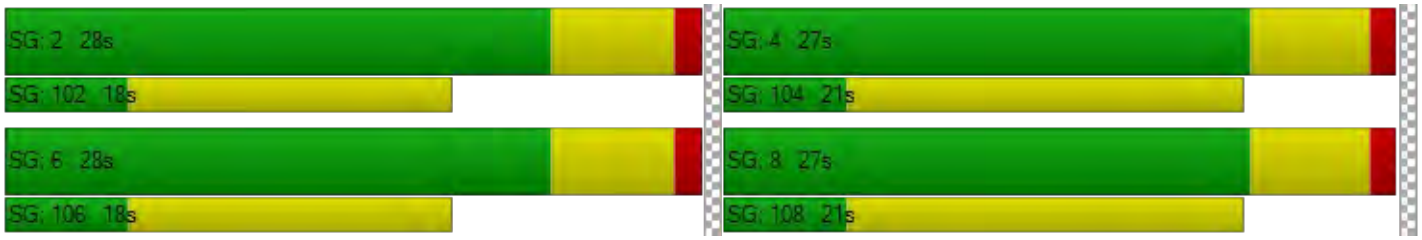
d_M, Delay for Movement [s/veh]	19.49	19.58	19.72	23.06	23.53	23.91	8.99	4.43	4.43	8.53	6.18	6.18
Movement LOS	B	B	B	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	19.60			23.45			5.03			7.18		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	13.02											
Intersection LOS	B											
Intersection V/C	0.335											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersection	2.645	2.393	2.045	2.417
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	771	771	800	800
d_b, Bicycle Delay [s]	10.39	10.39	9.90	9.90
l_b,int, Bicycle LOS Score for Intersection	1.637	1.854	1.687	2.614
Bicycle LOS	A	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 32: Central Avenue / 5th Street

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.302

Intersection Setup

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	5	19	4	42	56	33	15	191	14	33	683	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	19	4	42	56	33	15	191	14	33	683	44
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	1	11	15	9	4	50	4	9	179	12
Total Analysis Volume [veh/h]	5	20	4	44	59	35	16	200	15	35	717	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	34	50	0	10	28	0	12	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	15	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	1	3	5	8	3	75	75	4	77	77
g / C, Green / Cycle	0.01	0.03	0.05	0.08	0.03	0.75	0.75	0.04	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.03	0.06	0.01	0.06	0.06	0.02	0.21	0.03
s, saturation flow rate [veh/h]	1619	1651	1714	1689	1619	1800	1757	1619	3427	1530
c, Capacity [veh/h]	15	58	86	128	41	1352	1319	71	2637	1177
d1, Uniform Delay [s]	49.22	47.26	46.27	45.21	47.98	3.30	3.30	46.74	3.36	2.74
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.29	4.76	4.58	7.82	5.96	0.12	0.12	5.26	0.25	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.42	0.51	0.73	0.39	0.08	0.08	0.49	0.27	0.04
d, Delay for Lane Group [s/veh]	61.51	52.02	50.85	53.04	53.94	3.41	3.42	51.99	3.61	2.80
Lane Group LOS	E	D	D	D	D	A	A	D	A	A
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.18	0.66	1.17	2.55	0.46	0.50	0.50	0.95	1.68	0.19
50th-Percentile Queue Length [ft/ln]	4.38	16.47	29.29	63.72	11.47	12.59	12.50	23.76	41.91	4.65
95th-Percentile Queue Length [veh/ln]	0.32	1.19	2.11	4.59	0.83	0.91	0.90	1.71	3.02	0.33
95th-Percentile Queue Length [ft/ln]	7.88	29.65	52.71	114.70	20.64	22.66	22.50	42.77	75.43	8.37

Movement, Approach, & Intersection Results

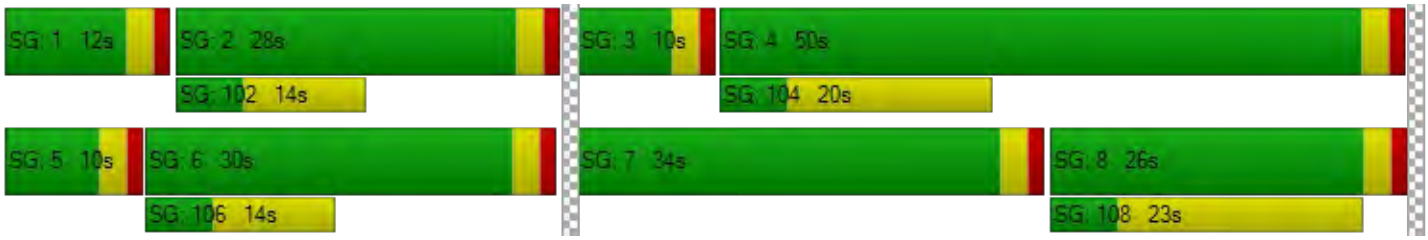
d_M, Delay for Movement [s/veh]	61.51	52.02	52.02	50.85	53.04	53.04	53.94	3.42	3.42	51.99	3.61	2.80
Movement LOS	E	D	D	D	D	D	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	53.66			52.34			6.91			5.69		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	12.47											
Intersection LOS	B											
Intersection V/C	0.302											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	1.992	2.018	2.499	2.629
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	940	500	540
d_b, Bicycle Delay [s]	29.65	14.05	28.13	26.65
l_b,int, Bicycle LOS Score for Intersection	1.607	1.787	1.750	2.218
Bicycle LOS	A	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 33: Palm Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	54.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	33	150	258	125	584	73	11	203	63	358	568	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	150	258	125	584	73	11	203	63	358	568	92
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	41	71	34	160	20	3	56	17	98	156	25
Total Analysis Volume [veh/h]	36	164	283	137	640	80	12	222	69	392	622	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	0	12	35	0	10	34	0	21	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	0	0	27	0	0	26	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	52	52	9	56	56	2	9	9	18	25	25
g / C, Green / Cycle	0.04	0.52	0.52	0.09	0.56	0.56	0.02	0.09	0.09	0.18	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.05	0.20	0.08	0.19	0.05	0.01	0.07	0.05	0.24	0.19	0.07
s, saturation flow rate [veh/h]	1619	3237	1445	1619	3427	1530	1619	3237	1445	1619	3237	1445
c, Capacity [veh/h]	72	1671	746	146	1926	860	33	303	135	291	820	366
d1, Uniform Delay [s]	46.69	12.32	14.55	45.23	11.80	10.13	48.36	44.09	43.13	41.00	34.49	29.96
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.33	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.28	0.12	1.47	22.74	0.46	0.21	6.70	3.41	2.95	169.76	1.47	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.10	0.38	0.94	0.33	0.09	0.37	0.73	0.51	1.35	0.76	0.28
d, Delay for Lane Group [s/veh]	51.98	12.44	16.01	67.97	12.27	10.34	55.06	47.50	46.07	210.76	35.96	30.36
Lane Group LOS	D	B	B	E	B	B	E	D	D	F	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.98	0.94	4.01	4.27	3.77	0.83	0.36	2.80	1.73	20.81	7.04	1.98
50th-Percentile Queue Length [ft/ln]	24.42	23.43	100.30	106.80	94.28	20.84	8.88	70.04	43.18	520.31	176.09	49.52
95th-Percentile Queue Length [veh/ln]	1.76	1.69	7.22	7.66	6.79	1.50	0.64	5.04	3.11	32.27	11.40	3.57
95th-Percentile Queue Length [ft/ln]	43.96	42.18	180.55	191.54	169.71	37.52	15.99	126.08	77.72	806.87	284.91	89.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.98	12.44	16.01	67.97	12.27	10.34	55.06	47.50	46.07	210.76	35.96	30.36
Movement LOS	D	B	B	E	B	B	E	D	D	F	D	C
d_A, Approach Delay [s/veh]	17.48			20.99			47.47			96.91		
Approach LOS	B			C			D			F		
d_I, Intersection Delay [s/veh]	53.98											
Intersection LOS	D											
Intersection V/C	0.591											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.821	2.644	2.859	2.745
Crosswalk LOS	C	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	640	620	840
d_b, Bicycle Delay [s]	24.50	23.12	23.81	16.82
l_b,int, Bicycle LOS Score for Intersection	1.958	2.267	1.810	2.479
Bicycle LOS	A	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 34: Church Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.441

Intersection Setup

Name	Church Ave		5th Street		5th Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Church Ave		5th Street		5th Street	
Base Volume Input [veh/h]	154	84	25	564	983	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	154	84	25	564	983	70
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	23	7	154	269	19
Total Analysis Volume [veh/h]	168	92	27	617	1075	77
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	32	0	10	68	58	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	12	4	82	75	75
g / C, Green / Cycle	0.12	0.12	0.04	0.82	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.10	0.06	0.02	0.18	0.32	0.33
s, saturation flow rate [veh/h]	1714	1530	1714	3427	1800	1759
c, Capacity [veh/h]	210	187	64	2802	1350	1319
d1, Uniform Delay [s]	42.70	40.98	47.07	2.03	4.59	4.64
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.93	1.99	4.32	0.18	0.99	1.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.49	0.42	0.22	0.43	0.44
d, Delay for Lane Group [s/veh]	49.63	42.97	51.39	2.21	5.58	5.69
Lane Group LOS	D	D	D	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.41	2.21	0.73	0.88	3.78	3.83
50th-Percentile Queue Length [ft/ln]	110.28	55.24	18.29	22.08	94.53	95.87
95th-Percentile Queue Length [veh/ln]	7.86	3.98	1.32	1.59	6.81	6.90
95th-Percentile Queue Length [ft/ln]	196.40	99.44	32.93	39.74	170.15	172.56

Movement, Approach, & Intersection Results

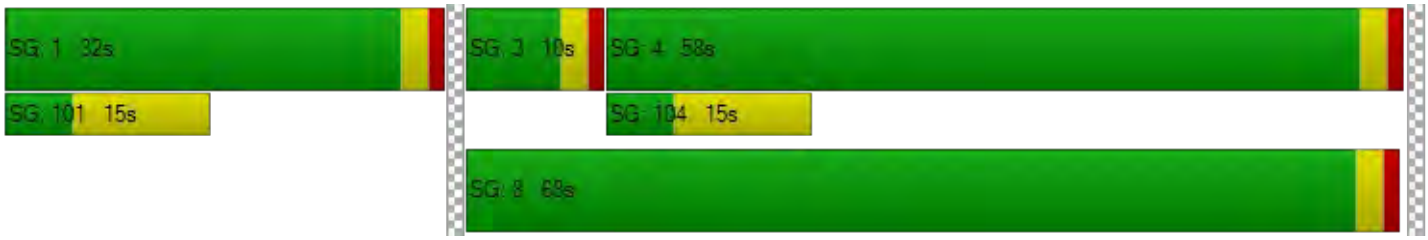
d_M, Delay for Movement [s/veh]	49.63	42.97	51.39	2.21	5.63	5.69
Movement LOS	D	D	D	A	A	A
d_A, Approach Delay [s/veh]	47.28		4.27		5.63	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	10.47					
Intersection LOS	B					
Intersection V/C	0.441					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.065	2.660	2.610
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.664	5.083
Bicycle LOS	D	E	F

Sequence

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



Intersection Level Of Service Report
Intersection 35: SR-210 EB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	25.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	122	7	121	0	326	396	745	951	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	122	7	121	0	326	396	745	951	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8920	0.8920	0.8920	1.0000	0.8920	0.8920	0.8920	0.8920	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	34	2	34	0	91	111	209	267	0
Total Analysis Volume [veh/h]	0	0	0	137	8	136	0	365	444	835	1066	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	10	0	0	51	0	39	90	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	12	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		28	28	32	32	31	66
g / C, Green / Cycle		0.28	0.28	0.32	0.32	0.31	0.66
(v / s)_i Volume / Saturation Flow Rate		0.08	0.09	0.11	0.29	0.28	0.31
s, saturation flow rate [veh/h]		1719	1530	3427	1530	2959	3427
c, Capacity [veh/h]		483	430	1096	489	915	2258
d1, Uniform Delay [s]		28.22	28.36	25.89	32.59	33.24	8.44
k, delay calibration		0.50	0.50	0.11	0.14	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.59	1.92	0.18	8.26	4.03	0.16
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.30	0.32	0.33	0.91	0.91	0.47
d, Delay for Lane Group [s/veh]		29.81	30.29	26.07	40.85	37.27	8.60
Lane Group LOS		C	C	C	D	D	A
Critical Lane Group		No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		2.92	2.78	3.30	11.14	10.00	5.16
50th-Percentile Queue Length [ft/ln]		72.93	69.46	82.47	278.55	249.95	128.89
95th-Percentile Queue Length [veh/ln]		5.25	5.00	5.94	16.62	15.18	8.88
95th-Percentile Queue Length [ft/ln]		131.28	125.04	148.44	415.40	379.59	221.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	29.81	29.81	30.29	0.00	26.07	40.85	37.27	8.60	0.00
Movement LOS				C	C	C		C	D	D	A	
d_A, Approach Delay [s/veh]	0.00			30.04			34.18			21.19		
Approach LOS	A			C			C			C		
d_I, Intersection Delay [s/veh]	25.54											
Intersection LOS	C											
Intersection V/C	0.661											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.699	2.935
Crosswalk LOS	F	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	140	960	1740
d_b, Bicycle Delay [s]	50.00	43.25	13.52	0.85
l_b,int, Bicycle LOS Score for Intersection	4.132	2.023	2.227	3.128
Bicycle LOS	D	B	B	C

Sequence

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

Intersection Level Of Service Report
Intersection 36: SR-210 WB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.488

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No						No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	363	0	319	0	0	0	82	371	0	0	1336	392
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	363	0	319	0	0	0	82	371	0	0	1336	392
Peak Hour Factor	0.9040	0.9040	0.9040	1.0000	1.0000	1.0000	0.9040	0.9040	1.0000	1.0000	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	100	0	88	0	0	0	23	103	0	0	369	108
Total Analysis Volume [veh/h]	402	0	353	0	0	0	91	410	0	0	1478	434
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	0	0	16	77	0	0	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	24	0	0	15	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	45	45	45		7	49	39	39
g / C, Green / Cycle	0.45	0.45	0.45		0.07	0.49	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.13		0.06	0.12	0.30	0.28
s, saturation flow rate [veh/h]	1714	1714	2708		1619	3427	4903	1530
c, Capacity [veh/h]	769	769	1215		116	1683	1911	596
d1, Uniform Delay [s]	17.21	17.21	17.47		45.69	14.70	26.65	25.99
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.83	0.83	0.61		11.17	0.07	0.69	1.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.26	0.29		0.79	0.24	0.77	0.73
d, Delay for Lane Group [s/veh]	18.03	18.03	18.07		56.85	14.78	27.34	27.71
Lane Group LOS	B	B	B		E	B	C	C
Critical Lane Group	No	No	Yes		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.00	3.00	2.62		2.57	2.64	10.05	8.81
50th-Percentile Queue Length [ft/ln]	75.00	75.00	65.47		64.24	66.07	251.13	220.24
95th-Percentile Queue Length [veh/ln]	5.40	5.40	4.71		4.63	4.76	15.24	13.68
95th-Percentile Queue Length [ft/ln]	135.00	135.00	117.85		115.63	118.93	381.08	341.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.03	18.03	18.07	0.00	0.00	0.00	56.85	14.78	0.00	0.00	27.34	27.71
Movement LOS	B	B	B				E	B			C	C
d_A, Approach Delay [s/veh]	18.05			0.00			22.42			27.42		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	24.40											
Intersection LOS	C											
Intersection V/C	0.488											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.932	2.894
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	0	1480	1160
d_b, Bicycle Delay [s]	32.00	50.00	3.38	8.82
l_b,int, Bicycle LOS Score for Intersection	2.805	4.132	1.973	2.611
Bicycle LOS	C	D	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 37: Tippecanoe Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	29.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.384

Intersection Setup

Name				Tippecanoe Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Tippecanoe Avenue								
Base Volume Input [veh/h]	58	265	176	37	500	32	30	170	44	302	549	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	265	176	37	500	32	30	170	44	302	549	25
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	70	46	10	132	8	8	45	12	80	145	7
Total Analysis Volume [veh/h]	61	280	186	39	527	34	32	179	46	319	579	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	35	35	10	33	0	10	21	0	34	45	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	59	59	5	58	58	4	11	11	13	20	20
g / C, Green / Cycle	0.06	0.59	0.59	0.05	0.58	0.58	0.04	0.11	0.11	0.13	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.12	0.02	0.16	0.16	0.02	0.06	0.07	0.10	0.17	0.02
s, saturation flow rate [veh/h]	1619	3427	1530	1619	1800	1762	1619	1800	1677	3144	3427	1530
c, Capacity [veh/h]	93	2037	909	75	1050	1028	67	201	187	401	677	302
d1, Uniform Delay [s]	46.16	8.96	9.36	46.58	10.29	10.30	46.87	42.16	42.27	42.34	38.73	32.75
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.62	0.14	0.51	5.42	0.63	0.65	5.17	2.54	2.98	3.61	3.22	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.14	0.20	0.52	0.27	0.27	0.48	0.57	0.59	0.79	0.85	0.09
d, Delay for Lane Group [s/veh]	53.78	9.10	9.87	52.00	10.92	10.94	52.04	44.70	45.24	45.95	41.95	32.87
Lane Group LOS	D	A	A	D	B	B	D	D	D	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.67	1.32	1.90	1.06	3.10	3.05	0.87	2.80	2.74	3.99	7.06	0.52
50th-Percentile Queue Length [ft/ln]	41.85	32.90	47.52	26.42	77.42	76.17	21.79	70.09	68.41	99.80	176.61	13.09
95th-Percentile Queue Length [veh/ln]	3.01	2.37	3.42	1.90	5.57	5.48	1.57	5.05	4.93	7.19	11.42	0.94
95th-Percentile Queue Length [ft/ln]	75.32	59.22	85.53	47.55	139.36	137.10	39.22	126.16	123.14	179.64	285.58	23.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.78	9.10	9.87	52.00	10.93	10.94	52.04	44.90	45.24	45.95	41.95	32.87
Movement LOS	D	A	A	D	B	B	D	D	D	D	D	C
d_A, Approach Delay [s/veh]	14.54			13.60			45.85			43.08		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.21											
Intersection LOS	C											
Intersection V/C	0.384											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.690	2.489	2.488	2.894
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	600	360	840
d_b, Bicycle Delay [s]	23.12	24.50	33.62	16.82
l_b,int, Bicycle LOS Score for Intersection	1.994	2.055	1.772	2.322
Bicycle LOS	A	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 38: Del Rosa Dr / 3rd St

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	89	97	26	228	86	73	210	28	230	815	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	89	97	26	228	86	73	210	28	230	815	12
Peak Hour Factor	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	25	27	7	63	24	20	58	8	64	226	3
Total Analysis Volume [veh/h]	14	99	108	29	253	95	81	233	31	255	905	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	18	10	18	0	10	39	0	33	62	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	49	63	4	51	51	6	24	24	11	29	29
g / C, Green / Cycle	0.02	0.49	0.63	0.04	0.51	0.51	0.06	0.24	0.24	0.11	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.07	0.02	0.10	0.10	0.05	0.07	0.02	0.09	0.26	0.26
s, saturation flow rate [veh/h]	1619	3427	1530	1619	1800	1637	1619	3427	1530	2959	1800	1791
c, Capacity [veh/h]	38	1680	972	63	911	829	102	808	361	340	518	515
d1, Uniform Delay [s]	48.11	13.38	7.16	47.00	13.54	13.59	46.24	31.34	29.81	42.87	34.07	34.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.96	0.07	0.23	5.05	0.48	0.55	13.17	0.20	0.10	3.35	5.39	5.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.06	0.11	0.46	0.20	0.20	0.80	0.29	0.09	0.75	0.89	0.89
d, Delay for Lane Group [s/veh]	54.08	13.44	7.40	52.05	14.02	14.15	59.41	31.53	29.91	46.22	39.47	39.50
Lane Group LOS	D	B	A	D	B	B	E	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.41	0.59	0.91	0.79	2.27	2.16	2.35	2.31	0.59	3.19	11.23	11.18
50th-Percentile Queue Length [ft/ln]	10.13	14.74	22.66	19.80	56.87	54.06	58.64	57.83	14.75	79.74	280.65	279.44
95th-Percentile Queue Length [veh/ln]	0.73	1.06	1.63	1.43	4.09	3.89	4.22	4.16	1.06	5.74	16.72	16.66
95th-Percentile Queue Length [ft/ln]	18.23	26.53	40.78	35.65	102.36	97.30	105.56	104.09	26.56	143.54	418.02	416.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.08	13.44	7.40	52.05	14.06	14.15	59.41	31.53	29.91	46.22	39.48	39.50
Movement LOS	D	B	A	D	B	B	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	13.06			17.00			37.93			40.95		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	33.28											
Intersection LOS	C											
Intersection V/C	0.417											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.583	2.418	2.680	2.815
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	720	1180
d_b, Bicycle Delay [s]	36.13	36.13	20.48	8.41
l_b,int, Bicycle LOS Score for Intersection	1.742	1.871	1.844	2.527
Bicycle LOS	A	A	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 39: Sterling Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	39	333	98	223	795	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	333	98	223	795	23
Peak Hour Factor	0.8670	0.8670	0.8670	0.8670	0.8670	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	96	28	64	229	7
Total Analysis Volume [veh/h]	45	384	113	257	917	27
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	53	0	11	47	36	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	17	17	9	77	65	65
g / C, Green / Cycle	0.17	0.17	0.09	0.77	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.07	0.07	0.26	0.26
s, saturation flow rate [veh/h]	1714	2708	1619	3427	1800	1782
c, Capacity [veh/h]	291	459	141	2640	1176	1165
d1, Uniform Delay [s]	35.40	40.17	44.82	2.85	8.14	8.17
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	4.08	10.15	0.07	1.02	1.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.84	0.80	0.10	0.40	0.41
d, Delay for Lane Group [s/veh]	35.65	44.25	54.97	2.92	9.16	9.22
Lane Group LOS	D	D	D	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.95	4.78	3.13	0.51	4.64	4.66
50th-Percentile Queue Length [ft/ln]	23.82	119.45	78.18	12.77	115.99	116.52
95th-Percentile Queue Length [veh/ln]	1.72	8.36	5.63	0.92	8.17	8.20
95th-Percentile Queue Length [ft/ln]	42.88	209.07	140.72	22.99	204.31	205.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.65	44.25	54.97	2.92	9.19	9.22
Movement LOS	D	D	D	A	A	A
d_A, Approach Delay [s/veh]	43.35		18.82		9.19	
Approach LOS	D		B		A	
d_I, Intersection Delay [s/veh]	19.64					
Intersection LOS	B					
Intersection V/C	0.476					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.417	2.632	2.441
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.438	4.911
Bicycle LOS	D	E	E

Sequence

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

Intersection Level Of Service Report
Intersection 40: Victoria Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	33.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	12	10	22	55	30	452	82	156	24	23	328	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	10	22	55	30	452	82	156	24	23	328	13
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	3	6	15	8	126	23	43	7	6	91	4
Total Analysis Volume [veh/h]	13	11	24	61	33	503	91	174	27	26	365	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	32	0	25	47	0	10	32	0	11	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	24	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	32	32	6	35	35	7	47	47	4	44	44
g / C, Green / Cycle	0.02	0.32	0.32	0.06	0.35	0.35	0.07	0.47	0.47	0.04	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.02	0.04	0.02	0.33	0.06	0.06	0.06	0.02	0.11	0.11
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1530	1619	1800	1718	1619	1800	1777
c, Capacity [veh/h]	35	567	482	95	634	538	114	846	807	59	785	775
d1, Uniform Delay [s]	48.25	23.60	23.83	46.06	21.39	31.28	45.78	14.88	14.90	47.19	17.78	17.79
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.23	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.43	0.01	0.04	7.15	0.03	14.77	11.91	0.29	0.31	5.13	0.73	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.02	0.05	0.64	0.05	0.93	0.80	0.12	0.12	0.44	0.24	0.24
d, Delay for Lane Group [s/veh]	54.69	23.61	23.87	53.22	21.42	46.06	57.69	15.17	15.21	52.32	18.52	18.54
Lane Group LOS	D	C	C	D	C	D	E	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	0.18	0.40	1.66	0.51	13.54	2.59	1.34	1.32	0.72	2.88	2.86
50th-Percentile Queue Length [ft/ln]	9.52	4.52	9.97	41.60	12.85	338.44	64.72	33.58	32.90	17.88	71.97	71.45
95th-Percentile Queue Length [veh/ln]	0.69	0.33	0.72	3.00	0.93	19.57	4.66	2.42	2.37	1.29	5.18	5.14
95th-Percentile Queue Length [ft/ln]	17.14	8.13	17.95	74.88	23.14	489.30	116.50	60.44	59.23	32.18	129.55	128.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.69	23.61	23.87	53.22	21.42	46.06	57.69	15.19	15.21	52.32	18.53	18.54
Movement LOS	D	C	C	D	C	D	E	B	B	D	B	B
d_A, Approach Delay [s/veh]	32.16			45.43			28.44			20.70		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	33.79											
Intersection LOS	C											
Intersection V/C	0.499											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.333	2.446	2.535	2.436
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	880	580	600
d_b, Bicycle Delay [s]	25.21	15.68	25.21	24.50
l_b,int, Bicycle LOS Score for Intersection	1.599	2.052	1.801	1.894
Bicycle LOS	A	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 41: Central Ave / 3rd St

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.057

Intersection Setup

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

Volumes

Name				Central Avenue								
Base Volume Input [veh/h]	0	0	0	22	0	70	20	216	0	0	306	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	22	0	70	20	216	0	0	306	3
Peak Hour Factor	0.8820	0.8820	0.8820	0.8820	1.0000	0.8820	0.8820	0.8820	1.0000	1.0000	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	6	0	20	6	61	0	0	87	1
Total Analysis Volume [veh/h]	0	0	0	25	0	79	23	245	0	0	347	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.06	0.00	0.09	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.30	14.28	8.95	14.12	0.00	10.18	8.01	0.00	0.00	0.00	0.00	0.00
Movement LOS	B	B	A	B		B	A	A			A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.53	0.00	0.53	0.06	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	13.19	0.00	13.19	1.44	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.17			11.13			0.69			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	1.86											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 42: Palm Ave_Alabama St / 3rd St

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	170	364	6	30	800	149	106	3	0	6	5	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	364	6	30	800	149	106	3	0	6	5	45
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	1.0000	0.9090	1.0000	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	100	2	8	220	41	29	1	0	2	1	12
Total Analysis Volume [veh/h]	187	400	7	33	880	164	117	3	0	7	5	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	26	0	32	31	0	10	31	0	11	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	14	71	71	4	62	62	7	11	1	6
g / C, Green / Cycle	0.14	0.71	0.71	0.04	0.62	0.62	0.07	0.11	0.01	0.06
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.11	0.02	0.26	0.11	0.04	0.00	0.00	0.04
s, saturation flow rate [veh/h]	1619	1800	1789	1619	3427	1530	2959	1600	1619	1551
c, Capacity [veh/h]	219	1285	1277	70	2131	951	199	177	20	86
d1, Uniform Delay [s]	42.27	4.61	4.61	46.75	9.63	8.01	45.29	39.64	48.96	46.22
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.13	0.26	0.27	4.94	0.59	0.39	2.74	0.04	9.58	7.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.16	0.16	0.47	0.41	0.17	0.59	0.02	0.34	0.64
d, Delay for Lane Group [s/veh]	51.40	4.88	4.88	51.69	10.22	8.41	48.03	39.68	58.54	53.75
Lane Group LOS	D	A	A	D	B	A	D	D	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.02	1.25	1.25	0.89	4.68	1.50	1.48	0.07	0.23	1.51
50th-Percentile Queue Length [ft/ln]	125.61	31.32	31.17	22.36	116.98	37.54	36.95	1.69	5.68	37.82
95th-Percentile Queue Length [veh/ln]	8.70	2.25	2.24	1.61	8.23	2.70	2.66	0.12	0.41	2.72
95th-Percentile Queue Length [ft/ln]	217.51	56.37	56.11	40.24	205.68	67.57	66.52	3.04	10.22	68.07

Movement, Approach, & Intersection Results

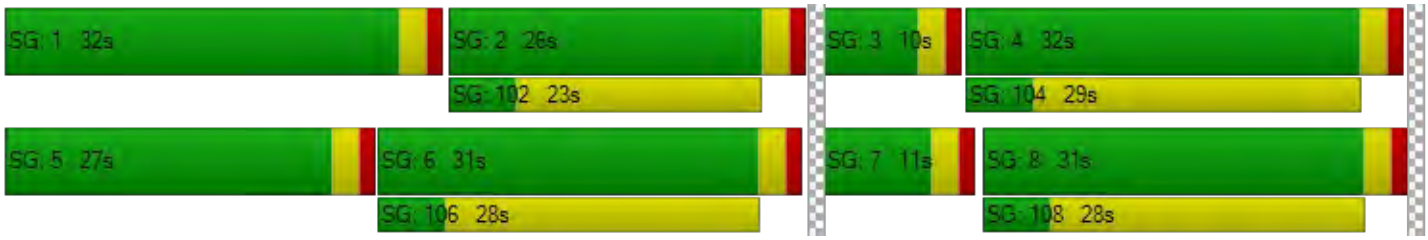
d_M, Delay for Movement [s/veh]	51.40	4.88	4.88	51.69	10.22	8.41	48.03	39.68	0.00	58.54	53.75	53.75
Movement LOS	D	A	A	D	B	A	D	D		E	D	D
d_A, Approach Delay [s/veh]	19.52			11.21			47.82			54.29		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	17.69											
Intersection LOS	B											
Intersection V/C	0.447											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.595	2.830	2.399	1.981
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	560	560	580
d_b, Bicycle Delay [s]	29.65	25.92	25.92	25.21
l_b,int, Bicycle LOS Score for Intersection	2.050	2.448	1.758	1.662
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 43: Tippecanoe Ave / Rialto Ave

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.360

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	66	451	0	0	692	81	85	0	94	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	451	0	0	692	81	85	0	94	0	0	0
Peak Hour Factor	0.8920	0.8920	1.0000	0.8920	0.8920	0.8920	0.8920	1.0000	0.8920	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	126	0	0	194	23	24	0	26	0	0	0
Total Analysis Volume [veh/h]	74	506	0	0	776	91	95	0	105	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	0	8	0	0	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	0	7	0	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	30	0	0	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Split [s]	10	18	0	10	18	0	72	0	72	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No		No		No			
Maximum Recall	No	No		No	No		No		No			
Pedestrian Recall	No	No		No	No		No		No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	6	82	0	76	76	9	9	
g / C, Green / Cycle	0.06	0.82	0.00	0.76	0.76	0.09	0.09	
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.00	0.25	0.25	0.06	0.07	
s, saturation flow rate [veh/h]	1619	3427	1619	1800	1735	1714	1530	
c, Capacity [veh/h]	99	2821	0	1372	1322	149	133	
d1, Uniform Delay [s]	46.19	1.84	0.00	3.75	3.75	44.15	44.78	
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	10.69	0.14	0.00	0.62	0.64	4.51	10.05	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.75	0.18	0.00	0.32	0.32	0.64	0.79	
d, Delay for Lane Group [s/veh]	56.88	1.98	0.00	4.37	4.39	48.66	54.83	
Lane Group LOS	E	A	A	A	A	D	D	
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	
50th-Percentile Queue Length [veh/ln]	2.09	0.65	0.00	2.40	2.32	2.45	2.91	
50th-Percentile Queue Length [ft/ln]	52.31	16.26	0.00	60.02	58.08	61.24	72.69	
95th-Percentile Queue Length [veh/ln]	3.77	1.17	0.00	4.32	4.18	4.41	5.23	
95th-Percentile Queue Length [ft/ln]	94.16	29.28	0.00	108.03	104.55	110.23	130.84	

Movement, Approach, & Intersection Results

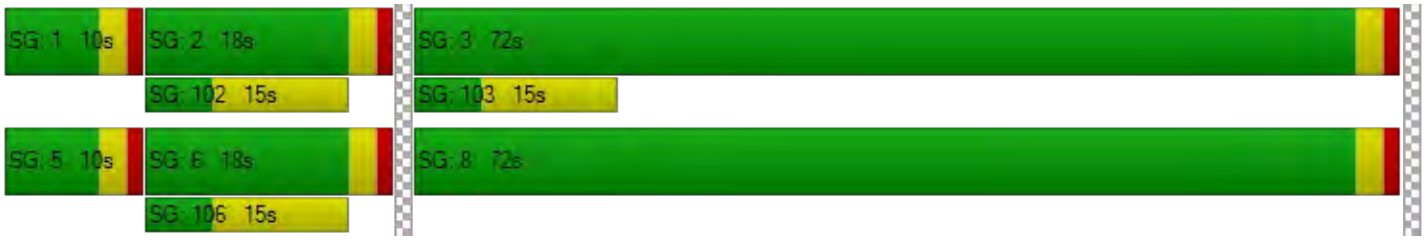
d_M, Delay for Movement [s/veh]	56.88	1.98	0.00	0.00	4.38	4.39	48.66	0.00	54.83	0.00	0.00	0.00
Movement LOS	E	A		A	A	A	D		D			
d_A, Approach Delay [s/veh]	8.98			4.38			51.90			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	11.77											
Intersection LOS	B											
Intersection V/C	0.360											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.697	0.000	2.065	1.430
Crosswalk LOS	B	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	0	0
d_b, Bicycle Delay [s]	36.13	36.13	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	2.038	2.275	4.132	4.132
Bicycle LOS	B	B	D	D

Sequence

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



Intersection Level Of Service Report
Intersection 44: Tippecanoe Ave / Mill St

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.442

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	6	722	142	167	602	4	30	14	5	120	38	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	722	142	167	602	4	30	14	5	120	38	165
Peak Hour Factor	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	201	39	46	167	1	8	4	1	33	11	46
Total Analysis Volume [veh/h]	7	803	158	186	670	4	33	16	6	133	42	184
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	7	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	22	0	38	50	50	16	27	0	13	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	Yes	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	1	55	55	14	67	67	23	23	11	23	14	14
g / C, Green / Cycle	0.01	0.55	0.55	0.14	0.67	0.67	0.23	0.23	0.11	0.23	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.00	0.19	0.19	0.11	0.20	0.00	0.01	0.02	0.00	0.09	0.01	0.12
s, saturation flow rate [veh/h]	1619	3427	1654	1619	3427	1530	1450	1585	1530	1412	3427	1530
c, Capacity [veh/h]	20	1879	906	219	2300	1027	418	454	163	351	495	221
d1, Uniform Delay [s]	48.98	12.58	12.61	42.23	6.72	5.42	30.30	30.41	40.06	35.68	37.06	41.61
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.06	0.50	1.05	8.82	0.32	0.01	0.05	0.06	0.09	0.67	0.07	7.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.34	0.35	0.85	0.29	0.00	0.05	0.06	0.04	0.38	0.08	0.83
d, Delay for Lane Group [s/veh]	59.04	13.08	13.66	51.06	7.04	5.43	30.35	30.46	40.15	36.35	37.13	49.54
Lane Group LOS	E	B	B	D	A	A	C	C	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.23	3.98	4.02	4.98	2.71	0.03	0.39	0.55	0.14	2.92	0.45	4.85
50th-Percentile Queue Length [ft/ln]	5.72	99.50	100.55	124.46	67.63	0.68	9.63	13.81	3.40	73.09	11.22	121.37
95th-Percentile Queue Length [veh/ln]	0.41	7.16	7.24	8.64	4.87	0.05	0.69	0.99	0.24	5.26	0.81	8.47
95th-Percentile Queue Length [ft/ln]	10.29	179.10	180.99	215.94	121.74	1.22	17.34	24.86	6.12	131.55	20.20	211.70

Movement, Approach, & Intersection Results

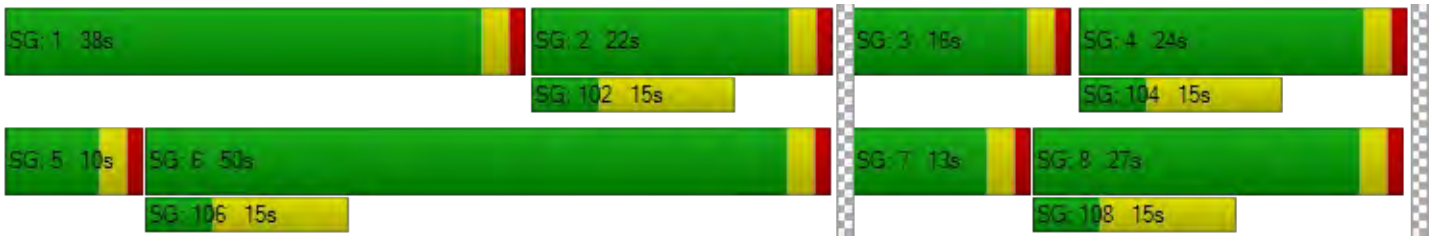
d_M, Delay for Movement [s/veh]	59.04	13.19	13.66	51.06	7.04	5.43	30.39	30.46	40.15	36.35	37.13	49.54
Movement LOS	E	B	B	D	A	A	C	C	D	D	D	D
d_A, Approach Delay [s/veh]	13.60			16.56			31.48			43.20		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	19.91											
Intersection LOS	B											
Intersection V/C	0.442											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.037	2.908	2.328	2.447
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	940	740	420
d_b, Bicycle Delay [s]	32.81	14.05	19.85	31.21
l_b,int, Bicycle LOS Score for Intersection	2.092	2.269	1.650	1.856
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 45: Tippecanoe Ave / Central Ave

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.406

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	1	2	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	562	127	238	626	100	82	204	46	26	95	195
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	562	127	238	626	100	82	204	46	26	95	195
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	153	35	65	170	27	22	55	13	7	26	53
Total Analysis Volume [veh/h]	49	612	138	259	681	109	89	222	50	28	103	212
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	5	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2			6			8			4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	10	18	18	13	21	21	10	59	59	10	59	59
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	10	10	0	10	10	0	10	10	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	55	55	10	60	60	7	19	19	4	16	16
g / C, Green / Cycle	0.05	0.55	0.55	0.10	0.60	0.60	0.07	0.19	0.19	0.04	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.09	0.09	0.14	0.07	0.05	0.06	0.03	0.02	0.03	0.14
s, saturation flow rate [veh/h]	2959	4903	1530	2959	4903	1530	1619	3427	1530	1619	3427	1530
c, Capacity [veh/h]	154	2690	839	296	2924	913	110	662	296	62	560	250
d1, Uniform Delay [s]	45.67	11.64	11.20	44.38	9.46	8.77	45.96	34.79	33.64	47.08	36.08	40.62
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.17	0.20	0.42	8.06	0.19	0.27	12.99	0.30	0.27	5.14	0.16	7.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.23	0.16	0.88	0.23	0.12	0.81	0.34	0.17	0.45	0.18	0.85
d, Delay for Lane Group [s/veh]	46.84	11.84	11.62	52.45	9.64	9.04	58.95	35.09	33.91	52.21	36.23	48.41
Lane Group LOS	D	B	B	D	A	A	E	D	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.61	2.30	1.56	3.47	2.24	1.04	2.56	2.35	1.03	0.77	1.09	5.55
50th-Percentile Queue Length [ft/ln]	15.23	57.40	39.01	86.75	56.03	26.07	64.09	58.65	25.79	19.18	27.34	138.84
95th-Percentile Queue Length [veh/ln]	1.10	4.13	2.81	6.25	4.03	1.88	4.61	4.22	1.86	1.38	1.97	9.42
95th-Percentile Queue Length [ft/ln]	27.41	103.32	70.22	156.15	100.85	46.93	115.37	105.56	46.43	34.53	49.21	235.46

Movement, Approach, & Intersection Results

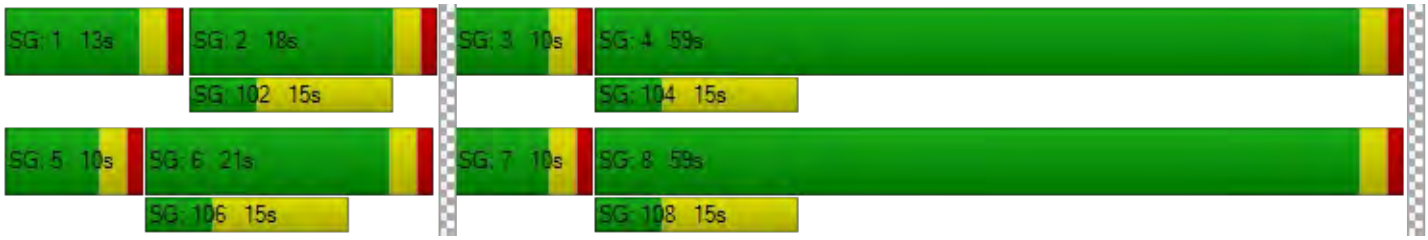
d_M, Delay for Movement [s/veh]	46.84	11.84	11.62	52.45	9.64	9.04	58.95	35.09	33.91	52.21	36.23	48.41
Movement LOS	D	B	B	D	A	A	E	D	C	D	D	D
d_A, Approach Delay [s/veh]	13.95			20.15			40.81			45.06		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	24.48											
Intersection LOS	C											
Intersection V/C	0.406											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.025	3.068	2.561	2.616
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	360	1120	1120
d_b, Bicycle Delay [s]	36.13	33.62	9.68	9.68
l_b,int, Bicycle LOS Score for Intersection	1.999	2.137	1.857	1.843
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 46: Tippecanoe Ave / Orange Show Rd_San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.460

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	75	512	48	109	590	64	122	157	128	88	256	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	512	48	109	590	64	122	157	128	88	256	116
Peak Hour Factor	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	146	14	31	168	18	35	45	36	25	73	33
Total Analysis Volume [veh/h]	85	583	55	124	672	73	139	179	146	100	292	132
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	30	0	10	24	0	13	50	0	10	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	7	57	57	7	57	57	27	18	18	27	15	15
g / C, Green / Cycle	0.07	0.57	0.57	0.07	0.57	0.57	0.27	0.18	0.18	0.27	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.05	0.18	0.18	0.04	0.21	0.21	0.12	0.10	0.10	0.08	0.12	0.13
s, saturation flow rate [veh/h]	1619	1800	1746	2959	1800	1739	1206	1800	1541	1224	1800	1615
c, Capacity [veh/h]	107	1028	997	201	1032	996	320	316	270	345	278	250
d1, Uniform Delay [s]	46.04	11.21	11.21	45.35	11.54	11.54	29.82	37.59	37.76	28.72	40.73	40.86
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.55	0.80	0.83	3.08	1.01	1.05	0.93	1.46	1.87	0.46	5.11	6.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.31	0.32	0.62	0.37	0.37	0.43	0.54	0.57	0.29	0.79	0.81
d, Delay for Lane Group [s/veh]	58.59	12.01	12.04	48.44	12.55	12.59	30.75	39.06	39.62	29.18	45.85	47.13
Lane Group LOS	E	B	B	D	B	B	C	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.44	3.79	3.69	1.57	4.59	4.45	2.72	3.93	3.55	1.90	5.59	5.22
50th-Percentile Queue Length [ft/ln]	61.03	94.69	92.25	39.37	114.79	111.19	68.10	98.33	88.64	47.38	139.80	130.39
95th-Percentile Queue Length [veh/ln]	4.39	6.82	6.64	2.83	8.11	7.91	4.90	7.08	6.38	3.41	9.47	8.96
95th-Percentile Queue Length [ft/ln]	109.86	170.45	166.05	70.87	202.64	197.65	122.57	177.00	159.55	85.29	236.75	224.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.59	12.02	12.04	48.44	12.57	12.59	30.75	39.08	39.62	29.18	46.16	47.13
Movement LOS	E	B	B	D	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	17.50			17.69			36.76			43.16		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	26.24											
Intersection LOS	C											
Intersection V/C	0.460											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.754	2.875	2.485	2.478
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	540	420	940	880
d_b, Bicycle Delay [s]	26.65	31.21	14.05	15.68
l_b,int, Bicycle LOS Score for Intersection	2.156	2.277	1.942	1.992
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 47: Tippecanoe Ave / Hospitality Ln_Coulston St

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.376

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	808	40	51	570	43	56	19	62	79	53	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	382	808	40	51	570	43	56	19	62	79	53	39
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	99	210	10	13	148	11	15	5	16	21	14	10
Total Analysis Volume [veh/h]	397	839	42	53	592	45	58	20	64	82	55	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	8	7	4	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	30	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	54	62	0	10	18	0	0	18	18	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No			No	No	No	No	
Maximum Recall	No	No		No	No			No	No	No	No	
Pedestrian Recall	No	No		No	No			No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
g_i, Effective Green Time [s]	16	65	65	5	55	55	11	11	11	20	20
g / C, Green / Cycle	0.16	0.65	0.65	0.05	0.55	0.55	0.11	0.11	0.11	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.13	0.17	0.17	0.03	0.12	0.12	0.02	0.07	0.04	0.06	0.06
s, saturation flow rate [veh/h]	2959	3427	1756	1619	3427	1736	1321	715	1530	1488	1676
c, Capacity [veh/h]	480	2242	1149	87	1872	948	122	136	167	275	338
d1, Uniform Delay [s]	40.55	7.20	7.20	46.26	11.74	11.76	47.17	44.13	41.43	34.00	33.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.72	0.28	0.55	6.60	0.28	0.56	0.84	1.78	1.45	0.60	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.26	0.26	0.61	0.23	0.23	0.21	0.38	0.38	0.30	0.28
d, Delay for Lane Group [s/veh]	44.26	7.48	7.75	52.86	12.02	12.32	48.01	45.90	42.88	34.60	34.22
Lane Group LOS	D	A	A	D	B	B	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.92	2.45	2.60	1.44	2.41	2.54	0.65	1.34	1.53	1.71	1.98
50th-Percentile Queue Length [ft/ln]	123.10	61.30	65.00	36.05	60.30	63.60	16.25	33.47	38.16	42.75	49.57
95th-Percentile Queue Length [veh/ln]	8.56	4.41	4.68	2.60	4.34	4.58	1.17	2.41	2.75	3.08	3.57
95th-Percentile Queue Length [ft/ln]	214.07	110.35	117.00	64.90	108.53	114.47	29.25	60.25	68.68	76.95	89.22

Movement, Approach, & Intersection Results

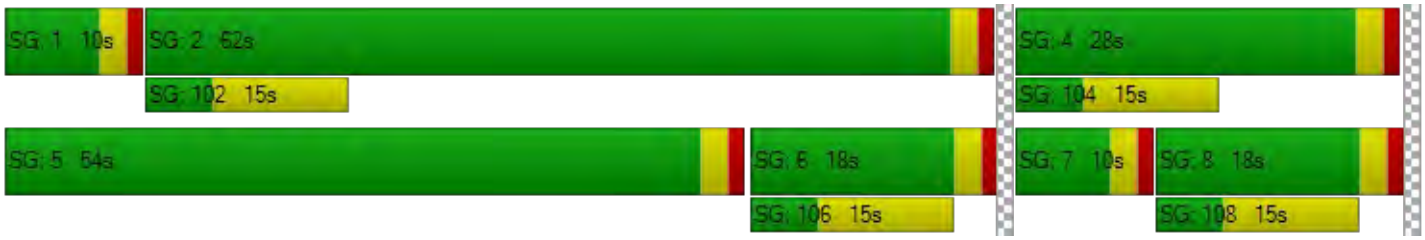
d_M, Delay for Movement [s/veh]	44.26	7.57	7.75	52.86	12.11	12.32	46.96	45.90	42.88	34.60	34.22	34.22
Movement LOS	D	A	A	D	B	B	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	18.97			15.25			44.92			34.39		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	20.65											
Intersection LOS	C											
Intersection V/C	0.376											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.089	2.929	2.431	2.042
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1180	300	300	500
d_b, Bicycle Delay [s]	8.41	36.13	36.13	28.13
l_b,int, Bicycle LOS Score for Intersection	2.263	1.939	1.794	1.852
Bicycle LOS	B	A	A	A

Sequence

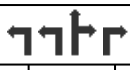
Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 48: Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.467

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	0	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	125	817	388	0	714	60	38	0	179	528	137	369
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	817	388	0	714	60	38	0	179	528	137	369
Peak Hour Factor	0.9130	0.9130	0.9130	1.0000	0.9130	0.9130	0.9130	1.0000	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	224	106	0	196	16	10	0	49	145	38	101
Total Analysis Volume [veh/h]	137	895	425	0	782	66	42	0	196	578	150	404
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	5	2	0	0	6	0	3	0	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	0	7	7	7	0
Maximum Green [s]	30	30	0	0	30	0	30	0	30	30	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	10	35	0	0	25	0	21	0	16	49	44	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No			No		No		No	No	No	
Maximum Recall	No	No			No		No		No	No	No	
Pedestrian Recall	No	No			No		No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	61	51	51	5	17	23	25	25
g / C, Green / Cycle	0.07	0.61	0.51	0.51	0.05	0.17	0.23	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.05	0.21	0.13	0.12	0.03	0.07	0.20	0.17	0.18
s, saturation flow rate [veh/h]	2959	4358	4903	1706	1619	2708	2959	1665	1530
c, Capacity [veh/h]	207	2676	2520	877	80	461	668	411	378
d1, Uniform Delay [s]	45.34	9.37	13.57	13.49	46.40	37.12	37.24	34.03	34.64
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.58	0.34	0.24	0.65	5.30	0.62	3.52	1.93	2.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.33	0.25	0.24	0.53	0.43	0.86	0.67	0.73
d, Delay for Lane Group [s/veh]	48.93	9.71	13.81	14.14	51.70	37.74	40.76	35.96	37.41
Lane Group LOS	D	A	B	B	D	D	D	D	D
Critical Lane Group	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.75	3.02	2.64	2.73	1.13	2.17	7.02	6.21	6.39
50th-Percentile Queue Length [ft/ln]	43.78	75.55	65.99	68.16	28.31	54.28	175.40	155.33	159.78
95th-Percentile Queue Length [veh/ln]	3.15	5.44	4.75	4.91	2.04	3.91	11.36	10.30	10.54
95th-Percentile Queue Length [ft/ln]	78.81	135.99	118.78	122.68	50.96	97.70	284.00	257.53	263.43

Movement, Approach, & Intersection Results

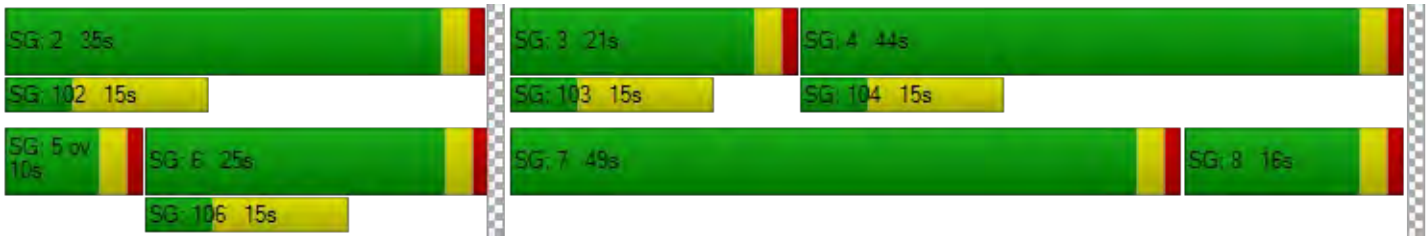
d_M, Delay for Movement [s/veh]	48.93	9.71	0.00	0.00	13.87	14.14	51.70	0.00	37.74	40.76	35.96	36.96
Movement LOS	D	A			B	B	D		D	D	D	D
d_A, Approach Delay [s/veh]	14.92			13.89			40.20			38.77		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	24.81											
Intersection LOS	C											
Intersection V/C	0.467											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.136	2.905	2.422	2.527
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	440	0	820
d_b, Bicycle Delay [s]	23.12	30.42	50.00	17.41
l_b,int, Bicycle LOS Score for Intersection	2.127	1.909	4.132	3.427
Bicycle LOS	B	A	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 49: Anderson St / SR-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	0	641	298	161	830	0	691	4	611	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	641	298	161	830	0	691	4	611	0	0	0
Peak Hour Factor	1.0000	0.9070	0.9070	0.9070	0.9070	1.0000	0.9070	0.9070	0.9070	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	177	82	44	229	0	190	1	168	0	0	0
Total Analysis Volume [veh/h]	0	707	329	178	915	0	762	4	674	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	25	0	12	37	0	0	63	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	53	53	8	64	30	30	30	
g / C, Green / Cycle	0.53	0.53	0.08	0.64	0.30	0.30	0.30	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.22	0.06	0.27	0.22	0.22	0.25	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1714	1715	2708	
c, Capacity [veh/h]	1822	813	234	2196	513	513	811	
d1, Uniform Delay [s]	13.82	13.98	45.11	8.81	31.61	31.61	32.68	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.63	1.50	5.02	0.58	2.19	2.18	2.30	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.39	0.40	0.76	0.42	0.75	0.75	0.83	
d, Delay for Lane Group [s/veh]	14.45	15.47	50.13	9.39	33.80	33.79	34.98	
Lane Group LOS	B	B	D	A	C	C	C	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.66	4.57	2.31	4.59	8.50	8.50	7.71	
50th-Percentile Queue Length [ft/ln]	116.43	114.29	57.82	114.82	212.51	212.46	192.70	
95th-Percentile Queue Length [veh/ln]	8.20	8.08	4.16	8.11	13.28	13.28	12.26	
95th-Percentile Queue Length [ft/ln]	204.91	201.95	104.08	202.69	332.04	331.99	306.52	

Movement, Approach, & Intersection Results

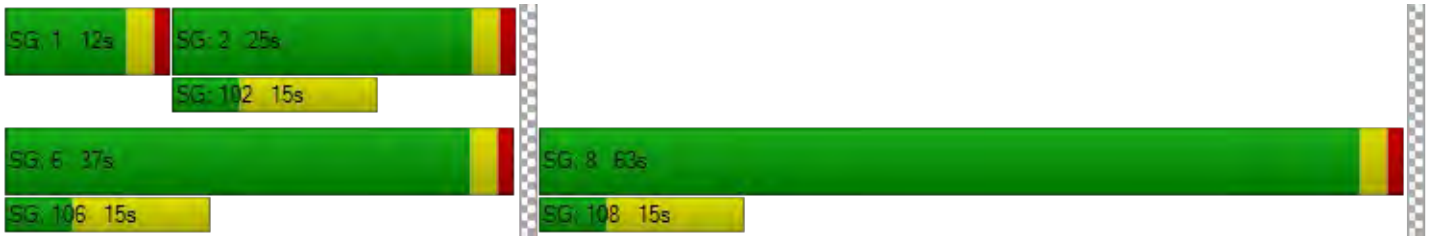
d_M, Delay for Movement [s/veh]	0.00	14.45	15.47	50.13	9.39	0.00	33.79	33.79	34.98	0.00	0.00	0.00
Movement LOS		B	B	D	A		C	C	C			
d_A, Approach Delay [s/veh]	14.78			16.03			34.35			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	23.06											
Intersection LOS	C											
Intersection V/C	0.524											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.818	2.876	2.489	1.971
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	440	680	1200	0
d_b, Bicycle Delay [s]	30.42	21.78	8.00	50.00
l_b,int, Bicycle LOS Score for Intersection	2.414	2.461	3.936	4.132
Bicycle LOS	B	B	D	D

Sequence

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



Intersection Level Of Service Report
Intersection 308: Arden Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.460

Intersection Setup

Name	Arden Ave			Arden Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Arden Ave			Arden Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	230	1	144	1	0	6	2	917	0	0	933	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1	144	1	0	6	2	917	0	0	933	6
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	0	40	0	0	2	1	255	0	0	259	2
Total Analysis Volume [veh/h]	256	1	160	1	0	7	2	1019	0	0	1037	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	27	0	14	18	0	10	49	0	10	49	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	18	54	54	0	37	37	0	33	33	0	33	33
g / C, Green / Cycle	0.18	0.54	0.54	0.00	0.37	0.37	0.00	0.33	0.33	0.00	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.16	0.00	0.10	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.20	0.20
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1530	2959	3427	1530	1619	3427	1794
c, Capacity [veh/h]	285	977	830	4	665	565	13	1144	511	1	1132	592
d1, Uniform Delay [s]	40.30	10.46	11.67	49.75	19.89	19.98	49.60	31.57	0.00	0.00	28.04	28.04
k, delay calibration	0.12	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.43	0.00	0.52	23.47	0.00	0.04	5.62	2.62	0.00	0.00	0.53	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.00	0.19	0.22	0.00	0.01	0.16	0.89	0.00	0.00	0.61	0.61
d, Delay for Lane Group [s/veh]	50.73	10.46	12.19	73.23	19.89	20.02	55.22	34.19	0.00	0.00	28.57	29.05
Lane Group LOS	D	B	B	E	B	C	E	C	A	A	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	6.91	0.01	1.87	0.05	0.00	0.11	0.03	11.74	0.00	0.00	6.82	7.22
50th-Percentile Queue Length [ft/ln]	172.69	0.26	46.74	1.35	0.00	2.73	0.87	293.54	0.00	0.00	170.40	180.40
95th-Percentile Queue Length [veh/ln]	11.22	0.02	3.37	0.10	0.00	0.20	0.06	17.36	0.00	0.00	11.10	11.62
95th-Percentile Queue Length [ft/ln]	280.45	0.46	84.14	2.43	0.00	4.91	1.56	434.03	0.00	0.00	277.44	290.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.73	10.46	12.19	73.23	19.89	20.02	55.22	34.19	0.00	0.00	28.73	29.05
Movement LOS	D	B	B	E	B	C	E	C	A	A	C	C
d_A, Approach Delay [s/veh]	35.85			26.67			34.23			28.73		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	32.17											
Intersection LOS	C											
Intersection V/C	0.460											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.527	2.310	3.015	2.910
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	300	920	920
d_b, Bicycle Delay [s]	28.88	36.13	14.58	14.58
l_b,int, Bicycle LOS Score for Intersection	1.904	1.566	2.402	2.134
Bicycle LOS	A	A	B	B

Sequence

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

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Del Rosa Ave / SR-210 WB Ramps	Signalized	HCM 6th Edition	WB Right	0.814	32.7	C
2	Del Rosa Ave / SR-210 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.778	32.4	C
3	Del Rosa Ave / Date St_Date Pl	Signalized	HCM 6th Edition	EB Left	0.484	19.6	B
4	Del Rosa Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.517	35.9	D
5	Highland Ave / SR-210 EB Off Ramp	Signalized	HCM 6th Edition	SB Left	0.531	20.9	C
6	Highland Ave / SR-210 WB Off Ramp	Signalized	HCM 6th Edition	EB Left	0.515	11.4	B
7	Victoria Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.824	29.1	C
8	Del Rosa Dr / Pacific St	Signalized	HCM 6th Edition	SB Left	0.440	27.4	C
9	Victoria Ave / Pacific St	Signalized	HCM 6th Edition	EB Left	0.399	31.9	C
10	Victoria Ave / 14th St	Signalized	HCM 6th Edition	NB Left	0.223	13.4	B
11	Tippecanoe Ave / Baseline St	Signalized	HCM 6th Edition	WB Left	0.520	24.4	C
12	Del Rosa Dr / Baseline St	Signalized	HCM 6th Edition	SB Left	0.415	35.2	D
13	Sterling Ave / Base Line	Signalized	HCM 6th Edition	EB Left	0.562	33.9	C
14	Victoria Ave / Base Line	Signalized	HCM 6th Edition	SB Left	0.386	33.3	C
15	Tippecanoe Ave / 9th St	Signalized	HCM 6th Edition	NB Left	0.339	28.7	C
16	Del Rosa Dr / 9th St	Signalized	HCM 6th Edition	NB Left	0.392	28.6	C
17	Sterling Ave / 9th St	Signalized	HCM 6th Edition	SB Left	0.412	29.2	C
			HCM 6th				

18	Victoria Ave / 9th St	Signalized	HCM 6th Edition	EB Left	0.262	28.3	C
19	Del Rosa Dr / 6th St	Signalized	HCM 6th Edition	NB Left	0.267	21.0	C
20	Sterling Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.226	39.3	E
21	Victoria Ave / 6th St	Two-way stop	HCM 6th Edition	EB Thru	0.144	18.7	C
22	Central Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.083	11.0	B
23	I-215 SB Ramps / 5th St	Signalized	HCM 6th Edition	SB Right	0.521	20.2	C
24	I-215 NB Ramps / 5th St	Signalized	HCM 6th Edition	EB Left	0.669	24.1	C
25	E St / 5th St	Signalized	HCM 6th Edition	NB Left	0.458	18.5	B
26	Arrowhead Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.310	16.2	B
27	Waterman Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.425	25.4	C
28	Tippecanoe Ave / 5th St	Signalized	HCM 6th Edition	NB Left	0.470	27.6	C
29	Del Rosa Dr / 5th St	Signalized	HCM 6th Edition	EB Left	0.311	21.6	C
30	Sterling Ave / 5th St	Signalized	HCM 6th Edition	EB Left	0.281	23.1	C
31	Victoria Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.423	13.6	B
32	Central Avenue / 5th Street	Signalized	HCM 6th Edition	NB Left	0.429	17.0	B
33	Palm Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.876	46.3	D
34	Church Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.472	6.0	A
35	SR-210 EB Ramps / 5th Street	Signalized	HCM 6th Edition	WB Left	0.657	26.7	C
36	SR-210 WB Ramps / 5th Street	Signalized	HCM 6th Edition	EB Left	0.487	28.9	C
37	Tippecanoe Ave / 3rd St	Signalized	HCM 6th Edition	NB Left	0.636	29.8	C
38	Del Rosa Dr / 3rd St	Signalized	HCM 6th Edition	NB Left	0.612	28.9	C

39	Sterling Ave / 3rd St	Signalized	HCM 6th Edition	SB Right	0.421	13.7	B
40	Victoria Ave / 3rd St	Signalized	HCM 6th Edition	SB Right	0.372	22.5	C
41	Central Ave / 3rd St	Two-way stop	HCM 6th Edition	NB Left	0.010	40.5	E
42	Palm Ave_Alabama St / 3rd St	Signalized	HCM 6th Edition	WB Left	0.418	24.6	C
43	Tippecanoe Ave / Rialto Ave	Signalized	HCM 6th Edition	NB Left	0.371	10.2	B
44	Tippecanoe Ave / Mill St	Signalized	HCM 6th Edition	SB Left	0.471	17.9	B
45	Tippecanoe Ave / Central Ave	Signalized	HCM 6th Edition	EB Left	0.528	26.6	C
46	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave	Signalized	HCM 6th Edition	NB Left	0.634	33.8	C
47	Tippecanoe Ave / Hospitality Ln_Coulston St	Signalized	HCM 6th Edition	SB Left	0.594	28.7	C
48	Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps	Signalized	HCM 6th Edition	WB Left	0.611	28.3	C
49	Anderson St / SR-10 EB Ramps	Signalized	HCM 6th Edition	EB Left	0.650	26.9	C

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

Intersection Level Of Service Report
Intersection 1: Del Rosa Ave / SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.814

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No						No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Base Volume Input [veh/h]	627	713	0	0	353	373	0	0	0	128	0	226
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	627	713	0	0	353	373	0	0	0	128	0	226
Peak Hour Factor	0.9560	0.9560	1.0000	1.0000	0.9560	0.9560	1.0000	1.0000	1.0000	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	164	186	0	0	92	98	0	0	0	33	0	59
Total Analysis Volume [veh/h]	656	746	0	0	369	390	0	0	0	134	0	236
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	50	80	0	0	30	0	0	0	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Cycle Length [s]	100	100	100	100		100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	42	77	32	32		17	17
g / C, Green / Cycle	0.42	0.77	0.32	0.32		0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.41	0.22	0.21	0.25		0.08	0.15
s, saturation flow rate [veh/h]	1619	3427	1800	1530		1714	1530
c, Capacity [veh/h]	686	2639	569	484		291	260
d1, Uniform Delay [s]	27.90	3.38	29.41	31.38		37.37	40.73
k, delay calibration	0.38	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	20.93	0.27	5.63	13.42		1.13	11.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.96	0.28	0.65	0.81		0.46	0.91
d, Delay for Lane Group [s/veh]	48.83	3.65	35.04	44.80		38.50	52.21
Lane Group LOS	D	A	D	D		D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	18.47	1.77	8.36	10.23		3.02	6.46
50th-Percentile Queue Length [ft/ln]	461.70	44.24	209.12	255.80		75.59	161.45
95th-Percentile Queue Length [veh/ln]	25.52	3.18	13.11	15.48		5.44	10.63
95th-Percentile Queue Length [ft/ln]	637.89	79.62	327.70	386.94		136.07	265.65

Movement, Approach, & Intersection Results

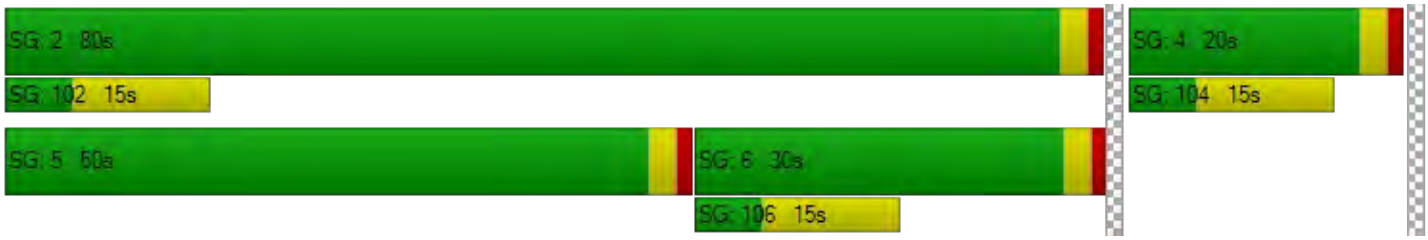
d_M, Delay for Movement [s/veh]	48.83	3.65	0.00	0.00	35.04	44.80	0.00	0.00	0.00	38.50	38.50	52.21
Movement LOS	D	A			D	D				D	D	D
d_A, Approach Delay [s/veh]	24.79			40.06			0.00			47.24		
Approach LOS	C			D			A			D		
d_I, Intersection Delay [s/veh]	32.65											
Intersection LOS	C											
Intersection V/C	0.814											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.769	2.562	2.450	1.902
Crosswalk LOS	C	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1540	540	0	340
d_b, Bicycle Delay [s]	2.65	26.65	50.00	34.45
l_b,int, Bicycle LOS Score for Intersection	2.716	2.186	4.132	2.170
Bicycle LOS	B	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Del Rosa Ave / SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	32.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.778

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Base Volume Input [veh/h]	0	949	120	121	361	0	387	1	715	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	949	120	121	361	0	387	1	715	0	0	0
Peak Hour Factor	1.0000	0.9660	0.9660	0.9660	0.9660	1.0000	0.9660	0.9660	0.9660	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	246	31	31	93	0	100	0	185	0	0	0
Total Analysis Volume [veh/h]	0	982	124	125	374	0	401	1	740	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	24	0	11	35	0	0	65	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	32	32	8	43	51	51	
g / C, Green / Cycle	0.32	0.32	0.08	0.43	0.51	0.51	
(v / s)_i Volume / Saturation Flow Rate	0.22	0.22	0.08	0.11	0.23	0.48	
s, saturation flow rate [veh/h]	3427	1699	1619	3427	1714	1530	
c, Capacity [veh/h]	1092	541	130	1469	877	782	
d1, Uniform Delay [s]	29.58	29.65	45.86	18.33	15.59	23.12	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.32	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.35	6.78	29.10	0.42	0.37	15.57	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.68	0.68	0.97	0.25	0.46	0.95	
d, Delay for Lane Group [s/veh]	32.93	36.43	74.96	18.74	15.97	38.68	
Lane Group LOS	C	D	E	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	8.04	8.57	4.12	2.81	5.71	18.71	
50th-Percentile Queue Length [ft/ln]	201.00	214.22	102.95	70.24	142.72	467.85	
95th-Percentile Queue Length [veh/ln]	12.69	13.37	7.41	5.06	9.63	25.81	
95th-Percentile Queue Length [ft/ln]	317.26	334.24	185.31	126.43	240.68	645.21	

Movement, Approach, & Intersection Results

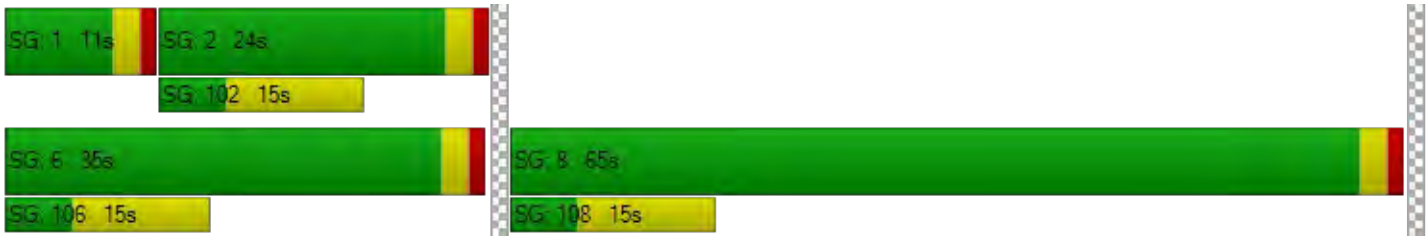
d_M, Delay for Movement [s/veh]	0.00	33.80	36.43	74.96	18.74	0.00	15.97	15.97	38.68	0.00	0.00	0.00
Movement LOS		C	D	E	B		B	B	D			
d_A, Approach Delay [s/veh]	34.10			32.83			30.69			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	32.45											
Intersection LOS	C											
Intersection V/C	0.778											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.820	2.765	2.278	1.674
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	420	640	1240	0
d_b, Bicycle Delay [s]	31.21	23.12	7.22	50.00
l_b,int, Bicycle LOS Score for Intersection	2.168	1.971	3.444	4.132
Bicycle LOS	B	A	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 3: Del Rosa Ave / Date St_Date Pl

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.484

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Base Volume Input [veh/h]	58	736	48	240	727	113	126	57	51	46	71	206
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	736	48	240	727	113	126	57	51	46	71	206
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	192	13	63	190	29	33	15	13	12	19	54
Total Analysis Volume [veh/h]	60	767	50	250	758	118	131	59	53	48	74	215
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	48	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	63	51	51	63	54	54	31	31	31	31
g / C, Green / Cycle	0.63	0.51	0.51	0.63	0.54	0.54	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.08	0.23	0.23	0.30	0.25	0.25	0.12	0.07	0.04	0.18
s, saturation flow rate [veh/h]	747	1800	1762	830	1800	1716	1107	1661	1301	1591
c, Capacity [veh/h]	477	912	892	527	972	927	223	521	385	499
d1, Uniform Delay [s]	8.45	15.80	15.80	9.86	14.10	14.11	42.28	25.28	29.97	28.81
k, delay calibration	0.50	0.50	0.50	0.48	0.50	0.50	0.11	0.11	0.11	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.54	1.62	1.66	2.91	1.58	1.66	2.44	0.20	0.14	1.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.45	0.45	0.47	0.46	0.46	0.59	0.22	0.12	0.58
d, Delay for Lane Group [s/veh]	8.99	17.42	17.46	12.77	15.68	15.76	44.72	25.48	30.12	30.27
Lane Group LOS	A	B	B	B	B	B	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.54	6.21	6.09	2.64	6.33	6.06	3.29	1.97	0.92	5.92
50th-Percentile Queue Length [ft/ln]	13.44	155.26	152.20	65.94	158.19	151.57	82.19	49.37	23.10	148.04
95th-Percentile Queue Length [veh/ln]	0.97	10.30	10.13	4.75	10.45	10.10	5.92	3.55	1.66	9.91
95th-Percentile Queue Length [ft/ln]	24.20	257.43	253.36	118.69	261.32	252.53	147.94	88.87	41.58	247.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.99	17.44	17.46	12.77	15.71	15.76	44.72	25.48	25.48	30.12	30.27	30.27
Movement LOS	A	B	B	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	16.86			15.06			35.85			30.24		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	19.61											
Intersection LOS	B											
Intersection V/C	0.484											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.911	3.010	2.155	2.360
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	1040	640	640
d_b, Bicycle Delay [s]	15.13	11.52	23.12	23.12
l_b,int, Bicycle LOS Score for Intersection	2.283	2.489	1.961	2.116
Bicycle LOS	B	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 4: Del Rosa Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.517

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	174	510	65	165	406	113	174	628	160	72	422	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	174	510	65	165	406	113	174	628	160	72	422	160
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	133	17	43	106	29	45	164	42	19	110	42
Total Analysis Volume [veh/h]	182	532	68	172	424	118	182	656	167	75	441	167
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	5	2	0	1	6	6	3	8	0	7	4	4
Auxiliary Signal Groups						6						4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	7
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	22	32	0	21	31	31	22	36	0	11	25	25
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	19	29	29	18	28	28	19	33	33	8	22	22
g / C, Green / Cycle	0.19	0.29	0.29	0.18	0.28	0.28	0.19	0.33	0.33	0.08	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.11	0.17	0.17	0.11	0.12	0.08	0.11	0.19	0.11	0.05	0.13	0.11
s, saturation flow rate [veh/h]	1619	1800	1729	1619	3427	1530	1619	3427	1530	1619	3427	1530
c, Capacity [veh/h]	308	522	502	291	960	428	308	1131	505	130	754	337
d1, Uniform Delay [s]	36.96	30.36	30.37	37.62	29.58	28.09	36.96	27.76	25.20	44.38	34.91	34.15
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.12	4.75	4.96	8.50	1.48	1.59	8.12	2.17	1.75	17.50	3.31	5.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.59	0.59	0.59	0.44	0.28	0.59	0.58	0.33	0.58	0.58	0.50
d, Delay for Lane Group [s/veh]	45.08	35.12	35.33	46.12	31.06	29.68	45.08	29.93	26.95	61.88	38.22	39.30
Lane Group LOS	D	D	D	D	C	C	D	C	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.72	6.89	6.66	4.52	4.34	2.38	4.72	6.72	3.19	2.41	5.10	4.00
50th-Percentile Queue Length [ft/ln]	117.90	172.29	166.53	112.92	108.44	59.44	117.90	168.02	79.85	60.31	127.48	100.06
95th-Percentile Queue Length [veh/ln]	8.28	11.20	10.89	8.00	7.75	4.28	8.28	10.97	5.75	4.34	8.80	7.20
95th-Percentile Queue Length [ft/ln]	206.94	279.92	272.35	200.06	193.83	106.99	206.94	274.31	143.72	108.56	220.07	180.11

Movement, Approach, & Intersection Results

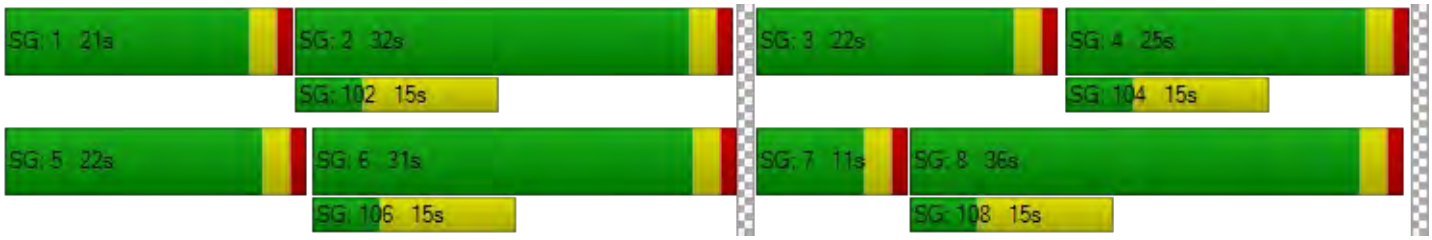
d_M, Delay for Movement [s/veh]	45.08	35.21	35.33	46.12	31.06	29.68	45.08	29.93	26.95	61.88	38.22	39.30
Movement LOS	D	D	D	D	C	C	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	37.52			34.46			32.18			41.08		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	35.91											
Intersection LOS	D											
Intersection V/C	0.517											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.589	2.823	2.743	2.820
Crosswalk LOS	B	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	560	660	440
d_b, Bicycle Delay [s]	25.21	25.92	22.45	30.42
l_b,int, Bicycle LOS Score for Intersection	2.205	2.149	2.389	2.123
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: Highland Ave / SR-210 EB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

Intersection Setup

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Base Volume Input [veh/h]	1025	155	0	702	577	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1025	155	0	702	577	0
Peak Hour Factor	0.9650	0.9650	1.0000	0.9650	0.9650	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	266	40	0	182	149	0
Total Analysis Volume [veh/h]	1062	161	0	727	598	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	2.0	0.0	0.0	2.0	2.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	68	0	0	32	32	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	0.0	1.0	1.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	36	36	58	58
g / C, Green / Cycle	0.36	0.36	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.32	0.11	0.21	0.17
s, saturation flow rate [veh/h]	3329	1530	3427	3427
c, Capacity [veh/h]	1206	554	1980	1980
d1, Uniform Delay [s]	29.85	22.72	11.32	10.81
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.27	0.29	0.53	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.29	0.37	0.30
d, Delay for Lane Group [s/veh]	32.12	23.00	11.85	11.20
Lane Group LOS	C	C	B	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	11.95	2.71	4.22	3.31
50th-Percentile Queue Length [ft/ln]	298.70	67.84	105.60	82.76
95th-Percentile Queue Length [veh/ln]	17.62	4.88	7.59	5.96
95th-Percentile Queue Length [ft/ln]	440.42	122.11	189.86	148.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.12	23.00	0.00	11.85	11.20	0.00
Movement LOS	C	C		B	B	
d_A, Approach Delay [s/veh]	30.92		11.85		11.20	
Approach LOS	C		B		B	
d_I, Intersection Delay [s/veh]	20.85					
Intersection LOS	C					
Intersection V/C	0.531					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.344	2.596	2.720
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.732	4.626
Bicycle LOS	D	E	E

Sequence

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

Intersection Level Of Service Report
Intersection 6: Highland Ave / SR-210 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

Intersection Setup

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	263	1	129	3	0	9	14	1358	0	0	1488	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	263	1	129	3	0	9	14	1358	0	0	1488	8
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	0	32	1	0	2	4	340	0	0	372	2
Total Analysis Volume [veh/h]	263	1	129	3	0	9	14	1358	0	0	1488	8
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Permiss	Split	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	0	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	30	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	29	0	0	10	41	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	21	0	0	0	9	0	0	9	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	10	10	2	2	2	69	64	64
g / C, Green / Cycle	0.12	0.12	0.02	0.02	0.02	0.76	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.00	0.01	0.01	0.40	0.42	0.42
s, saturation flow rate [veh/h]	3329	1532	1714	1530	1714	3427	1800	1797
c, Capacity [veh/h]	388	179	36	32	40	2612	1270	1268
d1, Uniform Delay [s]	38.13	38.37	43.19	43.37	43.29	4.22	6.67	6.68
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.07	5.57	0.96	4.54	5.23	0.74	2.01	2.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.73	0.08	0.28	0.35	0.52	0.59	0.59
d, Delay for Lane Group [s/veh]	40.20	43.94	44.15	47.90	48.52	4.96	8.68	8.70
Lane Group LOS	D	D	D	D	D	A	A	A
Critical Lane Group	No	Yes	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.85	3.00	0.07	0.24	0.36	3.70	6.41	6.42
50th-Percentile Queue Length [ft/ln]	71.34	75.10	1.87	5.91	9.04	92.40	160.31	160.58
95th-Percentile Queue Length [veh/ln]	5.14	5.41	0.13	0.43	0.65	6.65	10.57	10.58
95th-Percentile Queue Length [ft/ln]	128.41	135.19	3.36	10.64	16.28	166.32	264.14	264.50

Movement, Approach, & Intersection Results

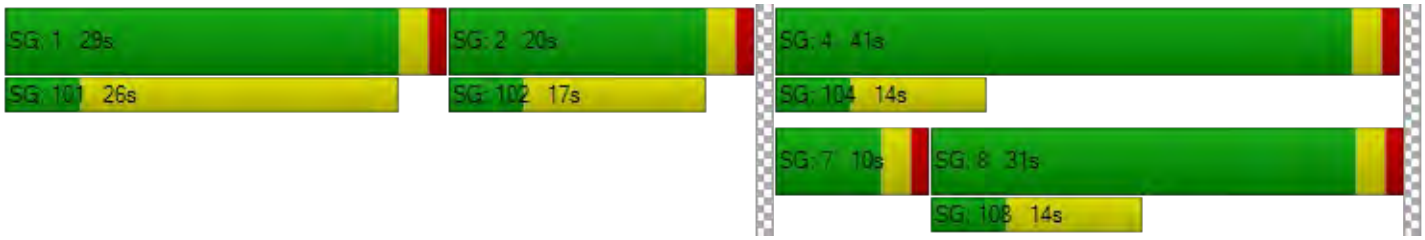
d_M, Delay for Movement [s/veh]	40.20	43.94	43.94	44.15	0.00	47.90	48.52	4.96	0.00	0.00	8.69	8.70
Movement LOS	D	D	D	D		D	D	A			A	A
d_A, Approach Delay [s/veh]	41.44			46.96			5.40			8.69		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	11.38											
Intersection LOS	B											
Intersection V/C	0.515											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.069	1.953	3.032	2.860
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	0	844	622
d_b, Bicycle Delay [s]	29.61	45.00	15.02	21.36
l_b,int, Bicycle LOS Score for Intersection	2.208	4.132	2.692	2.794
Bicycle LOS	B	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 7: Victoria Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.824

Intersection Setup

Name							Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Highland Ave			Highland Ave		
Base Volume Input [veh/h]	237	191	57	183	146	591	672	507	164	62	567	127
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	237	191	57	183	146	591	672	507	164	62	567	127
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	49	15	47	38	153	174	131	42	16	147	33
Total Analysis Volume [veh/h]	245	198	59	189	151	611	695	524	170	64	586	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	18	30	62	0	10	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	40	30	30	40	30	60	27	45	45	6	24	24
g / C, Green / Cycle	0.40	0.30	0.30	0.40	0.30	0.60	0.27	0.45	0.45	0.06	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.18	0.08	0.08	0.15	0.04	0.40	0.23	0.20	0.20	0.04	0.21	0.21
s, saturation flow rate [veh/h]	1328	1700	1569	1235	3427	1530	2959	1800	1652	1619	1800	1688
c, Capacity [veh/h]	589	518	478	524	1043	924	798	805	738	95	425	398
d1, Uniform Delay [s]	21.83	26.24	26.28	20.37	25.31	13.05	34.86	19.10	19.17	46.14	36.73	36.75
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.12	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.16	1.19	1.32	0.42	0.29	3.71	3.13	0.39	0.44	8.09	6.06	6.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.26	0.26	0.36	0.14	0.66	0.87	0.45	0.45	0.68	0.87	0.87
d, Delay for Lane Group [s/veh]	23.99	27.43	27.60	20.79	25.60	16.76	37.99	19.49	19.61	54.23	42.79	43.33
Lane Group LOS	C	C	C	C	C	B	D	B	B	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.29	2.53	2.40	2.98	1.34	9.19	8.25	5.69	5.33	1.76	9.25	8.76
50th-Percentile Queue Length [ft/ln]	107.30	63.28	59.92	74.52	33.48	229.68	206.21	142.27	133.27	44.09	231.34	218.95
95th-Percentile Queue Length [veh/ln]	7.69	4.56	4.31	5.37	2.41	14.16	12.96	9.60	9.12	3.17	14.24	13.61
95th-Percentile Queue Length [ft/ln]	192.24	113.90	107.86	134.13	60.27	353.95	323.97	240.08	227.93	79.36	356.06	340.28

Movement, Approach, & Intersection Results

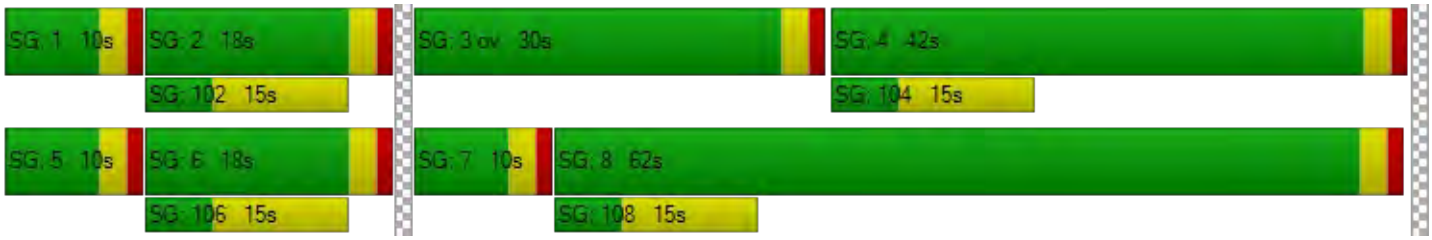
d_M, Delay for Movement [s/veh]	23.99	27.48	27.60	20.79	25.60	16.76	37.99	19.53	19.61	54.23	42.99	43.33
Movement LOS	C	C	C	C	C	B	D	B	B	D	D	D
d_A, Approach Delay [s/veh]	25.79			18.96			28.78			43.96		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	29.06											
Intersection LOS	C											
Intersection V/C	0.824											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.479	2.780	3.038	2.697
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1180	780
d_b, Bicycle Delay [s]	36.13	36.13	8.41	18.61
l_b,int, Bicycle LOS Score for Intersection	1.974	2.344	2.706	2.204
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: Del Rosa Dr / Pacific St

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

Intersection Setup

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Base Volume Input [veh/h]	20	402	69	65	319	146	147	339	25	29	191	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	402	69	65	319	146	147	339	25	29	191	35
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	105	18	17	84	38	38	89	7	8	50	9
Total Analysis Volume [veh/h]	21	421	72	68	334	153	154	355	26	30	200	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	46	0	13	49	0	23	31	0	10	18	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	62	62	6	64	64	11	17	17	4	9	9
g / C, Green / Cycle	0.03	0.62	0.62	0.06	0.64	0.64	0.11	0.17	0.17	0.04	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.05	0.04	0.14	0.14	0.10	0.11	0.11	0.02	0.07	0.07
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1613	1619	1800	1757	1619	1800	1705
c, Capacity [veh/h]	51	1105	939	97	1157	1036	185	299	291	65	165	156
d1, Uniform Delay [s]	47.51	9.72	7.82	46.11	7.44	7.47	43.35	38.95	38.97	46.94	44.20	44.29
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.21	1.00	0.16	8.74	0.44	0.50	9.30	2.32	2.41	5.06	6.00	6.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.38	0.08	0.70	0.22	0.22	0.83	0.64	0.65	0.46	0.73	0.75
d, Delay for Lane Group [s/veh]	52.72	10.72	7.98	54.86	7.88	7.97	52.65	41.28	41.39	52.00	50.20	51.26
Lane Group LOS	D	B	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.59	4.60	0.63	1.89	2.22	2.05	4.18	4.56	4.49	0.82	3.15	3.11
50th-Percentile Queue Length [ft/ln]	14.63	114.95	15.79	47.13	55.53	51.27	104.41	114.09	112.14	20.45	78.76	77.74
95th-Percentile Queue Length [veh/ln]	1.05	8.11	1.14	3.39	4.00	3.69	7.52	8.07	7.96	1.47	5.67	5.60
95th-Percentile Queue Length [ft/ln]	26.33	202.87	28.42	84.84	99.96	92.29	187.93	201.68	198.98	36.82	141.77	139.94

Movement, Approach, & Intersection Results

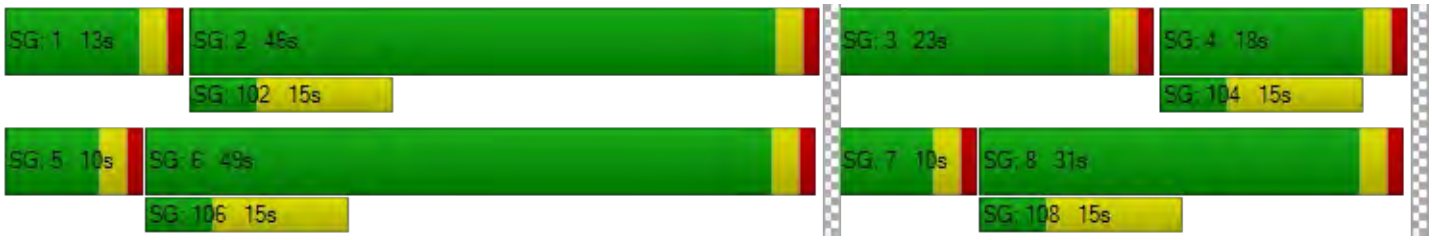
d_M, Delay for Movement [s/veh]	52.72	10.72	7.98	54.86	7.90	7.97	52.65	41.33	41.39	52.00	50.63	51.26
Movement LOS	D	B	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.05			13.67			44.59			50.87		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.38											
Intersection LOS	C											
Intersection V/C	0.440											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.483	2.649	2.484	2.455
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	860	920	560	300
d_b, Bicycle Delay [s]	16.25	14.58	25.92	36.13
l_b,int, Bicycle LOS Score for Intersection	2.408	2.017	2.001	1.780
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 9: Victoria Ave / Pacific St

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.399

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	145	379	55	54	279	66	71	358	190	42	247	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	145	379	55	54	279	66	71	358	190	42	247	60
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	100	15	14	74	17	19	95	50	11	65	16
Total Analysis Volume [veh/h]	153	401	58	57	295	70	75	378	201	44	261	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	36	0	13	28	0	21	41	0	10	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	57	57	6	52	52	6	20	20	5	19	19
g / C, Green / Cycle	0.11	0.57	0.57	0.06	0.52	0.52	0.06	0.20	0.20	0.05	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.09	0.13	0.13	0.04	0.10	0.11	0.05	0.17	0.17	0.03	0.09	0.09
s, saturation flow rate [veh/h]	1619	1800	1722	1619	1800	1683	1619	1800	1593	1619	1800	1682
c, Capacity [veh/h]	183	1032	987	91	930	870	102	361	319	80	337	315
d1, Uniform Delay [s]	43.43	10.45	10.46	46.15	13.03	13.07	46.02	38.49	38.59	46.41	36.39	36.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.52	0.51	0.54	6.83	0.49	0.53	9.70	5.49	6.60	5.67	1.11	1.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.23	0.23	0.63	0.20	0.21	0.73	0.85	0.86	0.55	0.49	0.50
d, Delay for Lane Group [s/veh]	52.95	10.96	11.00	52.98	13.52	13.60	55.71	43.98	45.19	52.09	37.50	37.73
Lane Group LOS	D	B	B	D	B	B	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.16	2.55	2.46	1.55	2.32	2.23	2.10	7.66	6.97	1.19	3.69	3.56
50th-Percentile Queue Length [ft/ln]	104.03	63.73	61.54	38.80	57.91	55.66	52.43	191.50	174.36	29.76	92.25	88.91
95th-Percentile Queue Length [veh/ln]	7.49	4.59	4.43	2.79	4.17	4.01	3.77	12.20	11.31	2.14	6.64	6.40
95th-Percentile Queue Length [ft/ln]	187.25	114.71	110.78	69.84	104.23	100.18	94.37	304.97	282.64	53.57	166.05	160.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.95	10.98	11.00	52.98	13.55	13.60	55.71	44.21	45.19	52.09	37.58	37.73
Movement LOS	D	B	B	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	21.47			18.88			45.83			39.34		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	31.89											
Intersection LOS	C											
Intersection V/C	0.399											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.531	2.494	2.528	2.474
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	500	760	540
d_b, Bicycle Delay [s]	22.45	28.13	19.22	26.65
l_b,int, Bicycle LOS Score for Intersection	2.065	1.908	2.099	1.863
Bicycle LOS	B	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 10: Victoria Ave / 14th St

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.223

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	27	17	54	31	471	12	13	10	3	27	4	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	17	54	31	471	12	13	10	3	27	4	52
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	5	15	8	129	3	4	3	1	7	1	14
Total Analysis Volume [veh/h]	30	19	59	34	515	13	14	11	3	30	4	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	24	49	0	24	49	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	11	0	0	19	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	80	80	4	80	80	7	7
g / C, Green / Cycle	0.04	0.80	0.80	0.04	0.80	0.80	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.04	0.02	0.15	0.15	0.02	0.06
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1784	1603	1595
c, Capacity [veh/h]	65	1431	1216	70	1436	1424	169	162
d1, Uniform Delay [s]	46.93	2.13	2.19	46.73	2.39	2.39	43.78	45.58
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.99	0.02	0.08	5.07	0.28	0.29	0.46	3.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.01	0.05	0.48	0.18	0.18	0.17	0.56
d, Delay for Lane Group [s/veh]	51.92	2.14	2.26	51.80	2.68	2.68	44.23	48.59
Lane Group LOS	D	A	A	D	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.82	0.06	0.20	0.92	0.95	0.95	0.67	2.34
50th-Percentile Queue Length [ft/ln]	20.43	1.51	4.91	23.05	23.79	23.65	16.84	58.60
95th-Percentile Queue Length [veh/ln]	1.47	0.11	0.35	1.66	1.71	1.70	1.21	4.22
95th-Percentile Queue Length [ft/ln]	36.78	2.71	8.85	41.49	42.82	42.57	30.31	105.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.92	2.14	2.26	51.80	2.68	2.68	44.23	44.23	44.23	48.59	48.59	48.59
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.04			5.65			44.23			48.59		
Approach LOS	B			A			D			D		
d_I, Intersection Delay [s/veh]	13.39											
Intersection LOS	B											
Intersection V/C	0.223											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.477	2.454	1.758	1.817
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	920	920	480	480
d_b, Bicycle Delay [s]	14.58	14.58	28.88	28.88
l_b,int, Bicycle LOS Score for Intersection	1.649	2.023	1.606	1.710
Bicycle LOS	A	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 11: Tippecanoe Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.520

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	283	249	651	167	165	499
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	283	249	651	167	165	499
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	63	166	43	42	127
Total Analysis Volume [veh/h]	288	254	663	170	168	508
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	2.0	0.0	2.0	0.0	2.0	2.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	33	0	47	0	20	67
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	0.0	1.0	1.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	30	30	44	44	17	64
g / C, Green / Cycle	0.30	0.30	0.44	0.44	0.17	0.64
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.23	0.25	0.10	0.15
s, saturation flow rate [veh/h]	1714	1530	1800	1679	1619	3427
c, Capacity [veh/h]	514	459	792	739	275	2193
d1, Uniform Delay [s]	29.45	29.38	20.40	20.85	38.43	7.61
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.36	4.75	2.49	3.10	9.71	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.55	0.53	0.56	0.61	0.23
d, Delay for Lane Group [s/veh]	33.81	34.12	22.89	23.95	48.14	7.85
Lane Group LOS	C	C	C	C	D	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.36	5.65	7.41	7.65	4.52	2.20
50th-Percentile Queue Length [ft/ln]	158.88	141.22	185.37	191.37	113.08	54.93
95th-Percentile Queue Length [veh/ln]	10.49	9.55	11.88	12.19	8.01	3.96
95th-Percentile Queue Length [ft/ln]	262.23	238.67	297.01	304.80	200.28	98.88

Movement, Approach, & Intersection Results

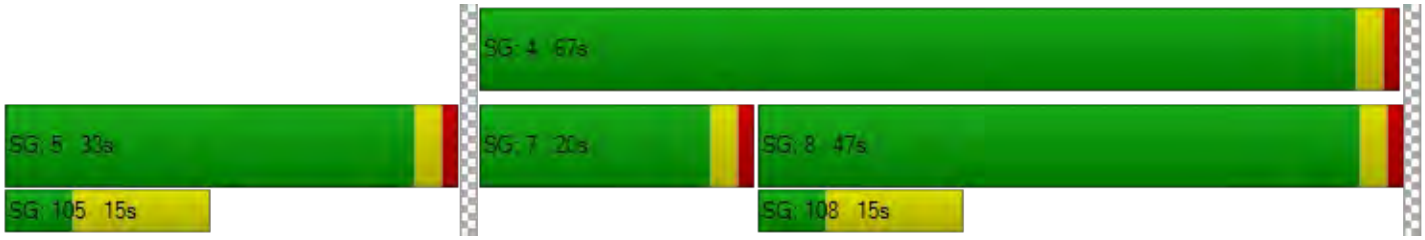
d_M, Delay for Movement [s/veh]	33.81	34.12	23.29	23.95	48.14	7.85
Movement LOS	C	C	C	C	D	A
d_A, Approach Delay [s/veh]	33.95		23.42		17.87	
Approach LOS	C		C		B	
d_I, Intersection Delay [s/veh]	24.37					
Intersection LOS	C					
Intersection V/C	0.520					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.352	2.535	2.617
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.820	4.690
Bicycle LOS	D	E	E

Sequence

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



Intersection Level Of Service Report
Intersection 12: Del Rosa Dr / Baseline St

Control Type:	Signalized	Delay (sec / veh):	35.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.415

Intersection Setup

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

Volumes

Name				Del Rosa Dr								
Base Volume Input [veh/h]	44	314	64	81	204	90	127	693	37	26	461	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	314	64	81	204	90	127	693	37	26	461	50
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	85	17	22	55	24	34	188	10	7	125	14
Total Analysis Volume [veh/h]	48	341	69	88	221	98	138	752	40	28	500	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	13	29	0	27	51	0	10	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	52	52	7	54	54	10	25	25	4	19	19
g / C, Green / Cycle	0.05	0.52	0.52	0.07	0.54	0.54	0.10	0.25	0.25	0.04	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.12	0.05	0.12	0.06	0.09	0.22	0.22	0.02	0.16	0.16
s, saturation flow rate [veh/h]	1619	1800	1697	1619	1800	1530	1619	1800	1768	1619	1800	1739
c, Capacity [veh/h]	84	938	884	110	966	821	169	455	447	62	336	325
d1, Uniform Delay [s]	46.32	12.99	13.02	45.94	12.22	11.46	43.82	35.87	35.87	47.05	39.20	39.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.00	0.55	0.60	12.49	0.55	0.30	9.08	5.56	5.65	5.04	5.51	5.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.22	0.23	0.80	0.23	0.12	0.81	0.88	0.88	0.45	0.84	0.84
d, Delay for Lane Group [s/veh]	52.33	13.54	13.61	58.43	12.78	11.75	52.90	41.43	41.52	52.10	44.71	45.10
Lane Group LOS	D	B	B	E	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.30	2.61	2.51	2.52	2.66	1.11	3.75	9.88	9.72	0.77	7.08	6.91
50th-Percentile Queue Length [ft/ln]	32.51	65.20	62.82	63.07	66.41	27.76	93.68	247.11	243.05	19.15	176.94	172.79
95th-Percentile Queue Length [veh/ln]	2.34	4.69	4.52	4.54	4.78	2.00	6.74	15.04	14.84	1.38	11.44	11.22
95th-Percentile Queue Length [ft/ln]	58.52	117.36	113.08	113.53	119.54	49.96	168.62	376.02	370.88	34.48	286.02	280.58

Movement, Approach, & Intersection Results

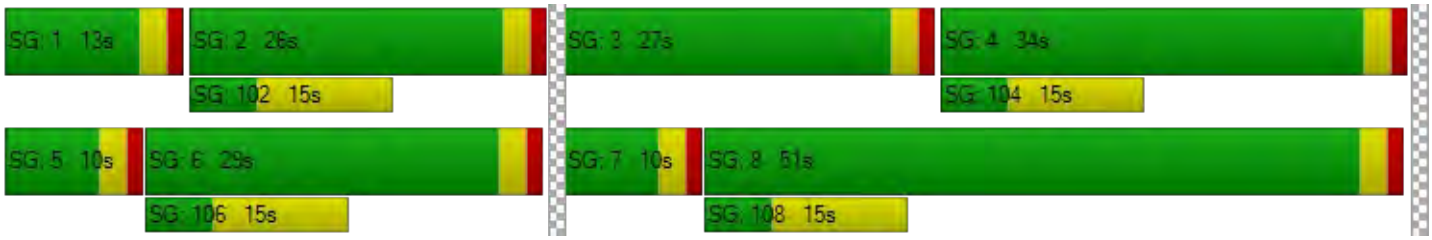
d_M, Delay for Movement [s/veh]	52.33	13.57	13.61	58.43	12.78	11.75	52.90	41.47	41.52	52.10	44.88	45.10
Movement LOS	D	B	B	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	17.64			22.40			43.17			45.25		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	35.20											
Intersection LOS	D											
Intersection V/C	0.415											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.452	2.490	2.614	2.597
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	520	960	620
d_b, Bicycle Delay [s]	29.65	27.38	13.52	23.81
l_b,int, Bicycle LOS Score for Intersection	1.937	2.231	2.327	2.040
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Sterling Ave / Base Line

Control Type:	Signalized	Delay (sec / veh):	33.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

Intersection Setup

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

Volumes

Name				Sterling Ave								
Base Volume Input [veh/h]	69	447	76	202	309	83	127	551	49	60	354	216
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	69	447	76	202	309	83	127	551	49	60	354	216
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	120	20	54	83	22	34	148	13	16	95	58
Total Analysis Volume [veh/h]	74	481	82	217	332	89	137	592	53	65	381	232
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	29	0	22	40	0	15	39	0	10	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	60	42	42	15	51	51	10	25	25	6	21	21
g / C, Green / Cycle	0.60	0.42	0.42	0.15	0.51	0.51	0.10	0.25	0.25	0.06	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.07	0.16	0.16	0.13	0.12	0.12	0.08	0.18	0.18	0.04	0.18	0.18
s, saturation flow rate [veh/h]	1057	1800	1710	1619	1800	1671	1619	1800	1749	1619	1800	1576
c, Capacity [veh/h]	664	748	710	247	912	847	164	456	443	95	379	332
d1, Uniform Delay [s]	8.76	20.34	20.36	41.44	13.83	13.85	44.11	34.08	34.09	46.16	38.04	38.14
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.13	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	1.50	1.59	9.57	0.62	0.67	10.48	2.13	2.20	8.38	6.98	8.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.38	0.39	0.88	0.24	0.24	0.83	0.72	0.72	0.68	0.86	0.87
d, Delay for Lane Group [s/veh]	9.10	21.84	21.96	51.01	14.45	14.52	54.59	36.22	36.29	54.54	45.02	46.83
Lane Group LOS	A	C	C	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.70	4.88	4.69	5.83	2.83	2.66	3.78	7.41	7.22	1.80	8.29	7.51
50th-Percentile Queue Length [ft/ln]	17.60	122.09	117.23	145.83	70.68	66.55	94.57	185.25	180.40	44.92	207.34	187.81
95th-Percentile Queue Length [veh/ln]	1.27	8.51	8.24	9.79	5.09	4.79	6.81	11.87	11.62	3.23	13.02	12.01
95th-Percentile Queue Length [ft/ln]	31.68	212.69	206.01	244.85	127.23	119.79	170.22	296.85	290.54	80.85	325.41	300.19

Movement, Approach, & Intersection Results

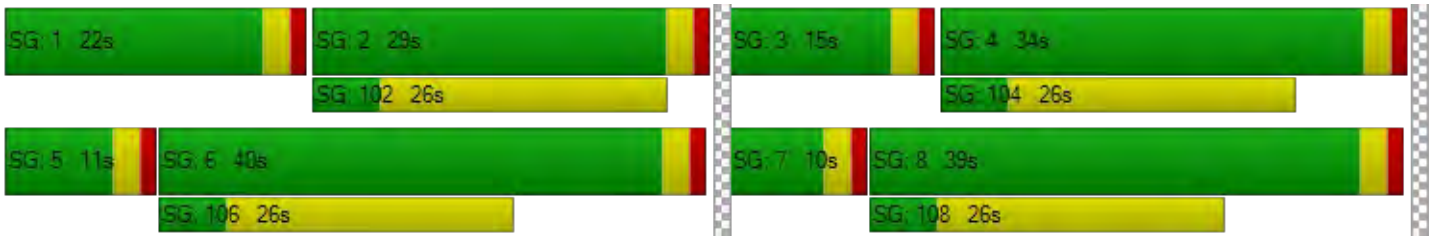
d_M, Delay for Movement [s/veh]	9.10	21.89	21.96	51.01	14.47	14.52	54.59	36.25	36.29	54.54	45.28	46.83
Movement LOS	A	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	20.41			26.91			39.47			46.70		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.89											
Intersection LOS	C											
Intersection V/C	0.562											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.518	2.701	2.621	2.612
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	740	720	620
d_b, Bicycle Delay [s]	27.38	19.85	20.48	23.81
l_b,int, Bicycle LOS Score for Intersection	2.085	2.086	2.205	2.119
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Victoria Ave / Base Line

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.386

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	62	339	74	99	276	122	115	494	59	38	327	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	339	74	99	276	122	115	494	59	38	327	98
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	87	19	25	71	31	30	127	15	10	84	25
Total Analysis Volume [veh/h]	64	348	76	102	284	125	118	508	61	39	336	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	31	0	12	30	0	29	47	0	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	22	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	56	56	8	58	58	9	20	20	5	15	15
g / C, Green / Cycle	0.06	0.56	0.56	0.08	0.58	0.58	0.09	0.20	0.20	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.06	0.12	0.12	0.07	0.16	0.16	0.02	0.13	0.13
s, saturation flow rate [veh/h]	1619	1800	1690	1619	1800	1618	1619	1800	1733	1619	1800	1660
c, Capacity [veh/h]	95	1004	943	125	1038	933	147	357	344	75	277	256
d1, Uniform Delay [s]	46.15	11.12	11.14	45.42	10.16	10.20	44.58	38.29	38.31	46.58	40.89	41.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.11	0.49	0.54	11.89	0.45	0.51	9.72	4.43	4.67	5.42	5.66	6.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.22	0.22	0.81	0.21	0.21	0.80	0.81	0.81	0.52	0.81	0.83
d, Delay for Lane Group [s/veh]	54.25	11.61	11.68	57.31	10.61	10.71	54.30	42.72	42.98	52.00	46.56	47.76
Lane Group LOS	D	B	B	E	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.76	2.45	2.35	2.89	2.27	2.11	3.25	7.13	6.91	1.06	5.74	5.49
50th-Percentile Queue Length [ft/ln]	44.10	61.34	58.84	72.25	56.72	52.68	81.14	178.22	172.79	26.42	143.51	137.20
95th-Percentile Queue Length [veh/ln]	3.18	4.42	4.24	5.20	4.08	3.79	5.84	11.51	11.22	1.90	9.67	9.33
95th-Percentile Queue Length [ft/ln]	79.38	110.42	105.91	130.04	102.10	94.82	146.06	287.69	280.58	47.55	241.74	233.24

Movement, Approach, & Intersection Results

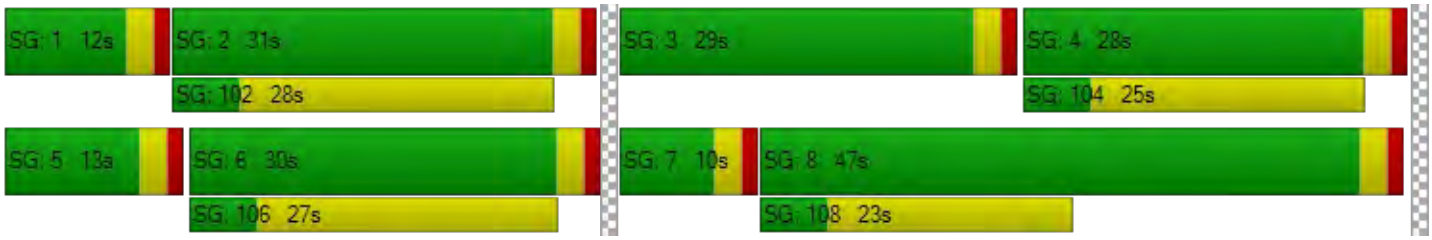
d_M, Delay for Movement [s/veh]	54.25	11.64	11.68	57.31	10.64	10.71	54.30	42.83	42.98	52.00	46.95	47.76
Movement LOS	D	B	B	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	17.23			19.97			44.82			47.54		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	33.32											
Intersection LOS	C											
Intersection V/C	0.386											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.477	2.517	2.543	2.533
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	540	880	500
d_b, Bicycle Delay [s]	25.92	26.65	15.68	28.13
l_b,int, Bicycle LOS Score for Intersection	1.962	1.981	2.126	1.952
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 15: Tippecanoe Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	28.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.339

Intersection Setup

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

Volumes

Name	Tippacanoe Avenue											
Base Volume Input [veh/h]	116	511	57	12	265	35	61	370	75	48	246	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	511	57	12	265	35	61	370	75	48	246	22
Peak Hour Factor	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	133	15	3	69	9	16	96	19	12	64	6
Total Analysis Volume [veh/h]	121	531	59	12	275	36	63	385	78	50	256	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	10	34	0	26	44	0	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	65	65	2	58	58	6	16	16	5	15	15
g / C, Green / Cycle	0.09	0.65	0.65	0.02	0.58	0.58	0.06	0.16	0.16	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.07	0.17	0.17	0.01	0.09	0.09	0.04	0.13	0.13	0.03	0.08	0.08
s, saturation flow rate [veh/h]	1619	1800	1738	1619	1800	1729	1619	1800	1697	1619	1800	1749
c, Capacity [veh/h]	146	1164	1124	33	1039	997	96	289	272	85	277	269
d1, Uniform Delay [s]	44.75	7.49	7.49	48.36	9.80	9.82	46.05	40.60	40.67	46.30	38.84	38.88
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.37	0.54	0.56	6.70	0.31	0.33	7.43	5.77	6.48	6.25	1.44	1.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.26	0.26	0.37	0.15	0.15	0.66	0.82	0.83	0.59	0.51	0.51
d, Delay for Lane Group [s/veh]	56.12	8.02	8.05	55.06	10.11	10.15	53.48	46.37	47.15	52.55	40.28	40.40
Lane Group LOS	E	A	A	E	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.39	2.66	2.58	0.36	1.61	1.59	1.72	6.04	5.82	1.36	3.26	3.21
50th-Percentile Queue Length [ft/ln]	84.72	66.48	64.53	8.88	40.37	39.63	43.08	151.05	145.59	33.93	81.39	80.27
95th-Percentile Queue Length [veh/ln]	6.10	4.79	4.65	0.64	2.91	2.85	3.10	10.07	9.78	2.44	5.86	5.78
95th-Percentile Queue Length [ft/ln]	152.50	119.67	116.15	15.99	72.67	71.33	77.54	251.83	244.53	61.07	146.50	144.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.12	8.03	8.05	55.06	10.13	10.15	53.48	46.67	47.15	52.55	40.33	40.40
Movement LOS	E	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.22			11.80			47.56			42.19		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.71											
Intersection LOS	C											
Intersection V/C	0.339											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.524	2.490	2.490	2.460
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	620	820	500
d_b, Bicycle Delay [s]	22.45	23.81	17.41	28.13
l_b,int, Bicycle LOS Score for Intersection	2.146	1.826	1.994	1.831
Bicycle LOS	B	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 16: Del Rosa Dr / 9th St

Control Type:	Signalized	Delay (sec / veh):	28.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.392

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	80	390	75	52	261	43	38	219	65	40	287	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	390	75	52	261	43	38	219	65	40	287	46
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	110	21	15	73	12	11	62	18	11	81	13
Total Analysis Volume [veh/h]	90	439	84	59	294	48	43	247	73	45	323	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	24	0	10	22	0	10	56	0	10	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	57	57	6	56	56	5	20	20	5	20	20
g / C, Green / Cycle	0.07	0.57	0.57	0.06	0.56	0.56	0.05	0.20	0.20	0.05	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.06	0.15	0.15	0.04	0.10	0.10	0.03	0.14	0.05	0.03	0.18	0.03
s, saturation flow rate [veh/h]	1619	1800	1701	1619	1800	1714	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	112	1026	970	92	1004	956	80	365	311	81	367	312
d1, Uniform Delay [s]	45.88	10.85	10.87	46.18	10.83	10.85	46.44	36.81	33.35	46.39	38.60	32.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.53	0.62	0.66	7.33	0.38	0.40	5.60	2.19	0.38	5.75	6.84	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.26	0.26	0.64	0.17	0.18	0.54	0.68	0.24	0.55	0.88	0.17
d, Delay for Lane Group [s/veh]	58.41	11.47	11.53	53.51	11.20	11.25	52.04	39.00	33.74	52.14	45.44	33.04
Lane Group LOS	E	B	B	D	B	B	D	D	C	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.58	3.02	2.89	1.61	1.91	1.86	1.16	5.74	1.51	1.22	8.27	1.06
50th-Percentile Queue Length [ft/ln]	64.48	75.45	72.19	40.37	47.69	46.39	29.08	143.51	37.77	30.44	206.83	26.44
95th-Percentile Queue Length [veh/ln]	4.64	5.43	5.20	2.91	3.43	3.34	2.09	9.67	2.72	2.19	12.99	1.90
95th-Percentile Queue Length [ft/ln]	116.06	135.81	129.95	72.66	85.85	83.50	52.35	241.74	67.98	54.80	324.76	47.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.41	11.49	11.53	53.51	11.22	11.25	52.04	39.00	33.74	52.14	45.44	33.04
Movement LOS	E	B	B	D	B	B	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	18.39			17.45			39.49			44.62		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.57											
Intersection LOS	C											
Intersection V/C	0.392											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.506	2.489	2.467	2.335
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	420	380	1060	1060
d_b, Bicycle Delay [s]	31.21	32.81	11.05	11.05
l_b,int, Bicycle LOS Score for Intersection	2.065	1.890	2.159	2.253
Bicycle LOS	B	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 17: Sterling Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	29.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.412

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	33	360	106	71	234	75	97	270	34	50	176	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	360	106	71	234	75	97	270	34	50	176	73
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	103	30	20	67	21	28	77	10	14	50	21
Total Analysis Volume [veh/h]	38	412	121	81	268	86	111	309	39	57	202	84
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	27	0	12	29	0	29	51	0	10	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	19	0	0	22	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	57	57	6	58	58	9	20	20	6	16	16
g / C, Green / Cycle	0.05	0.57	0.57	0.06	0.58	0.58	0.09	0.20	0.20	0.06	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.15	0.15	0.05	0.10	0.10	0.07	0.17	0.03	0.04	0.11	0.05
s, saturation flow rate [veh/h]	1619	1800	1662	1619	1800	1654	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	75	1017	940	102	1048	963	141	353	300	90	297	252
d1, Uniform Delay [s]	46.60	11.16	11.18	46.21	9.71	9.74	44.76	39.03	33.18	46.20	39.28	36.90
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.30	0.66	0.72	12.86	0.36	0.41	9.41	6.96	0.19	7.04	2.74	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.27	0.27	0.79	0.17	0.18	0.79	0.88	0.13	0.63	0.68	0.33
d, Delay for Lane Group [s/veh]	51.90	11.81	11.91	59.06	10.07	10.14	54.17	45.99	33.37	53.23	42.03	37.67
Lane Group LOS	D	B	B	E	B	B	D	D	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.03	3.16	2.98	2.34	1.87	1.77	3.05	7.95	0.80	1.56	4.85	1.86
50th-Percentile Queue Length [ft/ln]	25.72	79.11	74.57	58.46	46.70	44.35	76.25	198.63	19.89	38.90	121.19	46.47
95th-Percentile Queue Length [veh/ln]	1.85	5.70	5.37	4.21	3.36	3.19	5.49	12.57	1.43	2.80	8.46	3.35
95th-Percentile Queue Length [ft/ln]	46.30	142.40	134.23	105.23	84.06	79.84	137.24	314.19	35.79	70.02	211.46	83.65

Movement, Approach, & Intersection Results

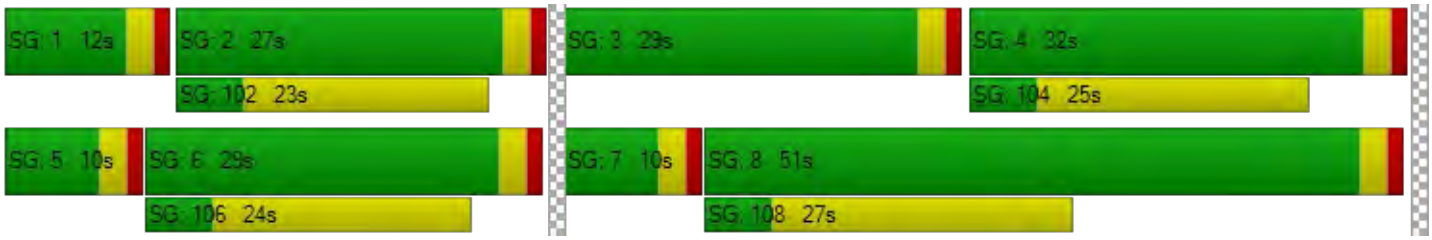
d_M, Delay for Movement [s/veh]	51.90	11.84	11.91	59.06	10.09	10.14	54.17	45.99	33.37	53.23	42.03	37.67
Movement LOS	D	B	B	E	B	B	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	14.52			19.22			46.90			42.82		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.24											
Intersection LOS	C											
Intersection V/C	0.412											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.611	2.510	2.329	2.346
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	520	960	580
d_b, Bicycle Delay [s]	28.88	27.38	13.52	25.21
l_b,int, Bicycle LOS Score for Intersection	2.031	1.918	2.317	2.126
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 18: Victoria Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.262

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	46	303	27	59	216	60	83	178	45	19	120	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	303	27	59	216	60	83	178	45	19	120	56
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	80	7	16	57	16	22	47	12	5	32	15
Total Analysis Volume [veh/h]	49	320	28	62	228	63	88	188	47	20	127	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	35	0	15	35	0	23	40	0	10	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	66	66	6	67	67	7	13	13	3	9	9
g / C, Green / Cycle	0.05	0.66	0.66	0.06	0.67	0.67	0.07	0.13	0.13	0.03	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.10	0.04	0.08	0.09	0.05	0.10	0.03	0.01	0.07	0.04
s, saturation flow rate [veh/h]	1619	1800	1750	1619	1800	1669	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	85	1188	1155	94	1198	1111	112	237	202	49	168	142
d1, Uniform Delay [s]	46.28	6.40	6.41	46.14	6.10	6.12	45.84	42.08	38.88	47.62	44.25	42.78
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.01	0.26	0.27	7.67	0.21	0.24	11.59	5.88	0.58	5.42	6.85	1.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.15	0.15	0.66	0.12	0.13	0.79	0.79	0.23	0.41	0.76	0.41
d, Delay for Lane Group [s/veh]	52.29	6.67	6.68	53.81	6.31	6.36	57.42	47.96	39.46	53.04	51.10	44.70
Lane Group LOS	D	A	A	D	A	A	E	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.33	1.36	1.34	1.70	1.11	1.07	2.50	4.85	1.06	0.56	3.37	1.45
50th-Percentile Queue Length [ft/ln]	33.16	33.94	33.42	42.54	27.65	26.63	62.46	121.20	26.58	14.02	84.21	36.14
95th-Percentile Queue Length [veh/ln]	2.39	2.44	2.41	3.06	1.99	1.92	4.50	8.46	1.91	1.01	6.06	2.60
95th-Percentile Queue Length [ft/ln]	59.69	61.10	60.16	76.57	49.77	47.94	112.43	211.47	47.84	25.23	151.57	65.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.29	6.67	6.68	53.81	6.33	6.36	57.42	47.96	39.46	53.04	51.10	44.70
Movement LOS	D	A	A	D	A	A	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.30			14.67			49.30			49.45		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.28											
Intersection LOS	C											
Intersection V/C	0.262											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.572	2.466	2.275	2.256
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	640	740	480
d_b, Bicycle Delay [s]	23.12	23.12	19.85	28.88
l_b,int, Bicycle LOS Score for Intersection	1.887	1.851	2.093	1.900
Bicycle LOS	A	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 19: Del Rosa Dr / 6th St

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.267

Intersection Setup

Name							6th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							6th Street					
Base Volume Input [veh/h]	10	313	122	14	230	30	55	124	14	39	86	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	313	122	14	230	30	55	124	14	39	86	19
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	87	34	4	64	8	15	35	4	11	24	5
Total Analysis Volume [veh/h]	11	349	136	16	256	33	61	138	16	43	96	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	34	0	10	34	0	34	46	0	10	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	70	70	3	70	70	6	11	5	10
g / C, Green / Cycle	0.02	0.70	0.70	0.03	0.70	0.70	0.06	0.11	0.05	0.10
(v / s)_i Volume / Saturation Flow Rate	0.01	0.14	0.14	0.01	0.08	0.08	0.04	0.09	0.03	0.07
s, saturation flow rate [veh/h]	1619	1800	1632	1619	1800	1730	1619	1768	1619	1745
c, Capacity [veh/h]	30	1255	1138	41	1267	1217	96	191	79	171
d1, Uniform Delay [s]	48.46	5.33	5.35	47.96	4.77	4.78	46.00	43.55	46.46	43.59
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.03	0.36	0.41	5.86	0.18	0.20	6.85	7.69	5.66	4.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.20	0.21	0.39	0.12	0.12	0.64	0.80	0.54	0.68
d, Delay for Lane Group [s/veh]	55.49	5.69	5.75	53.82	4.96	4.97	52.85	51.25	52.12	48.34
Lane Group LOS	E	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.33	1.73	1.63	0.46	0.91	0.89	1.66	4.10	1.16	3.01
50th-Percentile Queue Length [ft/ln]	8.24	43.33	40.65	11.45	22.74	22.36	41.45	102.61	29.11	75.13
95th-Percentile Queue Length [veh/ln]	0.59	3.12	2.93	0.82	1.64	1.61	2.98	7.39	2.10	5.41
95th-Percentile Queue Length [ft/ln]	14.83	78.00	73.17	20.61	40.93	40.25	74.60	184.70	52.39	135.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.49	5.70	5.75	53.82	4.96	4.97	52.85	51.25	51.25	52.12	48.34	48.34
Movement LOS	E	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.82			7.53			51.70			49.35		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	21.00											
Intersection LOS	C											
Intersection V/C	0.267											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.465	2.450	2.062	2.093
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	620	620	860	380
d_b, Bicycle Delay [s]	23.81	23.81	16.25	32.81
l_b,int, Bicycle LOS Score for Intersection	1.969	1.811	1.914	1.824
Bicycle LOS	A	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 20: Sterling Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	39.3
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.226

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	15	458	38	26	237	23	55	104	11	10	76	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	458	38	26	237	23	55	104	11	10	76	18
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	124	10	7	64	6	15	28	3	3	21	5
Total Analysis Volume [veh/h]	16	496	41	28	257	25	60	113	12	11	82	20
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.00	0.23	0.41	0.01	0.06	0.30	0.03
d_M, Delay for Movement [s/veh]	7.82	0.00	0.00	8.55	0.00	0.00	39.30	38.87	29.75	32.06	25.76	17.47
Movement LOS	A	A	A	A	A	A	E	E	D	D	D	C
95th-Percentile Queue Length [veh/ln]	0.04	0.02	0.00	0.08	0.04	0.00	4.17	4.17	4.17	1.76	1.76	1.76
95th-Percentile Queue Length [ft/ln]	0.94	0.47	0.00	2.07	1.04	0.00	104.35	104.35	104.35	43.90	43.90	43.90
d_A, Approach Delay [s/veh]	0.23			0.77			38.41			24.90		
Approach LOS	A			A			E			C		
d_I, Intersection Delay [s/veh]	8.86											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 21: Victoria Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	18.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.144

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	46	341	5	16	203	24	26	44	25	3	29	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	341	5	16	203	24	26	44	25	3	29	10
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	93	1	4	55	7	7	12	7	1	8	3
Total Analysis Volume [veh/h]	50	370	5	17	220	26	28	48	27	3	31	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.01	0.00	0.00	0.08	0.14	0.03	0.01	0.10	0.01
d_M, Delay for Movement [s/veh]	7.81	0.00	0.00	8.06	0.00	0.00	17.69	18.72	11.76	18.20	17.42	10.61
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.12	0.06	0.00	0.04	0.02	0.00	0.97	0.97	0.97	0.40	0.40	0.40
95th-Percentile Queue Length [ft/ln]	2.92	1.46	0.00	1.08	0.54	0.00	24.36	24.36	24.36	10.04	10.04	10.04
d_A, Approach Delay [s/veh]	0.92			0.52			16.62			15.81		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	3.53											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 22: Central Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.083

Intersection Setup

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

Volumes

Name	Central Avenue					
Base Volume Input [veh/h]	22	173	75	30	50	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	173	75	30	50	27
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	47	20	8	14	7
Total Analysis Volume [veh/h]	24	188	81	33	54	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.08	0.03
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	0.00	11.00	8.85
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.27	0.09
95th-Percentile Queue Length [ft/ln]	1.23	1.23	0.00	0.00	6.73	2.32
d_A, Approach Delay [s/veh]	0.84		0.00		10.25	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.52					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 23: I-215 SB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.521

Intersection Setup

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			Yes			No			No	

Volumes

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	198	6	186	0	589	393	498	805	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	198	6	186	0	589	393	498	805	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9700	0.9700	0.9700	1.0000	0.9700	0.9700	0.9700	0.9700	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	51	2	48	0	152	101	128	207	0
Total Analysis Volume [veh/h]	0	0	0	204	6	192	0	607	405	513	830	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	13	0	0	61	0	26	87	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	C	L	C
C, Cycle Length [s]		100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		10	10	10	61	61	20	84
g / C, Green / Cycle		0.10	0.10	0.10	0.61	0.61	0.20	0.84
(v / s)_i Volume / Saturation Flow Rate		0.08	0.08	0.08	0.12	0.26	0.17	0.24
s, saturation flow rate [veh/h]		1714	1622	1530	4903	1530	2959	3427
c, Capacity [veh/h]		171	162	153	3008	939	582	2879
d1, Uniform Delay [s]		44.14	44.15	44.15	8.53	10.16	39.04	1.69
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		9.53	10.09	10.71	0.15	1.45	4.59	0.25
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.82	0.83	0.83	0.20	0.43	0.88	0.29
d, Delay for Lane Group [s/veh]		53.67	54.23	54.86	8.68	11.61	43.64	1.94
Lane Group LOS		D	D	D	A	B	D	A
Critical Lane Group		No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		3.86	3.69	3.51	1.85	4.69	6.41	0.96
50th-Percentile Queue Length [ft/ln]		96.55	92.13	87.68	46.30	117.37	160.15	23.89
95th-Percentile Queue Length [veh/ln]		6.95	6.63	6.31	3.33	8.25	10.56	1.72
95th-Percentile Queue Length [ft/ln]		173.79	165.84	157.82	83.35	206.20	263.92	43.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	53.86	54.23	54.66	0.00	8.68	11.61	43.64	1.94	0.00
Movement LOS				D	D	D		A	B	D	A	
d_A, Approach Delay [s/veh]	0.00			54.23			9.85			17.87		
Approach LOS	A			D			A			B		
d_I, Intersection Delay [s/veh]	20.23											
Intersection LOS	C											
Intersection V/C	0.521											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	41.41	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.077	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	200	1160	1680
d_b, Bicycle Delay [s]	50.00	40.50	8.82	1.28
l_b,int, Bicycle LOS Score for Intersection	4.132	2.223	1.977	2.668
Bicycle LOS	D	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 24: I-215 NB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.669

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	380	3	418	0	0	0	225	561	0	0	925	644
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	380	3	418	0	0	0	225	561	0	0	925	644
Peak Hour Factor	0.9960	0.9960	0.9960	0.9960	1.0000	0.9960	0.9960	0.9960	1.0000	1.0000	0.9960	0.9960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	1	105	0	0	0	56	141	0	0	232	162
Total Analysis Volume [veh/h]	382	3	420	0	0	0	226	563	0	0	929	647
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	12	82	0	0	70	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	35	35	35		9	59	47	47
g / C, Green / Cycle	0.35	0.35	0.35		0.09	0.59	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.16	0.17	0.17		0.08	0.16	0.14	0.42
s, saturation flow rate [veh/h]	1714	1600	1530		2959	3427	6538	1530
c, Capacity [veh/h]	603	563	538		266	2016	3062	716
d1, Uniform Delay [s]	25.08	25.22	25.31		44.83	10.14	16.48	24.49
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.53	2.86	3.08		7.38	0.07	0.06	8.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.47	0.48		0.85	0.28	0.30	0.90
d, Delay for Lane Group [s/veh]	27.61	28.08	28.40		52.21	10.22	16.53	32.54
Lane Group LOS	C	C	C		D	B	B	C
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.44	5.29	5.19		3.01	2.91	3.23	14.94
50th-Percentile Queue Length [ft/ln]	136.01	132.20	129.78		75.32	72.66	80.83	373.53
95th-Percentile Queue Length [veh/ln]	9.27	9.06	8.93		5.42	5.23	5.82	21.28
95th-Percentile Queue Length [ft/ln]	231.64	226.49	223.19		135.58	130.79	145.50	532.01

Movement, Approach, & Intersection Results

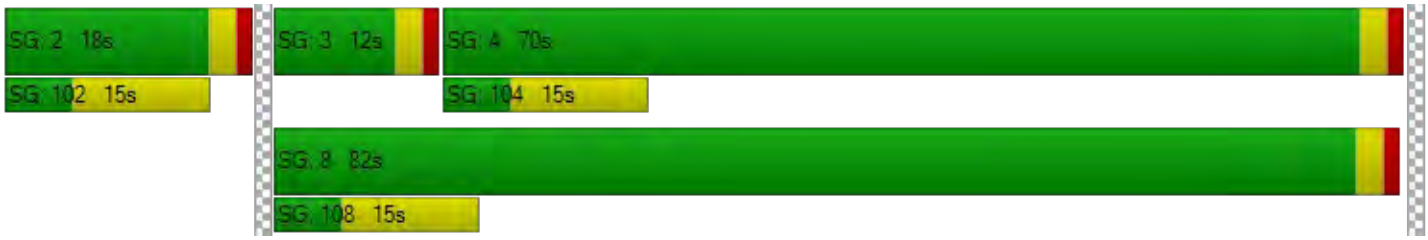
d_M, Delay for Movement [s/veh]	27.75	28.08	28.28	0.00	0.00	0.00	52.21	10.22	0.00	0.00	16.53	32.54
Movement LOS	C	C	C				D	B			B	C
d_A, Approach Delay [s/veh]	28.02			0.00			22.24			23.10		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	24.14											
Intersection LOS	C											
Intersection V/C	0.669											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.208	2.149	2.988	2.957
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	0	1580	1340
d_b, Bicycle Delay [s]	36.13	50.00	2.21	5.45
l_b,int, Bicycle LOS Score for Intersection	2.888	4.132	2.211	2.210
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 25: E St / 5th St

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.458

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	94	281	27	21	163	60	26	543	42	33	838	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	281	27	21	163	60	26	543	42	33	838	20
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	75	7	6	44	16	7	145	11	9	225	5
Total Analysis Volume [veh/h]	101	301	29	23	175	64	28	582	45	35	898	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	28.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	54	0	10	52	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	6	0	0	6	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	19	3	15	59	59	59	59	59	59
g / C, Green / Cycle	0.08	0.21	0.03	0.17	0.65	0.65	0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.01	0.14	0.05	0.18	0.18	0.04	0.26	0.26
s, saturation flow rate [veh/h]	1619	1773	1619	1719	618	1800	1755	811	1800	1786
c, Capacity [veh/h]	125	376	56	292	381	1175	1146	515	1175	1166
d1, Uniform Delay [s]	40.85	34.31	42.54	36.04	12.38	6.58	6.58	10.12	7.29	7.29
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.40	6.58	4.72	5.67	0.37	0.56	0.58	0.25	0.99	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.88	0.41	0.82	0.07	0.27	0.27	0.07	0.39	0.39
d, Delay for Lane Group [s/veh]	52.25	40.88	47.25	41.71	12.75	7.14	7.16	10.38	8.27	8.28
Lane Group LOS	D	D	D	D	B	A	A	B	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.57	7.51	0.57	5.43	0.33	2.40	2.35	0.35	3.90	3.87
50th-Percentile Queue Length [ft/ln]	64.27	187.76	14.24	135.71	8.25	60.06	58.87	8.86	97.44	96.72
95th-Percentile Queue Length [veh/ln]	4.63	12.01	1.03	9.25	0.59	4.32	4.24	0.64	7.02	6.96
95th-Percentile Queue Length [ft/ln]	115.69	300.13	25.63	231.23	14.85	108.11	105.96	15.94	175.39	174.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.25	40.88	40.88	47.25	41.71	41.71	12.75	7.15	7.16	10.38	8.28	8.28
Movement LOS	D	D	D	D	D	D	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	43.54			42.20			7.39			8.35		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	18.52											
Intersection LOS	B											
Intersection V/C	0.458											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.214	2.180	2.936	2.611
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1133	1089	511	511
d_b, Bicycle Delay [s]	8.45	9.34	24.94	24.94
l_b,int, Bicycle LOS Score for Intersection	2.271	1.992	2.100	2.347
Bicycle LOS	B	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 26: Arrowhead Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.310

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	95	305	64	27	142	51	46	490	30	39	588	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	95	305	64	27	142	51	46	490	30	39	588	20
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	86	18	8	40	14	13	138	8	11	165	6
Total Analysis Volume [veh/h]	107	343	72	30	160	57	52	551	34	44	661	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	4	0	1	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	20	0	0	20	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	60	0	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	62	62	62	62	62	62
g / C, Green / Cycle	0.20	0.20	0.20	0.20	0.20	0.20	0.69	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.09	0.12	0.12	0.03	0.06	0.06	0.07	0.16	0.16	0.05	0.19	0.19
s, saturation flow rate [veh/h]	1183	1800	1694	987	1800	1644	770	1800	1763	843	1800	1780
c, Capacity [veh/h]	222	361	340	145	361	330	540	1239	1214	593	1239	1225
d1, Uniform Delay [s]	38.33	32.60	32.66	40.47	30.64	30.74	7.85	5.23	5.23	7.27	5.41	5.41
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	1.53	1.67	0.70	0.48	0.56	0.36	0.45	0.46	0.24	0.56	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.59	0.60	0.21	0.31	0.32	0.10	0.24	0.24	0.07	0.28	0.28
d, Delay for Lane Group [s/veh]	39.95	34.13	34.33	41.17	31.11	31.30	8.20	5.69	5.70	7.51	5.96	5.97
Lane Group LOS	D	C	C	D	C	C	A	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.35	4.27	4.09	0.66	2.07	1.99	0.45	1.89	1.86	0.36	2.27	2.25
50th-Percentile Queue Length [ft/ln]	58.74	106.83	102.28	16.53	51.63	49.85	11.36	47.23	46.48	9.00	56.84	56.30
95th-Percentile Queue Length [veh/ln]	4.23	7.66	7.36	1.19	3.72	3.59	0.82	3.40	3.35	0.65	4.09	4.05
95th-Percentile Queue Length [ft/ln]	105.72	191.58	184.11	29.75	92.94	89.74	20.45	85.01	83.67	16.20	102.32	101.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.95	34.20	34.33	41.17	31.17	31.30	8.20	5.69	5.70	7.51	5.96	5.97
Movement LOS	D	C	C	D	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	35.40			32.41			5.90			6.06		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	16.24											
Intersection LOS	B											
Intersection V/C	0.310											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.510	2.503	2.737	2.611
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	556	1222	1222
d_b, Bicycle Delay [s]	23.47	23.47	6.81	6.81
l_b,int, Bicycle LOS Score for Intersection	1.990	1.763	2.085	2.159
Bicycle LOS	A	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 27: Waterman Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.425

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	143	678	97	52	574	132	137	395	132	62	212	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	678	97	52	574	132	137	395	132	62	212	33
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	174	25	13	147	34	35	101	34	16	54	8
Total Analysis Volume [veh/h]	147	696	100	53	589	136	141	406	136	64	218	34
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	5.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	33	0	15	31	0	9	33	0	9	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	4.00	2.00	4.00	4.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	10	46	46	4	40	40	25	17	17	25	16	16
g / C, Green / Cycle	0.11	0.51	0.51	0.04	0.44	0.44	0.28	0.19	0.19	0.28	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.09	0.20	0.07	0.03	0.14	0.15	0.11	0.16	0.16	0.06	0.06	0.02
s, saturation flow rate [veh/h]	1619	3427	1530	1619	3427	1635	1303	1800	1648	1055	3427	1530
c, Capacity [veh/h]	177	1753	783	68	1522	726	421	343	314	283	616	275
d1, Uniform Delay [s]	39.25	13.47	11.49	42.69	16.21	16.27	25.70	34.94	34.99	25.34	32.34	30.97
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.47	0.67	0.34	17.11	0.56	1.20	0.46	4.90	5.54	0.40	0.35	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.40	0.13	0.78	0.32	0.33	0.33	0.82	0.83	0.23	0.35	0.12
d, Delay for Lane Group [s/veh]	48.71	14.14	11.82	59.80	16.77	17.47	26.17	39.85	40.53	25.74	32.68	31.17
Lane Group LOS	D	B	B	E	B	B	C	D	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.60	4.23	1.07	1.48	3.24	3.30	2.39	6.27	5.84	1.04	2.08	0.63
50th-Percentile Queue Length [ft/ln]	90.00	105.63	26.70	36.97	81.10	82.39	59.79	156.74	146.07	26.00	52.06	15.71
95th-Percentile Queue Length [veh/ln]	6.48	7.60	1.92	2.66	5.84	5.93	4.31	10.38	9.81	1.87	3.75	1.13
95th-Percentile Queue Length [ft/ln]	162.00	189.91	48.07	66.54	145.99	148.31	107.63	259.40	245.18	46.80	93.70	28.28

Movement, Approach, & Intersection Results

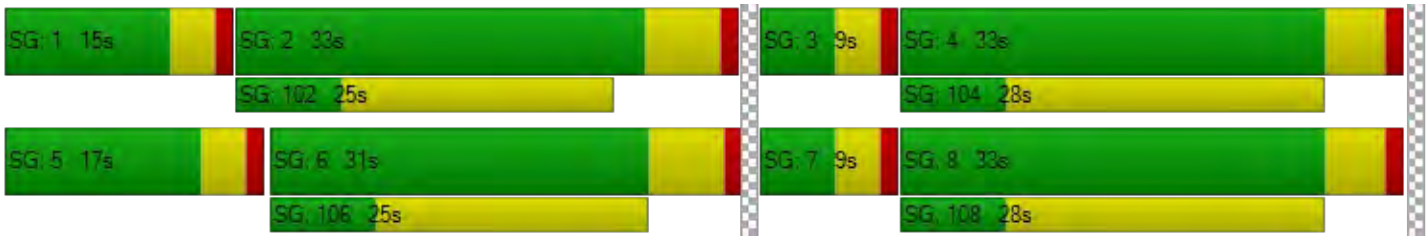
d_M, Delay for Movement [s/veh]	48.71	14.14	11.82	59.80	16.89	17.47	26.17	40.06	40.53	25.74	32.68	31.17
Movement LOS	D	B	B	E	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	19.29			19.91			37.29			31.11		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	25.36											
Intersection LOS	C											
Intersection V/C	0.425											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.854	2.761	2.530	2.595
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	556	622	622
d_b, Bicycle Delay [s]	22.05	23.47	21.36	21.36
l_b,int, Bicycle LOS Score for Intersection	2.338	1.988	2.123	1.820
Bicycle LOS	B	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 28: Tippecanoe Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.470

Intersection Setup

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	57	468	34	35	297	24	59	414	48	26	122	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	468	34	35	297	24	59	414	48	26	122	28
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	129	9	10	82	7	16	114	13	7	34	8
Total Analysis Volume [veh/h]	63	516	37	39	327	26	65	456	53	29	135	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	22	0	10	18	0	21	58	0	10	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	52	52	5	51	51	6	28	28	4	26	26
g / C, Green / Cycle	0.06	0.52	0.52	0.05	0.51	0.51	0.06	0.28	0.28	0.04	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.04	0.16	0.16	0.02	0.10	0.10	0.04	0.25	0.03	0.02	0.08	0.02
s, saturation flow rate [veh/h]	1619	1800	1758	1619	1800	1754	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	95	929	908	76	908	885	98	500	425	63	462	393
d1, Uniform Delay [s]	46.10	13.84	13.85	46.56	13.63	13.64	45.99	34.93	27.02	47.00	29.88	28.21
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.68	0.83	0.85	5.36	0.48	0.50	7.51	6.88	0.13	5.05	0.35	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.30	0.30	0.52	0.20	0.20	0.66	0.91	0.12	0.46	0.29	0.08
d, Delay for Lane Group [s/veh]	53.78	14.67	14.70	51.92	14.11	14.14	53.50	41.81	27.15	52.05	30.22	28.29
Lane Group LOS	D	B	B	D	B	B	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.73	3.70	3.63	1.06	2.27	2.23	1.78	11.45	0.96	0.79	2.64	0.57
50th-Percentile Queue Length [ft/ln]	43.21	92.41	90.72	26.39	56.65	55.85	44.45	286.27	23.97	19.80	65.89	14.28
95th-Percentile Queue Length [veh/ln]	3.11	6.65	6.53	1.90	4.08	4.02	3.20	17.00	1.73	1.43	4.74	1.03
95th-Percentile Queue Length [ft/ln]	77.78	166.33	163.29	47.50	101.98	100.54	80.01	425.00	43.15	35.65	118.61	25.70

Movement, Approach, & Intersection Results

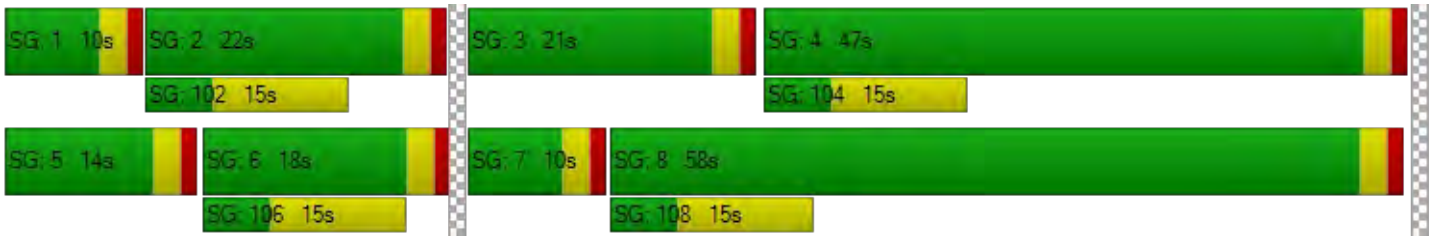
d_M, Delay for Movement [s/veh]	53.78	14.69	14.70	51.92	14.13	14.14	53.50	41.81	27.15	52.05	30.22	28.29
Movement LOS	D	B	B	D	B	B	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	18.69			17.89			41.78			33.16		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	27.56											
Intersection LOS	C											
Intersection V/C	0.470											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.506	2.502	2.462	2.448
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	300	1100	880
d_b, Bicycle Delay [s]	32.81	36.13	10.13	15.68
l_b,int, Bicycle LOS Score for Intersection	2.068	1.883	2.507	1.881
Bicycle LOS	B	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 29: Del Rosa Dr / 5th St

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.311

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	21	343	24	48	215	32	71	398	18	16	119	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	343	24	48	215	32	71	398	18	16	119	36
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	90	6	13	56	8	19	104	5	4	31	9
Total Analysis Volume [veh/h]	22	360	25	50	226	34	75	418	19	17	125	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	47	0	0	47	0	0	53	0	0	53	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	C	C	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	72	72	72	72	22	22	22	22
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.22	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.11	0.10	0.19	0.17	0.10	0.08
s, saturation flow rate [veh/h]	1722	1602	1431	1577	1221	1619	547	1556
c, Capacity [veh/h]	1276	1150	1075	1132	319	359	169	346
d1, Uniform Delay [s]	4.51	4.53	4.36	4.41	38.58	36.66	32.28	32.97
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.32	0.28	0.25	3.06	3.82	1.02	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.17	0.14	0.14	0.72	0.79	0.31	0.37
d, Delay for Lane Group [s/veh]	4.79	4.85	4.64	4.67	41.64	40.48	33.30	33.63
Lane Group LOS	A	A	A	A	D	D	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.29	1.20	0.92	0.94	5.67	6.79	1.05	2.67
50th-Percentile Queue Length [ft/ln]	32.29	30.12	23.02	23.44	141.74	169.63	26.28	66.80
95th-Percentile Queue Length [veh/ln]	2.32	2.17	1.66	1.69	9.57	11.06	1.89	4.81
95th-Percentile Queue Length [ft/ln]	58.12	54.21	41.43	42.19	239.36	276.43	47.30	120.23

Movement, Approach, & Intersection Results

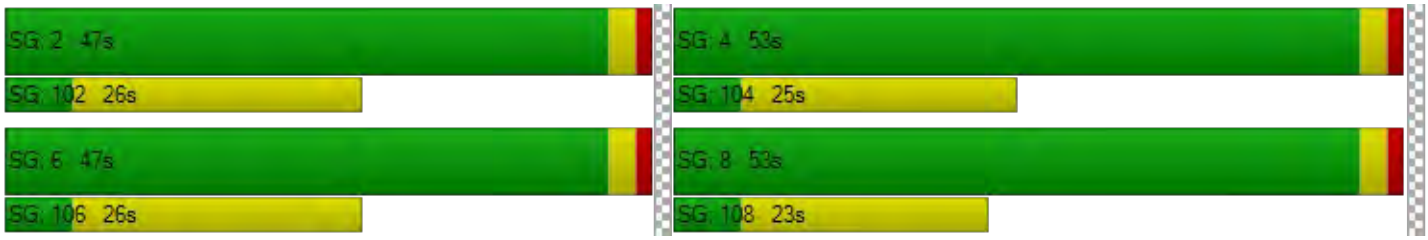
d_M, Delay for Movement [s/veh]	4.79	4.82	4.85	4.64	4.65	4.67	41.64	40.91	40.48	33.30	33.54	33.63
Movement LOS	A	A	A	A	A	A	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	4.82			4.65			41.00			33.54		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	21.60											
Intersection LOS	C											
Intersection V/C	0.311											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.325	2.435	2.338	2.509
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	880	880	1000	1000
d_b, Bicycle Delay [s]	15.68	15.68	12.50	12.50
l_b,int, Bicycle LOS Score for Intersection	1.895	1.815	1.982	1.708
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 30: Sterling Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.281

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	6	310	14	35	182	42	83	366	29	11	124	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	310	14	35	182	42	83	366	29	11	124	30
Peak Hour Factor	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	85	4	10	50	12	23	101	8	3	34	8
Total Analysis Volume [veh/h]	7	341	15	39	200	46	91	403	32	12	137	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	36	0	0	44	0	0	44	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	6	0	0	6	0	0	6	0	0	6	0
Pedestrian Clearance [s]	0	13	0	0	13	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	68	68	68	68	68	68	21	21	21	21	21	21
g / C, Green / Cycle	0.68	0.68	0.68	0.68	0.68	0.68	0.21	0.21	0.21	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.10	0.04	0.07	0.07	0.18	0.16	0.02	0.07	0.06	0.02
s, saturation flow rate [veh/h]	1152	1800	1774	1042	1800	1687	1242	1638	1530	778	1638	1530
c, Capacity [veh/h]	801	1217	1199	719	1217	1140	316	350	327	211	350	327
d1, Uniform Delay [s]	6.79	5.83	5.83	7.44	5.64	5.65	39.21	36.98	31.57	32.50	32.87	31.59
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.25	0.26	0.14	0.17	0.19	2.97	3.56	0.13	0.59	0.43	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.15	0.15	0.05	0.10	0.11	0.71	0.77	0.10	0.24	0.28	0.10
d, Delay for Lane Group [s/veh]	6.81	6.08	6.09	7.59	5.81	5.84	42.18	40.54	31.70	33.09	33.30	31.72
Lane Group LOS	A	A	A	A	A	A	D	D	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.06	1.30	1.29	0.34	0.88	0.86	5.55	6.44	0.63	1.03	2.01	0.65
50th-Percentile Queue Length [ft/ln]	1.40	32.55	32.31	8.46	22.01	21.44	138.87	161.08	15.77	25.82	50.30	16.28
95th-Percentile Queue Length [veh/ln]	0.10	2.34	2.33	0.61	1.58	1.54	9.42	10.61	1.14	1.86	3.62	1.17
95th-Percentile Queue Length [ft/ln]	2.52	58.59	58.16	15.22	39.61	38.59	235.50	265.15	28.39	46.48	90.54	29.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.81	6.09	6.09	7.59	5.82	5.84	42.18	41.08	31.70	33.09	33.24	31.72
Movement LOS	A	A	A	A	A	A	D	D	C	C	C	C
d_A, Approach Delay [s/veh]	6.10			6.07			40.70			32.96		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	23.12											
Intersection LOS	C											
Intersection V/C	0.281											

Other Modes

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	40.50	40.50	40.50	40.50
l_p,int, Pedestrian LOS Score for Intersection	2.574	2.581	2.455	2.486
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	590	610	770	770
d_b, Bicycle Delay [s]	24.85	24.15	18.91	18.91
l_b,int, Bicycle LOS Score for Intersection	1.859	1.795	1.994	1.710
Bicycle LOS	A	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 31: Victoria Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.423

Intersection Setup

Name										5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name										5th Street		
Base Volume Input [veh/h]	2	248	116	75	137	14	48	362	11	30	138	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	248	116	75	137	14	48	362	11	30	138	109
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	71	33	21	39	4	14	103	3	9	39	31
Total Analysis Volume [veh/h]	2	283	132	86	156	16	55	413	13	34	157	124
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	18.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.8	0.0	0.0	4.8	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	31	0	0	31	0	0	24	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.8	0.0	0.0	3.8	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		Yes			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.80	5.80	5.80	5.80	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.80	3.80	3.80	3.80	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	15	15	15	15	28	28	28	28
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.19	0.10	0.05	0.24	0.03	0.17
s, saturation flow rate [veh/h]	1779	1460	554	1609	1116	1790	977	1670
c, Capacity [veh/h]	547	395	270	435	550	923	445	861
d1, Uniform Delay [s]	16.75	16.86	21.57	16.22	11.27	8.48	13.11	7.77
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	0.93	0.88	0.50	0.36	1.66	0.33	1.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.49	0.38	0.36	0.10	0.46	0.08	0.33
d, Delay for Lane Group [s/veh]	17.24	17.79	22.45	16.71	11.63	10.14	13.44	8.78
Lane Group LOS	B	B	C	B	B	B	B	A
Critical Lane Group	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.21	1.93	1.23	1.49	0.44	2.94	0.30	1.76
50th-Percentile Queue Length [ft/ln]	55.30	48.23	30.77	37.17	10.97	73.51	7.60	44.03
95th-Percentile Queue Length [veh/ln]	3.98	3.47	2.22	2.68	0.79	5.29	0.55	3.17
95th-Percentile Queue Length [ft/ln]	99.54	86.82	55.39	66.91	19.75	132.31	13.68	79.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.24	17.36	17.79	22.45	17.32	16.71	11.63	10.14	10.14	13.44	8.78	8.78
Movement LOS	B	B	B	C	B	B	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	17.49			18.99			10.31			9.28		
Approach LOS	B			B			B			A		
d_I, Intersection Delay [s/veh]	13.65											
Intersection LOS	B											
Intersection V/C	0.423											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersection	2.306	2.494	2.132	2.460
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	916	916	655	655
d_b, Bicycle Delay [s]	8.07	8.07	12.45	12.45
l_b,int, Bicycle LOS Score for Intersection	1.904	1.772	2.353	2.079
Bicycle LOS	A	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 32: Central Avenue / 5th Street

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.429

Intersection Setup

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	2	88	110	50	31	14	21	616	5	6	299	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	88	110	50	31	14	21	616	5	6	299	73
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	26	32	15	9	4	6	181	1	2	88	21
Total Analysis Volume [veh/h]	2	103	129	59	36	16	25	722	6	7	351	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	32	0	10	26	0	10	38	0	10	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	15	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	0	16	5	21	3	56	56	1	54	54
g / C, Green / Cycle	0.00	0.17	0.06	0.23	0.04	0.62	0.62	0.01	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.00	0.15	0.03	0.03	0.02	0.20	0.20	0.00	0.10	0.06
s, saturation flow rate [veh/h]	1619	1548	1714	1707	1619	1800	1795	1619	3427	1530
c, Capacity [veh/h]	10	269	103	389	60	1115	1111	22	2043	912
d1, Uniform Delay [s]	44.52	36.15	41.16	27.67	42.40	8.18	8.18	43.98	8.18	7.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.13	8.06	4.89	0.15	4.64	0.78	0.79	8.16	0.18	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.86	0.57	0.13	0.42	0.33	0.33	0.32	0.17	0.09
d, Delay for Lane Group [s/veh]	54.65	44.21	46.05	27.82	47.04	8.96	8.96	52.14	8.37	7.99
Lane Group LOS	D	D	D	C	D	A	A	D	A	A
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	5.46	1.40	0.90	0.62	3.26	3.25	0.20	1.46	0.71
50th-Percentile Queue Length [ft/ln]	1.78	136.40	35.00	22.41	15.38	81.56	81.35	5.07	36.46	17.69
95th-Percentile Queue Length [veh/ln]	0.13	9.29	2.52	1.61	1.11	5.87	5.86	0.36	2.63	1.27
95th-Percentile Queue Length [ft/ln]	3.21	232.16	62.99	40.34	27.68	146.80	146.43	9.12	65.63	31.84

Movement, Approach, & Intersection Results

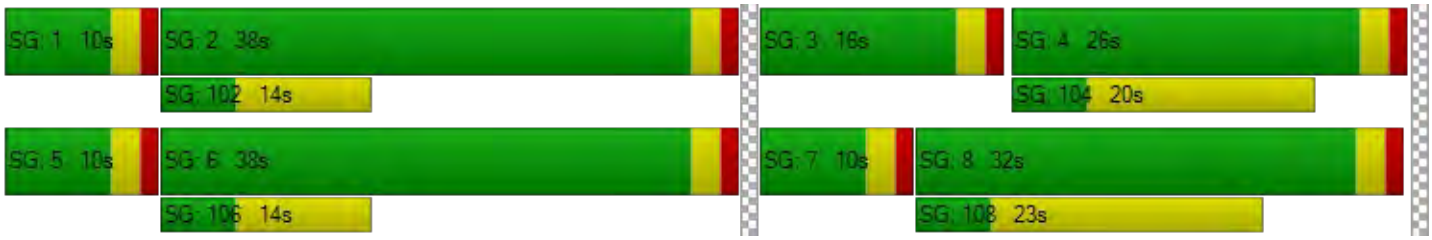
d_M, Delay for Movement [s/veh]	54.65	44.21	44.21	46.05	27.82	27.82	47.04	8.96	8.96	52.14	8.37	7.99
Movement LOS	D	D	D	D	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	44.30			37.51			10.23			8.98		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	17.00											
Intersection LOS	B											
Intersection V/C	0.429											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.034	2.047	2.520	2.674
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	644	511	778	778
d_b, Bicycle Delay [s]	20.67	24.94	16.81	16.81
l_b,int, Bicycle LOS Score for Intersection	1.946	1.743	2.181	1.926
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 33: Palm Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	46.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.876

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	88	569	534	174	246	30	70	700	60	190	250	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	569	534	174	246	30	70	700	60	190	250	132
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	154	144	47	66	8	19	189	16	51	68	36
Total Analysis Volume [veh/h]	95	615	577	188	266	32	76	757	65	205	270	143
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	15	39	0	15	34	0	15	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	0	0	27	0	0	26	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	38	38	12	43	43	6	26	26	12	32	32
g / C, Green / Cycle	0.07	0.38	0.38	0.12	0.43	0.43	0.06	0.26	0.26	0.12	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.40	0.12	0.08	0.02	0.05	0.23	0.04	0.13	0.08	0.10
s, saturation flow rate [veh/h]	1619	3237	1445	1619	3427	1530	1619	3237	1445	1619	3237	1445
c, Capacity [veh/h]	118	1229	549	194	1463	653	103	842	376	194	1026	458
d1, Uniform Delay [s]	45.66	23.74	31.01	43.81	17.80	16.77	46.03	35.72	28.65	44.00	25.46	25.90
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.02	1.46	52.61	23.13	0.27	0.14	9.99	3.79	0.22	45.64	0.14	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.50	1.05	0.97	0.18	0.05	0.74	0.90	0.17	1.06	0.26	0.31
d, Delay for Lane Group [s/veh]	57.68	25.20	83.62	66.93	18.07	16.91	56.02	39.51	28.87	89.64	25.59	26.28
Lane Group LOS	E	C	F	E	B	B	E	D	C	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.70	5.69	20.71	5.83	1.93	0.45	2.13	9.17	1.23	7.22	2.39	2.60
50th-Percentile Queue Length [ft/ln]	67.56	142.29	517.69	145.85	48.33	11.28	53.29	229.34	30.63	180.58	59.66	65.00
95th-Percentile Queue Length [veh/ln]	4.86	9.60	29.16	9.80	3.48	0.81	3.84	14.14	2.21	11.88	4.30	4.68
95th-Percentile Queue Length [ft/ln]	121.61	240.11	729.09	244.88	86.99	20.31	95.91	353.52	55.14	297.10	107.39	116.99

Movement, Approach, & Intersection Results

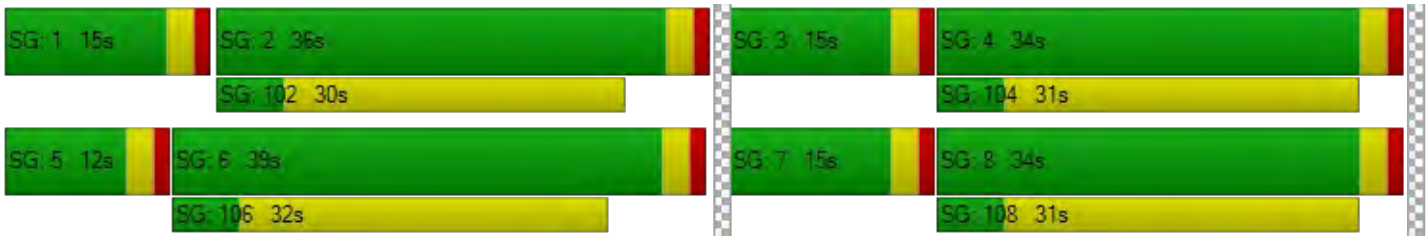
d_M, Delay for Movement [s/veh]	57.68	25.20	83.62	66.93	18.07	16.91	56.02	39.51	28.87	89.64	25.59	26.28
Movement LOS	E	C	F	E	B	B	E	D	C	F	C	C
d_A, Approach Delay [s/veh]	53.79			36.90			40.13			47.00		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	46.29											
Intersection LOS	D											
Intersection V/C	0.876											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.854	2.674	2.890	2.807
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	720	620	620
d_b, Bicycle Delay [s]	22.45	20.48	23.81	23.81
l_b,int, Bicycle LOS Score for Intersection	2.621	1.961	2.300	2.069
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 34: Church Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

Intersection Setup

Name	Church Ave		5th Street		5th Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Church Ave		5th Street		5th Street	
Base Volume Input [veh/h]	79	30	58	1317	511	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	30	58	1317	511	77
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	8	16	361	140	21
Total Analysis Volume [veh/h]	87	33	64	1442	560	84
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	18	0	25	72	47	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	7	6	77	69	69
g / C, Green / Cycle	0.07	0.07	0.06	0.86	0.76	0.76
(v / s)_i Volume / Saturation Flow Rate	0.05	0.02	0.04	0.42	0.18	0.19
s, saturation flow rate [veh/h]	1714	1530	1714	3427	1800	1721
c, Capacity [veh/h]	128	114	109	2943	1371	1311
d1, Uniform Delay [s]	40.59	39.38	41.00	1.55	3.11	3.14
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.19	1.38	4.96	0.59	0.40	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.29	0.59	0.49	0.23	0.25
d, Delay for Lane Group [s/veh]	46.79	40.76	45.96	2.14	3.51	3.59
Lane Group LOS	D	D	D	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.08	0.73	1.52	1.04	1.35	1.37
50th-Percentile Queue Length [ft/ln]	51.92	18.18	37.90	25.88	33.66	34.19
95th-Percentile Queue Length [veh/ln]	3.74	1.31	2.73	1.86	2.42	2.46
95th-Percentile Queue Length [ft/ln]	93.46	32.72	68.22	46.58	60.58	61.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.79	40.76	45.96	2.14	3.54	3.59
Movement LOS	D	D	D	A	A	A
d_A, Approach Delay [s/veh]	45.13		4.00		3.55	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	6.05					
Intersection LOS	A					
Intersection V/C	0.472					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.029	2.711	2.662
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	5.375	4.664
Bicycle LOS	D	F	E

Sequence

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

Intersection Level Of Service Report
Intersection 35: SR-210 EB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.657

Intersection Setup

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	310	6	118	0	933	489	279	482	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	310	6	118	0	933	489	279	482	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9110	0.9110	0.9110	1.0000	0.9110	0.9110	0.9110	0.9110	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	85	2	32	0	256	134	77	132	0
Total Analysis Volume [veh/h]	0	0	0	340	7	130	0	1024	537	306	529	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	10	0	0	60	0	30	90	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	12	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		38	38	40	40	13	56
g / C, Green / Cycle		0.38	0.38	0.40	0.40	0.13	0.56
(v / s)_i Volume / Saturation Flow Rate		0.20	0.08	0.30	0.35	0.10	0.15
s, saturation flow rate [veh/h]		1716	1530	3427	1530	2959	3427
c, Capacity [veh/h]		653	582	1373	613	382	1918
d1, Uniform Delay [s]		24.07	20.99	25.62	27.68	42.29	11.46
k, delay calibration		0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.09	0.89	0.83	4.18	3.91	0.08
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.53	0.22	0.75	0.88	0.80	0.28
d, Delay for Lane Group [s/veh]		27.16	21.87	26.45	31.86	46.20	11.54
Lane Group LOS		C	C	C	C	D	B
Critical Lane Group		Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		6.79	2.18	10.21	12.10	3.85	2.95
50th-Percentile Queue Length [ft/ln]		169.64	54.43	255.24	302.56	96.16	73.72
95th-Percentile Queue Length [veh/ln]		11.06	3.92	15.45	17.81	6.92	5.31
95th-Percentile Queue Length [ft/ln]		276.44	97.97	386.25	445.19	173.08	132.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	27.16	27.16	21.87	0.00	26.45	31.86	46.20	11.54	0.00
Movement LOS				C	C	C		C	C	D	B	
d_A, Approach Delay [s/veh]	0.00			25.72			28.31			24.24		
Approach LOS	A			C			C			C		
d_I, Intersection Delay [s/veh]	26.70											
Intersection LOS	C											
Intersection V/C	0.657											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.739	2.907
Crosswalk LOS	F	F	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	140	1140	1740
d_b, Bicycle Delay [s]	50.00	43.25	9.25	0.85
l_b,int, Bicycle LOS Score for Intersection	4.132	2.347	2.847	2.248
Bicycle LOS	D	B	C	B

Sequence

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

Intersection Level Of Service Report
Intersection 36: SR-210 WB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	207	0	435	0	0	0	182	1041	0	0	575	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	207	0	435	0	0	0	182	1041	0	0	575	267
Peak Hour Factor	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000	0.9530	0.9530	1.0000	1.0000	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	0	114	0	0	0	48	273	0	0	151	70
Total Analysis Volume [veh/h]	217	0	456	0	0	0	191	1092	0	0	603	280
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	0	0	39	71	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	24	0	0	15	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	55	55	55		14	39	22	22
g / C, Green / Cycle	0.55	0.55	0.55		0.14	0.39	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.17		0.12	0.32	0.12	0.18
s, saturation flow rate [veh/h]	1714	1714	2708		1619	3427	4903	1530
c, Capacity [veh/h]	941	941	1487		227	1340	1083	338
d1, Uniform Delay [s]	10.85	10.85	12.22		41.92	27.22	34.61	37.15
k, delay calibration	0.50	0.50	0.50		0.11	0.12	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	0.25	0.53		8.22	1.39	0.45	5.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.12	0.31		0.84	0.82	0.56	0.83
d, Delay for Lane Group [s/veh]	11.10	11.10	12.76		50.14	28.61	35.06	42.36
Lane Group LOS	B	B	B		D	C	D	D
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.18	1.18	2.75		5.07	11.53	4.34	6.92
50th-Percentile Queue Length [ft/ln]	29.47	29.47	68.66		126.78	288.14	108.62	172.97
95th-Percentile Queue Length [veh/ln]	2.12	2.12	4.94		8.76	17.09	7.76	11.23
95th-Percentile Queue Length [ft/ln]	53.05	53.05	123.59		219.10	427.33	194.08	280.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.10	11.10	12.76	0.00	0.00	0.00	50.14	28.61	0.00	0.00	35.06	42.36
Movement LOS	B	B	B				D	C			D	D
d_A, Approach Delay [s/veh]	12.22			0.00			31.81			37.37		
Approach LOS	B			A			C			D		
d_I, Intersection Delay [s/veh]	28.90											
Intersection LOS	C											
Intersection V/C	0.487											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.893	2.855
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	0	1360	580
d_b, Bicycle Delay [s]	27.38	50.00	5.12	25.21
l_b,int, Bicycle LOS Score for Intersection	2.670	4.132	2.618	2.045
Bicycle LOS	B	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 37: Tippecanoe Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	29.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

Intersection Setup

Name				Tippecanoe Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Tippecanoe Avenue								
Base Volume Input [veh/h]	60	499	488	42	299	25	42	616	59	215	198	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	499	488	42	299	25	42	616	59	215	198	50
Peak Hour Factor	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	131	129	11	79	7	11	162	16	57	52	13
Total Analysis Volume [veh/h]	63	526	514	44	315	26	44	649	62	227	209	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	25	25	10	18	0	34	46	0	19	31	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	51	51	5	50	50	5	23	23	9	27	27
g / C, Green / Cycle	0.06	0.51	0.51	0.05	0.50	0.50	0.05	0.23	0.23	0.09	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.15	0.34	0.03	0.10	0.10	0.03	0.20	0.20	0.07	0.06	0.03
s, saturation flow rate [veh/h]	1619	3427	1530	1619	1800	1752	1619	1800	1745	3144	3427	1530
c, Capacity [veh/h]	94	1736	775	80	896	872	82	414	402	295	938	419
d1, Uniform Delay [s]	46.15	14.39	18.34	46.44	13.95	13.96	46.35	37.06	37.07	44.24	28.09	27.32
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.93	0.45	4.45	5.76	0.48	0.50	5.44	5.74	5.97	4.20	0.12	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.30	0.66	0.55	0.19	0.19	0.54	0.87	0.87	0.77	0.22	0.13
d, Delay for Lane Group [s/veh]	54.08	14.84	22.79	52.20	14.42	14.46	51.78	42.80	43.04	48.45	28.20	27.45
Lane Group LOS	D	B	C	D	B	B	D	D	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.73	3.47	9.33	1.19	2.22	2.19	1.19	9.01	8.77	2.90	1.94	0.96
50th-Percentile Queue Length [ft/ln]	43.34	86.77	233.35	29.80	55.53	54.73	29.66	225.16	219.35	72.47	48.46	24.11
95th-Percentile Queue Length [veh/ln]	3.12	6.25	14.34	2.15	4.00	3.94	2.14	13.93	13.63	5.22	3.49	1.74
95th-Percentile Queue Length [ft/ln]	78.01	156.19	358.61	53.64	99.96	98.52	53.39	348.21	340.80	130.45	87.23	43.39

Movement, Approach, & Intersection Results

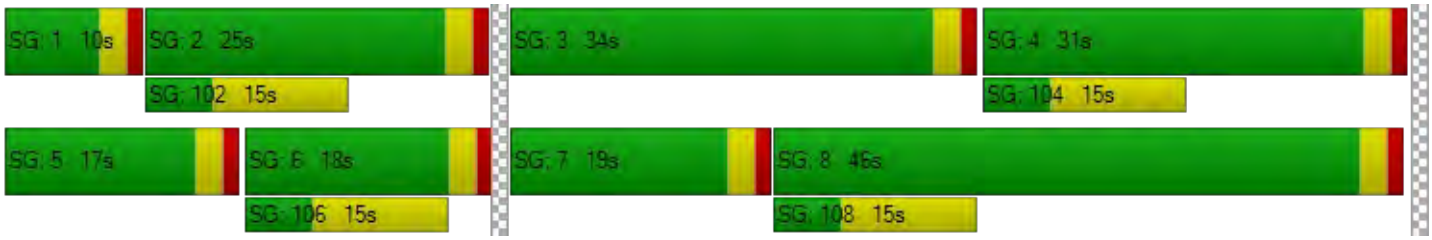
d_M, Delay for Movement [s/veh]	54.08	14.84	22.79	52.20	14.44	14.46	51.78	42.90	43.04	48.45	28.20	27.45
Movement LOS	D	B	C	D	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	20.79			18.76			43.43			37.52		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	29.75											
Intersection LOS	C											
Intersection V/C	0.636											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.737	2.503	2.512	2.939
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	440	300	860	560
d_b, Bicycle Delay [s]	30.42	36.13	16.25	25.92
l_b,int, Bicycle LOS Score for Intersection	2.470	1.877	2.182	1.963
Bicycle LOS	B	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 38: Del Rosa Dr / 3rd St

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.612

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	207	337	44	131	69	116	975	6	61	351	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	207	337	44	131	69	116	975	6	61	351	26
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	59	97	13	38	20	33	280	2	18	101	7
Total Analysis Volume [veh/h]	14	238	387	51	151	79	133	1121	7	70	403	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	18	10	18	0	54	62	0	10	18	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	39	49	5	42	42	10	37	37	7	34	34
g / C, Green / Cycle	0.02	0.39	0.49	0.05	0.42	0.42	0.10	0.37	0.37	0.07	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.01	0.07	0.25	0.03	0.07	0.07	0.08	0.33	0.00	0.02	0.12	0.12
s, saturation flow rate [veh/h]	1619	3427	1530	1619	1800	1600	1619	3427	1530	2959	1800	1757
c, Capacity [veh/h]	37	1335	749	86	755	672	166	1259	562	207	603	588
d1, Uniform Delay [s]	48.15	20.03	17.45	46.28	18.02	18.10	43.87	29.74	20.10	44.29	25.18	25.20
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.21	0.29	2.54	6.35	0.44	0.53	8.60	2.39	0.01	0.96	0.37	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.18	0.52	0.59	0.16	0.17	0.80	0.89	0.01	0.34	0.36	0.36
d, Delay for Lane Group [s/veh]	54.36	20.32	19.99	52.64	18.47	18.63	52.47	32.13	20.11	45.25	25.55	25.58
Lane Group LOS	D	C	B	D	B	B	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.41	1.85	6.38	1.39	1.77	1.69	3.59	12.65	0.10	0.85	3.93	3.86
50th-Percentile Queue Length [ft/ln]	10.17	46.35	159.50	34.63	44.26	42.15	89.87	316.32	2.62	21.25	98.33	96.62
95th-Percentile Queue Length [veh/ln]	0.73	3.34	10.52	2.49	3.19	3.03	6.47	18.49	0.19	1.53	7.08	6.96
95th-Percentile Queue Length [ft/ln]	18.30	83.43	263.06	62.33	79.66	75.87	161.76	462.16	4.71	38.26	177.00	173.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.36	20.32	19.99	52.64	18.50	18.63	52.47	32.13	20.11	45.25	25.56	25.58
Movement LOS	D	C	B	D	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	20.87			24.74			34.21			28.30		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.93											
Intersection LOS	C											
Intersection V/C	0.612											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.600	2.439	2.745	2.888
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1180	300
d_b, Bicycle Delay [s]	36.13	36.13	8.41	36.13
l_b,int, Bicycle LOS Score for Intersection	2.087	1.791	2.600	1.975
Bicycle LOS	B	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 39: Sterling Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	59	118	268	1128	262	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	118	268	1128	262	40
Peak Hour Factor	0.8840	0.8840	0.8840	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	33	76	319	74	11
Total Analysis Volume [veh/h]	67	133	303	1276	296	45
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	18	0	46	82	36	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	7	21	87	63	63
g / C, Green / Cycle	0.07	0.07	0.21	0.87	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.04	0.05	0.19	0.37	0.09	0.10
s, saturation flow rate [veh/h]	1714	2708	1619	3427	1800	1720
c, Capacity [veh/h]	123	194	340	2976	1131	1081
d1, Uniform Delay [s]	44.86	45.33	38.40	1.38	7.62	7.66
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.75	4.27	8.07	0.45	0.28	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.69	0.89	0.43	0.15	0.16
d, Delay for Lane Group [s/veh]	48.61	49.60	46.46	1.83	7.90	7.97
Lane Group LOS	D	D	D	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.73	1.72	7.87	0.95	1.48	1.50
50th-Percentile Queue Length [ft/ln]	43.15	42.95	196.79	23.86	37.09	37.39
95th-Percentile Queue Length [veh/ln]	3.11	3.09	12.47	1.72	2.67	2.69
95th-Percentile Queue Length [ft/ln]	77.67	77.31	311.82	42.94	66.77	67.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.61	49.60	46.46	1.83	7.93	7.97
Movement LOS	D	D	D	A	A	A
d_A, Approach Delay [s/veh]	49.27		10.40		7.94	
Approach LOS	D		B		A	
d_I, Intersection Delay [s/veh]	13.67					
Intersection LOS	B					
Intersection V/C	0.421					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.413	2.698	2.548
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	5.435	4.414
Bicycle LOS	D	F	E

Sequence

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

Intersection Level Of Service Report
Intersection 40: Victoria Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.372

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	18	32	41	48	20	105	318	830	7	32	167	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	32	41	48	20	105	318	830	7	32	167	38
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	9	11	13	6	29	88	230	2	9	46	11
Total Analysis Volume [veh/h]	20	35	45	53	22	116	352	919	8	35	185	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	32	0	10	32	0	25	48	0	10	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	24	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	7	7	5	10	10	24	71	71	4	51	51
g / C, Green / Cycle	0.03	0.07	0.07	0.05	0.10	0.10	0.24	0.71	0.71	0.04	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.03	0.03	0.01	0.08	0.22	0.26	0.26	0.02	0.06	0.07
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1530	1619	1800	1795	1619	1800	1688
c, Capacity [veh/h]	49	130	110	88	173	147	388	1278	1274	71	926	868
d1, Uniform Delay [s]	47.62	43.89	44.35	46.25	41.36	44.20	36.96	5.67	5.67	46.73	12.60	12.63
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.42	1.10	2.40	6.57	0.33	9.03	8.25	0.80	0.80	5.25	0.28	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.27	0.41	0.61	0.13	0.79	0.91	0.36	0.36	0.49	0.12	0.13
d, Delay for Lane Group [s/veh]	53.04	44.99	46.74	52.83	41.68	53.23	45.21	6.47	6.47	51.98	12.88	12.94
Lane Group LOS	D	D	D	D	D	D	D	A	A	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.56	0.86	1.14	1.44	0.51	3.16	9.09	3.51	3.50	0.95	1.37	1.34
50th-Percentile Queue Length [ft/ln]	14.02	21.43	28.39	36.04	12.77	78.99	227.34	87.64	87.43	23.76	34.37	33.54
95th-Percentile Queue Length [veh/ln]	1.01	1.54	2.04	2.60	0.92	5.69	14.04	6.31	6.29	1.71	2.47	2.41
95th-Percentile Queue Length [ft/ln]	25.23	38.58	51.10	64.88	22.99	142.19	350.97	157.75	157.37	42.77	61.87	60.37

Movement, Approach, & Intersection Results

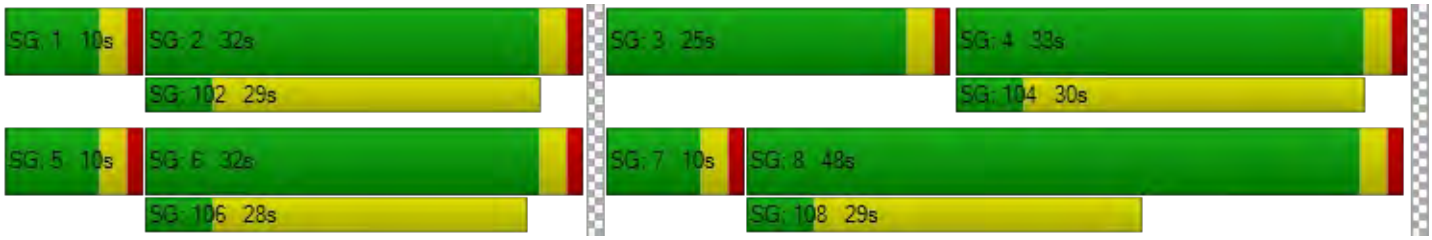
d_M, Delay for Movement [s/veh]	53.04	44.99	46.74	52.83	41.68	53.23	45.21	6.47	6.47	51.98	12.90	12.94
Movement LOS	D	D	D	D	D	D	D	A	A	D	B	B
d_A, Approach Delay [s/veh]	47.39			51.79			17.13			18.13		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	22.54											
Intersection LOS	C											
Intersection V/C	0.372											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.339	2.427	2.618	2.556
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	580	900	600
d_b, Bicycle Delay [s]	25.21	25.21	15.13	24.50
l_b,int, Bicycle LOS Score for Intersection	1.642	1.717	2.615	1.776
Bicycle LOS	A	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 41: Central Ave / 3rd St

Control Type:	Two-way stop	Delay (sec / veh):	40.5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

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

Volumes

Name				Central Avenue								
Base Volume Input [veh/h]	1	3	0	21	0	24	177	728	0	0	212	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	3	0	21	0	24	177	728	0	0	212	20
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	1.0000	0.9160	0.9160	0.9160	1.0000	1.0000	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	6	0	7	48	199	0	0	58	5
Total Analysis Volume [veh/h]	1	3	0	23	0	26	193	795	0	0	231	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.03	0.00	0.14	0.00	0.03	0.15	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	40.53	37.36	12.10	29.03	0.00	11.40	8.18	0.00	0.00	0.00	0.00	0.00
Movement LOS	E	E	B	D		B	A	A			A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.11	0.59	0.00	0.59	0.51	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.74	2.74	2.74	14.71	0.00	14.71	12.75	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	38.15			19.68			1.60			0.00		
Approach LOS	E			C			A			A		
d_I, Intersection Delay [s/veh]	2.08											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 42: Palm Ave_Alabama St / 3rd St

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	192	769	6	12	391	84	419	32	0	9	3	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	192	769	6	12	391	84	419	32	0	9	3	23
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	1.0000	0.9360	1.0000	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	205	2	3	104	22	112	9	0	2	1	6
Total Analysis Volume [veh/h]	205	822	6	13	418	90	448	34	0	10	3	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	39	0	10	31	0	19	39	0	12	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	14	66	66	2	54	54	16	18	2	4
g / C, Green / Cycle	0.14	0.66	0.66	0.02	0.54	0.54	0.16	0.18	0.02	0.04
(v / s)_i Volume / Saturation Flow Rate	0.13	0.23	0.23	0.01	0.12	0.06	0.15	0.02	0.01	0.02
s, saturation flow rate [veh/h]	1619	1800	1795	1619	3427	1530	2959	1800	1619	1555
c, Capacity [veh/h]	233	1188	1185	35	1841	822	473	327	28	60
d1, Uniform Delay [s]	41.96	7.52	7.52	48.27	12.19	11.38	41.57	34.14	48.59	47.04
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.26	0.81	0.81	6.58	0.29	0.27	10.17	0.14	7.55	5.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.35	0.35	0.38	0.23	0.11	0.95	0.10	0.36	0.46
d, Delay for Lane Group [s/veh]	52.22	8.33	8.33	54.85	12.48	11.65	51.74	34.27	56.14	52.49
Lane Group LOS	D	A	A	D	B	B	D	C	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.57	3.80	3.79	0.38	2.44	1.01	6.07	0.70	0.30	0.77
50th-Percentile Queue Length [ft/ln]	139.22	94.88	94.65	9.55	61.08	25.34	151.67	17.52	7.61	19.27
95th-Percentile Queue Length [veh/ln]	9.44	6.83	6.82	0.69	4.40	1.82	10.11	1.26	0.55	1.39
95th-Percentile Queue Length [ft/ln]	235.98	170.78	170.38	17.18	109.95	45.61	252.65	31.53	13.70	34.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.22	8.33	8.33	54.85	12.48	11.65	51.74	34.27	0.00	56.14	52.49	52.49
Movement LOS	D	A	A	D	B	B	D	C		E	D	D
d_A, Approach Delay [s/veh]	17.04			13.39			50.51			53.45		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	24.57											
Intersection LOS	C											
Intersection V/C	0.418											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.591	2.853	2.459	1.976
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	720	560	720	580
d_b, Bicycle Delay [s]	20.48	25.92	20.48	25.21
l_b,int, Bicycle LOS Score for Intersection	2.412	1.989	2.355	1.622
Bicycle LOS	B	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 43: Tippecanoe Ave / Rialto Ave

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.371

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	98	975	0	0	647	59	111	0	53	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	98	975	0	0	647	59	111	0	53	0	0	0
Peak Hour Factor	0.9400	0.9400	1.0000	0.9400	0.9400	0.9400	0.9400	1.0000	0.9400	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	259	0	0	172	16	30	0	14	0	0	0
Total Analysis Volume [veh/h]	104	1037	0	0	688	63	118	0	56	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	0	8	0	0	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	0	7	0	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	30	0	0	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Split [s]	20	70	0	10	60	0	20	0	20	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No		No		No			
Maximum Recall	No	No		No	No		No		No			
Pedestrian Recall	No	No		No	No		No		No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	8	82	0	74	74	9	9	
g / C, Green / Cycle	0.08	0.82	0.00	0.74	0.74	0.09	0.09	
(v / s)_i Volume / Saturation Flow Rate	0.06	0.30	0.00	0.21	0.21	0.07	0.04	
s, saturation flow rate [veh/h]	1619	3427	1619	1800	1748	1714	1530	
c, Capacity [veh/h]	130	2822	1	1339	1300	147	131	
d1, Uniform Delay [s]	45.22	2.23	0.00	4.16	4.16	44.86	43.36	
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	10.86	0.37	0.00	0.53	0.55	9.60	2.18	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.80	0.37	0.00	0.28	0.28	0.80	0.43	
d, Delay for Lane Group [s/veh]	56.08	2.60	0.00	4.69	4.71	54.46	45.54	
Lane Group LOS	E	A	A	A	A	D	D	
Critical Lane Group	No	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	2.91	1.64	0.00	2.23	2.18	3.25	1.39	
50th-Percentile Queue Length [ft/ln]	72.78	40.88	0.00	55.83	54.46	81.14	34.70	
95th-Percentile Queue Length [veh/ln]	5.24	2.94	0.00	4.02	3.92	5.84	2.50	
95th-Percentile Queue Length [ft/ln]	131.01	73.59	0.00	100.50	98.02	146.05	62.46	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.08	2.60	0.00	0.00	4.70	4.71	54.46	0.00	45.54	0.00	0.00	0.00
Movement LOS	E	A		A	A	A	D		D			
d_A, Approach Delay [s/veh]	7.48			4.70			51.59			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	10.18											
Intersection LOS	B											
Intersection V/C	0.371											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.766	0.000	2.058	1.430
Crosswalk LOS	C	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1340	1140	0	0
d_b, Bicycle Delay [s]	5.45	9.25	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	2.501	2.179	4.132	4.132
Bicycle LOS	B	B	D	D

Sequence

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

Intersection Level Of Service Report
Intersection 44: Tippecanoe Ave / Mill St

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	109	1005	0	2	776	121	244	8	224	25	27	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	1005	0	2	776	121	244	8	224	25	27	3
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	282	0	1	217	34	68	2	63	7	8	1
Total Analysis Volume [veh/h]	122	1127	0	2	870	136	274	9	251	28	30	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	7	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	31	56	0	10	35	35	10	24	0	10	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	Yes	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	9	67	67	0	58	58	24	24	15	24	14	14
g / C, Green / Cycle	0.09	0.67	0.67	0.00	0.58	0.58	0.24	0.24	0.15	0.24	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.08	0.22	0.22	0.00	0.25	0.09	0.10	0.15	0.12	0.02	0.01	0.00
s, saturation flow rate [veh/h]	1619	3427	1800	1619	3427	1530	1475	1301	1530	1137	3427	1530
c, Capacity [veh/h]	152	2292	1204	7	1986	886	448	406	234	202	469	210
d1, Uniform Delay [s]	44.42	7.00	7.00	49.63	11.86	9.71	32.04	34.24	40.86	36.11	37.57	37.31
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.51	0.37	0.71	21.12	0.71	0.37	1.96	4.24	6.06	0.31	0.06	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.32	0.32	0.29	0.44	0.15	0.33	0.49	0.80	0.14	0.06	0.01
d, Delay for Lane Group [s/veh]	53.93	7.37	7.70	70.76	12.56	10.08	34.00	38.48	46.92	36.43	37.63	37.34
Lane Group LOS	D	A	A	E	B	B	C	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.34	3.08	3.35	0.09	5.31	1.40	3.23	4.73	4.76	0.61	0.32	0.07
50th-Percentile Queue Length [ft/ln]	83.59	77.11	83.81	2.26	132.74	35.01	80.64	118.27	119.01	15.18	8.08	1.63
95th-Percentile Queue Length [veh/ln]	6.02	5.55	6.03	0.16	9.09	2.52	5.81	8.30	8.34	1.09	0.58	0.12
95th-Percentile Queue Length [ft/ln]	150.46	138.80	150.86	4.07	227.21	63.01	145.15	207.44	208.46	27.33	14.54	2.93

Movement, Approach, & Intersection Results

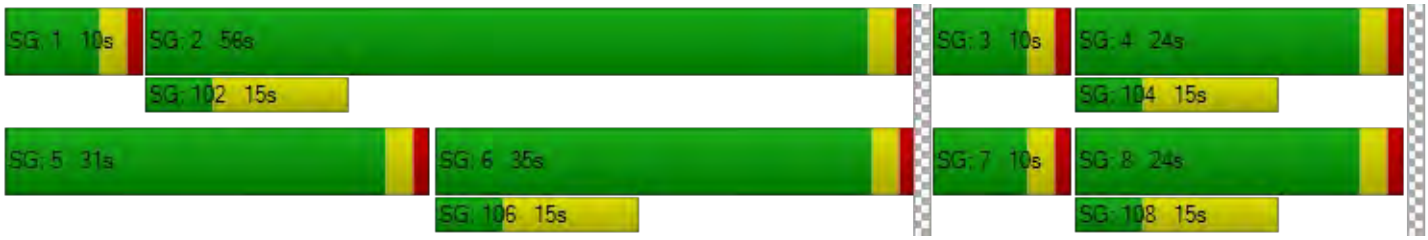
d_M, Delay for Movement [s/veh]	53.93	7.48	7.70	70.76	12.56	10.08	35.89	38.48	44.33	36.43	37.63	37.34
Movement LOS	D	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.02			12.34			40.17			37.06		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	17.94											
Intersection LOS	B											
Intersection V/C	0.471											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.974	3.255	2.467	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1060	640	620	420
d_b, Bicycle Delay [s]	11.05	23.12	23.81	31.21
l_b,int, Bicycle LOS Score for Intersection	2.247	2.391	2.441	1.610
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 45: Tippecanoe Ave / Central Ave

Control Type:	Signalized	Delay (sec / veh):	26.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	1	2	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	869	69	237	752	143	122	192	55	59	174	258
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	869	69	237	752	143	122	192	55	59	174	258
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	229	18	62	198	38	32	51	14	16	46	68
Total Analysis Volume [veh/h]	64	915	73	249	792	151	128	202	58	62	183	272
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	5	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2			6			8			4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	10	23	23	12	25	25	12	44	44	21	53	53
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	10	10	0	10	10	0	10	10	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	50	50	9	53	53	9	24	24	6	20	20
g / C, Green / Cycle	0.06	0.50	0.50	0.09	0.53	0.53	0.09	0.24	0.24	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.05	0.08	0.16	0.10	0.08	0.06	0.04	0.04	0.05	0.18
s, saturation flow rate [veh/h]	2959	4903	1530	2959	4903	1530	1619	3427	1530	1619	3427	1530
c, Capacity [veh/h]	173	2429	758	266	2585	806	146	806	360	96	701	313
d1, Uniform Delay [s]	45.31	15.65	13.37	45.21	13.33	12.41	44.96	31.08	30.40	46.00	33.42	38.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.32	0.45	0.25	14.15	0.31	0.51	15.11	0.16	0.21	7.03	0.20	7.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.38	0.10	0.93	0.31	0.19	0.88	0.25	0.16	0.64	0.26	0.87
d, Delay for Lane Group [s/veh]	46.63	16.09	13.62	59.35	13.64	12.92	60.07	31.25	30.61	53.02	33.62	45.82
Lane Group LOS	D	B	B	E	B	B	E	C	C	D	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.79	4.27	0.91	3.57	3.29	1.83	3.72	1.99	1.13	1.69	1.88	7.00
50th-Percentile Queue Length [ft/ln]	19.82	106.68	22.63	89.19	82.37	45.73	93.10	49.70	28.18	42.20	46.95	175.00
95th-Percentile Queue Length [veh/ln]	1.43	7.66	1.63	6.42	5.93	3.29	6.70	3.58	2.03	3.04	3.38	11.34
95th-Percentile Queue Length [ft/ln]	35.68	191.38	40.73	160.53	148.27	82.31	167.58	89.46	50.73	75.95	84.51	283.47

Movement, Approach, & Intersection Results

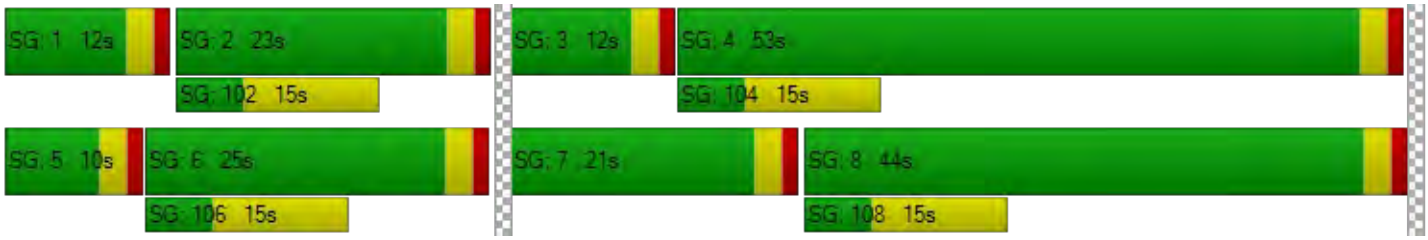
d_M, Delay for Movement [s/veh]	46.63	16.09	13.62	59.35	13.64	12.92	60.07	31.25	30.61	53.02	33.62	45.82
Movement LOS	D	B	B	E	B	B	E	C	C	D	C	D
d_A, Approach Delay [s/veh]	17.78			23.10			40.66			42.37		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	26.65											
Intersection LOS	C											
Intersection V/C	0.528											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.069	3.127	2.587	2.629
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	440	820	1000
d_b, Bicycle Delay [s]	32.00	30.42	17.41	12.50
l_b,int, Bicycle LOS Score for Intersection	2.138	2.215	1.880	1.986
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 46: Tippecanoe Ave / Orange Show Rd_San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	33.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.634

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	129	664	105	224	627	47	183	664	145	174	516	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	664	105	224	627	47	183	664	145	174	516	183
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	175	28	59	165	12	48	175	38	46	136	48
Total Analysis Volume [veh/h]	136	699	111	236	660	49	193	699	153	183	543	193
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	31	0	12	30	0	17	41	0	16	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	10	42	42	9	41	41	40	28	28	40	27	27
g / C, Green / Cycle	0.10	0.42	0.42	0.09	0.41	0.41	0.40	0.28	0.28	0.40	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.08	0.23	0.23	0.08	0.20	0.20	0.20	0.24	0.24	0.20	0.21	0.21
s, saturation flow rate [veh/h]	1619	1800	1715	2959	1800	1757	977	1800	1689	909	1800	1641
c, Capacity [veh/h]	162	746	710	266	728	710	368	503	472	332	494	450
d1, Uniform Delay [s]	44.21	22.29	22.29	44.99	22.16	22.16	22.28	34.34	34.35	23.11	33.51	33.51
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.22	0.17	0.17	0.11	0.12	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.95	2.98	3.13	9.57	2.38	2.44	2.31	7.35	7.81	1.43	2.94	3.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.56	0.56	0.89	0.49	0.49	0.52	0.87	0.87	0.55	0.78	0.78
d, Delay for Lane Group [s/veh]	55.16	25.27	25.42	54.57	24.54	24.60	24.58	41.70	42.15	24.54	36.45	36.73
Lane Group LOS	E	C	C	D	C	C	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.78	7.82	7.48	3.23	6.59	6.45	3.23	11.00	10.39	2.95	8.88	8.13
50th-Percentile Queue Length [ft/ln]	94.40	195.49	186.99	80.64	164.86	161.18	80.65	275.02	259.72	73.68	221.88	203.20
95th-Percentile Queue Length [veh/ln]	6.80	12.41	11.96	5.81	10.81	10.61	5.81	16.44	15.67	5.31	13.76	12.80
95th-Percentile Queue Length [ft/ln]	169.91	310.15	299.12	145.15	270.14	265.28	145.17	411.01	391.87	132.63	344.02	320.10

Movement, Approach, & Intersection Results

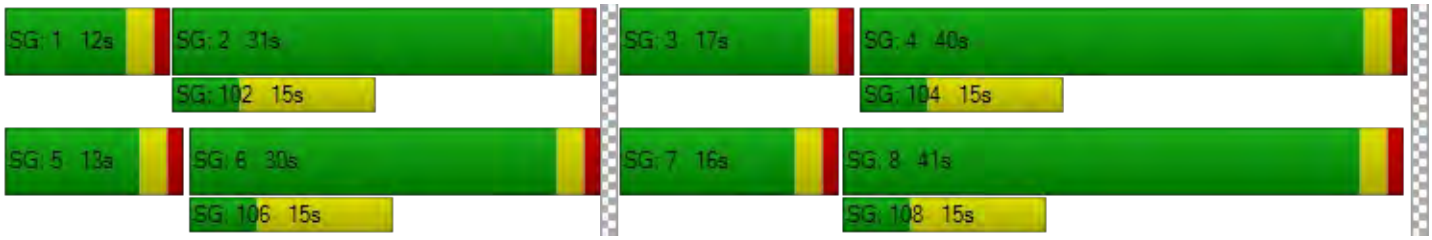
d_M, Delay for Movement [s/veh]	55.16	25.33	25.42	54.57	24.57	24.60	24.58	41.87	42.15	24.54	36.53	36.73
Movement LOS	E	C	C	D	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	29.63			32.06			38.72			34.18		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	33.77											
Intersection LOS	C											
Intersection V/C	0.634											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.853	2.964	2.652	2.690
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	540	760	740
d_b, Bicycle Delay [s]	25.92	26.65	19.22	19.85
l_b,int, Bicycle LOS Score for Intersection	2.340	2.339	2.422	2.318
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 47: Tippecanoe Ave / Hospitality Ln_Coulston St

Control Type:	Signalized	Delay (sec / veh):	28.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	425	516	78	45	816	114	213	88	306	82	65	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	425	516	78	45	816	114	213	88	306	82	65	23
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	112	136	21	12	215	30	56	23	81	22	17	6
Total Analysis Volume [veh/h]	448	544	82	47	861	120	225	93	323	86	69	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	8	7	4	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	30	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	27	35	0	10	18	0	0	44	44	11	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No			No	No	No	No	
Maximum Recall	No	No		No	No			No	No	No	No	
Pedestrian Recall	No	No		No	No			No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
g_i, Effective Green Time [s]	18	53	53	5	40	40	24	24	24	33	33
g / C, Green / Cycle	0.18	0.53	0.53	0.05	0.40	0.40	0.24	0.24	0.24	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.15	0.12	0.12	0.03	0.19	0.19	0.10	0.13	0.21	0.06	0.05
s, saturation flow rate [veh/h]	2959	3427	1682	1619	3427	1690	1324	1363	1530	1389	1722
c, Capacity [veh/h]	521	1798	883	83	1371	676	321	381	367	425	575
d1, Uniform Delay [s]	40.01	12.87	12.88	46.34	22.26	22.29	36.84	34.42	36.59	24.05	23.44
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.31	0.30	0.62	5.91	1.20	2.44	0.92	0.91	6.83	0.23	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.23	0.23	0.57	0.48	0.48	0.43	0.47	0.88	0.20	0.16
d, Delay for Lane Group [s/veh]	44.31	13.18	13.50	52.26	23.46	24.73	37.76	35.32	43.43	24.28	23.57
Lane Group LOS	D	B	B	D	C	C	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.59	2.54	2.58	1.27	5.81	6.00	3.13	3.95	8.16	1.45	1.56
50th-Percentile Queue Length [ft/ln]	139.84	63.44	64.55	31.82	145.29	150.03	78.28	98.70	204.01	36.16	38.92
95th-Percentile Queue Length [veh/ln]	9.47	4.57	4.65	2.29	9.76	10.02	5.64	7.11	12.85	2.60	2.80
95th-Percentile Queue Length [ft/ln]	236.81	114.20	116.19	57.27	244.12	250.47	140.90	177.66	321.13	65.09	70.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.31	13.25	13.50	52.26	23.76	24.73	36.91	35.32	43.43	24.28	23.57	23.57
Movement LOS	D	B	B	D	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	26.23			25.17			39.93			23.91		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	28.72											
Intersection LOS	C											
Intersection V/C	0.594											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.142	3.203	2.556	2.077
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	300	820	1040
d_b, Bicycle Delay [s]	23.12	36.13	17.41	11.52
l_b,int, Bicycle LOS Score for Intersection	2.150	2.125	2.617	1.855
Bicycle LOS	B	B	B	A

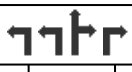
Sequence

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

Intersection Level Of Service Report
Intersection 48: Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.611

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	0	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	300	599	503	0	1174	180	157	0	670	180	215	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	300	599	503	0	1174	180	157	0	670	180	215	267
Peak Hour Factor	0.9740	0.9740	0.9740	1.0000	0.9740	0.9740	0.9740	1.0000	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	77	154	129	0	301	46	40	0	172	46	55	69
Total Analysis Volume [veh/h]	308	615	516	0	1205	185	161	0	688	185	221	274
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	5	2	0	0	6	0	3	0	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	0	7	7	7	0
Maximum Green [s]	30	30	0	0	30	0	30	0	30	30	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	15	41	0	0	26	0	36	0	49	10	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No			No		No		No	No	No	
Maximum Recall	No	No			No		No		No	No	No	
Pedestrian Recall	No	No			No		No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	61	46	46	12	38	7	18	18
g / C, Green / Cycle	0.12	0.61	0.46	0.46	0.12	0.38	0.07	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.10	0.14	0.21	0.21	0.10	0.27	0.06	0.15	0.15
s, saturation flow rate [veh/h]	2959	4358	4903	1645	1619	2558	2959	1752	1530
c, Capacity [veh/h]	355	2656	2252	756	196	974	207	315	275
d1, Uniform Delay [s]	43.22	8.88	18.56	18.53	42.92	26.24	46.13	39.54	39.68
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.46	0.20	0.69	2.01	8.39	0.96	12.46	5.64	7.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.23	0.46	0.46	0.82	0.71	0.89	0.83	0.85
d, Delay for Lane Group [s/veh]	49.68	9.09	19.25	20.54	51.31	27.19	58.59	45.18	46.79
Lane Group LOS	D	A	B	C	D	C	E	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.02	1.95	5.49	5.76	4.31	6.88	2.62	6.62	6.02
50th-Percentile Queue Length [ft/ln]	100.62	48.64	137.17	143.90	107.77	172.00	65.57	165.45	150.46
95th-Percentile Queue Length [veh/ln]	7.24	3.50	9.33	9.69	7.72	11.18	4.72	10.84	10.04
95th-Percentile Queue Length [ft/ln]	181.11	87.55	233.21	242.27	192.89	279.55	118.02	270.93	251.04

Movement, Approach, & Intersection Results

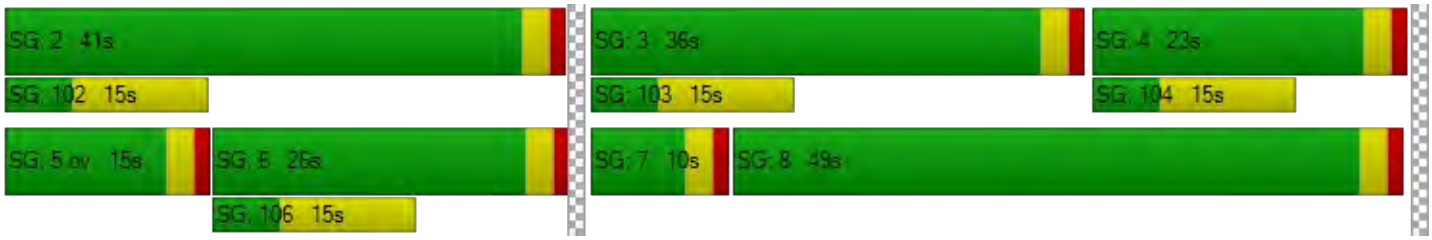
d_M, Delay for Movement [s/veh]	49.68	9.09	0.00	0.00	19.42	20.54	51.31	0.00	27.19	58.59	45.18	46.62
Movement LOS	D	A			B	C	D		C	E	D	D
d_A, Approach Delay [s/veh]	22.63			19.57			31.77			49.38		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	28.28											
Intersection LOS	C											
Intersection V/C	0.611											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.181	2.940	2.611	2.439
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	460	0	400
d_b, Bicycle Delay [s]	19.22	29.65	50.00	32.00
l_b,int, Bicycle LOS Score for Intersection	2.067	2.133	4.132	2.682
Bicycle LOS	B	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 49: Anderson St / SR-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	26.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	0	952	343	674	664	0	425	2	302	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	952	343	674	664	0	425	2	302	0	0	0
Peak Hour Factor	1.0000	0.9690	0.9690	0.9690	0.9690	1.0000	0.9690	0.9690	0.9690	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	246	88	174	171	0	110	1	78	0	0	0
Total Analysis Volume [veh/h]	0	982	354	696	685	0	439	2	312	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	39	0	32	71	0	0	19	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	36	36	29	68	16	16	16	
g / C, Green / Cycle	0.40	0.40	0.32	0.76	0.18	0.18	0.18	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.23	0.24	0.20	0.13	0.13	0.12	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1714	1715	2708	
c, Capacity [veh/h]	1371	612	954	2589	305	305	481	
d1, Uniform Delay [s]	22.71	21.08	27.03	3.36	34.91	34.91	34.38	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.23	3.95	4.90	0.25	13.90	13.89	6.61	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.72	0.58	0.73	0.26	0.72	0.72	0.65	
d, Delay for Lane Group [s/veh]	25.94	25.03	31.93	3.61	48.81	48.80	40.99	
Lane Group LOS	C	C	C	A	D	D	D	
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	
50th-Percentile Queue Length [veh/ln]	8.95	6.25	7.05	1.47	5.65	5.65	3.56	
50th-Percentile Queue Length [ft/ln]	223.84	156.30	176.18	36.78	141.18	141.20	88.94	
95th-Percentile Queue Length [veh/ln]	13.86	10.35	11.40	2.65	9.54	9.55	6.40	
95th-Percentile Queue Length [ft/ln]	346.52	258.82	285.02	66.20	238.61	238.64	160.09	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.94	25.03	31.93	3.61	0.00	48.80	48.80	40.99	0.00	0.00	0.00
Movement LOS		C	C	C	A		D	D	D			
d_A, Approach Delay [s/veh]	25.70			17.88			45.57			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	26.90											
Intersection LOS	C											
Intersection V/C	0.650											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.756	2.910	2.316	2.229
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	1511	356	0
d_b, Bicycle Delay [s]	16.20	2.69	30.42	45.00
l_b,int, Bicycle LOS Score for Intersection	2.662	2.699	2.802	4.132
Bicycle LOS	B	B	C	D

Sequence

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

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Del Rosa Ave / SR-210 WB Ramps	Signalized	HCM 6th Edition	NB Left	0.957	57.2	E
2	Del Rosa Ave / SR-210 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.795	34.4	C
3	Del Rosa Ave / Date St_Date Pl	Signalized	HCM 6th Edition	EB Left	0.404	14.7	B
4	Del Rosa Ave / Highland Ave	Signalized	HCM 6th Edition	NB Left	0.369	27.7	C
5	Highland Ave / SR-210 EB Off Ramp	Signalized	HCM 6th Edition	SB Left	0.467	22.8	C
6	Highland Ave / SR-210 WB Off Ramp	Signalized	HCM 6th Edition	EB Left	0.375	10.8	B
7	Victoria Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.574	28.2	C
8	Del Rosa Dr / Pacific St	Signalized	HCM 6th Edition	WB Left	0.435	29.6	C
9	Victoria Ave / Pacific St	Signalized	HCM 6th Edition	SB Left	0.595	36.0	D
10	Victoria Ave / 14th St	Signalized	HCM 6th Edition	SB Left	0.295	6.8	A
11	Tippecanoe Ave / Baseline St	Signalized	HCM 6th Edition	WB Left	0.467	20.6	C
12	Del Rosa Dr / Baseline St	Signalized	HCM 6th Edition	NB Left	0.474	31.4	C
13	Sterling Ave / Baseline St	Signalized	HCM 6th Edition	EB Left	0.424	29.9	C
14	Victoria Ave / Baseline St	Signalized	HCM 6th Edition	SB Left	0.393	28.6	C
15	Tippecanoe Ave / 9th St	Signalized	HCM 6th Edition	WB Left	0.445	31.1	C
16	Del Rosa Dr / 9th St	Signalized	HCM 6th Edition	SB Left	0.518	32.1	C
17	Sterling Ave / 9th St	Signalized	HCM 6th Edition	EB Left	0.404	29.2	C
			HCM 6th				

18	Victoria Ave / 9th St	Signalized	HCM 6th Edition	EB Left	0.282	25.0	C
19	Del Rosa Dr / 6th St	Signalized	HCM 6th Edition	SB Left	0.613	35.6	D
20	Sterling Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.478	176.9	F
21	Victoria Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.117	28.4	D
22	Central Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.116	12.1	B
23	I-215 SB Ramps / 5th St	Signalized	HCM 6th Edition	WB Left	0.526	24.7	C
24	I-215 NB Ramps / 5th St	Signalized	HCM 6th Edition	EB Left	0.503	27.8	C
25	E St / 5th St	Signalized	HCM 6th Edition	SB Thru	0.452	13.5	B
26	Arrowhead Ave / 5th St	Signalized	HCM 6th Edition	NB Left	0.359	11.9	B
27	Waterman Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.429	26.5	C
28	Tippecanoe Ave / 5th St	Signalized	HCM 6th Edition	NB Left	0.334	28.5	C
29	Del Rosa Dr / 5th St	Signalized	HCM 6th Edition	EB Left	0.488	20.9	C
30	Sterling Ave / 5th St	Signalized	HCM 6th Edition	EB Left	0.364	23.4	C
31	Victoria Ave / 5th St	Signalized	HCM 6th Edition	SB Right	0.533	13.8	B
32	Central Avenue / 5th Street	Signalized	HCM 6th Edition	NB Left	0.428	12.4	B
33	Palm Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.716	81.2	F
34	Church Ave / 5th St	Signalized	HCM 6th Edition	EB Left	0.600	10.9	B
35	SR-210 EB Ramps / 5th Street	Signalized	HCM 6th Edition	SB Right	0.876	33.5	C
36	SR-210 WB Ramps / 5th Street	Signalized	HCM 6th Edition	EB Left	0.612	25.7	C
37	Tippecanoe Ave / 3rd St	Signalized	HCM 6th Edition	SB Left	0.464	29.7	C
38	Del Rosa Dr / 3rd St	Signalized	HCM 6th Edition	EB Left	0.454	33.5	C
			HCM 6th				

39	Sterling Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.582	23.2	C
40	Victoria Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.536	32.7	C
41	Central Ave / 3rd St	Two-way stop	HCM 6th Edition	SB Left	0.073	16.9	C
42	Palm Ave_Alabama St / 3rd St	Signalized	HCM 6th Edition	WB Left	0.469	19.0	B
43	Tippecanoe Ave / Rialto Ave	Signalized	HCM 6th Edition	NB Left	0.373	10.7	B
44	Tippecanoe Ave / Mill St	Signalized	HCM 6th Edition	NB Left	0.485	19.6	B
45	Tippecanoe Ave / Central Ave	Signalized	HCM 6th Edition	EB Left	0.452	23.5	C
46	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave	Signalized	HCM 6th Edition	NB Left	0.484	25.4	C
47	Tippecanoe Ave / Hospitality Ln_Coulston St	Signalized	HCM 6th Edition	SB Left	0.384	19.7	B
48	Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps	Signalized	HCM 6th Edition	EB Left	0.519	24.0	C
49	Anderson St / SR-10 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.556	24.0	C

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

Intersection Level Of Service Report
Intersection 1: Del Rosa Ave / SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	57.2
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.957

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Base Volume Input [veh/h]	587	543	0	0	443	664	0	0	0	125	0	121
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	602	543	0	0	443	664	0	0	0	125	0	121
Peak Hour Factor	0.9250	0.9250	1.0000	1.0000	0.9250	0.9250	1.0000	1.0000	1.0000	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	163	147	0	0	120	179	0	0	0	34	0	33
Total Analysis Volume [veh/h]	651	587	0	0	479	718	0	0	0	135	0	131
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	38	81	0	0	43	0	0	0	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Cycle Length [s]	100	100	100	100		100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	35	83	45	45		11	11
g / C, Green / Cycle	0.35	0.83	0.45	0.45		0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.40	0.17	0.27	0.47		0.08	0.09
s, saturation flow rate [veh/h]	1619	3427	1800	1530		1714	1530
c, Capacity [veh/h]	567	2852	814	692		185	165
d1, Uniform Delay [s]	32.50	1.70	20.45	27.39		43.20	43.52
k, delay calibration	0.50	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	86.05	0.16	3.11	44.43		5.44	8.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.15	0.21	0.59	1.04		0.73	0.79
d, Delay for Lane Group [s/veh]	118.55	1.86	23.56	71.83		48.64	51.84
Lane Group LOS	F	A	C	F		D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	26.77	0.69	8.74	24.09		3.49	3.52
50th-Percentile Queue Length [ft/ln]	669.29	17.23	218.60	602.29		87.27	88.02
95th-Percentile Queue Length [veh/ln]	38.55	1.24	13.59	33.06		6.28	6.34
95th-Percentile Queue Length [ft/ln]	963.76	31.02	339.83	826.43		157.08	158.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	118.55	1.86	0.00	0.00	23.56	71.83	0.00	0.00	0.00	48.64	48.64	51.84
Movement LOS	F	A			C	F				D	D	D
d_A, Approach Delay [s/veh]	63.22			52.51			0.00			50.21		
Approach LOS	E			D			A			D		
d_I, Intersection Delay [s/veh]	57.20											
Intersection LOS	E											
Intersection V/C	0.957											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.760	2.604	2.765	1.851
Crosswalk LOS	C	B	C	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1560	800	0	320
d_b, Bicycle Delay [s]	2.42	18.00	50.00	35.28
l_b,int, Bicycle LOS Score for Intersection	2.581	2.547	4.132	1.999
Bicycle LOS	B	B	D	A

Sequence

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

Intersection Level Of Service Report
Intersection 2: Del Rosa Ave / SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	34.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Base Volume Input [veh/h]	0	817	84	170	402	0	360	1	695	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	15	0	0	0	0	0	0	76	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	832	84	170	402	0	360	1	771	0	0	0
Peak Hour Factor	1.0000	0.9900	0.9900	0.9900	0.9900	1.0000	0.9900	0.9900	0.9900	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	210	21	43	102	0	91	0	195	0	0	0
Total Analysis Volume [veh/h]	0	840	85	172	406	0	364	1	779	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	14	35	0	0	65	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	27	27	11	41	53	53	
g / C, Green / Cycle	0.27	0.27	0.11	0.41	0.53	0.53	
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.11	0.12	0.21	0.51	
s, saturation flow rate [veh/h]	3427	1716	1619	3427	1715	1530	
c, Capacity [veh/h]	910	456	178	1390	916	818	
d1, Uniform Delay [s]	32.89	32.87	44.31	20.04	13.77	22.08	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.35	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.04	7.83	24.05	0.53	0.28	17.17	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.68	0.68	0.97	0.29	0.40	0.95	
d, Delay for Lane Group [s/veh]	36.93	40.70	68.37	20.57	14.05	39.25	
Lane Group LOS	D	D	E	C	B	D	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.10	7.57	5.39	3.24	4.73	19.85	
50th-Percentile Queue Length [ft/ln]	177.41	189.36	134.81	81.02	118.30	496.22	
95th-Percentile Queue Length [veh/ln]	11.47	12.09	9.20	5.83	8.30	27.16	
95th-Percentile Queue Length [ft/ln]	286.63	302.20	230.02	145.84	207.48	678.88	

Movement, Approach, & Intersection Results

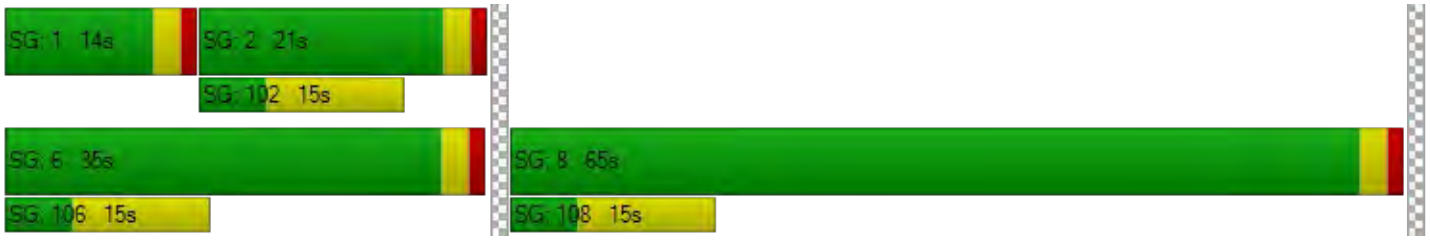
d_M, Delay for Movement [s/veh]	0.00	37.93	40.70	68.37	20.57	0.00	14.05	14.05	39.25	0.00	0.00	0.00
Movement LOS		D	D	E	C		B	B	D			
d_A, Approach Delay [s/veh]		38.19			34.80			31.21			0.00	
Approach LOS		D			C			C			A	
d_I, Intersection Delay [s/veh]	34.43											
Intersection LOS	C											
Intersection V/C	0.795											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.802	2.749	2.279	1.682
Crosswalk LOS	C	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	640	1240	0
d_b, Bicycle Delay [s]	33.62	23.12	7.22	50.00
l_b,int, Bicycle LOS Score for Intersection	2.068	2.036	3.447	4.132
Bicycle LOS	B	B	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 3: Del Rosa Ave / Date St_Date Pl

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Base Volume Input [veh/h]	30	628	21	179	846	69	112	31	39	15	28	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	26	50	0	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	639	21	205	896	69	112	31	39	15	28	157
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	163	5	52	229	18	29	8	10	4	7	40
Total Analysis Volume [veh/h]	31	652	21	209	914	70	114	32	40	15	29	160
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	45	0	25	60	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	70	60	60	70	63	63	24	24	24	24
g / C, Green / Cycle	0.70	0.60	0.60	0.70	0.63	0.63	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.05	0.19	0.19	0.24	0.28	0.28	0.09	0.04	0.01	0.12
s, saturation flow rate [veh/h]	656	1800	1780	874	1800	1755	1213	1639	1349	1566
c, Capacity [veh/h]	484	1080	1069	645	1134	1106	208	392	317	375
d1, Uniform Delay [s]	5.57	9.84	9.84	5.73	9.46	9.46	43.53	30.26	33.86	32.90
k, delay calibration	0.50	0.50	0.50	0.32	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	0.76	0.77	0.86	1.24	1.27	2.25	0.22	0.06	1.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.31	0.31	0.32	0.44	0.44	0.55	0.18	0.05	0.50
d, Delay for Lane Group [s/veh]	5.83	10.60	10.61	6.59	10.69	10.73	45.79	30.48	33.92	33.95
Lane Group LOS	A	B	B	A	B	B	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.21	3.65	3.61	1.46	5.48	5.36	2.87	1.40	0.31	4.03
50th-Percentile Queue Length [ft/ln]	5.15	91.21	90.37	36.44	136.92	134.00	71.78	34.95	7.66	100.75
95th-Percentile Queue Length [veh/ln]	0.37	6.57	6.51	2.62	9.31	9.16	5.17	2.52	0.55	7.25
95th-Percentile Queue Length [ft/ln]	9.27	164.18	162.67	65.60	232.87	228.93	129.20	62.91	13.79	181.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.83	10.60	10.61	6.59	10.71	10.73	45.79	30.48	30.48	33.92	33.95	33.95
Movement LOS	A	B	B	A	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.39			9.99			39.86			33.95		
Approach LOS	B			A			D			C		
d_I, Intersection Delay [s/veh]	14.68											
Intersection LOS	B											
Intersection V/C	0.404											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.855	2.966	2.078	2.283
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	840	1140	540	540
d_b, Bicycle Delay [s]	16.82	9.25	26.65	26.65
l_b,int, Bicycle LOS Score for Intersection	2.140	2.544	1.867	1.896
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 4: Del Rosa Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	27.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.369

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	104	412	36	122	568	123	51	267	119	47	273	135
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	50	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	423	36	122	618	123	51	267	119	47	273	135
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	107	9	31	157	31	13	68	30	12	69	34
Total Analysis Volume [veh/h]	105	429	37	124	627	125	52	271	121	48	277	137
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	5	2	0	1	6	6	3	8	0	7	4	4
Auxiliary Signal Groups						6						4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	7
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	28	23	0	31	26	26	12	34	0	12	34	34
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	62	62	9	63	63	5	12	12	5	12	12
g / C, Green / Cycle	0.08	0.62	0.62	0.09	0.63	0.63	0.05	0.12	0.12	0.05	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.13	0.08	0.18	0.08	0.03	0.08	0.08	0.03	0.08	0.09
s, saturation flow rate [veh/h]	1619	1800	1750	1619	3427	1530	1619	3427	1530	1619	3427	1530
c, Capacity [veh/h]	132	1106	1075	154	2152	961	87	407	182	84	400	179
d1, Uniform Delay [s]	45.09	8.55	8.56	44.34	8.48	7.54	46.25	42.17	42.17	46.32	42.44	42.84
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.24	0.44	0.46	9.46	0.34	0.28	6.40	1.88	4.16	6.00	2.15	6.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.21	0.21	0.81	0.29	0.13	0.60	0.67	0.67	0.57	0.69	0.77
d, Delay for Lane Group [s/veh]	55.33	8.99	9.02	53.81	8.82	7.82	52.65	44.06	46.33	52.32	44.59	49.57
Lane Group LOS	E	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.92	2.25	2.20	3.39	2.95	1.09	1.41	3.29	3.05	1.30	3.38	3.59
50th-Percentile Queue Length [ft/ln]	72.94	56.26	55.11	84.86	73.81	27.14	35.30	82.14	76.22	32.51	84.59	89.84
95th-Percentile Queue Length [veh/ln]	5.25	4.05	3.97	6.11	5.31	1.95	2.54	5.91	5.49	2.34	6.09	6.47
95th-Percentile Queue Length [ft/ln]	131.29	101.27	99.19	152.75	132.85	48.86	63.55	147.86	137.20	58.51	152.26	161.70

Movement, Approach, & Intersection Results

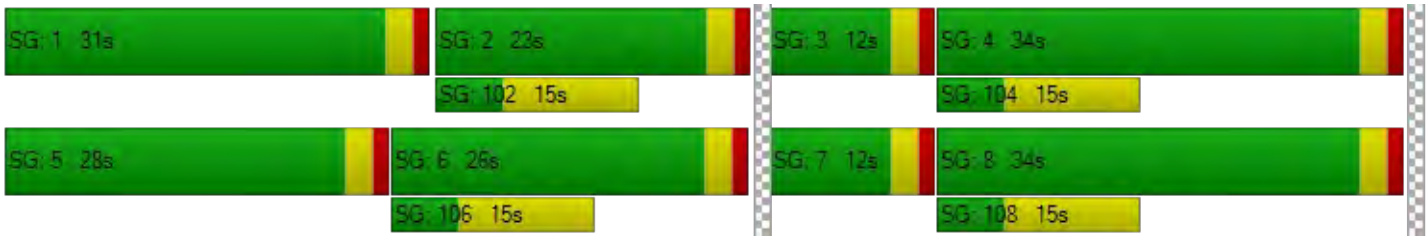
d_M, Delay for Movement [s/veh]	55.33	9.00	9.02	53.81	8.82	7.82	52.65	44.06	46.33	52.32	44.59	49.57
Movement LOS	E	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	17.52			15.05			45.68			46.87		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.68											
Intersection LOS	C											
Intersection V/C	0.369											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.573	2.809	2.614	2.725
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	460	620	620
d_b, Bicycle Delay [s]	32.00	29.65	23.81	23.81
l_b,int, Bicycle LOS Score for Intersection	2.031	2.282	1.926	1.941
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Highland Ave / SR-210 EB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.467

Intersection Setup

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Base Volume Input [veh/h]	911	160	0	293	329	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	46	0	0	0	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	957	160	0	293	334	0
Peak Hour Factor	0.8240	0.8240	1.0000	0.8240	0.8240	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	290	49	0	89	101	0
Total Analysis Volume [veh/h]	1161	194	0	356	405	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	2.0	0.0	0.0	2.0	2.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	77	0	0	23	23	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	0.0	1.0	1.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	39	39	55	55
g / C, Green / Cycle	0.39	0.39	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.35	0.13	0.10	0.12
s, saturation flow rate [veh/h]	3329	1530	3427	3427
c, Capacity [veh/h]	1316	605	1866	1866
d1, Uniform Delay [s]	28.06	20.93	11.57	11.76
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.12	0.30	0.23	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.32	0.19	0.22
d, Delay for Lane Group [s/veh]	30.18	21.23	11.80	12.03
Lane Group LOS	C	C	B	B
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	12.81	3.15	1.99	2.31
50th-Percentile Queue Length [ft/ln]	320.14	78.65	49.86	57.67
95th-Percentile Queue Length [veh/ln]	18.67	5.66	3.59	4.15
95th-Percentile Queue Length [ft/ln]	466.86	141.57	89.75	103.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.18	21.23	0.00	11.80	12.03	0.00
Movement LOS	C	C		B	B	
d_A, Approach Delay [s/veh]	28.90		11.80		12.03	
Approach LOS	C		B		B	
d_I, Intersection Delay [s/veh]	22.79					
Intersection LOS	C					
Intersection V/C	0.467					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.387	2.493	2.606
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.426	4.467
Bicycle LOS	D	E	E

Sequence

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

Intersection Level Of Service Report
Intersection 6: Highland Ave / SR-210 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.375

Intersection Setup

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	230	1	144	1	0	6	2	917	0	0	933	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	29	0	0	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1	144	1	0	6	2	946	0	0	951	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	0	36	0	0	2	1	237	0	0	238	2
Total Analysis Volume [veh/h]	230	1	144	1	0	6	2	946	0	0	951	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Permiss	Split	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	0	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	30	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	29	0	0	10	41	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	21	0	0	0	9	0	0	9	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	11	1	1	0	69	65	65
g / C, Green / Cycle	0.13	0.13	0.01	0.01	0.00	0.76	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.07	0.09	0.00	0.00	0.00	0.28	0.27	0.27
s, saturation flow rate [veh/h]	3329	1532	1714	1530	1714	3427	1800	1796
c, Capacity [veh/h]	418	192	23	21	7	2608	1302	1300
d1, Uniform Delay [s]	36.97	38.02	43.81	43.96	44.69	3.55	4.68	4.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	5.91	0.75	7.45	20.88	0.39	0.80	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.75	0.04	0.29	0.29	0.36	0.37	0.37
d, Delay for Lane Group [s/veh]	38.11	43.93	44.56	51.40	65.57	3.94	5.48	5.49
Lane Group LOS	D	D	D	D	E	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.41	3.36	0.03	0.17	0.08	2.15	2.90	2.91
50th-Percentile Queue Length [ft/ln]	60.26	83.88	0.67	4.35	2.12	53.81	72.55	72.63
95th-Percentile Queue Length [veh/ln]	4.34	6.04	0.05	0.31	0.15	3.87	5.22	5.23
95th-Percentile Queue Length [ft/ln]	108.48	150.99	1.20	7.84	3.81	96.85	130.60	130.74

Movement, Approach, & Intersection Results

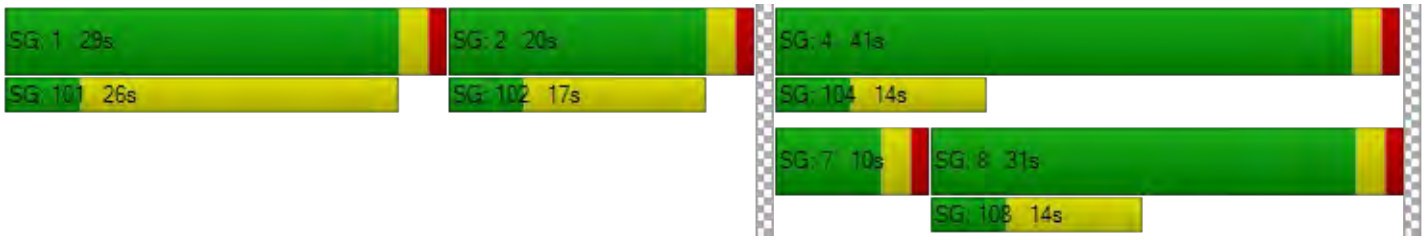
d_M, Delay for Movement [s/veh]	38.11	43.93	43.93	44.56	0.00	51.40	65.57	3.94	0.00	0.00	5.49	5.49
Movement LOS	D	D	D	D		D	E	A			A	A
d_A, Approach Delay [s/veh]	40.36			50.43			4.07			5.49		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	10.76											
Intersection LOS	B											
Intersection V/C	0.375											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.064	1.947	2.893	2.632
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	0	844	622
d_b, Bicycle Delay [s]	29.61	45.00	15.02	21.36
l_b,int, Bicycle LOS Score for Intersection	2.178	4.132	2.342	2.349
Bicycle LOS	B	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 7: Victoria Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Highland Ave			Highland Ave		
Base Volume Input [veh/h]	241	243	42	68	215	284	448	372	119	45	348	88
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	6	0	0	39	0	0	0	29	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	259	249	42	68	254	284	448	372	148	45	348	88
Peak Hour Factor	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960	0.8960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	69	12	19	71	79	125	104	41	13	97	25
Total Analysis Volume [veh/h]	289	278	47	76	283	317	500	415	165	50	388	98
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	21	0	11	18	18	32	58	0	10	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	54	45	45	54	40	63	20	32	32	5	17	17
g / C, Green / Cycle	0.54	0.45	0.45	0.54	0.40	0.63	0.20	0.32	0.32	0.05	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.24	0.10	0.10	0.07	0.08	0.21	0.17	0.17	0.17	0.03	0.14	0.14
s, saturation flow rate [veh/h]	1226	1700	1616	1145	3427	1530	2959	1800	1628	1619	1800	1677
c, Capacity [veh/h]	693	760	722	644	1367	966	600	573	518	86	303	282
d1, Uniform Delay [s]	13.23	16.94	16.96	11.44	19.70	8.56	38.24	27.96	27.97	46.29	40.15	40.24
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.24	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.85	0.66	0.70	0.08	0.34	0.44	3.11	0.77	0.85	6.20	5.62	6.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.22	0.22	0.12	0.21	0.33	0.83	0.53	0.53	0.58	0.82	0.84
d, Delay for Lane Group [s/veh]	15.07	17.61	17.66	11.52	20.04	9.00	41.36	28.73	28.82	52.48	45.77	46.69
Lane Group LOS	B	B	B	B	C	A	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.84	2.43	2.34	0.80	2.19	3.05	6.06	6.01	5.45	1.36	6.34	6.06
50th-Percentile Queue Length [ft/ln]	96.00	60.79	58.39	20.11	54.82	76.25	151.40	150.20	136.33	33.90	158.59	151.61
95th-Percentile Queue Length [veh/ln]	6.91	4.38	4.20	1.45	3.95	5.49	10.09	10.03	9.28	2.44	10.47	10.10
95th-Percentile Queue Length [ft/ln]	172.79	109.42	105.09	36.20	98.67	137.26	252.29	250.69	232.07	61.02	261.86	252.58

Movement, Approach, & Intersection Results

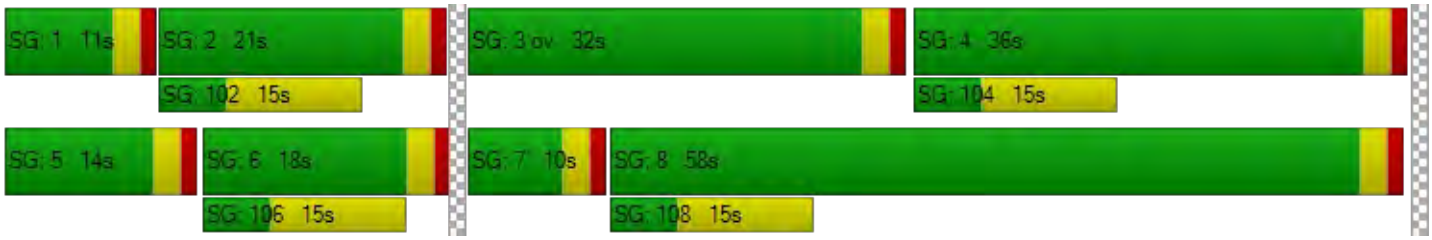
d_M, Delay for Movement [s/veh]	15.07	17.63	17.66	11.52	20.04	9.00	41.36	28.75	28.82	52.48	46.10	46.69
Movement LOS	B	B	B	B	C	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	16.43			13.90			34.60			46.80		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	28.20											
Intersection LOS	C											
Intersection V/C	0.574											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.523	2.712	2.969	2.566
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	300	1100	660
d_b, Bicycle Delay [s]	33.62	36.13	10.13	22.45
l_b,int, Bicycle LOS Score for Intersection	2.066	2.117	2.451	2.002
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: Del Rosa Dr / Pacific St

Control Type:	Signalized	Delay (sec / veh):	29.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.435

Intersection Setup

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Base Volume Input [veh/h]	44	214	28	38	342	200	154	236	27	69	280	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	50	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	225	28	38	392	200	154	236	27	69	280	42
Peak Hour Factor	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940	0.8940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	63	8	11	110	56	43	66	8	19	78	12
Total Analysis Volume [veh/h]	49	252	31	43	438	224	172	264	30	77	313	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	54	38	0	34	18	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	58	58	5	57	57	13	19	19	6	13	13
g / C, Green / Cycle	0.05	0.58	0.58	0.05	0.57	0.57	0.13	0.19	0.19	0.06	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.02	0.03	0.19	0.20	0.11	0.08	0.08	0.05	0.10	0.10
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1598	1619	1800	1737	1619	1800	1719
c, Capacity [veh/h]	85	1035	880	79	1029	914	207	346	334	103	231	220
d1, Uniform Delay [s]	46.32	10.50	9.22	46.46	11.38	11.40	42.55	35.55	35.58	46.02	42.30	42.36
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.15	0.56	0.07	5.66	0.90	1.02	8.31	0.84	0.89	10.20	6.04	6.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.24	0.04	0.54	0.34	0.34	0.83	0.43	0.43	0.75	0.79	0.80
d, Delay for Lane Group [s/veh]	52.47	11.06	9.30	52.12	12.28	12.43	50.86	36.40	36.47	56.22	48.34	49.06
Lane Group LOS	D	B	A	D	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.33	2.77	0.30	1.16	4.15	3.76	4.59	3.25	3.18	2.16	4.73	4.62
50th-Percentile Queue Length [ft/ln]	33.23	69.22	7.50	29.11	103.81	93.88	114.71	81.35	79.40	54.10	118.26	115.56
95th-Percentile Queue Length [veh/ln]	2.39	4.98	0.54	2.10	7.47	6.76	8.10	5.86	5.72	3.90	8.30	8.15
95th-Percentile Queue Length [ft/ln]	59.81	124.60	13.50	52.39	186.85	168.99	202.54	146.44	142.92	97.38	207.43	203.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.47	11.06	9.30	52.12	12.31	12.43	50.86	36.43	36.47	56.22	48.64	49.06
Movement LOS	D	B	A	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	17.01			14.77			41.76			50.02		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.58											
Intersection LOS	C											
Intersection V/C	0.435											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.477	2.651	2.512	2.458
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	700	300
d_b, Bicycle Delay [s]	36.13	36.13	21.13	36.13
l_b,int, Bicycle LOS Score for Intersection	2.107	2.141	1.944	1.920
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 9: Victoria Ave / Pacific St

Control Type:	Signalized	Delay (sec / veh):	36.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.595

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	165	321	30	58	282	103	113	252	206	50	331	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	0	68	0	0	0	17	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	165	345	30	58	350	103	113	252	223	50	331	89
Peak Hour Factor	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	121	11	20	123	36	40	88	78	18	116	31
Total Analysis Volume [veh/h]	231	484	42	81	491	144	158	353	313	70	464	125
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	24	43	0	11	30	0	17	36	0	10	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	16	51	51	6	41	41	12	25	25	6	20	20
g / C, Green / Cycle	0.16	0.51	0.51	0.06	0.41	0.41	0.12	0.25	0.25	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.14	0.15	0.15	0.05	0.18	0.18	0.10	0.20	0.20	0.04	0.17	0.17
s, saturation flow rate [veh/h]	1619	1800	1750	1619	1800	1662	1619	1800	1530	1619	1800	1671
c, Capacity [veh/h]	263	908	883	102	730	674	187	454	386	98	354	329
d1, Uniform Delay [s]	40.93	14.41	14.41	46.19	21.64	21.66	43.35	34.80	35.17	46.15	38.81	38.87
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.16	0.18	0.11	0.14	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.22	0.82	0.85	12.75	2.01	2.20	9.94	4.17	6.54	9.40	7.90	9.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.29	0.29	0.79	0.45	0.45	0.85	0.78	0.81	0.72	0.86	0.87
d, Delay for Lane Group [s/veh]	50.14	15.23	15.26	58.94	23.65	23.86	53.30	38.97	41.71	55.55	46.72	47.88
Lane Group LOS	D	B	B	E	C	C	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.17	3.60	3.51	2.34	5.89	5.51	4.31	8.39	7.75	1.95	7.90	7.49
50th-Percentile Queue Length [ft/ln]	154.20	90.08	87.86	58.39	147.29	137.70	107.86	209.70	193.66	48.85	197.44	187.25
95th-Percentile Queue Length [veh/ln]	10.24	6.49	6.33	4.20	9.87	9.36	7.72	13.14	12.31	3.52	12.51	11.98
95th-Percentile Queue Length [ft/ln]	256.03	162.14	158.15	105.11	246.81	233.92	193.03	328.44	307.77	87.93	312.66	299.46

Movement, Approach, & Intersection Results

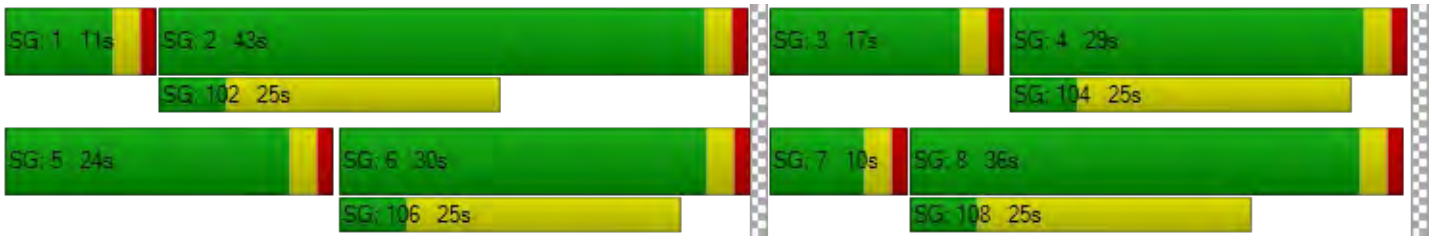
d_M, Delay for Movement [s/veh]	50.14	15.24	15.26	58.94	23.72	23.86	53.30	38.97	41.71	55.55	47.12	47.88
Movement LOS	D	B	B	E	C	C	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	25.89			27.73			42.76			48.16		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	36.00											
Intersection LOS	D											
Intersection V/C	0.595											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.625	2.596	2.631	2.528
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	540	660	520
d_b, Bicycle Delay [s]	18.00	26.65	22.45	27.38
l_b,int, Bicycle LOS Score for Intersection	2.184	2.150	2.239	2.103
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 10: Victoria Ave / 14th St

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.295

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	0	442	11	27	523	2	2	0	0	19	3	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	0	85	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	466	11	27	608	2	2	0	0	19	3	52
Peak Hour Factor	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390	0.7390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	158	4	9	206	1	1	0	0	6	1	18
Total Analysis Volume [veh/h]	0	631	15	37	823	3	3	0	0	26	4	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	58	0	10	58	0	0	32	0	0	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	11	0	0	19	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	0	78	78	5	83	83	8	8
g / C, Green / Cycle	0.00	0.78	0.78	0.05	0.83	0.83	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.00	0.18	0.18	0.02	0.23	0.23	0.00	0.07
s, saturation flow rate [veh/h]	1619	1800	1785	1619	1800	1798	1012	1536
c, Capacity [veh/h]	1	1411	1399	73	1491	1489	154	170
d1, Uniform Delay [s]	0.00	2.85	2.85	46.65	1.91	1.91	42.34	45.10
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.38	0.38	5.33	0.46	0.46	0.05	3.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.23	0.23	0.51	0.28	0.28	0.02	0.59
d, Delay for Lane Group [s/veh]	0.00	3.23	3.24	51.98	2.38	2.38	42.39	48.31
Lane Group LOS	A	A	A	D	A	A	D	D
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	1.38	1.37	1.00	1.19	1.19	0.07	2.57
50th-Percentile Queue Length [ft/ln]	0.00	34.46	34.25	25.08	29.81	29.78	1.76	64.33
95th-Percentile Queue Length [veh/ln]	0.00	2.48	2.47	1.81	2.15	2.14	0.13	4.63
95th-Percentile Queue Length [ft/ln]	0.00	62.03	61.65	45.15	53.65	53.60	3.16	115.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	3.24	3.24	51.98	2.38	2.38	42.39	42.39	42.39	48.31	48.31	48.31
Movement LOS	A	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	3.24			4.50			42.39			48.31		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.78											
Intersection LOS	A											
Intersection V/C	0.295											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.635	2.616	1.726	1.796
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	580	580
d_b, Bicycle Delay [s]	10.13	10.13	25.21	25.21
l_b,int, Bicycle LOS Score for Intersection	2.093	2.272	1.565	1.725
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 11: Tippecanoe Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.467

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	167	161	306	198	191	446
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	70	19	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	167	161	376	217	191	463
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	46	107	62	54	132
Total Analysis Volume [veh/h]	190	184	429	247	218	528
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	2.0	0.0	2.0	0.0	2.0	2.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	29	0	41	0	30	71
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	0.0	1.0	1.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	15	15	61	61	16	79
g / C, Green / Cycle	0.15	0.15	0.61	0.61	0.16	0.79
(v / s)_i Volume / Saturation Flow Rate	0.11	0.12	0.19	0.21	0.13	0.15
s, saturation flow rate [veh/h]	1714	1530	1800	1594	1619	3427
c, Capacity [veh/h]	249	223	1095	970	253	2723
d1, Uniform Delay [s]	41.06	41.50	9.45	9.74	41.12	2.50
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.78	7.60	0.73	0.99	8.39	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.83	0.31	0.35	0.86	0.19
d, Delay for Lane Group [s/veh]	45.84	49.10	10.18	10.73	49.51	2.65
Lane Group LOS	D	D	B	B	D	A
Critical Lane Group	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.79	4.83	3.54	3.69	5.77	0.94
50th-Percentile Queue Length [ft/ln]	119.74	120.84	88.57	92.22	144.24	23.43
95th-Percentile Queue Length [veh/ln]	8.38	8.44	6.38	6.64	9.71	1.69
95th-Percentile Queue Length [ft/ln]	209.47	210.98	159.43	165.99	242.72	42.18

Movement, Approach, & Intersection Results

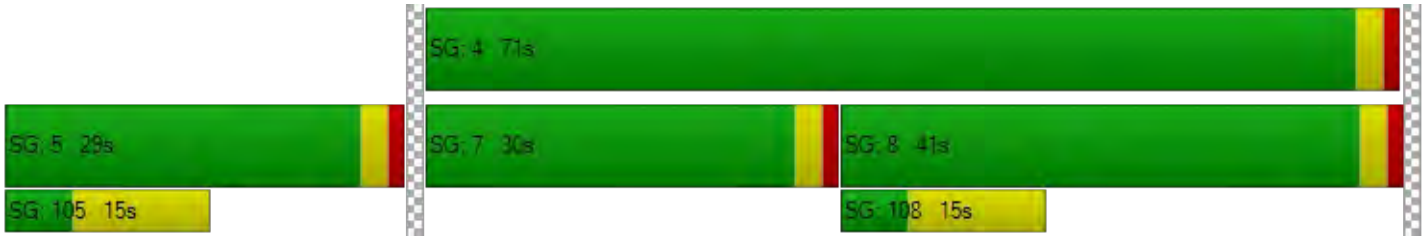
d_M, Delay for Movement [s/veh]	45.84	49.10	10.30	10.73	49.51	2.65
Movement LOS	D	D	B	B	D	A
d_A, Approach Delay [s/veh]	47.45		10.46		16.35	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	20.61					
Intersection LOS	C					
Intersection V/C	0.467					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.342	2.477	2.571
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.690	4.748
Bicycle LOS	D	E	E

Sequence

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



Intersection Level Of Service Report
Intersection 12: Del Rosa Dr / Baseline St

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

Intersection Setup

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

Volumes

Name				Del Rosa Dr								
Base Volume Input [veh/h]	50	208	77	31	279	125	49	232	134	92	378	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	11	0	0	50	0	0	0	70	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	219	77	31	329	125	49	232	204	92	378	35
Peak Hour Factor	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	63	22	9	94	36	14	66	58	26	108	10
Total Analysis Volume [veh/h]	77	251	88	35	376	143	56	265	233	105	432	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	33	44	0	28	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	58	58	4	56	56	6	18	18	8	21	21
g / C, Green / Cycle	0.06	0.58	0.58	0.04	0.56	0.56	0.06	0.18	0.18	0.08	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.05	0.10	0.10	0.02	0.21	0.09	0.03	0.15	0.15	0.06	0.13	0.13
s, saturation flow rate [veh/h]	1619	1800	1645	1619	1800	1530	1619	1800	1530	1619	1800	1747
c, Capacity [veh/h]	100	1034	945	71	1001	851	93	325	276	132	369	358
d1, Uniform Delay [s]	46.21	10.03	10.06	46.73	12.45	10.86	46.04	39.40	39.63	45.09	36.46	36.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.65	0.35	0.40	5.25	1.08	0.43	6.23	5.03	6.97	10.24	1.92	2.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.17	0.17	0.49	0.38	0.17	0.61	0.82	0.84	0.79	0.65	0.65
d, Delay for Lane Group [s/veh]	57.86	10.39	10.47	51.98	13.52	11.29	52.27	44.43	46.60	55.33	38.38	38.49
Lane Group LOS	E	B	B	D	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.20	1.83	1.73	0.95	4.78	1.59	1.51	6.64	6.00	2.92	5.49	5.36
50th-Percentile Queue Length [ft/ln]	54.94	45.68	43.32	23.76	119.44	39.68	37.84	165.88	150.05	72.94	137.15	134.05
95th-Percentile Queue Length [veh/ln]	3.96	3.29	3.12	1.71	8.36	2.86	2.72	10.86	10.02	5.25	9.33	9.16
95th-Percentile Queue Length [ft/ln]	98.90	82.22	77.97	42.77	209.05	71.42	68.11	271.49	250.49	131.29	233.18	229.00

Movement, Approach, & Intersection Results

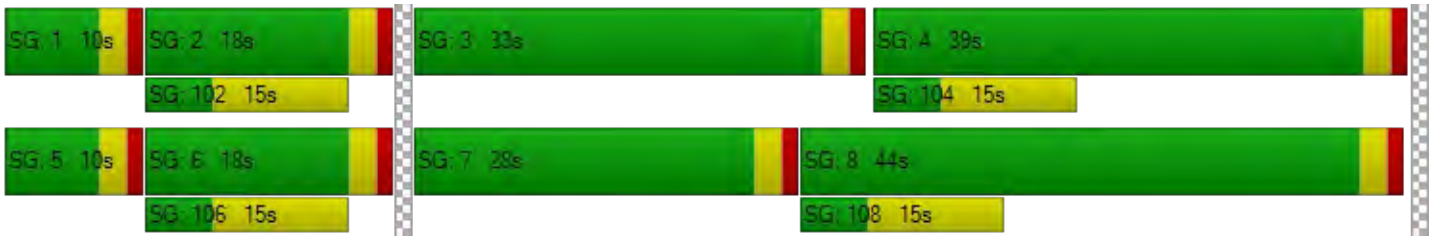
d_M, Delay for Movement [s/veh]	57.86	10.41	10.47	51.98	13.52	11.29	52.27	44.43	46.60	55.33	38.43	38.49
Movement LOS	E	B	B	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	19.20			15.38			46.13			41.51		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	31.42											
Intersection LOS	C											
Intersection V/C	0.474											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.527	2.482	2.542	2.495
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	820	720
d_b, Bicycle Delay [s]	36.13	36.13	17.41	20.48
l_b,int, Bicycle LOS Score for Intersection	1.903	2.474	2.017	2.036
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Sterling Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

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

Volumes

Name				Sterling Ave								
Base Volume Input [veh/h]	28	252	35	163	398	66	60	225	40	44	338	195
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	14	0	0	76	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	266	35	163	474	66	60	225	40	44	338	195
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	74	10	45	131	18	17	62	11	12	94	54
Total Analysis Volume [veh/h]	31	295	39	181	525	73	66	249	44	49	374	216
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	29	0	21	40	0	10	40	0	10	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	65	49	49	13	58	58	6	21	21	5	20	20
g / C, Green / Cycle	0.65	0.49	0.49	0.13	0.58	0.58	0.06	0.21	0.21	0.05	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.03	0.09	0.10	0.11	0.17	0.17	0.04	0.08	0.08	0.03	0.17	0.18
s, saturation flow rate [veh/h]	895	1800	1728	1619	1800	1724	1619	1800	1708	1619	1800	1583
c, Capacity [veh/h]	602	875	840	212	1036	993	95	380	360	85	368	324
d1, Uniform Delay [s]	6.86	14.58	14.60	42.55	10.84	10.84	46.16	33.93	33.99	46.30	38.28	38.40
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	0.49	0.52	9.51	0.72	0.76	8.58	0.66	0.72	6.10	5.45	6.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.19	0.20	0.86	0.29	0.29	0.69	0.39	0.40	0.58	0.85	0.86
d, Delay for Lane Group [s/veh]	7.02	15.07	15.13	52.06	11.56	11.60	54.74	34.59	34.71	52.40	43.73	45.06
Lane Group LOS	A	B	B	D	B	B	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	2.24	2.20	4.89	3.47	3.34	1.83	3.16	3.07	1.33	7.81	7.09
50th-Percentile Queue Length [ft/ln]	6.14	56.07	54.89	122.33	86.80	83.53	45.70	78.97	76.75	33.20	195.20	177.20
95th-Percentile Queue Length [veh/ln]	0.44	4.04	3.95	8.52	6.25	6.01	3.29	5.69	5.53	2.39	12.39	11.45
95th-Percentile Queue Length [ft/ln]	11.06	100.92	98.81	213.03	156.23	150.35	82.26	142.15	138.14	59.77	309.76	286.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.02	15.10	15.13	52.06	11.58	11.60	54.74	34.64	34.71	52.40	43.95	45.06
Movement LOS	A	B	B	D	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	14.41			20.98			38.34			44.98		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	29.93											
Intersection LOS	C											
Intersection V/C	0.424											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.498	2.680	2.496	2.523
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	740	740	740
d_b, Bicycle Delay [s]	27.38	19.85	19.85	19.85
l_b,int, Bicycle LOS Score for Intersection	1.861	2.202	1.856	2.087
Bicycle LOS	A	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 14: Victoria Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	28.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.393

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	48	265	20	85	329	122	105	211	30	33	245	74
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	0	85	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	289	20	85	414	122	105	211	30	33	245	74
Peak Hour Factor	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740	0.8740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	83	6	24	118	35	30	60	9	9	70	21
Total Analysis Volume [veh/h]	55	331	23	97	474	140	120	241	34	38	280	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	31	0	14	35	0	26	45	0	10	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	22	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	58	58	7	60	60	9	18	18	5	13	13
g / C, Green / Cycle	0.05	0.58	0.58	0.07	0.60	0.60	0.09	0.18	0.18	0.05	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.10	0.06	0.18	0.18	0.07	0.08	0.08	0.02	0.10	0.11
s, saturation flow rate [veh/h]	1619	1800	1759	1619	1800	1661	1619	1800	1724	1619	1800	1660
c, Capacity [veh/h]	89	1046	1023	120	1081	998	149	321	308	74	239	220
d1, Uniform Delay [s]	46.23	9.73	9.74	45.58	9.69	9.70	44.54	36.57	36.61	46.62	41.99	42.13
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.82	0.35	0.36	11.89	0.69	0.76	9.83	0.92	0.99	5.37	5.63	6.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.17	0.17	0.81	0.29	0.30	0.81	0.43	0.44	0.51	0.79	0.81
d, Delay for Lane Group [s/veh]	53.05	10.08	10.10	57.47	10.38	10.46	54.37	37.49	37.61	51.99	47.62	48.97
Lane Group LOS	D	B	B	E	B	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.50	1.83	1.81	2.75	3.38	3.15	3.30	3.10	3.02	1.03	4.81	4.64
50th-Percentile Queue Length [ft/ln]	37.47	45.76	45.17	68.82	84.44	78.87	82.58	77.43	75.48	25.75	120.30	115.93
95th-Percentile Queue Length [veh/ln]	2.70	3.29	3.25	4.96	6.08	5.68	5.95	5.58	5.43	1.85	8.41	8.17
95th-Percentile Queue Length [ft/ln]	67.45	82.37	81.30	123.88	152.00	141.97	148.64	139.38	135.87	46.35	210.24	204.22

Movement, Approach, & Intersection Results

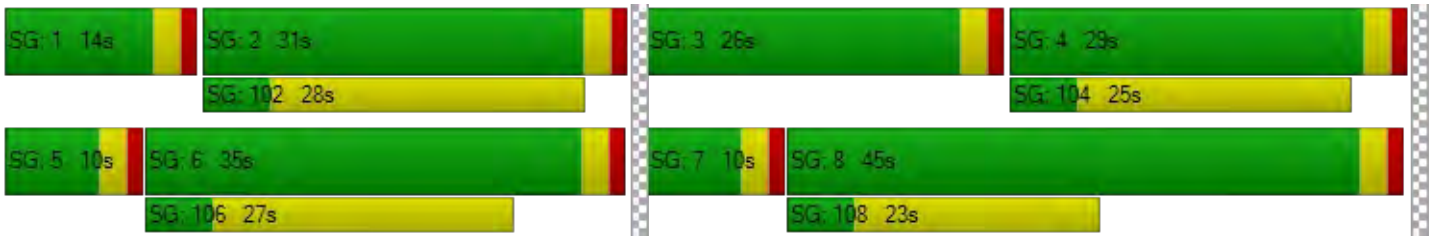
d_M, Delay for Movement [s/veh]	53.05	10.09	10.10	57.47	10.41	10.46	54.37	37.54	37.61	51.99	48.07	48.97
Movement LOS	D	B	B	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.87			16.84			42.66			48.63		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.63											
Intersection LOS	C											
Intersection V/C	0.393											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.493	2.550	2.476	2.455
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	640	840	520
d_b, Bicycle Delay [s]	25.92	23.12	16.82	27.38
l_b,int, Bicycle LOS Score for Intersection	1.897	2.146	1.885	1.892
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 15: Tippecanoe Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	31.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.445

Intersection Setup

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

Volumes

Name	Tippacanoe Avenue											
Base Volume Input [veh/h]	111	251	76	24	349	23	27	351	81	72	295	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	19	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	251	76	24	368	23	27	351	81	72	295	21
Peak Hour Factor	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820	0.7820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	80	24	8	118	7	9	112	26	23	94	7
Total Analysis Volume [veh/h]	142	321	97	31	471	29	35	449	104	92	377	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	38	0	11	34	0	10	37	0	14	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	10	58	58	4	52	52	4	19	19	7	21	21
g / C, Green / Cycle	0.10	0.58	0.58	0.04	0.52	0.52	0.04	0.19	0.19	0.07	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.09	0.12	0.12	0.02	0.14	0.14	0.02	0.16	0.16	0.06	0.11	0.11
s, saturation flow rate [veh/h]	1619	1800	1659	1619	1800	1764	1619	1800	1685	1619	1800	1758
c, Capacity [veh/h]	169	1045	963	66	931	912	71	338	316	115	386	377
d1, Uniform Delay [s]	43.95	10.00	10.02	46.88	13.57	13.57	46.71	39.19	39.27	45.76	34.79	34.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.45	0.45	0.50	5.02	0.72	0.74	5.18	5.68	6.39	12.02	1.12	1.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.21	0.21	0.47	0.27	0.27	0.49	0.84	0.85	0.80	0.53	0.53
d, Delay for Lane Group [s/veh]	54.40	10.45	10.51	51.90	14.28	14.31	51.89	44.88	45.66	57.78	35.90	35.97
Lane Group LOS	D	B	B	D	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.91	2.28	2.14	0.84	3.27	3.22	0.95	7.18	6.86	2.62	4.47	4.40
50th-Percentile Queue Length [ft/ln]	97.86	56.91	53.58	21.09	81.66	80.50	23.73	179.52	171.47	65.50	111.86	110.04
95th-Percentile Queue Length [veh/ln]	7.05	4.10	3.86	1.52	5.88	5.80	1.71	11.58	11.15	4.72	7.94	7.84
95th-Percentile Queue Length [ft/ln]	176.16	102.43	96.44	37.96	147.00	144.90	42.72	289.39	278.85	117.91	198.59	196.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.40	10.47	10.51	51.90	14.30	14.31	51.89	45.16	45.66	57.78	35.93	35.97
Movement LOS	D	B	B	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	21.62			16.49			45.65			39.99		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	31.05											
Intersection LOS	C											
Intersection V/C	0.445											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.546	2.485	2.528	2.516
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	620	680	760
d_b, Bicycle Delay [s]	21.13	23.81	21.78	19.22
l_b,int, Bicycle LOS Score for Intersection	2.022	1.998	2.045	1.969
Bicycle LOS	B	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 16: Del Rosa Dr / 9th St

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	78	119	137	130	199	70	48	421	123	31	233	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	0	120	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	147	137	130	319	70	48	421	123	31	233	44
Peak Hour Factor	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	45	42	40	98	21	15	129	38	9	71	13
Total Analysis Volume [veh/h]	96	180	168	159	391	86	59	516	151	38	286	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	18	0	14	20	0	10	58	0	10	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	41	41	11	45	45	6	31	31	5	30	30
g / C, Green / Cycle	0.07	0.41	0.41	0.11	0.45	0.45	0.06	0.31	0.31	0.05	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.11	0.10	0.14	0.14	0.04	0.29	0.10	0.02	0.16	0.04
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1689	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	119	738	628	178	804	755	92	564	480	75	545	464
d1, Uniform Delay [s]	45.62	19.33	19.54	43.92	17.73	17.75	46.16	33.04	26.15	46.56	28.88	25.18
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.97	0.78	1.05	14.08	0.98	1.05	7.23	6.33	0.37	5.18	0.78	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.24	0.27	0.89	0.30	0.31	0.64	0.91	0.31	0.51	0.52	0.12
d, Delay for Lane Group [s/veh]	57.59	20.11	20.59	57.99	18.71	18.80	53.39	39.37	26.52	51.74	29.66	25.29
Lane Group LOS	E	C	C	E	B	B	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.73	2.86	2.73	4.55	3.76	3.57	1.61	12.71	2.76	1.03	5.73	0.94
50th-Percentile Queue Length [ft/ln]	68.21	71.42	68.15	113.67	93.88	89.22	40.32	317.73	69.08	25.68	143.16	23.43
95th-Percentile Queue Length [veh/ln]	4.91	5.14	4.91	8.04	6.76	6.42	2.90	18.56	4.97	1.85	9.65	1.69
95th-Percentile Queue Length [ft/ln]	122.78	128.55	122.67	201.09	168.99	160.60	72.57	463.90	124.35	46.22	241.27	42.18

Movement, Approach, & Intersection Results

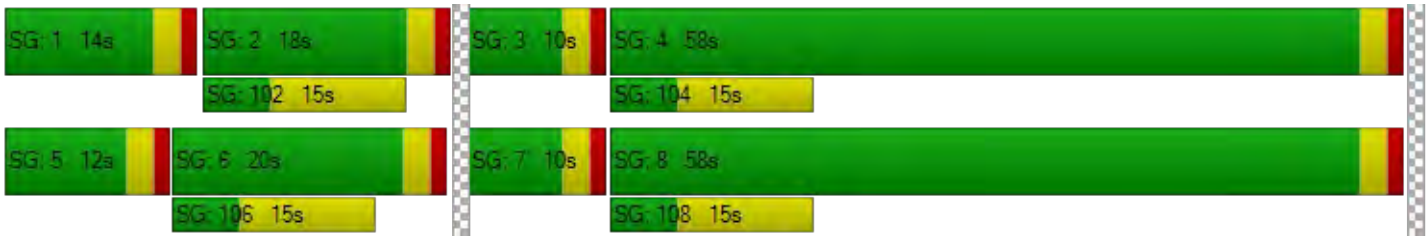
d_M, Delay for Movement [s/veh]	57.59	20.11	20.59	57.99	18.74	18.80	53.39	39.37	26.52	51.74	29.66	25.29
Movement LOS	E	C	C	E	B	B	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	28.40			28.56			37.84			31.25		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	32.08											
Intersection LOS	C											
Intersection V/C	0.518											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.506	2.488	2.539	2.435
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	340	1100	1100
d_b, Bicycle Delay [s]	36.13	34.45	10.13	10.13
l_b,int, Bicycle LOS Score for Intersection	1.926	2.084	2.758	2.183
Bicycle LOS	A	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 17: Sterling Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	29.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	22	171	36	55	362	83	80	172	22	52	256	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	31	45	0	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	181	36	86	407	83	80	172	22	52	256	89
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	53	11	25	119	24	23	50	6	15	75	26
Total Analysis Volume [veh/h]	26	211	42	100	475	97	93	201	26	61	299	104
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	28	0	15	33	0	13	36	0	21	44	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	19	0	0	22	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	54	54	8	58	58	7	20	20	6	19	19
g / C, Green / Cycle	0.04	0.54	0.54	0.08	0.58	0.58	0.07	0.20	0.20	0.06	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.07	0.06	0.16	0.16	0.06	0.11	0.02	0.04	0.17	0.07
s, saturation flow rate [veh/h]	1619	1800	1699	1619	1800	1696	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	59	973	918	124	1045	984	116	367	312	96	345	293
d1, Uniform Delay [s]	47.17	11.38	11.40	45.42	10.51	10.52	45.74	35.68	32.24	46.00	39.20	35.07
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.06	0.28	0.31	11.40	0.67	0.72	12.14	1.28	0.11	6.88	6.65	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.13	0.14	0.80	0.28	0.28	0.80	0.55	0.08	0.64	0.87	0.36
d, Delay for Lane Group [s/veh]	52.23	11.66	11.71	56.82	11.18	11.24	57.88	36.95	32.36	52.88	45.85	35.80
Lane Group LOS	D	B	B	E	B	B	E	D	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.71	1.44	1.40	2.82	3.26	3.11	2.65	4.48	0.52	1.66	7.66	2.25
50th-Percentile Queue Length [ft/ln]	17.86	35.95	35.12	70.51	81.57	77.64	66.27	112.00	12.96	41.46	191.53	56.13
95th-Percentile Queue Length [veh/ln]	1.29	2.59	2.53	5.08	5.87	5.59	4.77	7.95	0.93	2.98	12.20	4.04
95th-Percentile Queue Length [ft/ln]	32.14	64.71	63.22	126.91	146.83	139.76	119.28	198.78	23.32	74.62	305.01	101.04

Movement, Approach, & Intersection Results

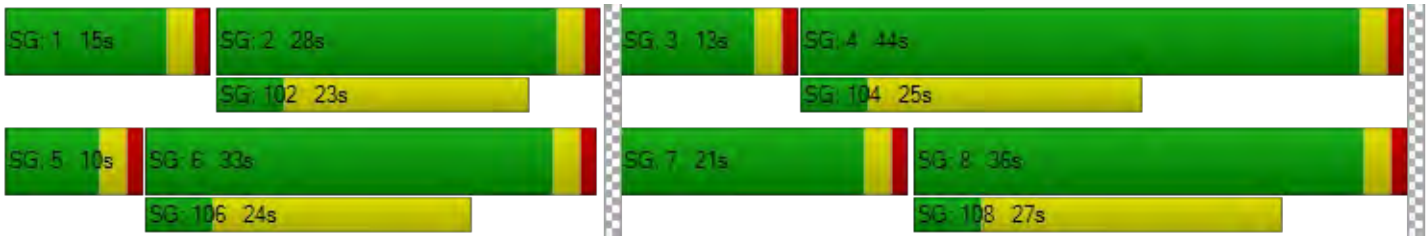
d_M, Delay for Movement [s/veh]	52.23	11.68	11.71	56.82	11.21	11.24	57.88	36.95	32.36	52.88	45.85	35.80
Movement LOS	D	B	B	E	B	B	E	D	C	D	D	D
d_A, Approach Delay [s/veh]	15.46			18.00			42.66			44.52		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.23											
Intersection LOS	C											
Intersection V/C	0.404											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.596	2.517	2.319	2.334
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	600	660	820
d_b, Bicycle Delay [s]	28.13	24.50	22.45	17.41
l_b,int, Bicycle LOS Score for Intersection	1.790	2.114	2.088	2.325
Bicycle LOS	A	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 18: Victoria Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	25.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.282

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	45	161	16	44	249	65	54	91	40	32	99	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	0	85	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	185	16	44	334	65	54	91	40	32	99	55
Peak Hour Factor	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160	0.8160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	57	5	13	102	20	17	28	12	10	30	17
Total Analysis Volume [veh/h]	55	227	20	54	409	80	66	112	49	39	121	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	27	0	11	28	0	10	52	0	10	52	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	68	68	5	68	68	6	10	10	5	9	9
g / C, Green / Cycle	0.05	0.68	0.68	0.05	0.68	0.68	0.06	0.10	0.10	0.05	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.03	0.07	0.07	0.03	0.14	0.14	0.04	0.06	0.03	0.02	0.07	0.04
s, saturation flow rate [veh/h]	1619	1800	1750	1619	1800	1700	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	89	1217	1183	88	1217	1149	95	185	157	75	163	138
d1, Uniform Delay [s]	46.23	5.63	5.63	46.24	6.10	6.11	46.17	42.92	41.58	46.59	44.36	43.27
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.84	0.17	0.18	6.70	0.38	0.41	8.66	3.17	1.12	5.45	6.59	2.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.10	0.10	0.61	0.21	0.21	0.69	0.61	0.31	0.52	0.74	0.48
d, Delay for Lane Group [s/veh]	53.08	5.79	5.81	52.95	6.48	6.52	54.83	46.09	42.70	52.04	50.94	45.89
Lane Group LOS	D	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.50	0.87	0.86	1.47	1.90	1.83	1.83	2.80	1.16	1.06	3.20	1.67
50th-Percentile Queue Length [ft/ln]	37.49	21.78	21.51	36.76	47.56	45.67	45.74	69.91	29.12	26.43	80.07	41.75
95th-Percentile Queue Length [veh/ln]	2.70	1.57	1.55	2.65	3.42	3.29	3.29	5.03	2.10	1.90	5.77	3.01
95th-Percentile Queue Length [ft/ln]	67.47	39.20	38.73	66.17	85.61	82.20	82.33	125.84	52.42	47.57	144.13	75.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.08	5.80	5.81	52.95	6.50	6.52	54.83	46.09	42.70	52.04	50.94	45.89
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	14.41			11.12			47.90			49.64		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	25.04											
Intersection LOS	C											
Intersection V/C	0.282											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.589	2.483	2.255	2.238
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	500	980	980
d_b, Bicycle Delay [s]	28.88	28.13	13.01	13.01
l_b,int, Bicycle LOS Score for Intersection	1.809	2.008	1.934	1.934
Bicycle LOS	A	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 19: Del Rosa Dr / 6th St

Control Type:	Signalized	Delay (sec / veh):	35.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.613

Intersection Setup

Name							6th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							6th Street					
Base Volume Input [veh/h]	71	199	37	43	274	95	155	144	53	86	144	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	21	4	25	92	3	1	11	4	0	10	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	220	41	68	366	98	156	155	57	86	154	49
Peak Hour Factor	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590	0.6590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	83	16	26	139	37	59	59	22	33	58	19
Total Analysis Volume [veh/h]	138	334	62	103	555	149	237	235	86	131	234	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	21	0	10	18	0	31	37	0	32	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	10	44	44	7	41	41	17	27	10	20
g / C, Green / Cycle	0.10	0.44	0.44	0.07	0.41	0.41	0.17	0.27	0.10	0.20
(v / s)_i Volume / Saturation Flow Rate	0.09	0.11	0.11	0.06	0.20	0.20	0.15	0.19	0.08	0.18
s, saturation flow rate [veh/h]	1619	1800	1704	1619	1800	1671	1619	1719	1619	1727
c, Capacity [veh/h]	162	795	752	113	741	687	271	460	163	347
d1, Uniform Delay [s]	44.27	17.58	17.60	46.18	21.72	21.73	40.61	32.96	43.99	38.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.78	0.77	0.83	22.20	2.34	2.52	8.67	1.92	8.82	7.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.25	0.26	0.91	0.49	0.49	0.87	0.70	0.80	0.89
d, Delay for Lane Group [s/veh]	56.05	18.35	18.43	68.38	24.06	24.26	49.27	34.89	52.81	46.45
Lane Group LOS	E	B	B	E	C	C	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.87	3.05	2.93	3.22	6.63	6.21	6.28	7.13	3.55	7.98
50th-Percentile Queue Length [ft/ln]	96.65	76.15	73.21	80.58	165.79	155.14	156.89	178.31	88.82	199.39
95th-Percentile Queue Length [veh/ln]	6.96	5.48	5.27	5.80	10.85	10.29	10.38	11.51	6.39	12.61
95th-Percentile Queue Length [ft/ln]	173.97	137.07	131.78	145.04	271.37	257.28	259.60	287.81	159.87	315.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.05	18.38	18.43	68.38	24.13	24.26	49.27	34.89	34.89	52.81	46.45	46.45
Movement LOS	E	B	B	E	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	28.12			29.80			41.00			48.35		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.57											
Intersection LOS	D											
Intersection V/C	0.613											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.561	2.590	2.297	2.219
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	300	680	700
d_b, Bicycle Delay [s]	33.62	36.13	21.78	21.13
l_b,int, Bicycle LOS Score for Intersection	2.000	2.225	2.480	2.284
Bicycle LOS	B	B	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 20: Sterling Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	176.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	12	138	9	24	469	43	37	102	12	9	116	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	7	21	6	34	5	1	27	0	45	18	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	145	30	30	503	48	38	129	12	54	134	16
Peak Hour Factor	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360	0.8360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	43	9	9	150	14	11	39	4	16	40	5
Total Analysis Volume [veh/h]	36	173	36	36	602	57	45	154	14	65	160	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.03	0.01	0.00	0.48	0.64	0.02	0.44	0.70	0.02
d_M, Delay for Movement [s/veh]	8.99	0.00	0.00	7.69	0.00	0.00	176.94	153.62	143.87	165.88	157.18	145.33
Movement LOS	A	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.12	0.06	0.00	0.08	0.04	0.00	10.65	10.65	10.65	11.87	11.87	11.87
95th-Percentile Queue Length [ft/ln]	2.99	1.49	0.00	2.02	1.01	0.00	266.35	266.35	266.35	296.84	296.84	296.84
d_A, Approach Delay [s/veh]	1.32			0.40			157.91			158.57		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	52.20											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 21: Victoria Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	28.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.117

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	31	120	1	13	299	23	23	33	41	9	32	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	19	21	25	38	22	2	44	3	4	51	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	139	22	38	337	45	25	77	44	13	83	21
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	38	6	10	92	12	7	21	12	4	23	6
Total Analysis Volume [veh/h]	64	152	24	41	368	49	27	84	48	14	91	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.03	0.00	0.00	0.12	0.27	0.06	0.05	0.30	0.02
d_M, Delay for Movement [s/veh]	8.31	0.00	0.00	7.62	0.00	0.00	28.42	24.43	17.15	24.29	23.27	14.97
Movement LOS	A	A	A	A	A	A	D	C	C	C	C	B
95th-Percentile Queue Length [veh/ln]	0.18	0.09	0.00	0.09	0.04	0.00	2.21	2.21	2.21	1.71	1.71	1.71
95th-Percentile Queue Length [ft/ln]	4.40	2.20	0.00	2.24	1.12	0.00	55.22	55.22	55.22	42.65	42.65	42.65
d_A, Approach Delay [s/veh]	2.21			0.68			22.91			21.89		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	7.40											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 22: Central Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.116

Intersection Setup

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

Volumes

Name	Central Avenue					
Base Volume Input [veh/h]	9	80	107	33	44	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	4	4	54	6	56
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	84	111	87	50	83
Peak Hour Factor	0.7450	0.7450	0.7450	0.7450	0.7450	0.7450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	28	37	29	17	28
Total Analysis Volume [veh/h]	47	113	149	117	67	111
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.12	0.13
d_M, Delay for Movement [s/veh]	7.85	0.00	0.00	0.00	12.08	9.95
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.00	0.00	0.39	0.46
95th-Percentile Queue Length [ft/ln]	2.79	2.79	0.00	0.00	9.83	11.39
d_A, Approach Delay [s/veh]	2.31		0.00		10.75	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.78					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 23: I-215 SB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	24.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

Intersection Setup

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	532	5	193	0	442	350	315	504	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	50	0	38	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	532	5	193	0	492	350	353	519	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9580	0.9580	0.9580	1.0000	0.9580	0.9580	0.9580	0.9580	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	139	1	50	0	128	91	92	135	0
Total Analysis Volume [veh/h]	0	0	0	555	5	201	0	514	365	368	542	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	32	0	0	48	0	20	68	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	C	L	C
C, Cycle Length [s]		100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		19	19	19	57	57	15	75
g / C, Green / Cycle		0.19	0.19	0.19	0.57	0.57	0.15	0.75
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.13	0.10	0.24	0.12	0.16
s, saturation flow rate [veh/h]		1714	1716	1530	4903	1530	2959	3427
c, Capacity [veh/h]		334	334	298	2773	865	443	2554
d1, Uniform Delay [s]		38.75	38.74	37.32	10.54	12.39	41.29	3.86
k, delay calibration		0.13	0.13	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.61	6.59	2.66	0.15	1.51	4.10	0.19
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.84	0.84	0.67	0.19	0.42	0.83	0.21
d, Delay for Lane Group [s/veh]		45.36	45.34	39.98	10.69	13.90	45.39	4.04
Lane Group LOS		D	D	D	B	B	D	A
Critical Lane Group		Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		7.14	7.14	4.73	1.79	4.76	4.61	1.41
50th-Percentile Queue Length [ft/ln]		178.43	178.48	118.31	44.79	118.88	115.25	35.28
95th-Percentile Queue Length [veh/ln]		11.52	11.52	8.30	3.23	8.33	8.13	2.54
95th-Percentile Queue Length [ft/ln]		287.96	288.03	207.50	80.63	208.29	203.28	63.51

Movement, Approach, & Intersection Results

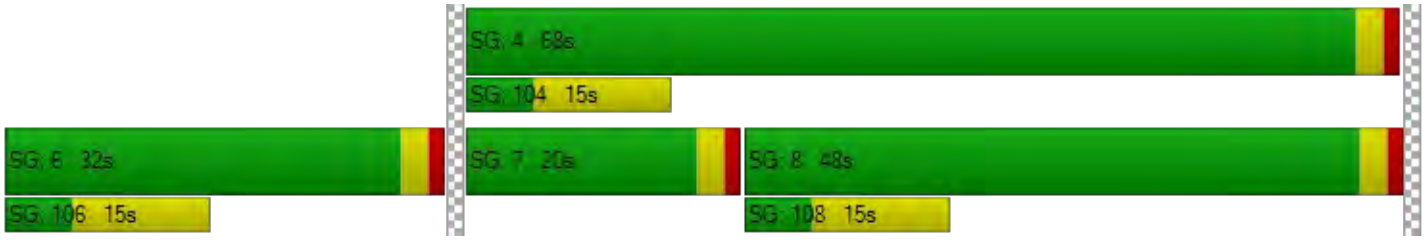
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	45.35	45.34	39.98	0.00	10.69	13.90	45.39	4.04	0.00
Movement LOS				D	D	D		B	B	D	A	
d_A, Approach Delay [s/veh]	0.00			43.93			12.02			20.77		
Approach LOS	A			D			B			C		
d_I, Intersection Delay [s/veh]	24.66											
Intersection LOS	C											
Intersection V/C	0.526											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.081	2.194	2.723	2.973
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	580	900	1300
d_b, Bicycle Delay [s]	50.00	25.21	15.13	6.13
l_b,int, Bicycle LOS Score for Intersection	4.132	2.815	1.922	2.310
Bicycle LOS	D	C	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 24: I-215 NB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	27.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	290	0	542	0	0	0	150	840	0	0	509	148
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	194	0	0	0	0	50	0	0	53	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	290	0	736	0	0	0	150	890	0	0	562	148
Peak Hour Factor	0.9940	0.9940	0.9940	0.9940	1.0000	0.9940	0.9940	0.9940	1.0000	1.0000	0.9940	0.9940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	73	0	185	0	0	0	38	224	0	0	141	37
Total Analysis Volume [veh/h]	292	0	740	0	0	0	151	895	0	0	565	149
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	44	0	0	0	0	11	56	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	66	66	66		7	28	18	18
g / C, Green / Cycle	0.66	0.66	0.66		0.07	0.28	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.17	0.24	0.24		0.05	0.26	0.09	0.10
s, saturation flow rate [veh/h]	1714	1530	1530		2959	3427	6538	1530
c, Capacity [veh/h]	1125	1004	1004		206	973	1204	282
d1, Uniform Delay [s]	7.12	7.80	7.80		45.61	34.71	36.42	36.86
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	1.04	1.04		4.98	4.13	0.28	1.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.37	0.37		0.73	0.92	0.47	0.53
d, Delay for Lane Group [s/veh]	7.68	8.84	8.84		50.59	38.84	36.71	38.40
Lane Group LOS	A	A	A		D	D	D	D
Critical Lane Group	No	Yes	No		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.51	3.53	3.53		1.97	10.88	3.09	3.39
50th-Percentile Queue Length [ft/ln]	62.79	88.27	88.27		49.24	271.91	77.13	84.72
95th-Percentile Queue Length [veh/ln]	4.52	6.36	6.36		3.55	16.28	5.55	6.10
95th-Percentile Queue Length [ft/ln]	113.03	158.89	158.89		88.63	407.12	138.83	152.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.68	8.84	8.84	0.00	0.00	0.00	50.59	38.84	0.00	0.00	36.71	38.40
Movement LOS	A	A	A				D	D			D	D
d_A, Approach Delay [s/veh]	8.51			0.00			40.53			37.06		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	27.81											
Intersection LOS	C											
Intersection V/C	0.503											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.282	1.868	2.964	2.928
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	820	0	1060	840
d_b, Bicycle Delay [s]	17.41	50.00	11.05	16.82
l_b,int, Bicycle LOS Score for Intersection	3.262	4.132	2.423	1.854
Bicycle LOS	C	D	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 25: E St / 5th St

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.452

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	27	102	20	10	132	17	75	937	37	7	421	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	244	0	0	53	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	102	20	10	132	17	75	1181	37	7	474	7
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	26	5	3	34	4	19	303	9	2	122	2
Total Analysis Volume [veh/h]	28	105	21	10	135	17	77	1211	38	7	486	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	9	9	0	9	9	0	0	9	0	0	9	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	2.0	0.0	1.0	2.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	43	0	13	43	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	21	0	0	20	0	0	19	0	0	22	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	4.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	2.00	4.00	3.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	5	10	2	10	61	61	61	63	63	63
g / C, Green / Cycle	0.05	0.11	0.02	0.11	0.67	0.67	0.67	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.01	0.09	0.08	0.35	0.35	0.02	0.14	0.14
s, saturation flow rate [veh/h]	1619	1749	1619	1765	918	1800	1781	337	1800	1791
c, Capacity [veh/h]	82	194	37	196	622	1209	1196	289	1259	1253
d1, Uniform Delay [s]	41.26	38.32	43.24	38.91	8.26	7.45	7.46	5.79	4.71	4.71
k, delay calibration	0.11	0.15	0.11	0.15	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.43	5.11	3.90	8.97	0.41	1.60	1.62	0.16	0.35	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.65	0.27	0.78	0.12	0.52	0.52	0.02	0.20	0.20
d, Delay for Lane Group [s/veh]	43.69	43.43	47.14	47.88	8.67	9.05	9.07	5.94	5.06	5.06
Lane Group LOS	D	D	D	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.65	2.90	0.26	3.71	0.69	5.64	5.60	0.04	1.44	1.43
50th-Percentile Queue Length [ft/ln]	16.24	72.60	6.42	92.69	17.20	141.12	140.06	1.12	35.98	35.86
95th-Percentile Queue Length [veh/ln]	1.17	5.23	0.46	6.67	1.24	9.54	9.48	0.08	2.59	2.58
95th-Percentile Queue Length [ft/ln]	29.23	130.68	11.55	166.85	30.95	238.53	237.11	2.02	64.76	64.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.69	43.43	43.43	47.14	47.88	47.88	8.67	9.06	9.07	5.94	5.06	5.06
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	43.48			47.83			9.04			5.07		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13.52											
Intersection LOS	B											
Intersection V/C	0.452											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.055	2.163	2.951	2.639
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	822	644	644
d_b, Bicycle Delay [s]	15.61	15.61	20.67	20.67
l_b,int, Bicycle LOS Score for Intersection	1.814	1.827	2.654	1.972
Bicycle LOS	A	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 26: Arrowhead Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.359

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	38	98	32	26	174	24	43	628	131	39	394	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	244	0	0	53	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	98	32	26	174	24	43	872	131	39	447	12
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	26	8	7	46	6	11	229	34	10	117	3
Total Analysis Volume [veh/h]	40	103	34	27	183	25	45	915	137	41	469	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	4	0	1	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	18	0	0	18	0	0	17	0	0	17	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	61	0	0	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	62	62	62	62	62	62
g / C, Green / Cycle	0.20	0.20	0.20	0.20	0.20	0.20	0.69	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.03	0.04	0.04	0.02	0.06	0.06	0.05	0.30	0.30	0.08	0.13	0.13
s, saturation flow rate [veh/h]	1192	1800	1653	1272	1800	1726	928	1800	1719	545	1800	1783
c, Capacity [veh/h]	241	363	333	272	363	348	645	1237	1182	365	1237	1226
d1, Uniform Delay [s]	34.87	29.84	29.91	33.13	30.47	30.51	7.21	6.27	6.28	11.11	5.08	5.08
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	0.25	0.30	0.16	0.44	0.47	0.21	1.11	1.17	0.62	0.35	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.19	0.20	0.10	0.29	0.30	0.07	0.43	0.44	0.11	0.20	0.20
d, Delay for Lane Group [s/veh]	35.19	30.10	30.21	33.29	30.90	30.98	7.42	7.39	7.44	11.73	5.43	5.44
Lane Group LOS	D	C	C	C	C	C	A	A	A	B	A	A
Critical Lane Group	No	No	No	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.80	1.26	1.23	0.52	1.95	1.92	0.36	4.15	3.98	0.46	1.49	1.48
50th-Percentile Queue Length [ft/ln]	19.97	31.55	30.78	12.96	48.75	48.00	9.04	103.66	99.54	11.59	37.31	37.07
95th-Percentile Queue Length [veh/ln]	1.44	2.27	2.22	0.93	3.51	3.46	0.65	7.46	7.17	0.83	2.69	2.67
95th-Percentile Queue Length [ft/ln]	35.94	56.78	55.40	23.33	87.74	86.40	16.27	186.58	179.16	20.87	67.16	66.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.19	30.13	30.21	33.29	30.94	30.98	7.42	7.41	7.44	11.73	5.44	5.44
Movement LOS	D	C	C	C	C	C	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	31.29			31.21			7.41			5.93		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	11.86											
Intersection LOS	B											
Intersection V/C	0.359											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.465	2.443	2.674	2.630
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	533	1244	1244
d_b, Bicycle Delay [s]	24.20	24.20	6.42	6.42
l_b,int, Bicycle LOS Score for Intersection	1.706	1.753	2.465	1.991
Bicycle LOS	A	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 27: Waterman Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	26.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.429

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	117	382	48	14	519	110	70	169	153	76	297	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	25	0	0	3	0	244	0	4	50	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	382	73	14	519	113	70	413	153	80	347	16
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	102	19	4	139	30	19	110	41	21	93	4
Total Analysis Volume [veh/h]	125	408	78	15	554	121	75	441	163	85	371	17
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	36.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	5.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	31	0	13	31	0	9	36	0	10	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	4.00	2.00	4.00	4.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	8	46	46	2	39	39	28	19	19	28	19	19
g / C, Green / Cycle	0.09	0.51	0.51	0.02	0.43	0.43	0.31	0.21	0.21	0.31	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.08	0.12	0.05	0.01	0.13	0.14	0.06	0.18	0.18	0.08	0.11	0.01
s, saturation flow rate [veh/h]	1619	3427	1530	1619	3427	1642	1161	1800	1637	1023	3427	1530
c, Capacity [veh/h]	152	1740	777	30	1483	710	380	376	342	295	737	329
d1, Uniform Delay [s]	40.04	12.38	11.49	43.74	16.69	16.76	23.06	34.12	34.18	24.14	31.09	28.03
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.50	0.32	0.26	12.05	0.53	1.15	0.25	4.97	5.68	0.53	0.53	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.23	0.10	0.50	0.31	0.31	0.20	0.84	0.84	0.29	0.50	0.05
d, Delay for Lane Group [s/veh]	50.54	12.69	11.75	55.79	17.23	17.91	23.31	39.09	39.86	24.67	31.62	28.10
Lane Group LOS	D	B	B	E	B	B	C	D	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.12	2.25	0.83	0.43	3.05	3.13	1.16	6.97	6.47	1.34	3.54	0.29
50th-Percentile Queue Length [ft/ln]	78.03	56.33	20.71	10.73	76.37	78.28	29.07	174.30	161.71	33.50	88.44	7.34
95th-Percentile Queue Length [veh/ln]	5.62	4.06	1.49	0.77	5.50	5.64	2.09	11.30	10.64	2.41	6.37	0.53
95th-Percentile Queue Length [ft/ln]	140.46	101.39	37.27	19.31	137.47	140.90	52.33	282.56	265.98	60.29	159.19	13.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.54	12.69	11.75	55.79	17.35	17.91	23.31	39.31	39.86	24.67	31.62	28.10
Movement LOS	D	B	B	E	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	20.32			18.28			37.67			30.24		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	26.46											
Intersection LOS	C											
Intersection V/C	0.429											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.818	2.671	2.552	2.616
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	556	689	711
d_b, Bicycle Delay [s]	23.47	23.47	19.34	18.69
l_b,int, Bicycle LOS Score for Intersection	2.064	1.939	2.120	1.950
Bicycle LOS	B	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 28: Tippecanoe Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	28.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.334

Intersection Setup

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	36	176	11	17	360	41	17	55	32	20	193	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	5	67	14	1	0	22	196	51	13	44	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	181	78	31	361	41	39	251	83	33	237	22
Peak Hour Factor	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	48	21	8	96	11	10	67	22	9	63	6
Total Analysis Volume [veh/h]	49	192	83	33	383	44	41	266	88	35	252	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	10	18	0	54	62	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	62	62	4	61	61	5	17	17	4	17	17
g / C, Green / Cycle	0.05	0.62	0.62	0.04	0.61	0.61	0.05	0.17	0.17	0.04	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.08	0.02	0.12	0.12	0.03	0.15	0.06	0.02	0.14	0.02
s, saturation flow rate [veh/h]	1619	1800	1622	1619	1800	1736	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	84	1117	1007	68	1099	1060	77	309	263	73	305	259
d1, Uniform Delay [s]	46.33	7.81	7.84	46.83	8.61	8.62	46.52	40.24	36.39	46.58	40.10	35.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.18	0.23	0.27	5.23	0.40	0.42	5.56	6.96	0.74	4.73	5.65	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.13	0.13	0.48	0.20	0.20	0.53	0.86	0.33	0.48	0.83	0.09
d, Delay for Lane Group [s/veh]	52.50	8.04	8.11	52.06	9.01	9.04	52.09	47.20	37.13	51.31	45.75	35.16
Lane Group LOS	D	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.33	1.24	1.19	0.90	2.07	2.02	1.11	6.88	1.93	0.94	6.40	0.48
50th-Percentile Queue Length [ft/ln]	33.24	31.10	29.63	22.46	51.64	50.48	27.77	171.95	48.32	23.57	160.00	12.06
95th-Percentile Queue Length [veh/ln]	2.39	2.24	2.13	1.62	3.72	3.63	2.00	11.18	3.48	1.70	10.55	0.87
95th-Percentile Queue Length [ft/ln]	59.83	55.99	53.33	40.42	92.95	90.86	49.98	279.48	86.98	42.43	263.73	21.71

Movement, Approach, & Intersection Results

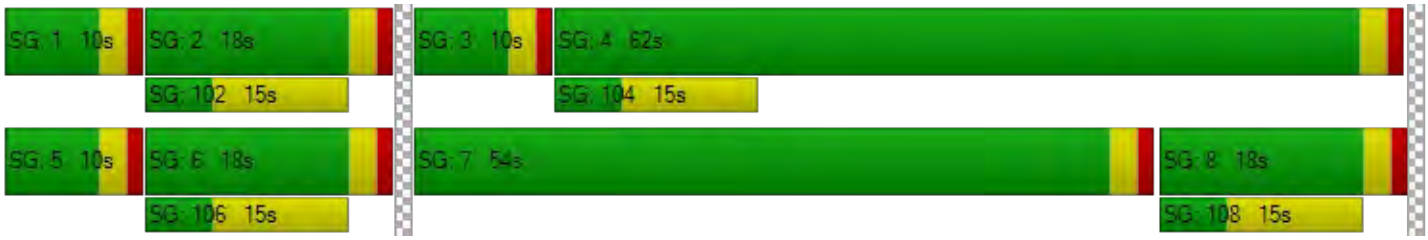
d_M, Delay for Movement [s/veh]	52.50	8.06	8.11	52.06	9.03	9.04	52.09	47.20	37.13	51.31	45.75	35.16
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	14.79			12.12			45.47			45.59		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.51											
Intersection LOS	C											
Intersection V/C	0.334											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.468	2.446	2.451	2.441
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	300	1180
d_b, Bicycle Delay [s]	36.13	36.13	36.13	8.41
l_b,int, Bicycle LOS Score for Intersection	1.827	1.939	2.211	2.071
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 29: Del Rosa Dr / 5th St

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.488

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	8	192	7	32	316	49	64	69	16	27	284	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	9	8	59	24	13	3	220	0	2	138	33
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	201	15	91	340	62	67	289	16	29	422	80
Peak Hour Factor	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090	0.8090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	62	5	28	105	19	21	89	5	9	130	25
Total Analysis Volume [veh/h]	10	248	19	112	420	77	83	357	20	36	522	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	71	0	0	71	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	C	C	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	58	58	58	58	36	36	36	36
g / C, Green / Cycle	0.58	0.58	0.58	0.58	0.36	0.36	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.21	0.20	0.28	0.21	0.22	0.22
s, saturation flow rate [veh/h]	1733	1598	1448	1569	446	1621	1396	1559
c, Capacity [veh/h]	1051	934	896	917	218	576	537	554
d1, Uniform Delay [s]	9.39	9.42	11.07	10.77	37.73	26.15	25.57	26.67
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	0.32	1.00	1.00	2.39	0.93	1.00	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.14	0.33	0.34	0.58	0.58	0.58	0.62
d, Delay for Lane Group [s/veh]	9.67	9.73	12.07	11.77	40.12	27.08	26.57	27.81
Lane Group LOS	A	A	B	B	D	C	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.45	1.33	3.60	3.62	3.09	6.46	5.80	6.82
50th-Percentile Queue Length [ft/ln]	36.17	33.37	89.92	90.52	77.34	161.39	145.05	170.59
95th-Percentile Queue Length [veh/ln]	2.60	2.40	6.47	6.52	5.57	10.62	9.75	11.11
95th-Percentile Queue Length [ft/ln]	65.11	60.07	161.85	162.94	139.22	265.57	243.81	277.69

Movement, Approach, & Intersection Results

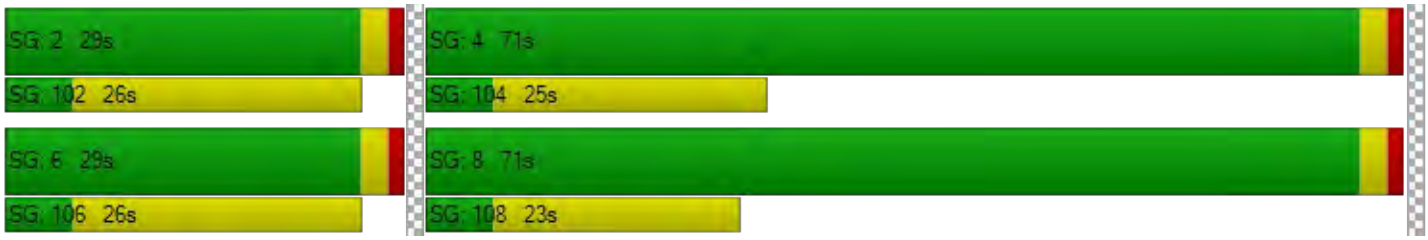
d_M, Delay for Movement [s/veh]	9.67	9.70	9.73	12.07	11.90	11.77	40.12	28.64	27.08	26.57	27.15	27.81
Movement LOS	A	A	A	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.70			11.92			30.65			27.22		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	20.93											
Intersection LOS	C											
Intersection V/C	0.488											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.372	2.509	2.412	2.689
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	520	1360	1360
d_b, Bicycle Delay [s]	27.38	27.38	5.12	5.12
l_b,int, Bicycle LOS Score for Intersection	1.788	2.062	1.939	2.102
Bicycle LOS	A	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 30: Sterling Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	8	97	2	9	330	55	22	73	11	24	269	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	15	84	13	18	48	13	220	14	24	149	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	112	86	22	348	103	35	293	25	48	418	28
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	31	24	6	97	29	10	82	7	13	116	8
Total Analysis Volume [veh/h]	32	125	96	24	388	115	39	326	28	53	465	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	44	0	0	57	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	6	0	0	6	0	0	6	0	0	6	0
Pedestrian Clearance [s]	0	13	0	0	13	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		Yes			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	62	62	62	62	62	62	27	27	27	27	27	27
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.62	0.62	0.27	0.27	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.04	0.06	0.07	0.02	0.14	0.15	0.21	0.17	0.02	0.22	0.20	0.02
s, saturation flow rate [veh/h]	910	1800	1553	1178	1800	1662	439	1638	1530	858	1638	1530
c, Capacity [veh/h]	561	1114	961	749	1114	1028	170	444	415	279	444	415
d1, Uniform Delay [s]	11.07	7.76	7.80	9.25	8.49	8.51	35.44	31.89	27.06	35.16	33.30	27.12
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.21	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.18	0.23	0.08	0.49	0.54	4.94	1.39	0.07	2.78	2.52	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.10	0.11	0.03	0.23	0.24	0.54	0.62	0.07	0.67	0.75	0.07
d, Delay for Lane Group [s/veh]	11.26	7.94	8.03	9.33	8.98	9.05	40.39	33.28	27.13	37.93	35.82	27.19
Lane Group LOS	B	A	A	A	A	A	D	C	C	D	D	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.36	0.99	0.94	0.23	2.48	2.35	2.44	5.87	0.50	4.61	7.53	0.56
50th-Percentile Queue Length [ft/ln]	8.99	24.87	23.55	5.87	62.01	58.65	61.02	146.87	12.59	115.33	188.21	13.97
95th-Percentile Queue Length [veh/ln]	0.65	1.79	1.70	0.42	4.46	4.22	4.39	9.85	0.91	8.14	12.03	1.01
95th-Percentile Queue Length [ft/ln]	16.18	44.77	42.39	10.57	111.62	105.57	109.84	246.24	22.67	203.39	300.71	25.15

Movement, Approach, & Intersection Results

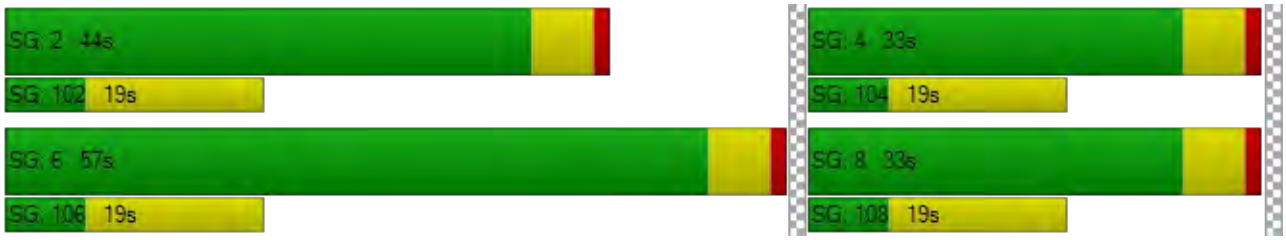
d_M, Delay for Movement [s/veh]	11.26	7.95	8.03	9.33	9.00	9.05	40.39	34.43	27.13	37.93	36.43	27.19
Movement LOS	B	A	A	A	A	A	D	C	C	D	D	C
d_A, Approach Delay [s/veh]	8.40			9.03			34.50			36.05		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	23.36											
Intersection LOS	C											
Intersection V/C	0.364											

Other Modes

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	40.50	40.50	40.50	40.50
l_p,int, Pedestrian LOS Score for Intersection	2.651	2.502	2.547	2.534
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	770	1030	550	550
d_b, Bicycle Delay [s]	18.91	11.76	26.28	26.28
l_b,int, Bicycle LOS Score for Intersection	1.768	1.994	1.884	2.013
Bicycle LOS	A	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 31: Victoria Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

Intersection Setup

Name										5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name										5th Street		
Base Volume Input [veh/h]	1	74	13	76	230	30	9	60	3	257	266	78
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	9	0	15	17	13	25	196	0	0	262	34
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	83	13	91	247	43	34	256	3	257	528	112
Peak Hour Factor	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	22	3	24	66	11	9	68	1	68	140	30
Total Analysis Volume [veh/h]	3	88	14	97	262	46	36	272	3	273	561	119
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.8	0.0	0.0	4.8	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	28	0	0	28	0
Vehicle Extension [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.8	0.0	0.0	3.8	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		Yes			Yes			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.80	5.80	5.80	5.80	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.80	3.80	3.80	3.80	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	11	11	11	11	33	33	33	33
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.14	0.12	0.05	0.15	0.24	0.39
s, saturation flow rate [veh/h]	1694	1562	1491	1571	772	1797	1122	1746
c, Capacity [veh/h]	396	301	383	303	322	1065	637	1035
d1, Uniform Delay [s]	18.47	18.52	21.01	20.40	16.33	5.39	10.95	7.48
k, delay calibration	0.15	0.15	0.15	0.15	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.37	1.81	3.08	0.70	0.59	2.10	3.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.17	0.56	0.63	0.11	0.26	0.43	0.66
d, Delay for Lane Group [s/veh]	18.70	18.89	22.83	23.48	17.03	5.98	13.05	10.74
Lane Group LOS	B	B	C	C	B	A	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.55	0.53	2.55	2.31	0.39	1.27	2.37	4.69
50th-Percentile Queue Length [ft/ln]	13.76	13.17	63.83	57.81	9.72	31.66	59.14	117.16
95th-Percentile Queue Length [veh/ln]	0.99	0.95	4.60	4.16	0.70	2.28	4.26	8.24
95th-Percentile Queue Length [ft/ln]	24.76	23.70	114.89	104.06	17.50	56.99	106.45	205.91

Movement, Approach, & Intersection Results

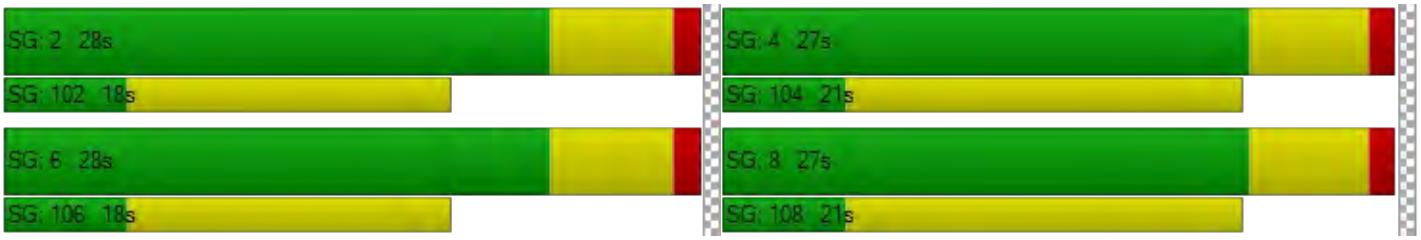
d_M, Delay for Movement [s/veh]	18.70	18.78	18.89	22.83	23.19	23.48	17.03	5.98	5.98	13.05	10.74	10.74
Movement LOS	B	B	B	C	C	C	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	18.79			23.14			7.26			11.40		
Approach LOS	B			C			A			B		
d_I, Intersection Delay [s/veh]	13.79											
Intersection LOS	B											
Intersection V/C	0.533											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersection	2.652	2.453	2.220	2.571
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	771	771	800	800
d_b, Bicycle Delay [s]	10.39	10.39	9.90	9.90
l_b,int, Bicycle LOS Score for Intersection	1.646	1.894	2.073	3.132
Bicycle LOS	A	A	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 32: Central Avenue / 5th Street

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.428

Intersection Setup

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	5	19	4	42	56	33	15	191	14	33	683	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	56	0	4	4	161	0	0	320	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	19	4	98	56	37	19	352	14	33	1003	70
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	1	26	15	10	5	92	4	9	263	18
Total Analysis Volume [veh/h]	5	20	4	103	59	39	20	369	15	35	1052	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	47	63	0	10	17	0	10	17	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	15	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	1	3	8	10	3	73	73	4	74	74
g / C, Green / Cycle	0.01	0.03	0.08	0.10	0.03	0.73	0.73	0.04	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.06	0.06	0.01	0.11	0.11	0.02	0.31	0.05
s, saturation flow rate [veh/h]	1619	1651	1714	1682	1619	1800	1775	1619	3427	1530
c, Capacity [veh/h]	15	58	133	173	49	1303	1286	71	2528	1129
d1, Uniform Delay [s]	49.22	47.26	45.28	42.72	47.63	4.26	4.27	46.74	4.96	3.61
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.29	4.76	9.28	2.89	5.49	0.24	0.24	5.29	0.51	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.42	0.78	0.57	0.41	0.15	0.15	0.50	0.42	0.06
d, Delay for Lane Group [s/veh]	61.51	52.02	54.56	45.61	53.13	4.50	4.51	52.03	5.47	3.72
Lane Group LOS	E	D	D	D	D	A	A	D	A	A
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.18	0.66	2.84	2.43	0.56	1.11	1.11	0.95	3.50	0.37
50th-Percentile Queue Length [ft/ln]	4.38	16.47	70.90	60.85	14.03	27.85	27.64	23.77	87.46	9.25
95th-Percentile Queue Length [veh/ln]	0.32	1.19	5.10	4.38	1.01	2.00	1.99	1.71	6.30	0.67
95th-Percentile Queue Length [ft/ln]	7.88	29.65	127.62	109.52	25.26	50.12	49.75	42.79	157.43	16.65

Movement, Approach, & Intersection Results

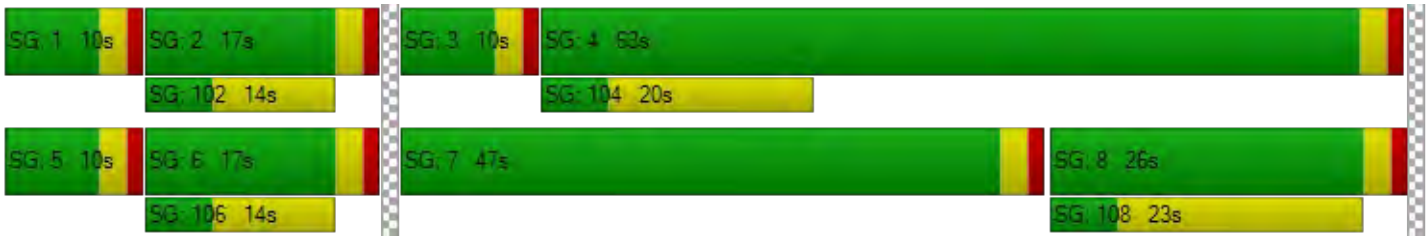
d_M, Delay for Movement [s/veh]	61.51	52.02	52.02	54.56	45.61	45.61	53.13	4.51	4.51	52.03	5.47	3.72
Movement LOS	E	D	D	D	D	D	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	53.66			50.19			6.91			6.76		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	12.42											
Intersection LOS	B											
Intersection V/C	0.428											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	1.992	2.049	2.599	2.725
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	1200	280	280
d_b, Bicycle Delay [s]	29.65	8.00	36.98	36.98
l_b,int, Bicycle LOS Score for Intersection	1.607	1.891	1.893	2.517
Bicycle LOS	A	A	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 33: Palm Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	81.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.716

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	33	150	258	125	584	73	11	203	63	358	568	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	2	3	6	6	10	0	148	5	101	382	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	152	261	131	590	83	11	351	68	459	950	92
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	42	71	36	162	23	3	96	19	126	260	25
Total Analysis Volume [veh/h]	47	166	286	143	646	91	12	384	74	503	1041	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	0	12	35	0	18	34	0	21	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	0	0	27	0	0	26	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	41	41	9	45	45	2	20	20	18	36	36
g / C, Green / Cycle	0.05	0.41	0.41	0.09	0.45	0.45	0.02	0.20	0.20	0.18	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.03	0.05	0.20	0.09	0.19	0.06	0.01	0.12	0.05	0.31	0.32	0.07
s, saturation flow rate [veh/h]	1619	3237	1445	1619	3427	1530	1619	3237	1445	1619	3237	1445
c, Capacity [veh/h]	83	1332	595	146	1544	689	34	642	287	291	1157	517
d1, Uniform Delay [s]	46.36	18.24	21.58	45.42	18.60	16.05	48.29	36.46	33.87	41.00	30.43	22.19
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.97	0.19	2.77	30.40	0.84	0.40	6.21	0.90	0.47	340.77	2.84	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.12	0.48	0.98	0.42	0.13	0.36	0.60	0.26	1.73	0.90	0.20
d, Delay for Lane Group [s/veh]	52.33	18.43	24.35	75.81	19.44	16.45	54.51	37.36	34.34	381.77	33.26	22.38
Lane Group LOS	D	B	C	E	B	B	D	D	C	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.27	1.21	5.25	4.74	5.10	1.27	0.35	4.31	1.55	34.66	11.93	1.65
50th-Percentile Queue Length [ft/ln]	31.84	30.30	131.31	118.57	127.54	31.81	8.81	107.63	38.76	866.41	298.37	41.27
95th-Percentile Queue Length [veh/ln]	2.29	2.18	9.01	8.31	8.81	2.29	0.63	7.71	2.79	54.49	17.60	2.97
95th-Percentile Queue Length [ft/ln]	57.31	54.54	225.27	207.86	220.14	57.26	15.86	192.70	69.76	1362.36	440.02	74.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.33	18.43	24.35	75.81	19.44	16.45	54.51	37.36	34.34	381.77	33.26	22.38
Movement LOS	D	B	C	E	B	B	D	D	C	F	C	C
d_A, Approach Delay [s/veh]	25.02			28.29			37.32			139.16		
Approach LOS	C			C			D			F		
d_I, Intersection Delay [s/veh]	81.24											
Intersection LOS	F											
Intersection V/C	0.716											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.840	2.648	2.933	2.859
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	640	620	680
d_b, Bicycle Delay [s]	24.50	23.12	23.81	21.78
l_b,int, Bicycle LOS Score for Intersection	1.971	2.286	1.947	2.917
Bicycle LOS	A	B	A	C

Sequence

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

Intersection Level Of Service Report
Intersection 34: Church Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.600

Intersection Setup

Name	Church Ave		5th Street		5th Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Church Ave		5th Street		5th Street	
Base Volume Input [veh/h]	154	84	25	564	983	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	99	521	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	154	84	25	663	1504	70
Peak Hour Factor	0.9140	0.9140	0.9140	0.9140	0.9140	0.9140
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	23	7	181	411	19
Total Analysis Volume [veh/h]	168	92	27	725	1646	77
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	32	0	10	68	58	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	12	4	82	75	75
g / C, Green / Cycle	0.12	0.12	0.04	0.82	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.10	0.06	0.02	0.21	0.48	0.49
s, saturation flow rate [veh/h]	1714	1530	1714	3427	1800	1772
c, Capacity [veh/h]	210	187	64	2802	1350	1329
d1, Uniform Delay [s]	42.70	40.98	47.07	2.11	5.98	6.07
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.93	1.99	4.32	0.22	2.32	2.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.49	0.42	0.26	0.64	0.65
d, Delay for Lane Group [s/veh]	49.63	42.97	51.39	2.33	8.30	8.53
Lane Group LOS	D	D	D	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.41	2.21	0.73	1.08	7.52	7.66
50th-Percentile Queue Length [ft/ln]	110.28	55.24	18.29	27.01	188.04	191.43
95th-Percentile Queue Length [veh/ln]	7.86	3.98	1.32	1.94	12.02	12.20
95th-Percentile Queue Length [ft/ln]	196.40	99.44	32.93	48.61	300.48	304.88

Movement, Approach, & Intersection Results

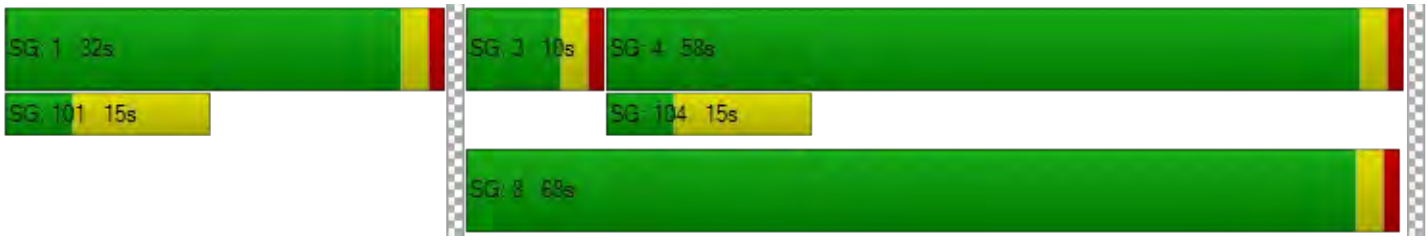
d_M, Delay for Movement [s/veh]	49.63	42.97	51.39	2.33	8.41	8.53
Movement LOS	D	D	D	A	A	A
d_A, Approach Delay [s/veh]	47.28		4.09		8.41	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	10.92					
Intersection LOS	B					
Intersection V/C	0.600					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.065	2.792	2.775
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.753	5.554
Bicycle LOS	D	E	F

Sequence

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



Intersection Level Of Service Report
Intersection 35: SR-210 EB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.876

Intersection Setup

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	122	7	121	0	326	396	745	951	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	240	0	80	53	0	281	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	122	7	361	0	406	449	745	1232	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.8920	0.8920	0.8920	1.0000	0.8920	0.8920	0.8920	0.8920	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	34	2	101	0	114	126	209	345	0
Total Analysis Volume [veh/h]	0	0	0	137	8	405	0	455	503	835	1381	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	10	0	0	51	0	39	90	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	12	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		24	24	36	36	31	70
g / C, Green / Cycle		0.24	0.24	0.36	0.36	0.31	0.70
(v / s)_i Volume / Saturation Flow Rate		0.08	0.26	0.13	0.33	0.28	0.40
s, saturation flow rate [veh/h]		1719	1530	3427	1530	2959	3427
c, Capacity [veh/h]		414	368	1233	550	916	2397
d1, Uniform Delay [s]		31.48	37.97	23.63	30.53	33.20	7.57
k, delay calibration		0.50	0.50	0.11	0.19	0.11	0.23
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.33	76.53	0.18	10.58	3.97	0.46
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.35	1.10	0.37	0.91	0.91	0.58
d, Delay for Lane Group [s/veh]		33.81	114.49	23.82	41.11	37.18	8.03
Lane Group LOS		C	F	C	D	D	A
Critical Lane Group		No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		3.15	16.65	3.94	12.79	9.99	6.50
50th-Percentile Queue Length [ft/ln]		78.69	416.19	98.58	319.77	249.74	162.56
95th-Percentile Queue Length [veh/ln]		5.67	24.61	7.10	18.66	15.17	10.68
95th-Percentile Queue Length [ft/ln]		141.64	615.31	177.44	466.41	379.32	267.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	33.81	33.81	114.49	0.00	23.82	41.11	37.18	8.03	0.00
Movement LOS				C	C	F		C	D	D	A	
d_A, Approach Delay [s/veh]	0.00			93.22			32.90			19.01		
Approach LOS	A			F			C			B		
d_I, Intersection Delay [s/veh]	33.55											
Intersection LOS	C											
Intersection V/C	0.876											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.842	2.992
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	140	960	1740
d_b, Bicycle Delay [s]	50.00	43.25	13.52	0.85
l_b,int, Bicycle LOS Score for Intersection	4.132	2.467	2.350	3.388
Bicycle LOS	D	B	B	C

Sequence

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

Intersection Level Of Service Report
Intersection 36: SR-210 WB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.612

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No						No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	363	0	319	0	0	0	82	371	0	0	1336	392
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	242	0	0	0	0	0	74	6	0	0	39	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	605	0	319	0	0	0	156	377	0	0	1375	392
Peak Hour Factor	0.9040	0.9040	0.9040	1.0000	1.0000	1.0000	0.9040	0.9040	1.0000	1.0000	0.9040	0.9040
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	167	0	88	0	0	0	43	104	0	0	380	108
Total Analysis Volume [veh/h]	669	0	353	0	0	0	173	417	0	0	1521	434
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	23	0	0	0	0	16	77	0	0	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	24	0	0	15	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	39	39	39		12	55	40	40
g / C, Green / Cycle	0.39	0.39	0.39		0.12	0.55	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.20	0.20	0.13		0.11	0.12	0.31	0.28
s, saturation flow rate [veh/h]	1714	1714	2708		1619	3427	4903	1530
c, Capacity [veh/h]	663	663	1047		201	1897	1958	611
d1, Uniform Delay [s]	23.37	23.37	21.63		42.95	11.35	26.16	25.19
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.73	2.73	0.87		10.31	0.06	0.69	1.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.50	0.34		0.86	0.22	0.78	0.71
d, Delay for Lane Group [s/veh]	26.11	26.11	22.50		53.26	11.41	26.84	26.73
Lane Group LOS	C	C	C		D	B	C	C
Critical Lane Group	Yes	No	No		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.38	6.38	3.00		4.73	2.28	10.27	8.63
50th-Percentile Queue Length [ft/ln]	159.54	159.54	74.94		118.24	56.94	256.87	215.72
95th-Percentile Queue Length [veh/ln]	10.52	10.52	5.40		8.30	4.10	15.53	13.45
95th-Percentile Queue Length [ft/ln]	263.12	263.12	134.89		207.40	102.50	388.29	336.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.11	26.11	22.50	0.00	0.00	0.00	53.26	11.41	0.00	0.00	26.84	26.73
Movement LOS	C	C	C				D	B			C	C
d_A, Approach Delay [s/veh]	24.86			0.00			23.68			26.82		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	25.74											
Intersection LOS	C											
Intersection V/C	0.612											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.988	2.902
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	0	1480	1160
d_b, Bicycle Delay [s]	32.00	50.00	3.38	8.82
l_b,int, Bicycle LOS Score for Intersection	3.246	4.132	2.046	2.635
Bicycle LOS	C	D	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 37: Tippecanoe Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name				Tippecanoe Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Tippecanoe Avenue								
Base Volume Input [veh/h]	58	265	176	37	500	32	30	170	44	302	549	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	72	139	51	14	0	0	42	0	28	3	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	337	315	88	514	32	30	212	44	330	552	35
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	89	83	23	136	8	8	56	12	87	146	9
Total Analysis Volume [veh/h]	61	355	332	93	542	34	32	224	46	348	582	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	20	20	10	18	0	10	32	0	38	60	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	57	57	7	58	58	4	10	10	14	20	20
g / C, Green / Cycle	0.06	0.57	0.57	0.07	0.58	0.58	0.04	0.10	0.10	0.14	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.04	0.10	0.22	0.06	0.16	0.16	0.02	0.08	0.08	0.11	0.17	0.02
s, saturation flow rate [veh/h]	1619	3427	1530	1619	1800	1763	1619	1800	1696	3144	3427	1530
c, Capacity [veh/h]	93	1950	871	113	1047	1025	67	186	175	433	684	305
d1, Uniform Delay [s]	46.16	10.36	11.86	45.88	10.44	10.44	46.87	43.53	43.63	41.80	38.59	32.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.62	0.21	1.27	13.45	0.66	0.68	5.17	5.63	6.59	3.53	3.11	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.18	0.38	0.82	0.28	0.28	0.48	0.74	0.76	0.80	0.85	0.12
d, Delay for Lane Group [s/veh]	53.78	10.57	13.13	59.33	11.10	11.12	52.04	49.15	50.21	45.33	41.70	33.01
Lane Group LOS	D	B	B	E	B	B	D	D	D	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.67	1.85	4.15	2.69	3.21	3.16	0.87	3.56	3.50	4.34	7.08	0.75
50th-Percentile Queue Length [ft/ln]	41.85	46.28	103.80	67.20	80.34	78.97	21.79	89.03	87.42	108.41	177.08	18.73
95th-Percentile Queue Length [veh/ln]	3.01	3.33	7.47	4.84	5.78	5.69	1.57	6.41	6.29	7.75	11.45	1.35
95th-Percentile Queue Length [ft/ln]	75.32	83.31	186.85	120.95	144.61	142.15	39.22	160.25	157.36	193.78	286.20	33.71

Movement, Approach, & Intersection Results

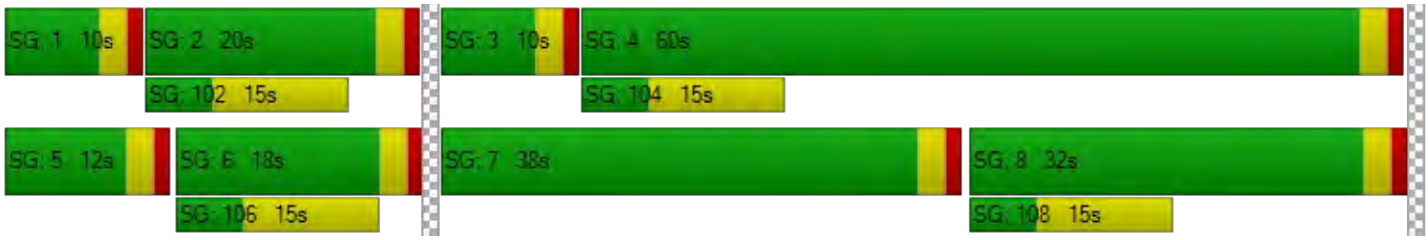
d_M, Delay for Movement [s/veh]	53.78	10.57	13.13	59.33	11.11	11.12	52.04	49.56	50.21	45.33	41.70	33.01
Movement LOS	D	B	B	E	B	B	D	D	D	D	D	C
d_A, Approach Delay [s/veh]	15.23			17.81			49.93			42.67		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.65											
Intersection LOS	C											
Intersection V/C	0.464											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.733	2.520	2.497	2.929
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	340	300	580	1140
d_b, Bicycle Delay [s]	34.45	36.13	25.21	9.25
l_b,int, Bicycle LOS Score for Intersection	2.177	2.112	1.809	2.357
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 38: Del Rosa Dr / 3rd St

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.454

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	89	97	26	228	86	73	210	28	230	815	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	9	0	17	15	191	0	0	60	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	89	97	35	228	103	88	401	28	230	875	14
Peak Hour Factor	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	25	27	10	63	29	24	111	8	64	243	4
Total Analysis Volume [veh/h]	14	99	108	39	253	114	98	445	31	255	971	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	18	10	18	0	10	37	0	35	62	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	46	60	5	48	48	7	26	26	11	31	31
g / C, Green / Cycle	0.02	0.46	0.60	0.05	0.48	0.48	0.07	0.26	0.26	0.11	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.07	0.02	0.11	0.11	0.06	0.13	0.02	0.09	0.27	0.28
s, saturation flow rate [veh/h]	1619	3427	1530	1619	1800	1616	1619	3427	1530	2959	1800	1790
c, Capacity [veh/h]	38	1561	919	76	862	774	113	900	402	341	554	551
d1, Uniform Delay [s]	48.11	15.26	8.58	46.56	15.18	15.24	46.03	31.25	27.75	42.84	33.05	33.05
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.96	0.08	0.26	5.36	0.59	0.69	17.12	0.42	0.08	3.30	5.30	5.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.06	0.12	0.52	0.22	0.23	0.86	0.49	0.08	0.75	0.89	0.89
d, Delay for Lane Group [s/veh]	54.08	15.34	8.84	51.92	15.77	15.93	63.15	31.67	27.83	46.14	38.34	38.39
Lane Group LOS	D	B	A	D	B	B	E	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.41	0.64	1.02	1.06	2.60	2.45	2.93	4.55	0.57	3.19	11.97	11.92
50th-Percentile Queue Length [ft/ln]	10.13	16.01	25.55	26.39	65.04	61.15	73.32	113.68	14.13	79.67	299.31	297.94
95th-Percentile Queue Length [veh/ln]	0.73	1.15	1.84	1.90	4.68	4.40	5.28	8.04	1.02	5.74	17.65	17.58
95th-Percentile Queue Length [ft/ln]	18.23	28.81	46.00	47.50	117.08	110.07	131.98	201.11	25.43	143.41	441.17	439.48

Movement, Approach, & Intersection Results

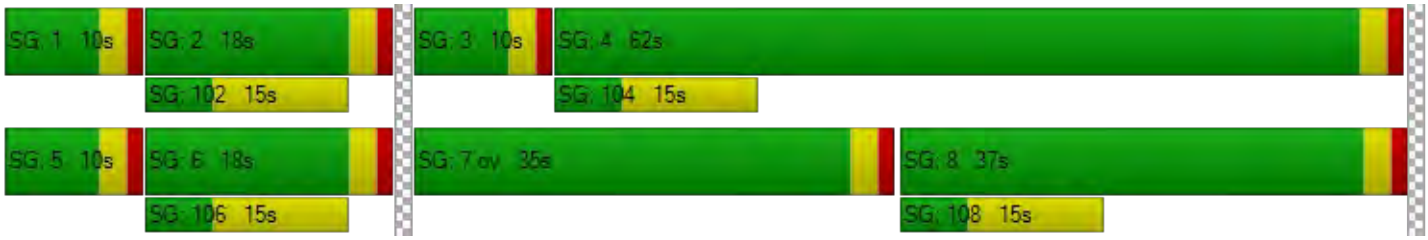
d_M, Delay for Movement [s/veh]	54.08	15.34	8.84	51.92	15.81	15.93	63.15	31.67	27.83	46.14	38.37	38.39
Movement LOS	D	B	A	D	B	B	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	14.61			19.31			36.84			39.96		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	33.50											
Intersection LOS	C											
Intersection V/C	0.454											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.583	2.427	2.731	2.856
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	680	1180
d_b, Bicycle Delay [s]	36.13	36.13	21.78	8.41
l_b,int, Bicycle LOS Score for Intersection	1.742	1.895	2.033	2.584
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 39: Sterling Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.582

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	39	333	98	223	795	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	33	95	79	40	25
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	366	193	302	835	48
Peak Hour Factor	0.8670	0.8670	0.8670	0.8670	0.8670	0.8670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	106	56	87	241	14
Total Analysis Volume [veh/h]	72	422	223	348	963	55
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	53	0	11	47	36	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	18	18	16	76	57	57
g / C, Green / Cycle	0.18	0.18	0.16	0.76	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.04	0.16	0.14	0.10	0.28	0.29
s, saturation flow rate [veh/h]	1714	2708	1619	3427	1800	1766
c, Capacity [veh/h]	316	499	255	2590	1023	1004
d1, Uniform Delay [s]	34.73	39.42	41.15	3.32	13.00	13.10
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	4.04	9.09	0.11	1.73	1.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.85	0.87	0.13	0.50	0.51
d, Delay for Lane Group [s/veh]	35.10	43.46	50.24	3.43	14.73	14.93
Lane Group LOS	D	D	D	A	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.52	5.22	5.94	0.79	6.97	7.04
50th-Percentile Queue Length [ft/ln]	37.96	130.59	148.62	19.84	174.30	175.99
95th-Percentile Queue Length [veh/ln]	2.73	8.97	9.94	1.43	11.30	11.39
95th-Percentile Queue Length [ft/ln]	68.32	224.29	248.59	35.72	282.56	284.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.10	43.46	50.24	3.43	14.83	14.93
Movement LOS	D	D	D	A	B	B
d_A, Approach Delay [s/veh]	42.24		21.71		14.83	
Approach LOS	D		C		B	
d_I, Intersection Delay [s/veh]	23.22					
Intersection LOS	C					
Intersection V/C	0.582					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.457	2.688	2.488
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.603	4.972
Bicycle LOS	D	E	E

Sequence

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

Intersection Level Of Service Report
Intersection 40: Victoria Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	12	10	22	55	30	452	82	156	24	23	328	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	11	0	6	2	73	0	0	86	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	10	22	66	30	458	84	229	24	23	414	22
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	3	6	18	8	128	23	64	7	6	115	6
Total Analysis Volume [veh/h]	13	11	24	73	33	510	94	255	27	26	461	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	32	0	25	47	0	10	33	0	10	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	24	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	32	32	6	36	36	7	47	47	4	43	43
g / C, Green / Cycle	0.02	0.32	0.32	0.06	0.36	0.36	0.07	0.47	0.47	0.04	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.02	0.05	0.02	0.33	0.06	0.08	0.08	0.02	0.14	0.14
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1530	1619	1800	1741	1619	1800	1769
c, Capacity [veh/h]	35	569	484	100	642	545	118	838	811	59	773	759
d1, Uniform Delay [s]	48.25	23.54	23.76	46.07	21.09	31.06	45.65	15.50	15.52	47.20	18.84	18.85
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.24	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.43	0.01	0.04	9.56	0.03	15.10	11.70	0.44	0.46	5.16	1.07	1.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.02	0.05	0.73	0.05	0.94	0.80	0.17	0.17	0.44	0.32	0.32
d, Delay for Lane Group [s/veh]	54.69	23.55	23.81	55.63	21.13	46.16	57.35	15.94	15.98	52.35	19.91	19.94
Lane Group LOS	D	C	C	E	C	D	E	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	0.18	0.40	2.04	0.51	13.76	2.66	1.95	1.92	0.72	3.89	3.85
50th-Percentile Queue Length [ft/ln]	9.52	4.51	9.96	50.98	12.75	343.92	66.62	48.78	47.90	17.88	97.28	96.14
95th-Percentile Queue Length [veh/ln]	0.69	0.32	0.72	3.67	0.92	19.84	4.80	3.51	3.45	1.29	7.00	6.92
95th-Percentile Queue Length [ft/ln]	17.14	8.12	17.92	91.77	22.94	495.99	119.92	87.80	86.23	32.19	175.11	173.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.69	23.55	23.81	55.63	21.13	46.16	57.35	15.96	15.98	52.35	19.93	19.94
Movement LOS	D	C	C	E	C	D	E	B	B	D	B	B
d_A, Approach Delay [s/veh]	32.11			45.95			26.31			21.58		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	32.73											
Intersection LOS	C											
Intersection V/C	0.536											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.333	2.452	2.572	2.475
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	880	600	600
d_b, Bicycle Delay [s]	25.21	15.68	24.50	24.50
l_b,int, Bicycle LOS Score for Intersection	1.599	2.068	1.870	1.981
Bicycle LOS	A	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 41: Central Ave / 3rd St

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.073

Intersection Setup

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

Volumes

Name				Central Avenue								
Base Volume Input [veh/h]	0	0	0	22	0	70	20	216	0	0	306	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	67	0	0	102	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	22	0	70	20	283	0	0	408	3
Peak Hour Factor	0.8820	0.8820	0.8820	0.8820	1.0000	0.8820	0.8820	0.8820	1.0000	1.0000	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	6	0	20	6	80	0	0	116	1
Total Analysis Volume [veh/h]	0	0	0	25	0	79	23	321	0	0	463	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

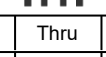
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.10	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.45	16.99	9.17	16.86	0.00	10.93	8.32	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	C	A	C		B	A	A			A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.63	0.00	0.63	0.06	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	15.78	0.00	15.78	1.59	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.87			12.35			0.56			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	1.62											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 42: Palm Ave_Alabama St / 3rd St

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.469

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	170	364	6	30	800	149	106	3	0	6	5	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	13	0	9	5	98	2	39	1	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	197	377	6	39	805	247	108	42	1	6	6	45
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	1.0000	0.9090	1.0000	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	104	2	11	221	68	30	12	0	2	2	12
Total Analysis Volume [veh/h]	217	415	7	43	886	272	119	46	1	7	6	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	26	0	32	31	0	10	31	0	11	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	15	71	71	5	60	60	7	11	1	6
g / C, Green / Cycle	0.15	0.71	0.71	0.05	0.60	0.60	0.07	0.11	0.01	0.06
(v / s)_i Volume / Saturation Flow Rate	0.13	0.12	0.12	0.03	0.26	0.18	0.04	0.03	0.00	0.04
s, saturation flow rate [veh/h]	1619	1800	1789	1619	3427	1530	2959	1800	1619	1555
c, Capacity [veh/h]	249	1272	1265	81	2065	922	200	200	20	87
d1, Uniform Delay [s]	41.34	4.87	4.88	46.38	10.65	9.61	45.31	40.56	48.96	46.21
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.11	0.28	0.28	5.39	0.65	0.82	2.83	0.58	9.58	7.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.17	0.17	0.53	0.43	0.30	0.60	0.23	0.34	0.64
d, Delay for Lane Group [s/veh]	50.44	5.16	5.16	51.78	11.31	10.42	48.14	41.14	58.54	53.82
Lane Group LOS	D	A	A	D	B	B	D	D	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.80	1.36	1.35	1.16	5.05	2.90	1.51	1.06	0.23	1.54
50th-Percentile Queue Length [ft/ln]	144.94	33.88	33.72	29.00	126.30	72.56	37.64	26.56	5.68	38.52
95th-Percentile Queue Length [veh/ln]	9.75	2.44	2.43	2.09	8.74	5.22	2.71	1.91	0.41	2.77
95th-Percentile Queue Length [ft/ln]	243.66	60.99	60.70	52.19	218.46	130.60	67.75	47.81	10.22	69.34

Movement, Approach, & Intersection Results

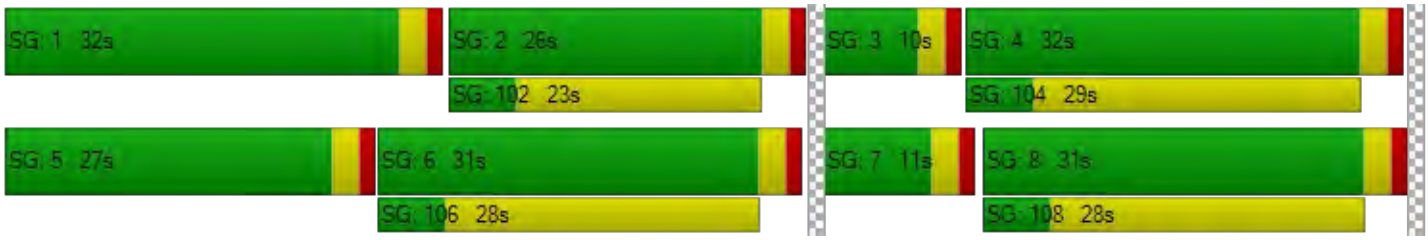
d_M, Delay for Movement [s/veh]	50.44	5.16	5.16	51.78	11.31	10.42	48.14	41.14	0.00	58.54	53.82	53.82
Movement LOS	D	A	A	D	B	B	D	D		E	D	D
d_A, Approach Delay [s/veh]	20.54			12.56			46.19			54.34		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	18.98											
Intersection LOS	B											
Intersection V/C	0.469											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.605	2.849	2.435	1.998
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	560	560	580
d_b, Bicycle Delay [s]	29.65	25.92	25.92	25.21
l_b,int, Bicycle LOS Score for Intersection	2.087	2.550	1.832	1.664
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 43: Tippecanoe Ave / Rialto Ave

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.373

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	66	451	0	0	692	81	85	0	94	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	2	4	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	658	0	0	732	83	89	0	94	0	0	0
Peak Hour Factor	0.8920	0.8920	1.0000	0.8920	0.8920	0.8920	0.8920	1.0000	0.8920	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	184	0	0	205	23	25	0	26	0	0	0
Total Analysis Volume [veh/h]	74	738	0	0	821	93	100	0	105	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	0	8	0	0	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	0	7	0	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	30	0	0	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Split [s]	10	18	0	10	18	0	72	0	72	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No		No		No			
Maximum Recall	No	No		No	No		No		No			
Pedestrian Recall	No	No		No	No		No		No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	6	82	0	76	76	9	9	
g / C, Green / Cycle	0.06	0.82	0.00	0.76	0.76	0.09	0.09	
(v / s)_i Volume / Saturation Flow Rate	0.05	0.22	0.00	0.26	0.26	0.06	0.07	
s, saturation flow rate [veh/h]	1619	3427	1619	1800	1737	1714	1530	
c, Capacity [veh/h]	99	2821	0	1372	1324	149	133	
d1, Uniform Delay [s]	46.19	2.00	0.00	3.81	3.81	44.29	44.78	
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	10.69	0.23	0.00	0.67	0.70	5.19	10.05	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.75	0.26	0.00	0.34	0.34	0.67	0.79	
d, Delay for Lane Group [s/veh]	56.88	2.22	0.00	4.48	4.51	49.48	54.83	
Lane Group LOS	E	A	A	A	A	D	D	
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	
50th-Percentile Queue Length [veh/ln]	2.09	1.03	0.00	2.58	2.50	2.60	2.91	
50th-Percentile Queue Length [ft/ln]	52.31	25.82	0.00	64.42	62.38	65.11	72.69	
95th-Percentile Queue Length [veh/ln]	3.77	1.86	0.00	4.64	4.49	4.69	5.23	
95th-Percentile Queue Length [ft/ln]	94.16	46.47	0.00	115.96	112.29	117.20	130.84	

Movement, Approach, & Intersection Results

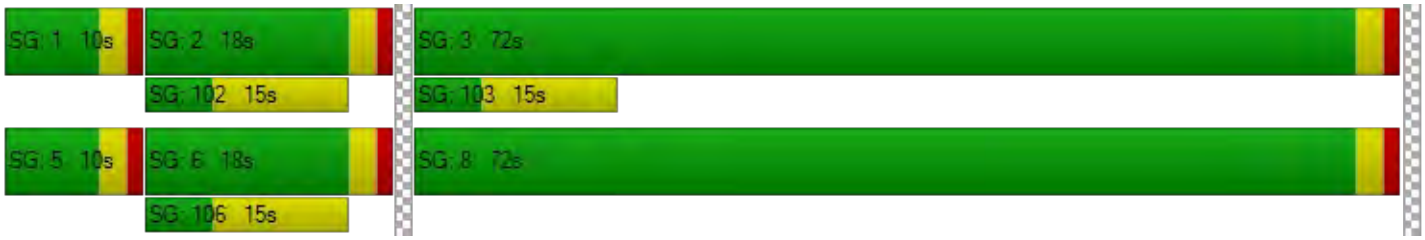
d_M, Delay for Movement [s/veh]	56.88	2.22	0.00	0.00	4.49	4.51	49.48	0.00	54.83	0.00	0.00	0.00
Movement LOS	E	A		A	A	A	D		D			
d_A, Approach Delay [s/veh]	7.20			4.50			52.22			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	10.70											
Intersection LOS	B											
Intersection V/C	0.373											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.742	0.000	2.068	1.430
Crosswalk LOS	B	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	0	0
d_b, Bicycle Delay [s]	36.13	36.13	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	2.230	2.314	4.132	4.132
Bicycle LOS	B	B	D	D

Sequence

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



Intersection Level Of Service Report
Intersection 44: Tippecanoe Ave / Mill St

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	6	722	142	167	602	4	30	14	5	120	38	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	929	142	167	642	4	30	14	5	120	38	165
Peak Hour Factor	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	258	39	46	179	1	8	4	1	33	11	46
Total Analysis Volume [veh/h]	7	1033	158	186	714	4	33	16	6	133	42	184
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	7	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	22	0	38	50	50	16	27	0	13	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	Yes	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	1	55	55	14	67	67	23	23	11	23	14	14
g / C, Green / Cycle	0.01	0.55	0.55	0.14	0.67	0.67	0.23	0.23	0.11	0.23	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.00	0.23	0.23	0.11	0.21	0.00	0.01	0.02	0.00	0.09	0.01	0.12
s, saturation flow rate [veh/h]	1619	3427	1681	1619	3427	1530	1450	1585	1530	1412	3427	1530
c, Capacity [veh/h]	20	1879	921	219	2300	1027	418	454	163	351	495	221
d1, Uniform Delay [s]	48.98	13.31	13.32	42.23	6.83	5.42	30.30	30.41	40.06	35.68	37.06	41.61
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.06	0.71	1.44	8.82	0.35	0.01	0.05	0.06	0.09	0.67	0.07	7.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.43	0.43	0.85	0.31	0.00	0.05	0.06	0.04	0.38	0.08	0.83
d, Delay for Lane Group [s/veh]	59.04	14.01	14.76	51.06	7.18	5.43	30.35	30.46	40.15	36.35	37.13	49.54
Lane Group LOS	E	B	B	D	A	A	C	C	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.23	5.22	5.32	4.98	2.93	0.03	0.39	0.55	0.14	2.92	0.45	4.85
50th-Percentile Queue Length [ft/ln]	5.72	130.40	132.94	124.46	73.27	0.68	9.63	13.81	3.40	73.09	11.22	121.37
95th-Percentile Queue Length [veh/ln]	0.41	8.96	9.10	8.64	5.28	0.05	0.69	0.99	0.24	5.26	0.81	8.47
95th-Percentile Queue Length [ft/ln]	10.29	224.04	227.48	215.94	131.89	1.22	17.34	24.86	6.12	131.55	20.20	211.70

Movement, Approach, & Intersection Results

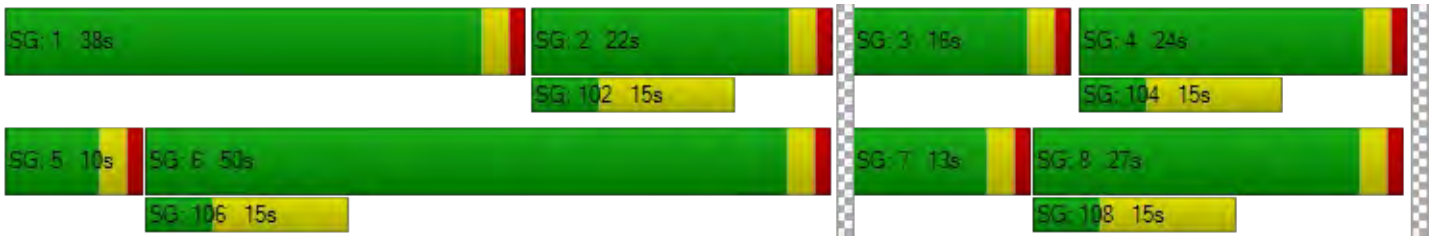
d_M, Delay for Movement [s/veh]	59.04	14.18	14.76	51.06	7.18	5.43	30.39	30.46	40.15	36.35	37.13	49.54
Movement LOS	E	B	B	D	A	A	C	C	D	D	D	D
d_A, Approach Delay [s/veh]	14.52			16.20			31.48			43.20		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	19.59											
Intersection LOS	B											
Intersection V/C	0.485											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.075	2.946	2.328	2.447
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	940	740	420
d_b, Bicycle Delay [s]	32.81	14.05	19.85	31.21
l_b,int, Bicycle LOS Score for Intersection	2.219	2.305	1.650	1.856
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 45: Tippecanoe Ave / Central Ave

Control Type:	Signalized	Delay (sec / veh):	23.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.452

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	1	2	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	45	562	127	238	626	100	82	204	46	26	95	195
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	769	127	238	666	100	82	204	46	26	95	195
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	209	35	65	181	27	22	55	13	7	26	53
Total Analysis Volume [veh/h]	49	837	138	259	725	109	89	222	50	28	103	212
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	5	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2			6			8			4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	10	18	18	13	21	21	10	59	59	10	59	59
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	10	10	0	10	10	0	10	10	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	55	55	10	60	60	7	19	19	4	16	16
g / C, Green / Cycle	0.05	0.55	0.55	0.10	0.60	0.60	0.07	0.19	0.19	0.04	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.09	0.09	0.15	0.07	0.05	0.06	0.03	0.02	0.03	0.14
s, saturation flow rate [veh/h]	2959	4903	1530	2959	4903	1530	1619	3427	1530	1619	3427	1530
c, Capacity [veh/h]	154	2690	839	296	2924	913	110	662	296	62	560	250
d1, Uniform Delay [s]	45.67	12.28	11.20	44.38	9.56	8.77	45.96	34.79	33.64	47.08	36.08	40.62
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.17	0.30	0.42	8.06	0.20	0.27	12.99	0.30	0.27	5.14	0.16	7.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.31	0.16	0.88	0.25	0.12	0.81	0.34	0.17	0.45	0.18	0.85
d, Delay for Lane Group [s/veh]	46.84	12.59	11.62	52.45	9.76	9.04	58.95	35.09	33.91	52.21	36.23	48.41
Lane Group LOS	D	B	B	D	A	A	E	D	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.61	3.32	1.56	3.47	2.41	1.04	2.56	2.35	1.03	0.77	1.09	5.55
50th-Percentile Queue Length [ft/ln]	15.23	82.95	39.01	86.75	60.29	26.07	64.09	58.65	25.79	19.18	27.34	138.84
95th-Percentile Queue Length [veh/ln]	1.10	5.97	2.81	6.25	4.34	1.88	4.61	4.22	1.86	1.38	1.97	9.42
95th-Percentile Queue Length [ft/ln]	27.41	149.32	70.22	156.15	108.52	46.93	115.37	105.56	46.43	34.53	49.21	235.46

Movement, Approach, & Intersection Results

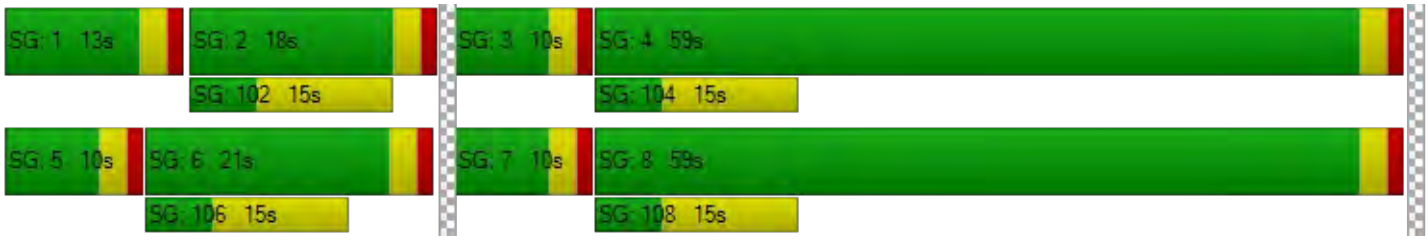
d_M, Delay for Movement [s/veh]	46.84	12.59	11.62	52.45	9.76	9.04	58.95	35.09	33.91	52.21	36.23	48.41
Movement LOS	D	B	B	D	A	A	E	D	C	D	D	D
d_A, Approach Delay [s/veh]	14.09			19.80			40.81			45.06		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	23.49											
Intersection LOS	C											
Intersection V/C	0.452											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.054	3.098	2.561	2.616
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	360	1120	1120
d_b, Bicycle Delay [s]	36.13	33.62	9.68	9.68
l_b,int, Bicycle LOS Score for Intersection	2.123	2.161	1.857	1.843
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 46: Tippecanoe Ave / Orange Show Rd_San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.484

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	75	512	48	109	590	64	122	157	128	88	256	116
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	719	48	109	630	64	122	157	128	88	256	116
Peak Hour Factor	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	205	14	31	179	18	35	45	36	25	73	33
Total Analysis Volume [veh/h]	85	819	55	124	718	73	139	179	146	100	292	132
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	30	0	10	24	0	13	50	0	10	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	7	57	57	7	57	57	27	18	18	27	15	15
g / C, Green / Cycle	0.07	0.57	0.57	0.07	0.57	0.57	0.27	0.18	0.18	0.27	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.05	0.25	0.25	0.04	0.22	0.22	0.12	0.10	0.10	0.08	0.12	0.13
s, saturation flow rate [veh/h]	1619	1800	1760	2959	1800	1742	1206	1800	1541	1224	1800	1615
c, Capacity [veh/h]	107	1028	1006	201	1032	998	320	316	270	345	278	250
d1, Uniform Delay [s]	46.04	12.18	12.18	45.35	11.73	11.73	29.82	37.59	37.76	28.72	40.73	40.86
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.55	1.31	1.34	3.08	1.11	1.15	0.93	1.46	1.87	0.46	5.11	6.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.43	0.43	0.62	0.39	0.39	0.43	0.54	0.57	0.29	0.79	0.81
d, Delay for Lane Group [s/veh]	58.59	13.50	13.53	48.44	12.84	12.88	30.75	39.06	39.62	29.18	45.85	47.13
Lane Group LOS	E	B	B	D	B	B	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.44	5.66	5.54	1.57	4.96	4.81	2.72	3.93	3.55	1.90	5.59	5.22
50th-Percentile Queue Length [ft/ln]	61.03	141.46	138.56	39.37	123.93	120.23	68.10	98.33	88.64	47.38	139.80	130.39
95th-Percentile Queue Length [veh/ln]	4.39	9.56	9.40	2.83	8.61	8.41	4.90	7.08	6.38	3.41	9.47	8.96
95th-Percentile Queue Length [ft/ln]	109.86	238.99	235.08	70.87	215.22	210.14	122.57	177.00	159.55	85.29	236.75	224.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.59	13.51	13.53	48.44	12.86	12.88	30.75	39.08	39.62	29.18	46.16	47.13
Movement LOS	E	B	B	D	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	17.51			17.68			36.76			43.16		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	25.38											
Intersection LOS	C											
Intersection V/C	0.484											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.800	2.914	2.485	2.478
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	540	420	940	880
d_b, Bicycle Delay [s]	26.65	31.21	14.05	15.68
l_b,int, Bicycle LOS Score for Intersection	2.351	2.314	1.942	1.992
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 47: Tippecanoe Ave / Hospitality Ln_Coulston St

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.384

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	382	808	40	51	570	43	56	19	62	79	53	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	382	1015	40	51	610	43	56	19	62	79	53	39
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	99	263	10	13	158	11	15	5	16	21	14	10
Total Analysis Volume [veh/h]	397	1054	42	53	633	45	58	20	64	82	55	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	8	7	4	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	30	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	54	62	0	10	18	0	0	18	18	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No			No	No	No	No	
Maximum Recall	No	No		No	No			No	No	No	No	
Pedestrian Recall	No	No		No	No			No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
g_i, Effective Green Time [s]	16	65	65	5	55	55	11	11	11	20	20
g / C, Green / Cycle	0.16	0.65	0.65	0.05	0.55	0.55	0.11	0.11	0.11	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.13	0.21	0.21	0.03	0.13	0.13	0.02	0.07	0.04	0.06	0.06
s, saturation flow rate [veh/h]	2959	3427	1765	1619	3427	1740	1321	715	1530	1488	1676
c, Capacity [veh/h]	480	2242	1155	87	1872	950	122	136	167	275	338
d1, Uniform Delay [s]	40.55	7.58	7.58	46.26	11.85	11.87	47.17	44.13	41.43	34.00	33.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.72	0.38	0.74	6.60	0.30	0.60	0.84	1.78	1.45	0.60	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.32	0.32	0.61	0.24	0.24	0.21	0.38	0.38	0.30	0.28
d, Delay for Lane Group [s/veh]	44.26	7.96	8.32	52.86	12.15	12.47	48.01	45.90	42.88	34.60	34.22
Lane Group LOS	D	A	A	D	B	B	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.92	3.21	3.42	1.44	2.59	2.73	0.65	1.34	1.53	1.71	1.98
50th-Percentile Queue Length [ft/ln]	123.10	80.23	85.51	36.05	64.76	68.35	16.25	33.47	38.16	42.75	49.57
95th-Percentile Queue Length [veh/ln]	8.56	5.78	6.16	2.60	4.66	4.92	1.17	2.41	2.75	3.08	3.57
95th-Percentile Queue Length [ft/ln]	214.07	144.42	153.92	64.90	116.58	123.03	29.25	60.25	68.68	76.95	89.22

Movement, Approach, & Intersection Results

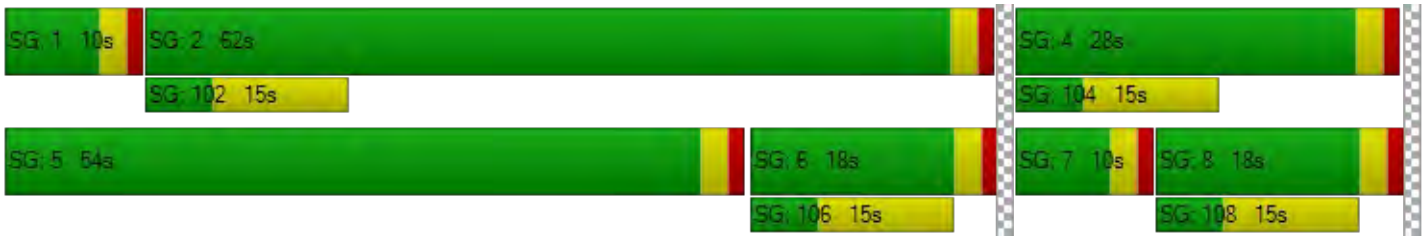
d_M, Delay for Movement [s/veh]	44.26	8.07	8.32	52.86	12.25	12.47	46.96	45.90	42.88	34.60	34.22	34.22
Movement LOS	D	A	A	D	B	B	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	17.70			15.20			44.92			34.39		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	19.67											
Intersection LOS	B											
Intersection V/C	0.384											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.117	2.964	2.431	2.042
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1180	300	300	500
d_b, Bicycle Delay [s]	8.41	36.13	36.13	28.13
l_b,int, Bicycle LOS Score for Intersection	2.381	1.962	1.794	1.852
Bicycle LOS	B	A	A	A

Sequence

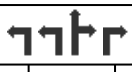
Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 48: Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	0	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	125	817	388	0	714	60	38	0	179	528	137	369
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	1024	388	0	754	60	38	0	179	528	137	369
Peak Hour Factor	0.9130	0.9130	0.9130	1.0000	0.9130	0.9130	0.9130	1.0000	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	280	106	0	206	16	10	0	49	145	38	101
Total Analysis Volume [veh/h]	137	1122	425	0	826	66	42	0	196	578	150	404
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	5	2	0	0	6	0	3	0	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	0	7	7	7	0
Maximum Green [s]	30	30	0	0	30	0	30	0	30	30	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	10	35	0	0	25	0	21	0	16	49	44	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No			No		No		No	No	No	
Maximum Recall	No	No			No		No		No	No	No	
Pedestrian Recall	No	No			No		No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	61	51	51	5	17	23	25	25
g / C, Green / Cycle	0.07	0.61	0.51	0.51	0.05	0.17	0.23	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.05	0.26	0.14	0.13	0.03	0.07	0.20	0.17	0.18
s, saturation flow rate [veh/h]	2959	4358	4903	1711	1619	2708	2959	1665	1530
c, Capacity [veh/h]	207	2676	2520	879	80	461	668	411	378
d1, Uniform Delay [s]	45.34	10.03	13.68	13.58	46.40	37.12	37.24	34.03	34.64
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.58	0.48	0.26	0.69	5.30	0.62	3.52	1.93	2.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.42	0.27	0.25	0.53	0.43	0.86	0.67	0.73
d, Delay for Lane Group [s/veh]	48.93	10.52	13.93	14.27	51.70	37.74	40.76	35.96	37.41
Lane Group LOS	D	B	B	B	D	D	D	D	D
Critical Lane Group	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.75	4.06	2.80	2.89	1.13	2.17	7.02	6.21	6.39
50th-Percentile Queue Length [ft/ln]	43.78	101.55	69.97	72.22	28.31	54.28	175.40	155.33	159.78
95th-Percentile Queue Length [veh/ln]	3.15	7.31	5.04	5.20	2.04	3.91	11.36	10.30	10.54
95th-Percentile Queue Length [ft/ln]	78.81	182.80	125.94	130.00	50.96	97.70	284.00	257.53	263.43

Movement, Approach, & Intersection Results

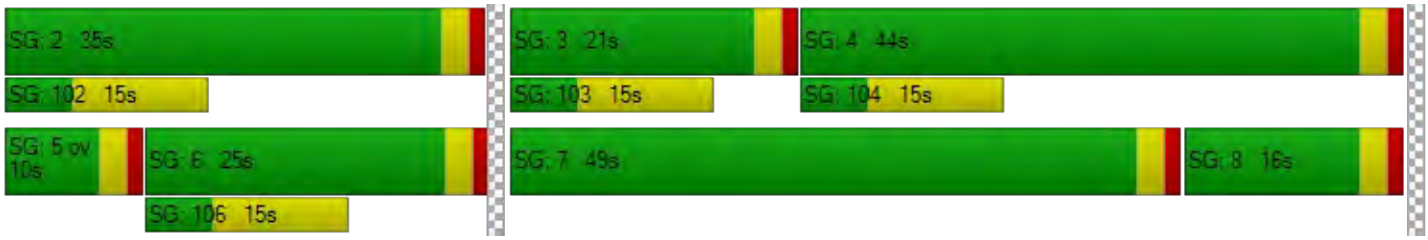
d_M, Delay for Movement [s/veh]	48.93	10.52	0.00	0.00	14.00	14.27	51.70	0.00	37.74	40.76	35.96	36.96
Movement LOS	D	B			B	B	D		D	D	D	D
d_A, Approach Delay [s/veh]	14.70			14.02			40.20			38.77		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	23.99											
Intersection LOS	C											
Intersection V/C	0.519											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.166	2.943	2.422	2.527
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	440	0	820
d_b, Bicycle Delay [s]	23.12	30.42	50.00	17.41
l_b,int, Bicycle LOS Score for Intersection	2.252	1.928	4.132	3.427
Bicycle LOS	B	A	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 49: Anderson St / SR-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	0	641	298	161	830	0	691	4	611	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	40	0	0	6	0	167	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	681	298	161	836	0	858	4	611	0	0	0
Peak Hour Factor	1.0000	0.9070	0.9070	0.9070	0.9070	1.0000	0.9070	0.9070	0.9070	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	188	82	44	230	0	236	1	168	0	0	0
Total Analysis Volume [veh/h]	0	751	329	178	922	0	946	4	674	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	29	0	11	40	0	0	60	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	50	50	8	61	33	33	33	
g / C, Green / Cycle	0.50	0.50	0.08	0.61	0.33	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.22	0.22	0.06	0.27	0.28	0.28	0.25	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1714	1715	2708	
c, Capacity [veh/h]	1718	767	232	2090	566	566	894	
d1, Uniform Delay [s]	15.92	15.84	45.18	10.41	31.03	31.03	29.87	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.81	1.75	5.23	0.68	3.42	3.42	1.32	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.44	0.43	0.77	0.44	0.84	0.84	0.75	
d, Delay for Lane Group [s/veh]	16.73	17.59	50.40	11.09	34.46	34.44	31.18	
Lane Group LOS	B	B	D	B	C	C	C	
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	
50th-Percentile Queue Length [veh/ln]	5.46	4.96	2.32	5.20	10.88	10.87	7.22	
50th-Percentile Queue Length [ft/ln]	136.52	124.10	57.99	130.11	271.94	271.87	180.59	
95th-Percentile Queue Length [veh/ln]	9.29	8.62	4.18	8.95	16.29	16.28	11.63	
95th-Percentile Queue Length [ft/ln]	232.33	215.45	104.38	223.65	407.16	407.08	290.78	

Movement, Approach, & Intersection Results

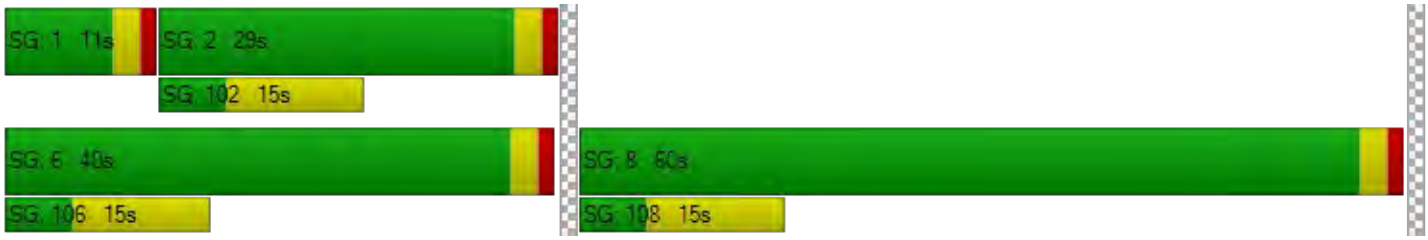
d_M, Delay for Movement [s/veh]	0.00	16.73	17.59	50.40	11.09	0.00	34.45	34.44	31.18	0.00	0.00	0.00
Movement LOS		B	B	D	B		C	C	C			
d_A, Approach Delay [s/veh]	16.99			17.45			33.09			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	24.00											
Intersection LOS	C											
Intersection V/C	0.556											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.828	2.914	2.534	1.971
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	740	1140	0
d_b, Bicycle Delay [s]	27.38	19.85	9.25	50.00
l_b,int, Bicycle LOS Score for Intersection	2.451	2.467	4.239	4.132
Bicycle LOS	B	B	D	D

Sequence

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



Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Del Rosa Ave / SR-210 WB Ramps	Signalized	HCM 6th Edition	SB Right	0.858	37.4	D
2	Del Rosa Ave / SR-210 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.803	34.0	C
3	Del Rosa Ave / Date St_Date Pl	Signalized	HCM 6th Edition	EB Left	0.513	20.3	C
4	Del Rosa Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.533	36.3	D
5	Highland Ave / SR-210 EB Off Ramp	Signalized	HCM 6th Edition	SB Left	0.537	20.9	C
6	Highland Ave / SR-210 WB Off Ramp	Signalized	HCM 6th Edition	EB Left	0.540	11.6	B
7	Victoria Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.824	29.4	C
8	Del Rosa Dr / Pacific St	Signalized	HCM 6th Edition	SB Left	0.471	26.9	C
9	Victoria Ave / Pacific St	Signalized	HCM 6th Edition	EB Left	0.410	30.5	C
10	Victoria Ave / 14th St	Signalized	HCM 6th Edition	NB Left	0.234	11.3	B
11	Tippecanoe Ave / Baseline St	Signalized	HCM 6th Edition	WB Left	0.532	24.0	C
12	Del Rosa Dr / Baseline St	Signalized	HCM 6th Edition	NB Left	0.462	39.0	D
13	Sterling Ave / Base Line	Signalized	HCM 6th Edition	EB Left	0.579	33.5	C
14	Victoria Ave / Base Line	Signalized	HCM 6th Edition	SB Left	0.425	31.9	C
15	Tippecanoe Ave / 9th St	Signalized	HCM 6th Edition	NB Left	0.339	28.7	C
16	Del Rosa Dr / 9th St	Signalized	HCM 6th Edition	NB Left	0.433	27.2	C
17	Sterling Ave / 9th St	Signalized	HCM 6th Edition	SB Left	0.436	28.9	C
			HCM 6th				

18	Victoria Ave / 9th St	Signalized	HCM 6th Edition	EB Left	0.302	25.7	C
19	Del Rosa Dr / 6th St	Signalized	HCM 6th Edition	NB Left	0.331	22.4	C
20	Sterling Ave / 6th St	Two-way stop	HCM 6th Edition	WB Left	0.805	222.2	F
21	Victoria Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.166	62.3	F
22	Central Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.137	12.0	B
23	I-215 SB Ramps / 5th St	Signalized	HCM 6th Edition	WB Left	0.598	32.0	C
24	I-215 NB Ramps / 5th St	Signalized	HCM 6th Edition	EB Left	0.682	23.4	C
25	E St / 5th St	Signalized	HCM 6th Edition	NB Left	0.543	17.9	B
26	Arrowhead Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.399	15.1	B
27	Waterman Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.461	27.2	C
28	Tippecanoe Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.570	32.8	C
29	Del Rosa Dr / 5th St	Signalized	HCM 6th Edition	EB Left	0.461	22.8	C
30	Sterling Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.574	25.7	C
31	Victoria Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.603	16.7	B
32	Central Avenue / 5th Street	Signalized	HCM 6th Edition	NB Left	0.614	21.7	C
33	Palm Ave / 5th St	Signalized	HCM 6th Edition	WB Left	1.068	93.3	F
34	Church Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.611	6.1	A
35	SR-210 EB Ramps / 5th Street	Signalized	HCM 6th Edition	SB Left	0.861	33.1	C
36	SR-210 WB Ramps / 5th Street	Signalized	HCM 6th Edition	EB Left	0.650	29.1	C
37	Tippecanoe Ave / 3rd St	Signalized	HCM 6th Edition	NB Left	0.746	33.6	C
38	Del Rosa Dr / 3rd St	Signalized	HCM 6th Edition	NB Left	0.646	29.0	C
			HCM 6th				

39	Sterling Ave / 3rd St	Signalized	HCM 6th Edition	SB Right	0.498	16.8	B
40	Victoria Ave / 3rd St	Signalized	HCM 6th Edition	SB Left	0.432	21.6	C
41	Central Ave / 3rd St	Two-way stop	HCM 6th Edition	NB Left	0.016	65.4	F
42	Palm Ave_Alabama St / 3rd St	Signalized	HCM 6th Edition	EB Left	0.450	27.0	C
43	Tippecanoe Ave / Rialto Ave	Signalized	HCM 6th Edition	NB Left	0.427	10.2	B
44	Tippecanoe Ave / Mill St	Signalized	HCM 6th Edition	SB Left	0.547	18.0	B
45	Tippecanoe Ave / Central Ave	Signalized	HCM 6th Edition	EB Left	0.542	25.9	C
46	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave	Signalized	HCM 6th Edition	NB Left	0.674	34.3	C
47	Tippecanoe Ave / Hospitality Ln_Coulston St	Signalized	HCM 6th Edition	SB Left	0.640	28.9	C
48	Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps	Signalized	HCM 6th Edition	WB Left	0.647	28.0	C
49	Anderson St / SR-10 EB Ramps	Signalized	HCM 6th Edition	EB Left	0.670	27.9	C

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

Intersection Level Of Service Report
Intersection 1: Del Rosa Ave / SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	37.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.858

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No						No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Base Volume Input [veh/h]	627	713	0	0	353	373	0	0	0	128	0	226
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	68	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	695	713	0	0	353	373	0	0	0	128	0	226
Peak Hour Factor	0.9560	0.9560	1.0000	1.0000	0.9560	0.9560	1.0000	1.0000	1.0000	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	182	186	0	0	92	98	0	0	0	33	0	59
Total Analysis Volume [veh/h]	727	746	0	0	369	390	0	0	0	134	0	236
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	50	80	0	0	30	0	0	0	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Cycle Length [s]	100	100	100	100		100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	46	77	28	28		17	17
g / C, Green / Cycle	0.46	0.77	0.28	0.28		0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.45	0.22	0.21	0.25		0.08	0.15
s, saturation flow rate [veh/h]	1619	3427	1800	1530		1714	1530
c, Capacity [veh/h]	748	2639	500	425		291	260
d1, Uniform Delay [s]	26.24	3.38	32.81	35.00		37.37	40.73
k, delay calibration	0.45	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	24.98	0.27	9.40	27.22		1.13	11.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.97	0.28	0.74	0.92		0.46	0.91
d, Delay for Lane Group [s/veh]	51.22	3.65	42.20	62.23		38.50	52.21
Lane Group LOS	D	A	D	E		D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	21.11	1.77	9.27	12.20		3.02	6.46
50th-Percentile Queue Length [ft/ln]	527.65	44.24	231.87	305.03		75.59	161.45
95th-Percentile Queue Length [veh/ln]	28.64	3.18	14.27	17.93		5.44	10.63
95th-Percentile Queue Length [ft/ln]	716.01	79.62	356.73	448.24		136.07	265.65

Movement, Approach, & Intersection Results

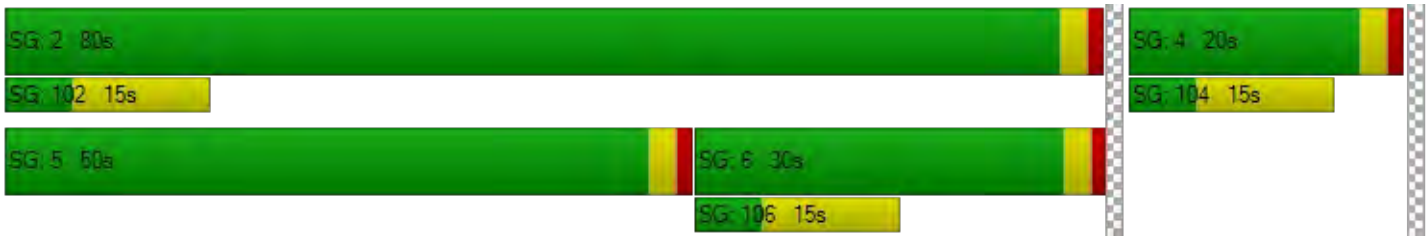
d_M, Delay for Movement [s/veh]	51.22	3.65	0.00	0.00	42.20	62.23	0.00	0.00	0.00	38.50	38.50	52.21
Movement LOS	D	A			D	E				D	D	D
d_A, Approach Delay [s/veh]	27.13			52.49			0.00			47.24		
Approach LOS	C			D			A			D		
d_I, Intersection Delay [s/veh]	37.39											
Intersection LOS	D											
Intersection V/C	0.858											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.781	2.562	2.519	1.902
Crosswalk LOS	C	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1540	540	0	340
d_b, Bicycle Delay [s]	2.65	26.65	50.00	34.45
l_b,int, Bicycle LOS Score for Intersection	2.775	2.186	4.132	2.170
Bicycle LOS	C	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Del Rosa Ave / SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	34.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.803

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Base Volume Input [veh/h]	0	949	120	121	361	0	387	1	715	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	68	0	0	0	0	0	0	18	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1017	120	121	361	0	387	1	733	0	0	0
Peak Hour Factor	1.0000	0.9660	0.9660	0.9660	0.9660	1.0000	0.9660	0.9660	0.9660	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	263	31	31	93	0	100	0	190	0	0	0
Total Analysis Volume [veh/h]	0	1053	124	125	374	0	401	1	759	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	24	0	11	35	0	0	65	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	31	31	8	42	52	52	
g / C, Green / Cycle	0.31	0.31	0.08	0.42	0.52	0.52	
(v / s)_i Volume / Saturation Flow Rate	0.23	0.23	0.08	0.11	0.23	0.50	
s, saturation flow rate [veh/h]	3427	1705	1619	3427	1714	1530	
c, Capacity [veh/h]	1053	524	130	1430	896	800	
d1, Uniform Delay [s]	31.13	31.18	45.86	19.07	14.87	22.59	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.33	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.81	9.48	29.10	0.45	0.35	16.27	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.75	0.75	0.97	0.26	0.45	0.95	
d, Delay for Lane Group [s/veh]	35.94	40.66	74.96	19.51	15.22	38.86	
Lane Group LOS	D	D	E	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.03	9.71	4.12	2.88	5.54	19.24	
50th-Percentile Queue Length [ft/ln]	225.66	242.87	102.95	72.02	138.38	481.02	
95th-Percentile Queue Length [veh/ln]	13.95	14.83	7.41	5.19	9.39	26.43	
95th-Percentile Queue Length [ft/ln]	348.84	370.67	185.31	129.64	234.83	660.86	

Movement, Approach, & Intersection Results

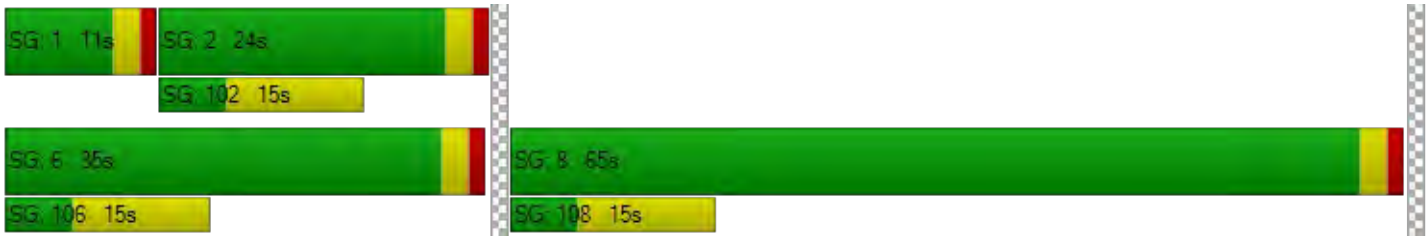
d_M, Delay for Movement [s/veh]	0.00	37.14	40.66	74.96	19.51	0.00	15.22	15.22	38.86	0.00	0.00	0.00
Movement LOS		D	D	E	B		B	B	D			
d_A, Approach Delay [s/veh]		37.51			33.40			30.67			0.00	
Approach LOS		D			C			C			A	
d_I, Intersection Delay [s/veh]	33.99											
Intersection LOS	C											
Intersection V/C	0.803											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.835	2.777	2.287	1.674
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	420	640	1240	0
d_b, Bicycle Delay [s]	31.21	23.12	7.22	50.00
l_b,int, Bicycle LOS Score for Intersection	2.207	1.971	3.475	4.132
Bicycle LOS	B	A	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 3: Del Rosa Ave / Date St_Date Pl

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Base Volume Input [veh/h]	58	736	48	240	727	113	126	57	51	46	71	206
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	6	12	0	0	0	0	0	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	790	48	246	739	113	126	57	51	46	71	220
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	206	13	64	193	29	33	15	13	12	19	57
Total Analysis Volume [veh/h]	60	824	50	257	771	118	131	59	53	48	74	229
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	48	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	62	50	50	62	53	53	32	32	32	32
g / C, Green / Cycle	0.62	0.50	0.50	0.62	0.53	0.53	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.08	0.25	0.25	0.32	0.25	0.25	0.12	0.07	0.04	0.19
s, saturation flow rate [veh/h]	741	1800	1764	807	1800	1718	1093	1661	1301	1588
c, Capacity [veh/h]	466	895	877	502	962	918	220	530	394	506
d1, Uniform Delay [s]	8.78	16.74	16.74	10.70	14.51	14.52	42.45	24.87	29.40	28.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	1.94	1.98	3.71	1.67	1.75	2.56	0.20	0.14	1.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.49	0.49	0.51	0.47	0.47	0.59	0.21	0.12	0.60
d, Delay for Lane Group [s/veh]	9.35	18.68	18.72	14.40	16.18	16.27	45.00	25.07	29.54	30.44
Lane Group LOS	A	B	B	B	B	B	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.55	6.97	6.84	2.86	6.57	6.30	3.30	1.95	0.91	6.25
50th-Percentile Queue Length [ft/ln]	13.77	174.32	171.08	71.38	164.21	157.52	82.47	48.82	22.81	156.20
95th-Percentile Queue Length [veh/ln]	0.99	11.30	11.13	5.14	10.77	10.42	5.94	3.52	1.64	10.35
95th-Percentile Queue Length [ft/ln]	24.78	282.58	278.34	128.49	269.29	260.43	148.44	87.88	41.05	258.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.35	18.69	18.72	14.40	16.22	16.27	45.00	25.07	25.07	29.54	30.44	30.44
Movement LOS	A	B	B	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	18.09			15.82			35.82			30.31		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	20.33											
Intersection LOS	C											
Intersection V/C	0.513											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.920	3.024	2.155	2.369
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	1040	640	640
d_b, Bicycle Delay [s]	15.13	11.52	23.12	23.12
l_b,int, Bicycle LOS Score for Intersection	2.330	2.505	1.961	2.139
Bicycle LOS	B	B	A	B

Sequence

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

Intersection Level Of Service Report
Intersection 4: Del Rosa Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	36.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	174	510	65	165	406	113	174	628	160	72	422	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	0	12	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	174	564	65	165	418	113	174	628	160	72	422	160
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	147	17	43	109	29	45	164	42	19	110	42
Total Analysis Volume [veh/h]	182	589	68	172	436	118	182	656	167	75	441	167
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	5	2	0	1	6	6	3	8	0	7	4	4
Auxiliary Signal Groups						6						4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	7
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	22	32	0	21	31	31	22	36	0	11	25	25
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	19	29	29	18	28	28	19	33	33	8	22	22
g / C, Green / Cycle	0.19	0.29	0.29	0.18	0.28	0.28	0.19	0.33	0.33	0.08	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.11	0.19	0.19	0.11	0.13	0.08	0.11	0.19	0.11	0.05	0.13	0.11
s, saturation flow rate [veh/h]	1619	1800	1735	1619	3427	1530	1619	3427	1530	1619	3427	1530
c, Capacity [veh/h]	308	522	503	291	960	428	308	1131	505	130	754	337
d1, Uniform Delay [s]	36.96	30.96	30.96	37.62	29.70	28.09	36.96	27.76	25.20	44.38	34.91	34.15
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.12	5.93	6.15	8.50	1.55	1.59	8.12	2.17	1.75	17.50	3.31	5.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.64	0.64	0.59	0.45	0.28	0.59	0.58	0.33	0.58	0.58	0.50
d, Delay for Lane Group [s/veh]	45.08	36.88	37.11	46.12	31.25	29.68	45.08	29.93	26.95	61.88	38.22	39.30
Lane Group LOS	D	D	D	D	C	C	D	C	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.72	7.77	7.53	4.52	4.48	2.38	4.72	6.72	3.19	2.41	5.10	4.00
50th-Percentile Queue Length [ft/ln]	117.90	194.37	188.32	112.92	112.05	59.44	117.90	168.02	79.85	60.31	127.48	100.06
95th-Percentile Queue Length [veh/ln]	8.28	12.35	12.03	8.00	7.95	4.28	8.28	10.97	5.75	4.34	8.80	7.20
95th-Percentile Queue Length [ft/ln]	206.94	308.69	300.84	200.06	198.85	106.99	206.94	274.31	143.72	108.56	220.07	180.11

Movement, Approach, & Intersection Results

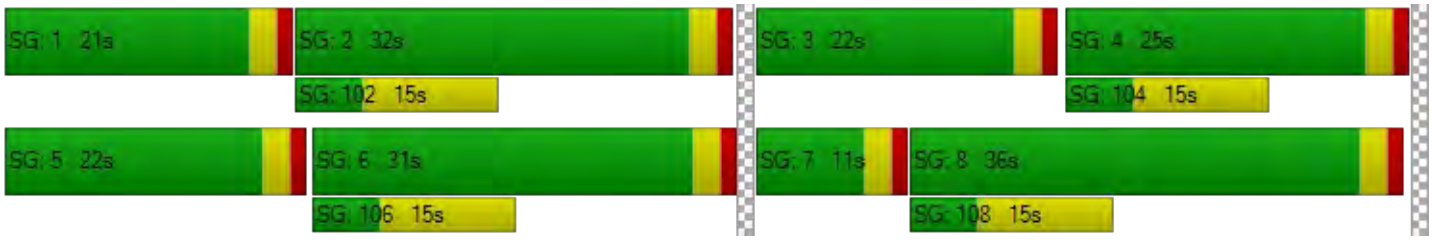
d_M, Delay for Movement [s/veh]	45.08	36.98	37.11	46.12	31.25	29.68	45.08	29.93	26.95	61.88	38.22	39.30
Movement LOS	D	D	D	D	C	C	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	38.75			34.52			32.18			41.08		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	36.26											
Intersection LOS	D											
Intersection V/C	0.533											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.602	2.832	2.743	2.820
Crosswalk LOS	B	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	560	660	440
d_b, Bicycle Delay [s]	25.21	25.92	22.45	30.42
l_b,int, Bicycle LOS Score for Intersection	2.252	2.159	2.389	2.123
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: Highland Ave / SR-210 EB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Base Volume Input [veh/h]	1025	155	0	702	577	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	0	0	0	20	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1044	155	0	702	597	0
Peak Hour Factor	0.9650	0.9650	1.0000	0.9650	0.9650	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	270	40	0	182	155	0
Total Analysis Volume [veh/h]	1082	161	0	727	619	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	2.0	0.0	0.0	2.0	2.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	68	0	0	32	32	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	0.0	1.0	1.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	37	37	57	57
g / C, Green / Cycle	0.37	0.37	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.33	0.11	0.21	0.18
s, saturation flow rate [veh/h]	3329	1530	3427	3427
c, Capacity [veh/h]	1230	565	1955	1955
d1, Uniform Delay [s]	29.44	22.21	11.71	11.26
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.21	0.27	0.54	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.28	0.37	0.32
d, Delay for Lane Group [s/veh]	31.65	22.48	12.26	11.69
Lane Group LOS	C	C	B	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	12.12	2.68	4.31	3.52
50th-Percentile Queue Length [ft/ln]	303.08	66.99	107.76	88.09
95th-Percentile Queue Length [veh/ln]	17.83	4.82	7.72	6.34
95th-Percentile Queue Length [ft/ln]	445.84	120.59	192.88	158.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.65	22.48	0.00	12.26	11.69	0.00
Movement LOS	C	C		B	B	
d_A, Approach Delay [s/veh]	30.46		12.26		11.69	
Approach LOS	C		B		B	
d_I, Intersection Delay [s/veh]	20.86					
Intersection LOS	C					
Intersection V/C	0.537					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.351	2.600	2.730
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
I_b,int, Bicycle LOS Score for Intersection	4.132	4.732	4.643
Bicycle LOS	D	E	E

Sequence

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

Intersection Level Of Service Report
Intersection 6: Highland Ave / SR-210 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	263	1	129	3	0	9	14	1358	0	0	1488	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	14	0	0	89	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	263	1	129	3	0	9	14	1372	0	0	1577	8
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	0	32	1	0	2	4	343	0	0	394	2
Total Analysis Volume [veh/h]	263	1	129	3	0	9	14	1372	0	0	1577	8
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Permiss	Split	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	0	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	30	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	29	0	0	10	41	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	21	0	0	0	9	0	0	9	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	10	10	2	2	2	69	64	64
g / C, Green / Cycle	0.12	0.12	0.02	0.02	0.02	0.76	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.00	0.01	0.01	0.40	0.44	0.44
s, saturation flow rate [veh/h]	3329	1532	1714	1530	1714	3427	1800	1797
c, Capacity [veh/h]	388	179	36	32	40	2612	1270	1268
d1, Uniform Delay [s]	38.13	38.37	43.19	43.37	43.29	4.24	6.96	6.97
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.07	5.57	0.96	4.54	5.23	0.76	2.32	2.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.73	0.08	0.28	0.35	0.53	0.62	0.63
d, Delay for Lane Group [s/veh]	40.20	43.94	44.15	47.90	48.52	5.00	9.28	9.31
Lane Group LOS	D	D	D	D	D	A	A	A
Critical Lane Group	No	Yes	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.85	3.00	0.07	0.24	0.36	3.76	7.13	7.14
50th-Percentile Queue Length [ft/ln]	71.34	75.10	1.87	5.91	9.04	94.02	178.21	178.53
95th-Percentile Queue Length [veh/ln]	5.14	5.41	0.13	0.43	0.65	6.77	11.51	11.52
95th-Percentile Queue Length [ft/ln]	128.41	135.19	3.36	10.64	16.28	169.23	287.68	288.09

Movement, Approach, & Intersection Results

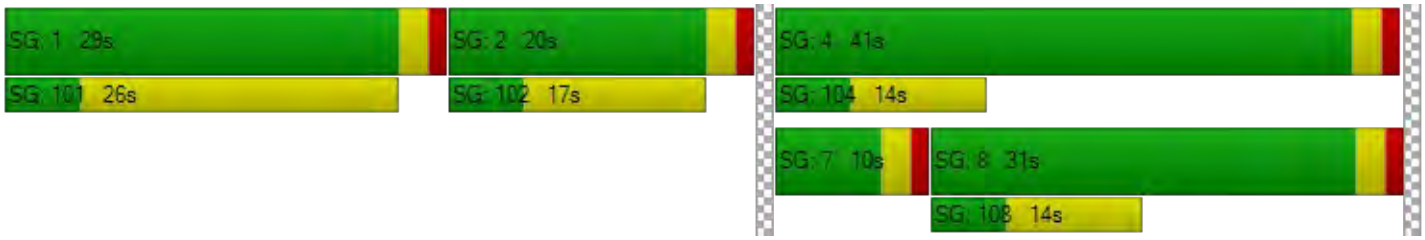
d_M, Delay for Movement [s/veh]	40.20	43.94	43.94	44.15	0.00	47.90	48.52	5.00	0.00	0.00	9.30	9.31
Movement LOS	D	D	D	D		D	D	A			A	A
d_A, Approach Delay [s/veh]	41.44			46.96			5.44			9.30		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	11.59											
Intersection LOS	B											
Intersection V/C	0.540											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.069	1.953	3.046	2.886
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	0	844	622
d_b, Bicycle Delay [s]	29.61	45.00	15.02	21.36
l_b,int, Bicycle LOS Score for Intersection	2.208	4.132	2.703	2.867
Bicycle LOS	B	D	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 7: Victoria Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.824

Intersection Setup

Name							Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Highland Ave			Highland Ave		
Base Volume Input [veh/h]	237	191	57	183	146	591	672	507	164	62	567	127
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	89	51	0	0	16	0	0	0	14	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	326	242	57	183	162	591	672	507	178	62	567	127
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	63	15	47	42	153	174	131	46	16	147	33
Total Analysis Volume [veh/h]	337	250	59	189	168	611	695	524	184	64	586	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	18	0	10	18	18	30	62	0	10	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	40	30	30	40	31	60	27	45	45	6	24	24
g / C, Green / Cycle	0.40	0.30	0.30	0.40	0.31	0.60	0.27	0.45	0.45	0.06	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.26	0.09	0.09	0.16	0.05	0.40	0.23	0.20	0.21	0.04	0.21	0.21
s, saturation flow rate [veh/h]	1312	1700	1590	1193	3427	1530	2959	1800	1643	1619	1800	1688
c, Capacity [veh/h]	580	518	484	497	1044	925	798	805	735	95	425	398
d1, Uniform Delay [s]	24.81	26.69	26.71	20.49	25.41	13.03	34.86	19.21	19.29	46.14	36.73	36.75
k, delay calibration	0.50	0.50	0.50	0.12	0.50	0.50	0.11	0.11	0.11	0.11	0.12	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.22	1.54	1.66	0.52	0.33	3.70	3.13	0.40	0.46	8.09	6.06	6.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.31	0.31	0.38	0.16	0.66	0.87	0.46	0.46	0.68	0.87	0.87
d, Delay for Lane Group [s/veh]	29.03	28.23	28.37	21.01	25.74	16.73	37.99	19.61	19.75	54.23	42.79	43.33
Lane Group LOS	C	C	C	C	C	B	D	B	B	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.49	3.10	2.94	2.99	1.50	9.18	8.25	5.85	5.46	1.76	9.25	8.76
50th-Percentile Queue Length [ft/ln]	162.17	77.60	73.52	74.78	37.45	229.53	206.21	146.18	136.60	44.09	231.34	218.95
95th-Percentile Queue Length [veh/ln]	10.66	5.59	5.29	5.38	2.70	14.15	12.96	9.81	9.30	3.17	14.24	13.61
95th-Percentile Queue Length [ft/ln]	266.59	139.68	132.34	134.61	67.42	353.77	323.97	245.32	232.44	79.36	356.06	340.28

Movement, Approach, & Intersection Results

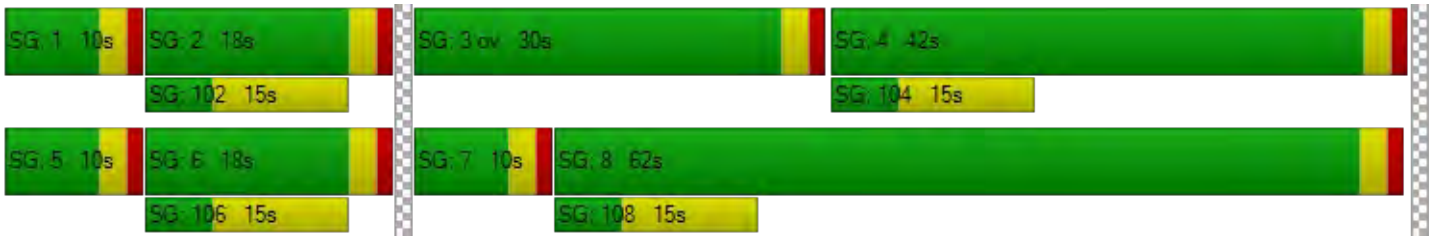
d_M, Delay for Movement [s/veh]	29.03	28.28	28.37	21.01	25.74	16.73	37.99	19.65	19.75	54.23	42.99	43.33
Movement LOS	C	C	C	C	C	B	D	B	B	D	D	D
d_A, Approach Delay [s/veh]	28.68			19.13			28.75			43.96		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	29.41											
Intersection LOS	C											
Intersection V/C	0.824											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.514	2.792	3.187	2.697
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1180	780
d_b, Bicycle Delay [s]	36.13	36.13	8.41	18.61
l_b,int, Bicycle LOS Score for Intersection	2.093	2.358	2.717	2.204
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: Del Rosa Dr / Pacific St

Control Type:	Signalized	Delay (sec / veh):	26.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

Intersection Setup

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Base Volume Input [veh/h]	20	402	69	65	319	146	147	339	25	29	191	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	0	12	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	456	69	65	331	146	147	339	25	29	191	35
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	119	18	17	87	38	38	89	7	8	50	9
Total Analysis Volume [veh/h]	21	477	72	68	347	153	154	355	26	30	200	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	46	0	13	49	0	23	31	0	10	18	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	62	62	6	64	64	11	17	17	4	9	9
g / C, Green / Cycle	0.03	0.62	0.62	0.06	0.64	0.64	0.11	0.17	0.17	0.04	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.27	0.05	0.04	0.15	0.15	0.10	0.11	0.11	0.02	0.07	0.07
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1617	1619	1800	1757	1619	1800	1705
c, Capacity [veh/h]	51	1105	939	97	1157	1039	185	299	291	65	165	156
d1, Uniform Delay [s]	47.51	10.13	7.82	46.11	7.47	7.50	43.35	38.95	38.97	46.94	44.20	44.29
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.21	1.23	0.16	8.74	0.45	0.52	9.30	2.32	2.41	5.06	6.00	6.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.43	0.08	0.70	0.23	0.23	0.83	0.64	0.65	0.46	0.73	0.75
d, Delay for Lane Group [s/veh]	52.72	11.36	7.98	54.86	7.93	8.01	52.65	41.28	41.39	52.00	50.20	51.26
Lane Group LOS	D	B	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.59	5.45	0.63	1.89	2.29	2.12	4.18	4.56	4.49	0.82	3.15	3.11
50th-Percentile Queue Length [ft/ln]	14.63	136.15	15.79	47.13	57.24	52.89	104.41	114.09	112.14	20.45	78.76	77.74
95th-Percentile Queue Length [veh/ln]	1.05	9.27	1.14	3.39	4.12	3.81	7.52	8.07	7.96	1.47	5.67	5.60
95th-Percentile Queue Length [ft/ln]	26.33	231.83	28.42	84.84	103.03	95.21	187.93	201.68	198.98	36.82	141.77	139.94

Movement, Approach, & Intersection Results

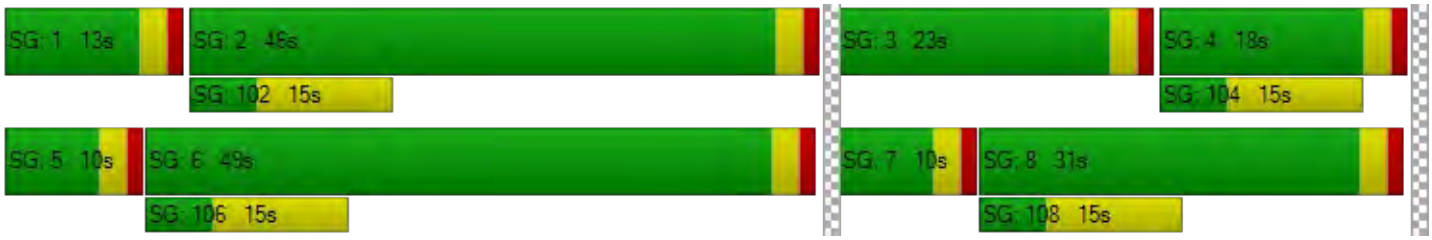
d_M, Delay for Movement [s/veh]	52.72	11.36	7.98	54.86	7.95	8.01	52.65	41.33	41.39	52.00	50.63	51.26
Movement LOS	D	B	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.46			13.58			44.59			50.87		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	26.93											
Intersection LOS	C											
Intersection V/C	0.471											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.496	2.660	2.484	2.455
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	860	920	560	300
d_b, Bicycle Delay [s]	16.25	14.58	25.92	36.13
l_b,int, Bicycle LOS Score for Intersection	2.500	2.028	2.001	1.780
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 9: Victoria Ave / Pacific St

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.410

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	145	379	55	54	279	66	71	358	190	42	247	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	30	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	145	519	55	54	309	66	71	358	195	42	247	60
Peak Hour Factor	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460	0.9460
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	137	15	14	82	17	19	95	52	11	65	16
Total Analysis Volume [veh/h]	153	549	58	57	327	70	75	378	206	44	261	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	37	0	11	28	0	15	42	0	10	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	57	57	6	52	52	6	20	20	5	19	19
g / C, Green / Cycle	0.11	0.57	0.57	0.06	0.52	0.52	0.06	0.20	0.20	0.05	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.09	0.17	0.17	0.04	0.11	0.11	0.05	0.17	0.17	0.03	0.09	0.09
s, saturation flow rate [veh/h]	1619	1800	1740	1619	1800	1692	1619	1800	1590	1619	1800	1682
c, Capacity [veh/h]	183	1030	996	91	927	872	101	364	322	80	342	319
d1, Uniform Delay [s]	43.45	11.05	11.06	46.18	13.25	13.28	46.11	38.39	38.49	46.41	36.15	36.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.64	0.75	0.77	6.97	0.54	0.59	10.34	5.47	6.58	5.67	1.06	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.30	0.30	0.63	0.22	0.22	0.74	0.85	0.86	0.55	0.48	0.50
d, Delay for Lane Group [s/veh]	53.10	11.80	11.83	53.15	13.79	13.87	56.45	43.86	45.07	52.09	37.21	37.44
Lane Group LOS	D	B	B	D	B	B	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.17	3.56	3.45	1.55	2.56	2.46	2.11	7.73	7.02	1.19	3.68	3.54
50th-Percentile Queue Length [ft/ln]	104.18	88.89	86.29	38.87	63.88	61.46	52.80	193.19	175.53	29.76	91.90	88.57
95th-Percentile Queue Length [veh/ln]	7.50	6.40	6.21	2.80	4.60	4.42	3.80	12.29	11.37	2.14	6.62	6.38
95th-Percentile Queue Length [ft/ln]	187.52	160.01	155.33	69.96	114.99	110.62	95.04	307.17	284.17	53.57	165.41	159.42

Movement, Approach, & Intersection Results

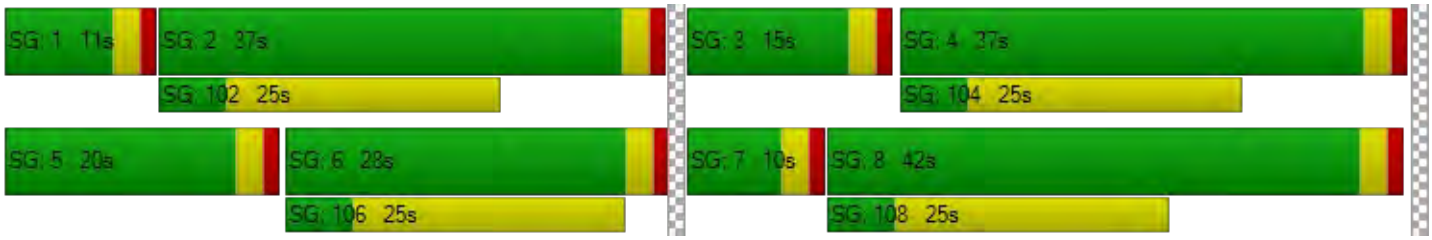
d_M, Delay for Movement [s/veh]	53.10	11.81	11.83	53.15	13.82	13.87	56.45	44.09	45.07	52.09	37.29	37.44
Movement LOS	D	B	B	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	20.12			18.77			45.80			39.09		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	30.51											
Intersection LOS	C											
Intersection V/C	0.410											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.567	2.529	2.529	2.474
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	500	780	680
d_b, Bicycle Delay [s]	21.78	28.13	18.61	21.78
l_b,int, Bicycle LOS Score for Intersection	2.187	1.934	2.103	1.863
Bicycle LOS	B	A	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Victoria Ave / 14th St

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.234

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	27	17	54	31	471	12	13	10	3	27	4	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	157	54	31	506	12	13	10	3	27	4	52
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	43	15	8	138	3	4	3	1	7	1	14
Total Analysis Volume [veh/h]	30	172	59	34	553	13	14	11	3	30	4	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	49	0	24	53	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	11	0	0	19	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	80	80	4	80	80	7	7
g / C, Green / Cycle	0.04	0.80	0.80	0.04	0.80	0.80	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.07	0.07	0.02	0.16	0.16	0.02	0.06
s, saturation flow rate [veh/h]	1619	1800	1648	1619	1800	1785	1603	1595
c, Capacity [veh/h]	65	1431	1310	70	1437	1425	169	162
d1, Uniform Delay [s]	46.94	2.25	2.26	46.73	2.42	2.42	43.78	45.58
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.05	0.11	0.13	5.07	0.31	0.31	0.46	3.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.08	0.09	0.48	0.20	0.20	0.17	0.56
d, Delay for Lane Group [s/veh]	51.99	2.37	2.39	51.80	2.73	2.73	44.23	48.59
Lane Group LOS	D	A	A	D	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.82	0.40	0.39	0.92	1.03	1.03	0.67	2.34
50th-Percentile Queue Length [ft/ln]	20.45	9.92	9.64	23.05	25.81	25.66	16.84	58.60
95th-Percentile Queue Length [veh/ln]	1.47	0.71	0.69	1.66	1.86	1.85	1.21	4.22
95th-Percentile Queue Length [ft/ln]	36.81	17.85	17.36	41.49	46.46	46.20	30.31	105.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.99	2.37	2.39	51.80	2.73	2.73	44.23	44.23	44.23	48.59	48.59	48.59
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.08			5.51			44.23			48.59		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	11.30											
Intersection LOS	B											
Intersection V/C	0.234											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.514	2.491	1.758	1.817
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	920	1000	480	480
d_b, Bicycle Delay [s]	14.58	12.50	28.88	28.88
l_b,int, Bicycle LOS Score for Intersection	1.775	2.055	1.606	1.710
Bicycle LOS	A	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 11: Tippecanoe Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	283	249	651	167	165	499
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	36	4	0	86
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	283	249	687	171	165	585
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	63	175	44	42	149
Total Analysis Volume [veh/h]	288	254	700	174	168	596
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	2.0	0.0	2.0	0.0	2.0	2.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	33	0	47	0	20	67
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	0.0	1.0	1.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	30	30	44	44	17	64
g / C, Green / Cycle	0.30	0.30	0.44	0.44	0.17	0.64
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.24	0.26	0.10	0.17
s, saturation flow rate [veh/h]	1714	1530	1800	1682	1619	3427
c, Capacity [veh/h]	514	459	792	740	275	2193
d1, Uniform Delay [s]	29.45	29.38	20.71	21.18	38.43	7.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.36	4.75	2.76	3.44	9.71	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.55	0.55	0.59	0.61	0.27
d, Delay for Lane Group [s/veh]	33.81	34.12	23.47	24.63	48.14	8.15
Lane Group LOS	C	C	C	C	D	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.36	5.65	7.92	8.19	4.52	2.66
50th-Percentile Queue Length [ft/ln]	158.88	141.22	198.00	204.73	113.08	66.50
95th-Percentile Queue Length [veh/ln]	10.49	9.55	12.54	12.88	8.01	4.79
95th-Percentile Queue Length [ft/ln]	262.23	238.67	313.38	322.06	200.28	119.70

Movement, Approach, & Intersection Results

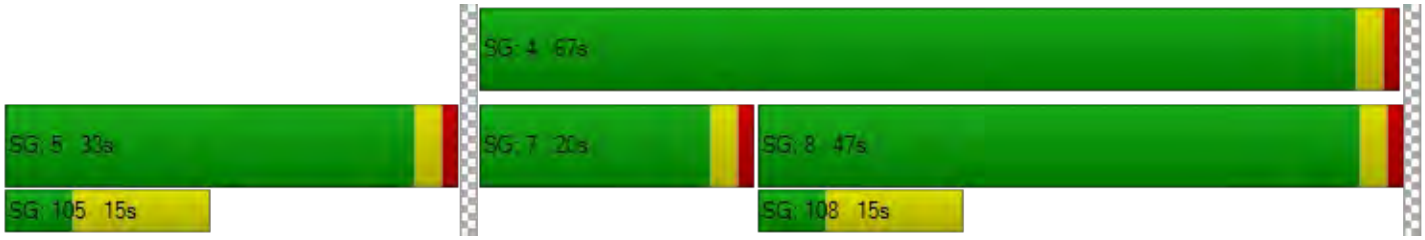
d_M, Delay for Movement [s/veh]	33.81	34.12	23.90	24.63	48.14	8.15
Movement LOS	C	C	C	C	D	A
d_A, Approach Delay [s/veh]	33.95		24.05		16.94	
Approach LOS	C		C		B	
d_I, Intersection Delay [s/veh]	24.02					
Intersection LOS	C					
Intersection V/C	0.532					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.353	2.566	2.641
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.853	4.763
Bicycle LOS	D	E	E

Sequence

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



Intersection Level Of Service Report
Intersection 12: Del Rosa Dr / Baseline St

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.462

Intersection Setup

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

Volumes

Name				Del Rosa Dr								
Base Volume Input [veh/h]	44	314	64	81	204	90	127	693	37	26	461	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	76	54	0	0	12	0	0	0	36	0	10	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	368	64	81	216	90	127	693	73	26	471	50
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	100	17	22	59	24	34	188	20	7	128	14
Total Analysis Volume [veh/h]	130	399	69	88	234	98	138	752	79	28	511	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	25	0	14	29	0	28	51	0	10	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	51	51	7	51	51	10	27	27	4	20	20
g / C, Green / Cycle	0.07	0.51	0.51	0.07	0.51	0.51	0.10	0.27	0.27	0.04	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.13	0.05	0.13	0.06	0.09	0.23	0.23	0.02	0.16	0.16
s, saturation flow rate [veh/h]	1619	1800	1709	1619	1800	1530	1619	1800	1741	1619	1800	1740
c, Capacity [veh/h]	113	914	868	110	910	774	170	479	463	62	359	347
d1, Uniform Delay [s]	46.50	13.98	13.99	45.92	14.04	13.05	43.80	35.21	35.21	47.05	38.11	38.15
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	86.62	0.70	0.74	12.31	0.68	0.34	9.01	5.53	5.70	5.04	4.10	4.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.15	0.26	0.26	0.80	0.26	0.13	0.81	0.88	0.88	0.45	0.80	0.80
d, Delay for Lane Group [s/veh]	133.12	14.67	14.74	58.23	14.72	13.39	52.81	40.73	40.91	52.10	42.21	42.48
Lane Group LOS	F	B	B	E	B	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.52	3.15	3.02	2.52	3.09	1.21	3.74	10.40	10.08	0.77	7.00	6.83
50th-Percentile Queue Length [ft/ln]	138.09	78.70	75.60	62.95	77.15	30.16	93.59	260.09	252.06	19.15	175.06	170.79
95th-Percentile Queue Length [veh/ln]	9.77	5.67	5.44	4.53	5.55	2.17	6.74	15.69	15.29	1.38	11.34	11.12
95th-Percentile Queue Length [ft/ln]	244.34	141.65	136.09	113.31	138.86	54.29	168.47	392.33	382.25	34.48	283.55	277.96

Movement, Approach, & Intersection Results

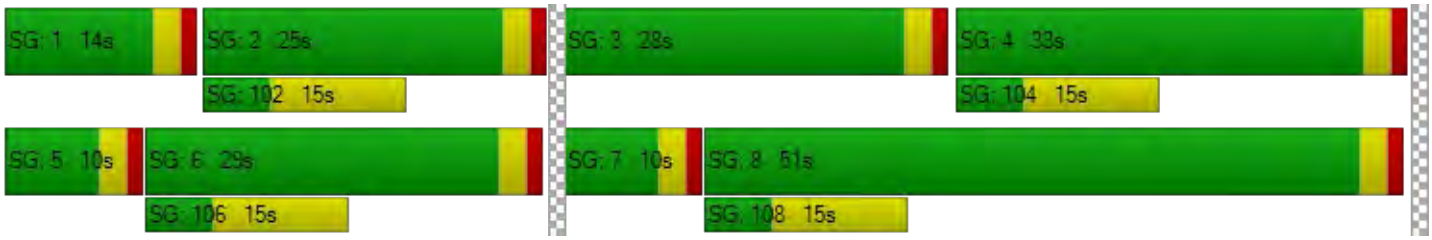
d_M, Delay for Movement [s/veh]	133.12	14.70	14.74	58.23	14.72	13.39	52.81	40.81	40.91	52.10	42.33	42.48
Movement LOS	F	B	B	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	40.45			23.53			42.53			42.80		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	39.02											
Intersection LOS	D											
Intersection V/C	0.462											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.490	2.504	2.640	2.599
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	440	520	960	600
d_b, Bicycle Delay [s]	30.42	27.38	13.52	24.50
l_b,int, Bicycle LOS Score for Intersection	2.053	2.253	2.359	2.049
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 13: Sterling Ave / Base Line

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.579

Intersection Setup

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

Volumes

Name				Sterling Ave								
Base Volume Input [veh/h]	69	447	76	202	309	83	127	551	49	60	354	216
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	58	0	0	30	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	505	76	202	339	83	127	551	49	60	354	216
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	136	20	54	91	22	34	148	13	16	95	58
Total Analysis Volume [veh/h]	85	543	82	217	365	89	137	592	53	65	381	232
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	29	0	22	40	0	15	39	0	10	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	60	42	42	15	50	50	10	25	25	6	21	21
g / C, Green / Cycle	0.60	0.42	0.42	0.15	0.50	0.50	0.10	0.25	0.25	0.06	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.08	0.18	0.18	0.13	0.13	0.13	0.08	0.18	0.18	0.04	0.18	0.18
s, saturation flow rate [veh/h]	1034	1800	1719	1619	1800	1680	1619	1800	1749	1619	1800	1576
c, Capacity [veh/h]	646	748	714	247	908	848	164	456	443	95	379	332
d1, Uniform Delay [s]	8.88	20.77	20.79	41.44	14.11	14.12	44.11	34.08	34.09	46.16	38.04	38.14
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.13	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	1.78	1.88	9.57	0.69	0.74	10.48	2.13	2.20	8.38	6.98	8.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.43	0.43	0.88	0.26	0.26	0.83	0.72	0.72	0.68	0.86	0.87
d, Delay for Lane Group [s/veh]	9.30	22.55	22.66	51.01	14.80	14.86	54.59	36.22	36.29	54.54	45.02	46.83
Lane Group LOS	A	C	C	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.82	5.55	5.34	5.83	3.10	2.92	3.78	7.41	7.22	1.80	8.29	7.51
50th-Percentile Queue Length [ft/ln]	20.44	138.68	133.38	145.83	77.44	73.11	94.57	185.25	180.40	44.92	207.34	187.81
95th-Percentile Queue Length [veh/ln]	1.47	9.41	9.12	9.79	5.58	5.26	6.81	11.87	11.62	3.23	13.02	12.01
95th-Percentile Queue Length [ft/ln]	36.79	235.24	228.08	244.85	139.38	131.59	170.22	296.85	290.54	80.85	325.41	300.19

Movement, Approach, & Intersection Results

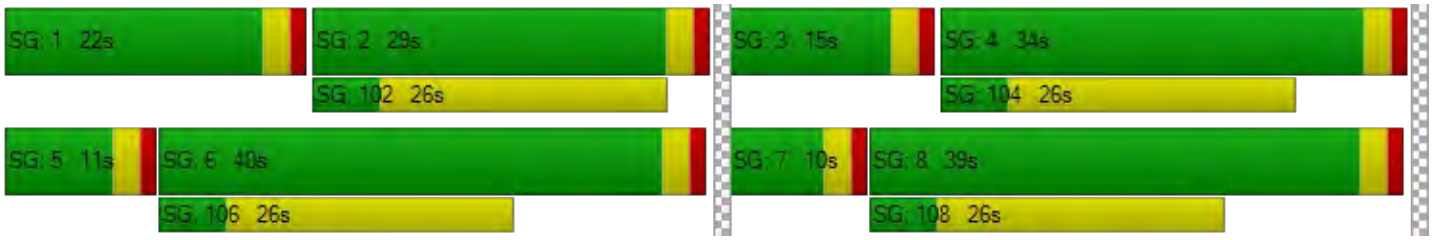
d_M, Delay for Movement [s/veh]	9.30	22.60	22.66	51.01	14.82	14.86	54.59	36.25	36.29	54.54	45.28	46.83
Movement LOS	A	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	21.01			26.53			39.47			46.70		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.53											
Intersection LOS	C											
Intersection V/C	0.579											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.539	2.717	2.631	2.612
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	740	720	620
d_b, Bicycle Delay [s]	27.38	19.85	20.48	23.81
l_b,int, Bicycle LOS Score for Intersection	2.145	2.113	2.205	2.119
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 14: Victoria Ave / Base Line

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.425

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	62	339	74	99	276	122	115	494	59	38	327	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	479	74	99	311	122	115	494	59	38	327	98
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	123	19	25	80	31	30	127	15	10	84	25
Total Analysis Volume [veh/h]	64	492	76	102	320	125	118	508	61	39	336	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	31	0	12	30	0	29	47	0	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	22	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	56	56	8	58	58	9	20	20	5	15	15
g / C, Green / Cycle	0.06	0.56	0.56	0.08	0.58	0.58	0.09	0.20	0.20	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.04	0.16	0.16	0.06	0.13	0.13	0.07	0.16	0.16	0.02	0.13	0.13
s, saturation flow rate [veh/h]	1619	1800	1717	1619	1800	1632	1619	1800	1733	1619	1800	1660
c, Capacity [veh/h]	95	1004	958	125	1038	941	147	357	344	75	277	256
d1, Uniform Delay [s]	46.15	11.66	11.67	45.42	10.28	10.31	44.58	38.29	38.31	46.58	40.89	41.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.11	0.73	0.77	11.89	0.50	0.56	9.72	4.43	4.67	5.42	5.66	6.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.29	0.29	0.81	0.22	0.23	0.80	0.81	0.81	0.52	0.81	0.83
d, Delay for Lane Group [s/veh]	54.25	12.38	12.44	57.31	10.78	10.87	54.30	42.72	42.98	52.00	46.56	47.76
Lane Group LOS	D	B	B	E	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.76	3.44	3.32	2.89	2.49	2.32	3.25	7.13	6.91	1.06	5.74	5.49
50th-Percentile Queue Length [ft/ln]	44.10	86.12	82.96	72.25	62.37	58.07	81.14	178.22	172.79	26.42	143.51	137.20
95th-Percentile Queue Length [veh/ln]	3.18	6.20	5.97	5.20	4.49	4.18	5.84	11.51	11.22	1.90	9.67	9.33
95th-Percentile Queue Length [ft/ln]	79.38	155.02	149.33	130.04	112.27	104.53	146.06	287.69	280.58	47.55	241.74	233.24

Movement, Approach, & Intersection Results

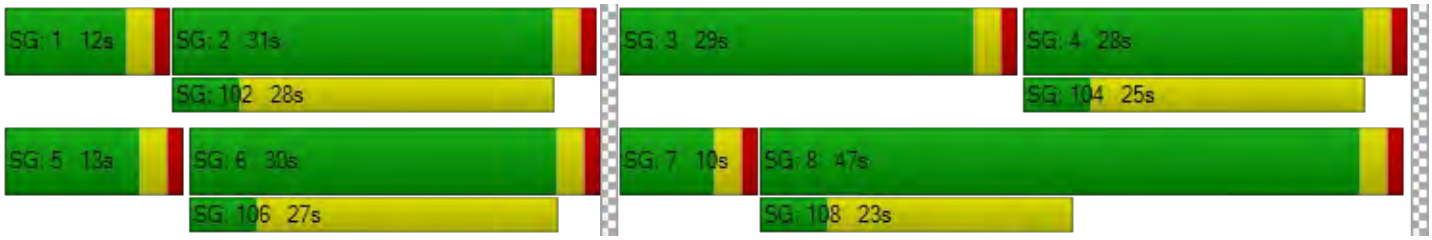
d_M, Delay for Movement [s/veh]	54.25	12.40	12.44	57.31	10.80	10.87	54.30	42.83	42.98	52.00	46.95	47.76
Movement LOS	D	B	B	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.65			19.49			44.82			47.54		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	31.85											
Intersection LOS	C											
Intersection V/C	0.425											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.512	2.552	2.543	2.533
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	540	880	500
d_b, Bicycle Delay [s]	25.92	26.65	15.68	28.13
l_b,int, Bicycle LOS Score for Intersection	2.081	2.011	2.126	1.952
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 15: Tippecanoe Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	28.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.339

Intersection Setup

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

Volumes

Name	Tippacanoe Avenue											
Base Volume Input [veh/h]	116	511	57	12	265	35	61	370	75	48	246	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	4	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	511	57	12	269	35	61	370	75	48	246	22
Peak Hour Factor	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	133	15	3	70	9	16	96	19	12	64	6
Total Analysis Volume [veh/h]	121	531	59	12	280	36	63	385	78	50	256	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	10	34	0	26	44	0	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	65	65	2	58	58	6	16	16	5	15	15
g / C, Green / Cycle	0.09	0.65	0.65	0.02	0.58	0.58	0.06	0.16	0.16	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.07	0.17	0.17	0.01	0.09	0.09	0.04	0.13	0.13	0.03	0.08	0.08
s, saturation flow rate [veh/h]	1619	1800	1738	1619	1800	1730	1619	1800	1697	1619	1800	1749
c, Capacity [veh/h]	146	1164	1124	33	1039	998	96	289	272	85	277	269
d1, Uniform Delay [s]	44.75	7.49	7.49	48.36	9.82	9.83	46.05	40.60	40.67	46.30	38.84	38.88
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.37	0.54	0.56	6.70	0.31	0.33	7.43	5.77	6.48	6.25	1.44	1.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.26	0.26	0.37	0.15	0.16	0.66	0.82	0.83	0.59	0.51	0.51
d, Delay for Lane Group [s/veh]	56.12	8.02	8.05	55.06	10.13	10.17	53.48	46.37	47.15	52.55	40.28	40.40
Lane Group LOS	E	A	A	E	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.39	2.66	2.58	0.36	1.64	1.61	1.72	6.04	5.82	1.36	3.26	3.21
50th-Percentile Queue Length [ft/ln]	84.72	66.48	64.53	8.88	41.08	40.33	43.08	151.05	145.59	33.93	81.39	80.27
95th-Percentile Queue Length [veh/ln]	6.10	4.79	4.65	0.64	2.96	2.90	3.10	10.07	9.78	2.44	5.86	5.78
95th-Percentile Queue Length [ft/ln]	152.50	119.67	116.15	15.99	73.95	72.60	77.54	251.83	244.53	61.07	146.50	144.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.12	8.03	8.05	55.06	10.15	10.17	53.48	46.67	47.15	52.55	40.33	40.40
Movement LOS	E	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.22			11.79			47.56			42.19		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.67											
Intersection LOS	C											
Intersection V/C	0.339											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.525	2.491	2.490	2.460
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	620	820	500
d_b, Bicycle Delay [s]	22.45	23.81	17.41	28.13
l_b,int, Bicycle LOS Score for Intersection	2.146	1.830	1.994	1.831
Bicycle LOS	B	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 16: Del Rosa Dr / 9th St

Control Type:	Signalized	Delay (sec / veh):	27.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	80	390	75	52	261	43	38	219	65	40	287	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	130	0	0	48	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	520	75	52	309	43	38	219	65	40	287	46
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	146	21	15	87	12	11	62	18	11	81	13
Total Analysis Volume [veh/h]	90	586	84	59	348	48	43	247	73	45	323	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	24	0	10	22	0	10	56	0	10	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	57	57	6	56	56	5	20	20	5	20	20
g / C, Green / Cycle	0.07	0.57	0.57	0.06	0.56	0.56	0.05	0.20	0.20	0.05	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.19	0.04	0.11	0.11	0.03	0.14	0.05	0.03	0.18	0.03
s, saturation flow rate [veh/h]	1619	1800	1722	1619	1800	1725	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	112	1026	982	92	1004	962	80	365	311	81	367	312
d1, Uniform Delay [s]	45.88	11.41	11.41	46.18	11.01	11.03	46.44	36.81	33.35	46.39	38.60	32.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.53	0.87	0.92	7.33	0.45	0.47	5.60	2.19	0.38	5.75	6.84	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.33	0.33	0.64	0.20	0.20	0.54	0.68	0.24	0.55	0.88	0.17
d, Delay for Lane Group [s/veh]	58.41	12.28	12.33	53.51	11.46	11.50	52.04	39.00	33.74	52.14	45.44	33.04
Lane Group LOS	E	B	B	D	B	B	D	D	C	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.58	4.06	3.91	1.61	2.25	2.19	1.16	5.74	1.51	1.22	8.27	1.06
50th-Percentile Queue Length [ft/ln]	64.48	101.56	97.69	40.37	56.17	54.69	29.08	143.51	37.77	30.44	206.83	26.44
95th-Percentile Queue Length [veh/ln]	4.64	7.31	7.03	2.91	4.04	3.94	2.09	9.67	2.72	2.19	12.99	1.90
95th-Percentile Queue Length [ft/ln]	116.06	182.80	175.84	72.66	101.10	98.44	52.35	241.74	67.98	54.80	324.76	47.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.41	12.30	12.33	53.51	11.48	11.50	52.04	39.00	33.74	52.14	45.44	33.04
Movement LOS	E	B	B	D	B	B	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	17.76			16.93			39.49			44.62		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.17											
Intersection LOS	C											
Intersection V/C	0.433											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.546	2.528	2.467	2.335
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	420	380	1060	1060
d_b, Bicycle Delay [s]	31.21	32.81	11.05	11.05
l_b,int, Bicycle LOS Score for Intersection	2.187	1.935	2.159	2.253
Bicycle LOS	B	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 17: Sterling Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	33	360	106	71	234	75	97	270	34	50	176	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	9	21	0	0	0	0	0	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	414	106	80	255	75	97	270	34	50	176	87
Peak Hour Factor	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	119	30	23	73	21	28	77	10	14	50	25
Total Analysis Volume [veh/h]	38	474	121	92	292	86	111	309	39	57	202	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	14	30	0	29	50	0	10	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	19	0	0	22	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	56	56	7	58	58	9	20	20	6	16	16
g / C, Green / Cycle	0.05	0.56	0.56	0.07	0.58	0.58	0.09	0.20	0.20	0.06	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.06	0.11	0.11	0.07	0.17	0.03	0.04	0.11	0.07
s, saturation flow rate [veh/h]	1619	1800	1676	1619	1800	1662	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	75	1003	934	115	1048	968	141	352	300	90	297	252
d1, Uniform Delay [s]	46.60	11.81	11.83	45.76	9.78	9.80	44.76	39.04	33.18	46.20	39.29	37.32
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.30	0.79	0.86	12.02	0.39	0.43	9.41	6.97	0.19	7.04	2.75	1.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.31	0.31	0.80	0.19	0.19	0.79	0.88	0.13	0.63	0.68	0.40
d, Delay for Lane Group [s/veh]	51.90	12.60	12.69	57.78	10.17	10.24	54.17	46.01	33.38	53.23	42.04	38.33
Lane Group LOS	D	B	B	E	B	B	D	D	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.03	3.69	3.49	2.62	2.01	1.91	3.05	7.95	0.80	1.56	4.85	2.24
50th-Percentile Queue Length [ft/ln]	25.72	92.27	87.18	65.50	50.25	47.72	76.25	198.66	19.89	38.90	121.20	56.10
95th-Percentile Queue Length [veh/ln]	1.85	6.64	6.28	4.72	3.62	3.44	5.49	12.57	1.43	2.80	8.46	4.04
95th-Percentile Queue Length [ft/ln]	46.30	166.08	156.92	117.91	90.44	85.90	137.24	314.24	35.80	70.02	211.47	100.98

Movement, Approach, & Intersection Results

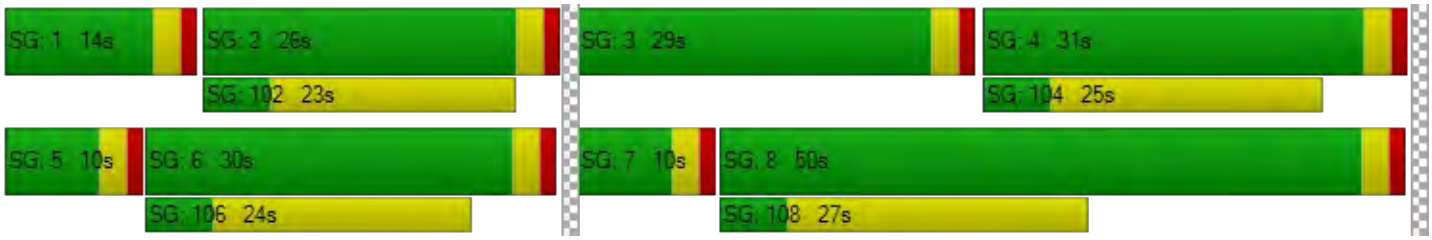
d_M, Delay for Movement [s/veh]	51.90	12.63	12.69	57.78	10.19	10.24	54.17	46.01	33.38	53.23	42.04	38.33
Movement LOS	D	B	B	E	B	B	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	15.00			19.52			46.91			42.78		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.92											
Intersection LOS	C											
Intersection V/C	0.436											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.625	2.532	2.329	2.352
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	540	940	560
d_b, Bicycle Delay [s]	29.65	26.65	14.05	25.92
l_b,int, Bicycle LOS Score for Intersection	2.082	1.947	2.317	2.152
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 18: Victoria Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.302

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	46	303	27	59	216	60	83	178	45	19	120	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	443	27	59	251	60	83	178	45	19	120	56
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	117	7	16	66	16	22	47	12	5	32	15
Total Analysis Volume [veh/h]	49	467	28	62	265	63	88	188	47	20	127	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	34	0	13	34	0	24	43	0	10	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	66	66	6	67	67	7	13	13	3	9	9
g / C, Green / Cycle	0.05	0.66	0.66	0.06	0.67	0.67	0.07	0.13	0.13	0.03	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.14	0.04	0.09	0.10	0.05	0.10	0.03	0.01	0.07	0.04
s, saturation flow rate [veh/h]	1619	1800	1764	1619	1800	1683	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	85	1188	1164	94	1198	1120	112	238	202	49	168	143
d1, Uniform Delay [s]	46.30	6.71	6.72	46.15	6.17	6.19	45.83	42.06	38.86	47.62	44.23	42.76
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.06	0.40	0.41	7.75	0.24	0.27	11.50	5.82	0.58	5.42	6.80	1.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.21	0.21	0.66	0.14	0.14	0.79	0.79	0.23	0.41	0.76	0.41
d, Delay for Lane Group [s/veh]	52.36	7.12	7.13	53.90	6.42	6.46	57.33	47.88	39.44	53.04	51.03	44.67
Lane Group LOS	D	A	A	D	A	A	E	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.33	2.03	2.00	1.70	1.26	1.22	2.50	4.84	1.06	0.56	3.37	1.45
50th-Percentile Queue Length [ft/ln]	33.19	50.64	49.93	42.58	31.52	30.39	62.41	121.09	26.57	14.02	84.15	36.13
95th-Percentile Queue Length [veh/ln]	2.39	3.65	3.59	3.07	2.27	2.19	4.49	8.45	1.91	1.01	6.06	2.60
95th-Percentile Queue Length [ft/ln]	59.74	91.15	89.87	76.64	56.74	54.71	112.33	211.33	47.82	25.23	151.47	65.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.36	7.12	7.13	53.90	6.43	6.46	57.33	47.88	39.44	53.04	51.03	44.67
Movement LOS	D	A	A	D	A	A	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	11.20			13.98			49.22			49.41		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	25.72											
Intersection LOS	C											
Intersection V/C	0.302											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.602	2.502	2.275	2.256
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	620	620	800	520
d_b, Bicycle Delay [s]	23.81	23.81	18.00	27.38
l_b,int, Bicycle LOS Score for Intersection	2.008	1.881	2.093	1.900
Bicycle LOS	B	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 19: Del Rosa Dr / 6th St

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.331

Intersection Setup

Name							6th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							6th Street					
Base Volume Input [veh/h]	10	313	122	14	230	30	55	124	14	39	86	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	98	1	8	39	1	3	11	26	5	13	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	411	123	22	269	31	58	135	40	44	99	48
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	114	34	6	75	9	16	38	11	12	28	13
Total Analysis Volume [veh/h]	16	458	137	24	300	35	65	150	45	49	110	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	34	0	10	34	0	34	46	0	10	22	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	66	66	3	67	67	6	13	5	13
g / C, Green / Cycle	0.03	0.66	0.66	0.03	0.67	0.67	0.06	0.13	0.05	0.13
(v / s)_i Volume / Saturation Flow Rate	0.01	0.17	0.17	0.01	0.09	0.10	0.04	0.11	0.03	0.10
s, saturation flow rate [veh/h]	1619	1800	1660	1619	1800	1735	1619	1730	1619	1702
c, Capacity [veh/h]	41	1186	1094	56	1202	1158	98	233	85	215
d1, Uniform Delay [s]	47.96	7.03	7.04	47.33	6.10	6.11	45.98	42.19	46.32	42.19
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.86	0.53	0.58	5.21	0.25	0.26	7.48	7.73	6.15	5.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.26	0.26	0.43	0.14	0.14	0.66	0.84	0.58	0.76
d, Delay for Lane Group [s/veh]	53.82	7.56	7.63	52.53	6.35	6.37	53.47	49.91	52.47	47.55
Lane Group LOS	D	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.46	2.62	2.46	0.66	1.27	1.24	1.78	5.15	1.33	4.17
50th-Percentile Queue Length [ft/ln]	11.45	65.44	61.50	16.59	31.63	31.05	44.43	128.80	33.23	104.31
95th-Percentile Queue Length [veh/ln]	0.82	4.71	4.43	1.19	2.28	2.24	3.20	8.87	2.39	7.51
95th-Percentile Queue Length [ft/ln]	20.61	117.80	110.71	29.87	56.93	55.90	79.98	221.86	59.81	187.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.82	7.58	7.63	52.53	6.36	6.37	53.47	49.91	49.91	52.47	47.55	47.55
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.80			9.44			50.80			48.68		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	22.40											
Intersection LOS	C											
Intersection V/C	0.331											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.502	2.489	2.084	2.117
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	620	620	860	380
d_b, Bicycle Delay [s]	23.81	23.81	16.25	32.81
l_b,int, Bicycle LOS Score for Intersection	2.064	1.856	1.989	1.909
Bicycle LOS	B	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 20: Sterling Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	222.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.805

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	15	458	38	26	237	23	55	104	11	10	76	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	40	5	2	17	2	6	35	0	78	21	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	498	43	28	254	25	61	139	11	88	97	26
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	135	12	8	69	7	17	38	3	24	26	7
Total Analysis Volume [veh/h]	21	540	47	30	275	27	66	151	12	95	105	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.03	0.00	0.00	0.33	0.62	0.01	0.80	0.43	0.04
d_M, Delay for Movement [s/veh]	7.88	0.00	0.00	8.72	0.00	0.00	94.81	91.76	81.04	222.22	206.55	196.79
Movement LOS	A	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.05	0.03	0.00	0.09	0.05	0.00	8.68	8.68	8.68	12.84	12.84	12.84
95th-Percentile Queue Length [ft/ln]	1.26	0.63	0.00	2.32	1.16	0.00	216.93	216.93	216.93	321.02	321.02	321.02
d_A, Approach Delay [s/veh]	0.27			0.79			92.08			211.88		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	49.98											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 21: Victoria Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	62.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.166

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	46	341	5	16	203	24	26	44	25	3	29	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	119	5	7	24	4	10	104	1	2	39	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	460	10	23	227	28	36	148	26	5	68	21
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	125	3	6	62	8	10	40	7	1	18	6
Total Analysis Volume [veh/h]	56	499	11	25	246	30	39	161	28	5	74	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.02	0.00	0.00	0.17	0.64	0.03	0.04	0.30	0.03
d_M, Delay for Movement [s/veh]	7.90	0.00	0.00	8.46	0.00	0.00	62.26	61.12	50.87	44.35	27.25	17.43
Movement LOS	A	A	A	A	A	A	F	F	F	E	D	C
95th-Percentile Queue Length [veh/ln]	0.14	0.07	0.00	0.07	0.04	0.00	6.81	6.81	6.81	1.66	1.66	1.66
95th-Percentile Queue Length [ft/ln]	3.38	1.69	0.00	1.80	0.90	0.00	170.25	170.25	170.25	41.56	41.56	41.56
d_A, Approach Delay [s/veh]	0.78			0.70			60.06			25.87		
Approach LOS	A			A			F			D		
d_I, Intersection Delay [s/veh]	14.19											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 22: Central Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.137

Intersection Setup

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

Volumes

Name	Central Avenue					
Base Volume Input [veh/h]	22	173	75	30	50	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	40	0	12	26	114
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	213	75	42	76	141
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	58	20	11	21	38
Total Analysis Volume [veh/h]	30	231	81	46	82	153
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.14	0.16
d_M, Delay for Movement [s/veh]	7.50	0.00	0.00	0.00	11.96	9.48
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.47	0.57
95th-Percentile Queue Length [ft/ln]	1.56	1.56	0.00	0.00	11.80	14.21
d_A, Approach Delay [s/veh]	0.86		0.00		10.34	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.26					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 23: I-215 SB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			Yes			No			No	

Volumes

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	198	6	186	0	589	393	498	805	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	24	0	221	64	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	198	6	186	0	613	393	719	869	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9700	0.9700	0.9700	1.0000	0.9700	0.9700	0.9700	0.9700	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	51	2	48	0	158	101	185	224	0
Total Analysis Volume [veh/h]	0	0	0	204	6	192	0	632	405	741	896	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	13	0	0	61	0	26	87	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	C	R	C	C	L	C
C, Cycle Length [s]		100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		10	10	10	58	58	23	84
g / C, Green / Cycle		0.10	0.10	0.10	0.58	0.58	0.23	0.84
(v / s)_i Volume / Saturation Flow Rate		0.08	0.08	0.08	0.13	0.26	0.25	0.26
s, saturation flow rate [veh/h]		1714	1622	1530	4903	1530	2959	3427
c, Capacity [veh/h]		171	162	153	2844	887	681	2879
d1, Uniform Delay [s]		44.14	44.15	44.15	10.13	12.00	38.50	1.73
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		9.53	10.09	10.71	0.18	1.69	46.00	0.28
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.82	0.83	0.83	0.22	0.46	1.09	0.31
d, Delay for Lane Group [s/veh]		53.67	54.23	54.86	10.31	13.69	84.50	2.02
Lane Group LOS		D	D	D	B	B	F	A
Critical Lane Group		No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		3.86	3.69	3.51	2.17	5.25	12.53	1.06
50th-Percentile Queue Length [ft/ln]		96.55	92.13	87.68	54.29	131.36	313.18	26.48
95th-Percentile Queue Length [veh/ln]		6.95	6.63	6.31	3.91	9.01	19.18	1.91
95th-Percentile Queue Length [ft/ln]		173.79	165.84	157.82	97.72	225.34	479.47	47.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	53.86	54.23	54.66	0.00	10.31	13.69	84.50	2.02	0.00
Movement LOS				D	D	D		B	B	F	A	
d_A, Approach Delay [s/veh]	0.00			54.23			11.63			39.35		
Approach LOS	A			D			B			D		
d_I, Intersection Delay [s/veh]	31.95											
Intersection LOS	C											
Intersection V/C	0.598											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	41.41	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.077	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	200	1160	1680
d_b, Bicycle Delay [s]	50.00	40.50	8.82	1.28
l_b,int, Bicycle LOS Score for Intersection	4.132	2.223	1.987	2.910
Bicycle LOS	D	B	A	C

Sequence

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

Intersection Level Of Service Report
Intersection 24: I-215 NB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	380	3	418	0	0	0	225	561	0	0	925	644
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	54	0	0	0	0	24	0	0	285	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	380	3	472	0	0	0	225	585	0	0	1210	644
Peak Hour Factor	0.9960	0.9960	0.9960	0.9960	1.0000	0.9960	0.9960	0.9960	1.0000	1.0000	0.9960	0.9960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	1	118	0	0	0	56	147	0	0	304	162
Total Analysis Volume [veh/h]	382	3	474	0	0	0	226	587	0	0	1215	647
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	12	82	0	0	70	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	34	34	34		9	60	48	48
g / C, Green / Cycle	0.34	0.34	0.34		0.09	0.60	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.17	0.18	0.18		0.08	0.17	0.19	0.42
s, saturation flow rate [veh/h]	1714	1585	1530		2959	3427	6538	1530
c, Capacity [veh/h]	581	537	518		266	2060	3146	736
d1, Uniform Delay [s]	26.39	26.64	26.75		44.83	9.60	16.53	23.32
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.14	3.71	4.00		7.38	0.08	0.08	6.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.53	0.54		0.85	0.28	0.39	0.88
d, Delay for Lane Group [s/veh]	29.53	30.35	30.75		52.21	9.67	16.61	29.78
Lane Group LOS	C	C	C		D	A	B	C
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.00	5.92	5.88		3.01	2.93	4.32	14.26
50th-Percentile Queue Length [ft/ln]	150.09	147.91	146.94		75.32	73.24	108.11	356.59
95th-Percentile Queue Length [veh/ln]	10.02	9.91	9.85		5.42	5.27	7.73	20.46
95th-Percentile Queue Length [ft/ln]	250.55	247.64	246.34		135.58	131.84	193.37	511.44

Movement, Approach, & Intersection Results

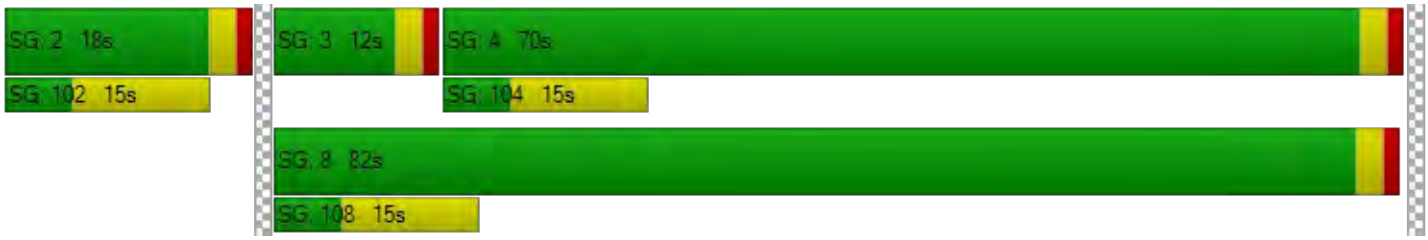
d_M, Delay for Movement [s/veh]	29.73	30.35	30.59	0.00	0.00	0.00	52.21	9.67	0.00	0.00	16.61	29.78
Movement LOS	C	C	C				D	A			B	C
d_A, Approach Delay [s/veh]	30.20			0.00			21.50			21.19		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	23.45											
Intersection LOS	C											
Intersection V/C	0.682											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.226	2.149	3.026	3.008
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	0	1580	1340
d_b, Bicycle Delay [s]	36.13	50.00	2.21	5.45
l_b,int, Bicycle LOS Score for Intersection	2.977	4.132	2.230	2.328
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 25: E St / 5th St

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	94	281	27	21	163	60	26	543	42	33	838	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	78	0	0	285	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	281	27	21	163	60	26	621	42	33	1123	20
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	75	7	6	44	16	7	166	11	9	301	5
Total Analysis Volume [veh/h]	101	301	29	23	175	64	28	666	45	35	1204	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	28.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	54	0	10	52	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	6	0	0	6	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	19	3	15	59	59	59	59	59	59
g / C, Green / Cycle	0.08	0.21	0.03	0.17	0.65	0.65	0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.01	0.14	0.06	0.20	0.20	0.05	0.34	0.34
s, saturation flow rate [veh/h]	1619	1773	1619	1719	462	1800	1760	750	1800	1789
c, Capacity [veh/h]	125	376	56	292	277	1175	1149	472	1175	1168
d1, Uniform Delay [s]	40.85	34.31	42.54	36.04	15.76	6.77	6.77	10.75	8.23	8.23
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.40	6.58	4.72	5.67	0.73	0.67	0.69	0.30	1.66	1.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.88	0.41	0.82	0.10	0.31	0.31	0.07	0.52	0.52
d, Delay for Lane Group [s/veh]	52.25	40.88	47.25	41.71	16.49	7.44	7.46	11.05	9.89	9.90
Lane Group LOS	D	D	D	D	B	A	A	B	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.57	7.51	0.57	5.43	0.40	2.81	2.75	0.37	5.92	5.89
50th-Percentile Queue Length [ft/ln]	64.27	187.76	14.24	135.71	9.92	70.16	68.85	9.28	147.92	147.23
95th-Percentile Queue Length [veh/ln]	4.63	12.01	1.03	9.25	0.71	5.05	4.96	0.67	9.91	9.87
95th-Percentile Queue Length [ft/ln]	115.69	300.13	25.63	231.23	17.85	126.29	123.92	16.70	247.65	246.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.25	40.88	40.88	47.25	41.71	41.71	16.49	7.45	7.46	11.05	9.90	9.90
Movement LOS	D	D	D	D	D	D	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	43.54			42.20			7.79			9.93		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	17.87											
Intersection LOS	B											
Intersection V/C	0.543											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.214	2.180	2.984	2.687
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1133	1089	511	511
d_b, Bicycle Delay [s]	8.45	9.34	24.94	24.94
l_b,int, Bicycle LOS Score for Intersection	2.271	1.992	2.169	2.599
Bicycle LOS	B	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 26: Arrowhead Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.399

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	95	305	64	27	142	51	46	490	30	39	588	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	78	0	0	285	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	95	305	64	27	142	51	46	568	30	39	873	20
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	86	18	8	40	14	13	160	8	11	245	6
Total Analysis Volume [veh/h]	107	343	72	30	160	57	52	638	34	44	981	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	4	0	1	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	20	0	0	20	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	60	0	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	62	62	62	62	62	62
g / C, Green / Cycle	0.20	0.20	0.20	0.20	0.20	0.20	0.69	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.09	0.12	0.12	0.03	0.06	0.06	0.09	0.19	0.19	0.06	0.28	0.28
s, saturation flow rate [veh/h]	1183	1800	1694	987	1800	1644	571	1800	1768	778	1800	1786
c, Capacity [veh/h]	222	361	340	145	361	330	394	1239	1217	545	1239	1229
d1, Uniform Delay [s]	38.33	32.60	32.66	40.47	30.64	30.74	10.02	5.39	5.39	7.71	6.07	6.07
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	1.53	1.67	0.70	0.48	0.56	0.69	0.55	0.56	0.29	0.99	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.59	0.60	0.21	0.31	0.32	0.13	0.27	0.27	0.08	0.41	0.41
d, Delay for Lane Group [s/veh]	39.95	34.13	34.33	41.17	31.11	31.30	10.71	5.93	5.95	8.00	7.06	7.07
Lane Group LOS	D	C	C	D	C	C	B	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.35	4.27	4.09	0.66	2.07	1.99	0.55	2.24	2.20	0.38	3.77	3.75
50th-Percentile Queue Length [ft/ln]	58.74	106.83	102.28	16.53	51.63	49.85	13.85	55.91	55.09	9.45	94.29	93.63
95th-Percentile Queue Length [veh/ln]	4.23	7.66	7.36	1.19	3.72	3.59	1.00	4.03	3.97	0.68	6.79	6.74
95th-Percentile Queue Length [ft/ln]	105.72	191.58	184.11	29.75	92.94	89.74	24.94	100.64	99.16	17.01	169.72	168.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.95	34.20	34.33	41.17	31.17	31.30	10.71	5.94	5.95	8.00	7.07	7.07
Movement LOS	D	C	C	D	C	C	B	A	A	A	A	A
d_A, Approach Delay [s/veh]	35.40			32.41			6.28			7.11		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	15.15											
Intersection LOS	B											
Intersection V/C	0.399											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.510	2.503	2.816	2.690
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	556	1222	1222
d_b, Bicycle Delay [s]	23.47	23.47	6.81	6.81
l_b,int, Bicycle LOS Score for Intersection	1.990	1.763	2.157	2.423
Bicycle LOS	A	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 27: Waterman Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	27.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	143	678	97	52	574	132	137	395	132	62	212	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	4	0	8	17	0	78	0	19	268	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	678	101	52	582	149	137	473	132	81	480	41
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	174	26	13	149	38	35	121	34	21	123	11
Total Analysis Volume [veh/h]	147	696	104	53	598	153	141	486	136	83	493	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	5.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	36	0	10	31	0	9	35	0	9	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	4.00	2.00	4.00	4.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	10	43	43	4	37	37	28	19	19	28	19	19
g / C, Green / Cycle	0.11	0.48	0.48	0.04	0.41	0.41	0.31	0.21	0.21	0.31	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.09	0.20	0.07	0.03	0.15	0.15	0.13	0.18	0.18	0.08	0.14	0.03
s, saturation flow rate [veh/h]	1619	3427	1530	1619	3427	1621	1094	1800	1666	1007	3427	1530
c, Capacity [veh/h]	176	1651	737	67	1420	671	343	385	357	297	720	322
d1, Uniform Delay [s]	39.29	15.18	12.98	42.73	18.12	18.18	24.26	33.87	33.89	23.87	32.79	28.87
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.74	0.79	0.40	17.96	0.70	1.53	0.79	4.86	5.33	0.51	1.16	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.42	0.14	0.79	0.36	0.36	0.41	0.84	0.84	0.28	0.68	0.13
d, Delay for Lane Group [s/veh]	49.04	15.97	13.38	60.70	18.82	19.71	25.05	38.73	39.22	24.38	33.95	29.05
Lane Group LOS	D	B	B	E	B	B	C	D	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.61	4.57	1.20	1.49	3.63	3.67	2.30	7.11	6.66	1.30	4.97	0.74
50th-Percentile Queue Length [ft/ln]	90.33	114.29	30.10	37.29	90.71	91.64	57.39	177.82	166.43	32.49	124.37	18.62
95th-Percentile Queue Length [veh/ln]	6.50	8.08	2.17	2.68	6.53	6.60	4.13	11.49	10.89	2.34	8.63	1.34
95th-Percentile Queue Length [ft/ln]	162.60	201.95	54.17	67.12	163.28	164.96	103.30	287.17	272.21	58.48	215.82	33.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.04	15.97	13.38	60.70	18.96	19.71	25.05	38.89	39.22	24.38	33.95	29.05
Movement LOS	D	B	B	E	B	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	20.82			21.85			36.39			32.33		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	27.15											
Intersection LOS	C											
Intersection V/C	0.461											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.867	2.772	2.603	2.657
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	667	667
d_b, Bicycle Delay [s]	20.00	23.47	20.00	20.00
l_b,int, Bicycle LOS Score for Intersection	2.341	2.002	2.189	2.069
Bicycle LOS	B	B	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 28: Tippecanoe Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	32.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.570

Intersection Setup

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	57	468	34	35	297	24	59	414	48	26	122	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	52	1	14	3	5	0	4	68	10	70	243	16
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	469	48	38	302	24	63	482	58	96	365	44
Peak Hour Factor	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	129	13	10	83	7	17	133	16	26	101	12
Total Analysis Volume [veh/h]	120	517	53	42	333	26	69	531	64	106	402	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	28	0	10	22	0	15	49	0	13	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	43	43	5	39	39	6	32	32	8	34	34
g / C, Green / Cycle	0.09	0.43	0.43	0.05	0.39	0.39	0.06	0.32	0.32	0.08	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.07	0.16	0.16	0.03	0.10	0.10	0.04	0.30	0.04	0.07	0.22	0.03
s, saturation flow rate [veh/h]	1619	1800	1742	1619	1800	1755	1619	1800	1530	1619	1800	1530
c, Capacity [veh/h]	147	776	751	79	700	683	100	575	488	131	609	518
d1, Uniform Delay [s]	44.62	19.27	19.28	46.44	20.75	20.77	45.99	32.87	24.19	45.22	28.19	22.62
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.19	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.29	1.37	1.42	5.42	0.89	0.93	8.27	10.95	0.12	11.31	1.23	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.37	0.37	0.53	0.26	0.26	0.69	0.92	0.13	0.81	0.66	0.09
d, Delay for Lane Group [s/veh]	54.91	20.64	20.70	51.85	21.64	21.69	54.26	43.82	24.31	56.52	29.42	22.70
Lane Group LOS	D	C	C	D	C	C	D	D	C	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.32	4.74	4.61	1.13	3.00	2.96	1.90	13.82	1.09	2.98	8.22	0.80
50th-Percentile Queue Length [ft/ln]	83.04	118.48	115.28	28.36	75.08	74.03	47.54	345.57	27.18	74.51	205.56	19.88
95th-Percentile Queue Length [veh/ln]	5.98	8.31	8.13	2.04	5.41	5.33	3.42	19.92	1.96	5.36	12.92	1.43
95th-Percentile Queue Length [ft/ln]	149.47	207.74	203.33	51.04	135.15	133.25	85.58	498.01	48.92	134.12	323.12	35.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.91	20.67	20.70	51.85	21.66	21.69	54.26	43.82	24.31	56.52	29.42	22.70
Movement LOS	D	C	C	D	C	C	D	D	C	E	C	C
d_A, Approach Delay [s/veh]	26.63			24.83			43.02			33.99		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	32.80											
Intersection LOS	C											
Intersection V/C	0.570											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.539	2.508	2.543	2.537
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	380	920	880
d_b, Bicycle Delay [s]	28.13	32.81	14.58	15.68
l_b,int, Bicycle LOS Score for Intersection	2.129	1.890	2.655	2.479
Bicycle LOS	B	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 29: Del Rosa Dr / 5th St

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	21	343	24	48	215	32	71	398	18	16	119	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	2	57	10	3	14	174	0	9	265	64
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	368	26	105	225	35	85	572	18	25	384	100
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	97	7	28	59	9	22	150	5	7	101	26
Total Analysis Volume [veh/h]	22	386	27	110	236	37	89	600	19	26	403	105
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	33	0	0	33	0	0	67	0	0	67	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	C	C	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	59	59	59	59	35	35	35	35
g / C, Green / Cycle	0.59	0.59	0.59	0.59	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.16	0.14	0.30	0.28	0.20	0.20
s, saturation flow rate [veh/h]	1718	1601	1026	1590	853	1626	1084	1546
c, Capacity [veh/h]	1052	944	665	937	348	570	420	542
d1, Uniform Delay [s]	9.64	9.69	12.74	9.75	33.68	29.24	25.01	26.43
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	0.54	0.91	0.57	3.00	2.58	1.03	0.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.22	0.25	0.23	0.73	0.80	0.53	0.58
d, Delay for Lane Group [s/veh]	10.11	10.23	13.64	10.33	36.68	31.82	26.03	27.41
Lane Group LOS	B	B	B	B	D	C	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.33	2.18	2.21	2.28	6.17	9.95	3.95	6.09
50th-Percentile Queue Length [ft/ln]	58.37	54.61	55.21	56.91	154.33	248.67	98.75	152.32
95th-Percentile Queue Length [veh/ln]	4.20	3.93	3.98	4.10	10.25	15.12	7.11	10.14
95th-Percentile Queue Length [ft/ln]	105.06	98.29	99.38	102.44	256.20	377.98	177.76	253.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.11	10.17	10.23	13.64	11.13	10.33	36.68	33.16	31.82	26.03	26.74	27.41
Movement LOS	B	B	B	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.17			11.77			33.57			26.84		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	22.83											
Intersection LOS	C											
Intersection V/C	0.461											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.349	2.499	2.454	2.711
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	600	1280	1280
d_b, Bicycle Delay [s]	24.50	24.50	6.48	6.48
l_b,int, Bicycle LOS Score for Intersection	1.918	1.876	2.144	2.000
Bicycle LOS	A	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 30: Sterling Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	6	310	14	35	182	42	83	366	29	11	124	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	41	23	18	3	47	45	16	220	47	76	206	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	333	32	38	229	87	99	586	76	87	330	40
Peak Hour Factor	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080	0.9080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	92	9	10	63	24	27	161	21	24	91	11
Total Analysis Volume [veh/h]	52	367	35	42	252	96	109	645	84	96	363	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	36	0	0	44	0	0	44	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	6	0	0	6	0	0	6	0	0	6	0
Pedestrian Clearance [s]	0	13	0	0	13	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	50	50	50	50	50	50	39	39	39	39	39	39
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.05	0.11	0.11	0.04	0.10	0.10	0.32	0.30	0.05	0.46	0.22	0.03
s, saturation flow rate [veh/h]	1049	1800	1746	998	1800	1636	811	1638	1530	209	1638	1530
c, Capacity [veh/h]	513	893	866	484	893	811	370	645	602	154	645	602
d1, Uniform Delay [s]	17.70	14.32	14.34	18.00	14.11	14.16	33.27	26.29	19.45	45.60	23.62	18.93
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.32	0.28	0.11	0.50	0.12	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.59	0.62	0.35	0.51	0.58	7.01	4.80	0.10	17.49	0.86	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.23	0.23	0.09	0.20	0.21	0.71	0.76	0.14	0.62	0.56	0.07
d, Delay for Lane Group [s/veh]	18.10	14.91	14.95	18.36	14.62	14.74	40.27	31.09	19.56	63.09	24.48	18.98
Lane Group LOS	B	B	B	B	B	B	D	C	B	E	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.78	2.70	2.65	0.64	2.34	2.22	6.66	10.68	1.26	3.14	6.65	0.64
50th-Percentile Queue Length [ft/ln]	19.52	67.42	66.14	15.92	58.60	55.57	166.59	267.09	31.41	78.46	166.37	16.00
95th-Percentile Queue Length [veh/ln]	1.41	4.85	4.76	1.15	4.22	4.00	10.90	16.04	2.26	5.65	10.89	1.15
95th-Percentile Queue Length [ft/ln]	35.14	121.35	119.06	28.66	105.47	100.03	272.43	401.11	56.54	141.23	272.14	28.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.10	14.93	14.95	18.36	14.65	14.74	40.27	33.26	19.56	63.09	24.48	18.98
Movement LOS	B	B	B	B	B	B	D	C	B	E	C	B
d_A, Approach Delay [s/veh]	15.30			15.07			32.80			31.36		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	25.67											
Intersection LOS	C											
Intersection V/C	0.574											

Other Modes

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	40.50	40.50	40.50	40.50
l_p,int, Pedestrian LOS Score for Intersection	2.739	2.638	2.643	2.604
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	590	610	770	770
d_b, Bicycle Delay [s]	24.85	24.15	18.91	18.91
l_b,int, Bicycle LOS Score for Intersection	1.934	1.881	2.251	1.975
Bicycle LOS	A	A	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 31: Victoria Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

Intersection Setup

Name										5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name										5th Street		
Base Volume Input [veh/h]	2	248	116	75	137	14	48	362	11	30	138	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	37	0	3	20	4	36	285	0	0	219	57
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	285	116	78	157	18	84	647	11	30	357	166
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	81	33	22	45	5	24	184	3	9	102	47
Total Analysis Volume [veh/h]	3	325	132	89	179	21	96	738	13	34	407	189
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	18.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.8	0.0	0.0	4.8	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	28	0	0	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.8	0.0	0.0	3.8	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		Yes			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.80	5.80	5.80	5.80	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.80	3.80	3.80	3.80	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	14	14	14	14	30	30	30	30
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.14	0.18	0.11	0.11	0.42	0.05	0.35
s, saturation flow rate [veh/h]	1768	1476	643	1603	835	1795	723	1705
c, Capacity [veh/h]	504	366	274	397	305	965	218	917
d1, Uniform Delay [s]	18.05	18.18	21.05	17.42	19.44	10.11	22.35	9.04
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.74	1.46	1.07	0.74	2.68	6.17	1.53	3.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.58	0.43	0.43	0.31	0.78	0.16	0.65
d, Delay for Lane Group [s/veh]	18.79	19.64	22.12	18.15	22.11	16.27	23.87	12.60
Lane Group LOS	B	B	C	B	C	B	C	B
Critical Lane Group	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.57	2.28	1.43	1.72	1.23	7.07	0.47	4.76
50th-Percentile Queue Length [ft/ln]	64.30	56.93	35.64	43.06	30.68	176.85	11.74	118.89
95th-Percentile Queue Length [veh/ln]	4.63	4.10	2.57	3.10	2.21	11.44	0.85	8.33
95th-Percentile Queue Length [ft/ln]	115.75	102.47	64.15	77.51	55.22	285.89	21.14	208.30

Movement, Approach, & Intersection Results

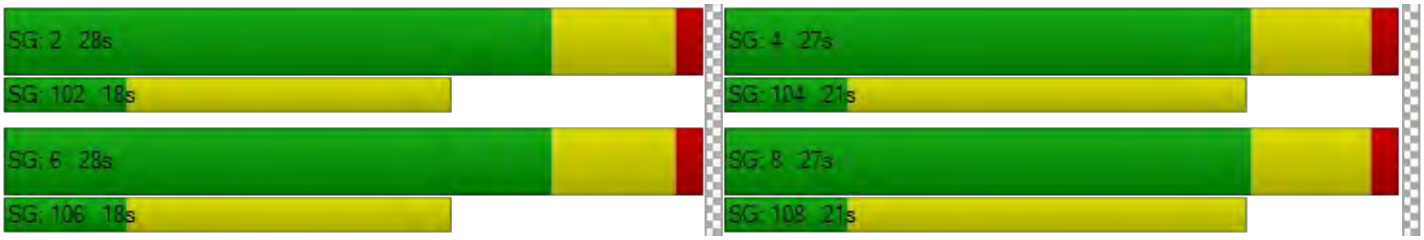
d_M, Delay for Movement [s/veh]	18.79	19.00	19.64	22.12	18.80	18.15	22.11	16.27	16.27	23.87	12.60	12.60
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.18			19.78			16.93			13.21		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.71											
Intersection LOS	B											
Intersection V/C	0.603											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersection	2.323	2.588	2.336	2.621
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	771	771	800	800
d_b, Bicycle Delay [s]	10.39	10.39	9.90	9.90
l_b,int, Bicycle LOS Score for Intersection	1.939	1.798	2.957	2.599
Bicycle LOS	A	A	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 32: Central Avenue / 5th Street

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

Intersection Setup

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	2	88	110	50	31	14	21	616	5	6	299	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	114	0	0	40	279	0	0	225	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	88	110	164	31	14	61	895	5	6	524	79
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	26	32	48	9	4	18	262	1	2	154	23
Total Analysis Volume [veh/h]	2	103	129	192	36	16	72	1049	6	7	614	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	33	0	15	32	0	10	32	0	10	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	15	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	0	16	12	27	6	49	49	1	45	45
g / C, Green / Cycle	0.00	0.17	0.13	0.30	0.07	0.55	0.55	0.01	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.00	0.15	0.11	0.03	0.04	0.29	0.29	0.00	0.18	0.06
s, saturation flow rate [veh/h]	1619	1548	1714	1707	1619	1800	1796	1619	3427	1530
c, Capacity [veh/h]	10	269	224	510	105	988	986	22	1703	760
d1, Uniform Delay [s]	44.52	36.14	38.28	22.84	41.16	12.97	12.97	43.98	13.87	12.12
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.13	8.06	9.04	0.09	7.54	2.07	2.08	8.16	0.59	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.86	0.86	0.10	0.68	0.53	0.53	0.32	0.36	0.12
d, Delay for Lane Group [s/veh]	54.65	44.20	47.32	22.93	48.70	15.05	15.05	52.14	14.46	12.45
Lane Group LOS	D	D	D	C	D	B	B	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	5.46	4.64	0.80	1.76	6.83	6.81	0.20	3.76	1.03
50th-Percentile Queue Length [ft/ln]	1.78	136.39	115.95	19.93	44.12	170.66	170.36	5.07	93.98	25.69
95th-Percentile Queue Length [veh/ln]	0.13	9.29	8.17	1.44	3.18	11.11	11.10	0.36	6.77	1.85
95th-Percentile Queue Length [ft/ln]	3.21	232.15	204.24	35.88	79.42	277.79	277.39	9.12	169.17	46.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.65	44.20	44.20	47.32	22.93	22.93	48.70	15.05	15.05	52.14	14.46	12.45
Movement LOS	D	D	D	D	C	C	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	44.29			42.12			17.20			14.57		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	21.75											
Intersection LOS	C											
Intersection V/C	0.614											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.034	2.108	2.644	2.793
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	644	644	644
d_b, Bicycle Delay [s]	20.00	20.67	20.67	20.67
l_b,int, Bicycle LOS Score for Intersection	1.946	1.962	2.489	2.149
Bicycle LOS	A	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 33: Palm Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	93.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.068

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	88	569	534	174	246	30	70	700	60	190	250	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	16	1	2	16	2	10	402	38	83	157	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	585	535	176	262	32	80	1102	98	273	407	142
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	158	145	48	71	9	22	298	26	74	110	38
Total Analysis Volume [veh/h]	97	632	578	190	283	35	86	1191	106	295	440	154
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	15	39	0	15	34	0	15	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	0	0	27	0	0	26	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	33	33	12	38	38	7	31	31	12	36	36
g / C, Green / Cycle	0.07	0.33	0.33	0.12	0.38	0.38	0.07	0.31	0.31	0.12	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.40	0.12	0.08	0.02	0.05	0.37	0.07	0.18	0.14	0.11
s, saturation flow rate [veh/h]	1619	3237	1445	1619	3427	1530	1619	3237	1445	1619	3237	1445
c, Capacity [veh/h]	120	1068	477	194	1288	575	109	1003	448	194	1173	524
d1, Uniform Delay [s]	45.59	27.89	33.50	43.87	21.24	19.94	45.92	34.50	25.69	44.00	23.52	22.75
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.17	0.11	0.18	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.92	2.41	113.58	25.13	0.39	0.20	11.70	87.77	0.27	242.50	0.20	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.59	1.21	0.98	0.22	0.06	0.79	1.19	0.24	1.52	0.38	0.29
d, Delay for Lane Group [s/veh]	57.51	30.30	147.08	69.00	21.63	20.14	57.62	122.27	25.96	286.50	23.72	23.05
Lane Group LOS	E	C	F	E	C	C	E	F	C	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.75	6.53	26.24	6.00	2.30	0.55	2.45	24.07	1.90	17.85	3.80	2.60
50th-Percentile Queue Length [ft/ln]	68.86	163.33	655.95	149.93	57.47	13.75	61.19	601.78	47.40	446.19	95.05	64.92
95th-Percentile Queue Length [veh/ln]	4.96	10.72	38.89	10.01	4.14	0.99	4.41	35.56	3.41	28.64	6.84	4.67
95th-Percentile Queue Length [ft/ln]	123.95	268.12	972.24	250.34	103.45	24.75	110.14	889.11	85.32	716.05	171.09	116.86

Movement, Approach, & Intersection Results

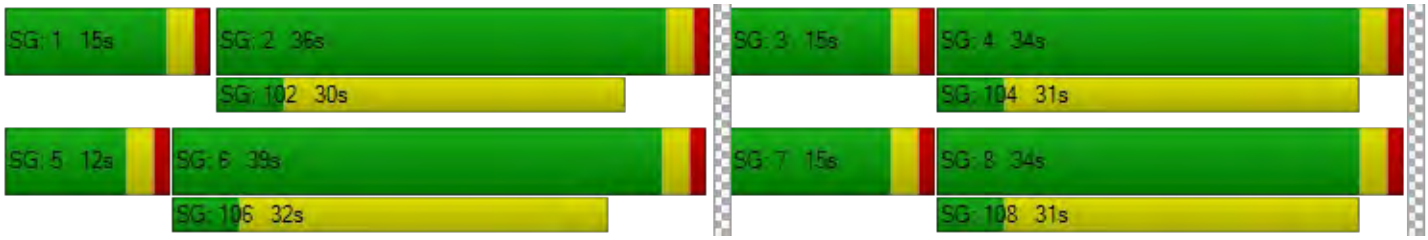
d_M, Delay for Movement [s/veh]	57.51	30.30	147.08	69.00	21.63	20.14	57.62	122.27	25.96	286.50	23.72	23.05
Movement LOS	E	C	F	E	C	C	E	F	C	F	C	C
d_A, Approach Delay [s/veh]	83.96			39.24			110.87			110.80		
Approach LOS	F			D			F			F		
d_I, Intersection Delay [s/veh]	93.35											
Intersection LOS	F											
Intersection V/C	1.068											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.878	2.684	2.970	2.922
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	720	620	620
d_b, Bicycle Delay [s]	22.45	20.48	23.81	23.81
l_b,int, Bicycle LOS Score for Intersection	2.638	1.979	2.701	2.293
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 34: Church Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.611

Intersection Setup

Name	Church Ave		5th Street		5th Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Church Ave		5th Street		5th Street	
Base Volume Input [veh/h]	79	30	58	1317	511	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	436	167	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	30	58	1753	678	77
Peak Hour Factor	0.9130	0.9130	0.9130	0.9130	0.9130	0.9130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	8	16	480	186	21
Total Analysis Volume [veh/h]	87	33	64	1920	743	84
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	18	0	13	72	59	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	7	6	77	69	69
g / C, Green / Cycle	0.07	0.07	0.06	0.86	0.76	0.76
(v / s)_i Volume / Saturation Flow Rate	0.05	0.02	0.04	0.56	0.23	0.24
s, saturation flow rate [veh/h]	1714	1530	1714	3427	1800	1738
c, Capacity [veh/h]	129	115	108	2940	1371	1324
d1, Uniform Delay [s]	40.53	39.32	41.05	2.06	3.31	3.35
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.97	1.35	5.14	1.14	0.57	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.29	0.59	0.65	0.30	0.31
d, Delay for Lane Group [s/veh]	46.50	40.67	46.19	3.21	3.88	3.97
Lane Group LOS	D	D	D	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.07	0.73	1.52	1.88	1.85	1.88
50th-Percentile Queue Length [ft/ln]	51.75	18.15	38.01	47.05	46.23	46.95
95th-Percentile Queue Length [veh/ln]	3.73	1.31	2.74	3.39	3.33	3.38
95th-Percentile Queue Length [ft/ln]	93.15	32.68	68.41	84.69	83.21	84.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.50	40.67	46.19	3.21	3.92	3.97
Movement LOS	D	D	D	A	A	A
d_A, Approach Delay [s/veh]	44.89		4.59		3.92	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	6.05					
Intersection LOS	A					
Intersection V/C	0.611					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.029	2.840	2.823
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	5.769	4.815
Bicycle LOS	D	F	E

Sequence

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

Intersection Level Of Service Report
Intersection 35: SR-210 EB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.861

Intersection Setup

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	310	6	118	0	933	489	279	482	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	76	0	329	284	0	91	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	310	6	194	0	1262	773	279	573	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9110	0.9110	0.9110	1.0000	0.9110	0.9110	0.9110	0.9110	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	85	2	53	0	346	212	77	157	0
Total Analysis Volume [veh/h]	0	0	0	340	7	213	0	1385	849	306	629	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	10	0	0	60	0	30	90	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	12	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		17	17	61	61	13	77
g / C, Green / Cycle		0.17	0.17	0.61	0.61	0.13	0.77
(v / s)_i Volume / Saturation Flow Rate		0.20	0.14	0.40	0.55	0.10	0.18
s, saturation flow rate [veh/h]		1716	1530	3427	1530	2959	3427
c, Capacity [veh/h]		295	263	2087	932	382	2633
d1, Uniform Delay [s]		41.41	39.84	12.83	17.18	42.29	3.29
k, delay calibration		0.50	0.50	0.11	0.32	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		109.10	23.00	0.37	10.14	3.91	0.05
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		1.18	0.81	0.66	0.91	0.80	0.24
d, Delay for Lane Group [s/veh]		150.51	62.84	13.20	27.32	46.20	3.34
Lane Group LOS		F	E	B	C	D	A
Critical Lane Group		Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		16.10	6.66	9.37	17.83	3.85	1.39
50th-Percentile Queue Length [ft/ln]		402.46	166.39	234.29	445.80	96.16	34.78
95th-Percentile Queue Length [veh/ln]		24.49	10.89	14.39	24.76	6.92	2.50
95th-Percentile Queue Length [ft/ln]		612.26	272.17	359.80	618.94	173.08	62.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	150.51	150.51	62.84	0.00	13.20	27.32	46.20	3.34	0.00
Movement LOS				F	F	E		B	C	D	A	
d_A, Approach Delay [s/veh]	0.00			117.16			18.56			17.37		
Approach LOS	A			F			B			B		
d_I, Intersection Delay [s/veh]	33.07											
Intersection LOS	C											
Intersection V/C	0.861											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.906	2.971
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	140	1140	1740
d_b, Bicycle Delay [s]	50.00	43.25	9.25	0.85
l_b,int, Bicycle LOS Score for Intersection	4.132	2.484	3.403	2.331
Bicycle LOS	D	B	C	B

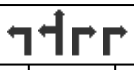
Sequence

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

Intersection Level Of Service Report
Intersection 36: SR-210 WB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	207	0	435	0	0	0	182	1041	0	0	575	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	75	0	0	0	0	0	278	51	0	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	282	0	435	0	0	0	460	1092	0	0	591	267
Peak Hour Factor	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000	0.9530	0.9530	1.0000	1.0000	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	0	114	0	0	0	121	286	0	0	155	70
Total Analysis Volume [veh/h]	296	0	456	0	0	0	483	1146	0	0	620	280
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	0	0	39	71	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	24	0	0	15	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	37	37	37		32	57	22	22
g / C, Green / Cycle	0.37	0.37	0.37		0.32	0.57	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.17		0.30	0.33	0.13	0.18
s, saturation flow rate [veh/h]	1714	1714	2708		1619	3427	4903	1530
c, Capacity [veh/h]	641	641	1012		513	1941	1075	335
d1, Uniform Delay [s]	21.46	21.46	23.58		33.24	14.13	34.90	37.31
k, delay calibration	0.50	0.50	0.50		0.35	0.14	0.11	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	0.84	1.45		21.51	0.37	0.49	6.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.23	0.45		0.94	0.59	0.58	0.83
d, Delay for Lane Group [s/veh]	22.30	22.30	25.03		54.75	14.51	35.39	44.02
Lane Group LOS	C	C	C		D	B	D	D
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.50	2.50	4.18		14.14	8.00	4.50	7.07
50th-Percentile Queue Length [ft/ln]	62.46	62.46	104.47		353.55	200.01	112.51	176.83
95th-Percentile Queue Length [veh/ln]	4.50	4.50	7.52		20.31	12.64	7.98	11.43
95th-Percentile Queue Length [ft/ln]	112.43	112.43	188.05		507.73	315.98	199.48	285.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.30	22.30	25.03	0.00	0.00	0.00	54.75	14.51	0.00	0.00	35.39	44.02
Movement LOS	C	C	C				D	B			D	D
d_A, Approach Delay [s/veh]	23.95			0.00			26.44			38.07		
Approach LOS	C			A			C			D		
d_I, Intersection Delay [s/veh]	29.06											
Intersection LOS	C											
Intersection V/C	0.650											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.955	2.866
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	0	1360	580
d_b, Bicycle Delay [s]	27.38	50.00	5.12	25.21
l_b,int, Bicycle LOS Score for Intersection	2.800	4.132	2.904	2.055
Bicycle LOS	C	D	C	B

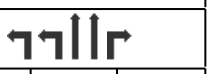
Sequence

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

Intersection Level Of Service Report
Intersection 37: Tippecanoe Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	33.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.746

Intersection Setup

Name				Tippecanoe Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Tippecanoe Avenue								
Base Volume Input [veh/h]	60	499	488	42	299	25	42	616	59	215	198	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	15	65	10	75	0	0	6	0	170	47	52
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	514	553	52	374	25	42	622	59	385	245	102
Peak Hour Factor	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	135	146	14	99	7	11	164	16	101	65	27
Total Analysis Volume [veh/h]	63	542	583	55	394	26	44	655	62	406	258	107
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	25	25	10	18	0	34	46	0	19	31	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	45	45	5	44	44	5	23	23	15	33	33
g / C, Green / Cycle	0.06	0.45	0.45	0.05	0.44	0.44	0.05	0.23	0.23	0.15	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.04	0.16	0.38	0.03	0.12	0.12	0.03	0.20	0.20	0.13	0.08	0.07
s, saturation flow rate [veh/h]	1619	3427	1530	1619	1800	1761	1619	1800	1746	3144	3427	1530
c, Capacity [veh/h]	94	1525	681	89	795	778	82	417	405	466	1130	504
d1, Uniform Delay [s]	46.15	18.29	24.88	46.23	17.66	17.67	46.35	36.99	37.00	41.65	24.30	24.16
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.93	0.65	13.08	6.84	0.82	0.84	5.44	5.77	5.99	5.15	0.10	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.36	0.86	0.62	0.27	0.27	0.54	0.87	0.87	0.87	0.23	0.21
d, Delay for Lane Group [s/veh]	54.08	18.94	37.96	53.08	18.48	18.51	51.78	42.76	42.99	46.80	24.40	24.37
Lane Group LOS	D	B	D	D	B	B	D	D	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.73	4.17	14.28	1.50	3.21	3.16	1.19	9.08	8.85	5.18	2.21	1.84
50th-Percentile Queue Length [ft/ln]	43.34	104.26	356.88	37.49	80.19	79.07	29.66	227.06	221.22	129.40	55.24	45.95
95th-Percentile Queue Length [veh/ln]	3.12	7.51	20.47	2.70	5.77	5.69	2.14	14.02	13.73	8.91	3.98	3.31
95th-Percentile Queue Length [ft/ln]	78.01	187.66	511.78	67.47	144.34	142.32	53.39	350.62	343.18	222.68	99.43	82.71

Movement, Approach, & Intersection Results

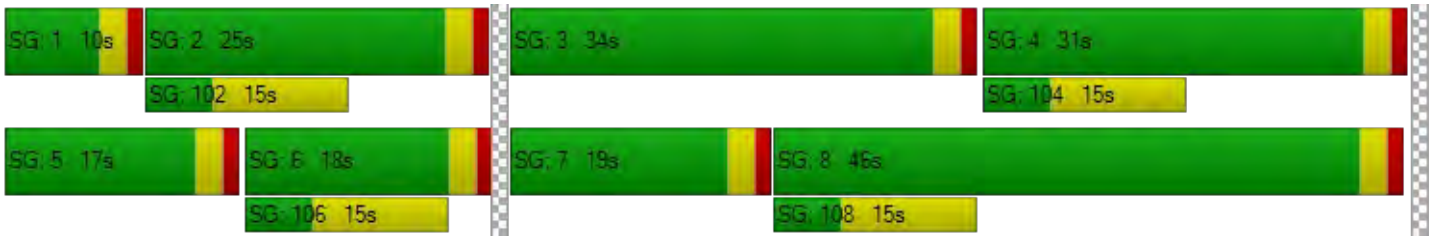
d_M, Delay for Movement [s/veh]	54.08	18.94	37.96	53.08	18.49	18.51	51.78	42.86	42.99	46.80	24.40	24.37
Movement LOS	D	B	D	D	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	30.14			22.50			43.39			36.19		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.62											
Intersection LOS	C											
Intersection V/C	0.746											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.793	2.534	2.523	2.984
Crosswalk LOS	C	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	440	300	860	560
d_b, Bicycle Delay [s]	30.42	36.13	16.25	25.92
l_b,int, Bicycle LOS Score for Intersection	2.540	1.951	2.187	2.196
Bicycle LOS	B	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 38: Del Rosa Dr / 3rd St

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	207	337	44	131	69	116	975	6	61	351	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	2	0	17	18	98	0	0	225	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	207	337	46	131	86	134	1073	6	61	576	35
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	59	97	13	38	25	39	308	2	18	166	10
Total Analysis Volume [veh/h]	14	238	387	53	151	99	154	1233	7	70	662	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	18	10	18	0	54	62	0	10	18	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	35	45	5	38	38	12	40	40	7	36	36
g / C, Green / Cycle	0.02	0.35	0.45	0.05	0.38	0.38	0.12	0.40	0.40	0.07	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.01	0.07	0.25	0.03	0.07	0.08	0.10	0.36	0.00	0.02	0.20	0.20
s, saturation flow rate [veh/h]	1619	3427	1530	1619	1800	1572	1619	3427	1530	2959	1800	1764
c, Capacity [veh/h]	37	1207	692	88	690	603	188	1384	618	207	643	631
d1, Uniform Delay [s]	48.15	22.55	20.09	46.25	20.49	20.59	43.15	27.76	17.86	44.29	25.70	25.71
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.21	0.37	3.25	6.57	0.60	0.74	8.40	2.20	0.01	0.96	0.74	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.20	0.56	0.61	0.19	0.20	0.82	0.89	0.01	0.34	0.55	0.55
d, Delay for Lane Group [s/veh]	54.36	22.92	23.34	52.83	21.09	21.34	51.55	29.96	17.86	45.25	26.44	26.46
Lane Group LOS	D	C	C	D	C	C	D	C	B	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.41	1.99	7.01	1.44	2.10	1.98	4.13	13.59	0.10	0.85	6.73	6.60
50th-Percentile Queue Length [ft/ln]	10.17	49.84	175.32	36.04	52.60	49.54	103.25	339.84	2.44	21.25	168.14	165.03
95th-Percentile Queue Length [veh/ln]	0.73	3.59	11.36	2.60	3.79	3.57	7.43	19.64	0.18	1.53	10.98	10.82
95th-Percentile Queue Length [ft/ln]	18.30	89.71	283.89	64.88	94.69	89.17	185.84	491.00	4.38	38.26	274.47	270.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.36	22.92	23.34	52.83	21.13	21.34	51.55	29.96	17.86	45.25	26.45	26.46
Movement LOS	D	C	C	D	C	C	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	23.86			26.74			32.29			28.16		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.99											
Intersection LOS	C											
Intersection V/C	0.646											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.600	2.450	2.812	2.941
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1180	300
d_b, Bicycle Delay [s]	36.13	36.13	8.41	36.13
l_b,int, Bicycle LOS Score for Intersection	2.087	1.810	2.710	2.197
Bicycle LOS	B	A	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 39: Sterling Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	59	118	268	1128	262	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	112	21	89	97	61
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	117	230	289	1217	359	101
Peak Hour Factor	0.8840	0.8840	0.8840	0.8840	0.8840	0.8840
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	65	82	344	102	29
Total Analysis Volume [veh/h]	132	260	327	1377	406	114
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	18	0	46	82	36	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	12	22	82	57	57
g / C, Green / Cycle	0.12	0.12	0.22	0.82	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.08	0.10	0.20	0.40	0.14	0.16
s, saturation flow rate [veh/h]	1714	2708	1619	3427	1800	1671
c, Capacity [veh/h]	202	319	364	2817	1021	948
d1, Uniform Delay [s]	42.15	43.04	37.67	2.65	10.93	11.08
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.54	5.04	8.10	0.61	0.60	0.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.81	0.90	0.49	0.25	0.27
d, Delay for Lane Group [s/veh]	45.69	48.07	45.77	3.25	11.53	11.79
Lane Group LOS	D	D	D	A	B	B
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.29	3.33	8.47	2.60	2.94	3.00
50th-Percentile Queue Length [ft/ln]	82.28	83.32	211.65	65.04	73.52	74.89
95th-Percentile Queue Length [veh/ln]	5.92	6.00	13.24	4.68	5.29	5.39
95th-Percentile Queue Length [ft/ln]	148.10	149.98	330.94	117.08	132.33	134.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.69	48.07	45.77	3.25	11.63	11.79
Movement LOS	D	D	D	A	B	B
d_A, Approach Delay [s/veh]	47.27		11.41		11.66	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	16.84					
Intersection LOS	B					
Intersection V/C	0.498					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.469	2.769	2.632
Crosswalk LOS	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	5.538	4.561
Bicycle LOS	D	F	E

Sequence

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

Intersection Level Of Service Report
Intersection 40: Victoria Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	18	32	41	48	20	105	318	830	7	32	167	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	19	0	1	12	161	0	0	137	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	32	41	67	20	106	330	991	7	32	304	64
Peak Hour Factor	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	9	11	19	6	29	91	274	2	9	84	18
Total Analysis Volume [veh/h]	20	35	45	74	22	117	365	1097	8	35	337	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	32	0	10	32	0	25	48	0	10	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	24	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	7	7	6	10	10	25	71	71	4	51	51
g / C, Green / Cycle	0.03	0.07	0.07	0.06	0.10	0.10	0.25	0.71	0.71	0.04	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.01	0.02	0.03	0.05	0.01	0.08	0.23	0.31	0.31	0.02	0.12	0.12
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1530	1619	1800	1795	1619	1800	1694
c, Capacity [veh/h]	49	119	101	99	174	148	401	1277	1273	71	910	856
d1, Uniform Delay [s]	47.62	44.49	44.94	46.19	41.28	44.15	36.56	6.10	6.11	46.73	13.83	13.86
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.42	1.36	3.06	10.66	0.32	8.96	8.24	1.07	1.08	5.25	0.59	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.29	0.45	0.75	0.13	0.79	0.91	0.43	0.43	0.49	0.23	0.23
d, Delay for Lane Group [s/veh]	53.04	45.85	48.01	56.85	41.60	53.11	44.80	7.18	7.18	51.98	14.42	14.50
Lane Group LOS	D	D	D	E	D	D	D	A	A	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.56	0.87	1.16	2.09	0.51	3.18	9.41	4.51	4.50	0.95	2.70	2.60
50th-Percentile Queue Length [ft/ln]	14.02	21.72	28.90	52.30	12.76	79.59	235.20	112.72	112.57	23.76	67.55	65.08
95th-Percentile Queue Length [veh/ln]	1.01	1.56	2.08	3.77	0.92	5.73	14.44	7.99	7.98	1.71	4.86	4.69
95th-Percentile Queue Length [ft/ln]	25.23	39.09	52.02	94.13	22.97	143.26	360.96	199.78	199.57	42.77	121.60	117.15

Movement, Approach, & Intersection Results

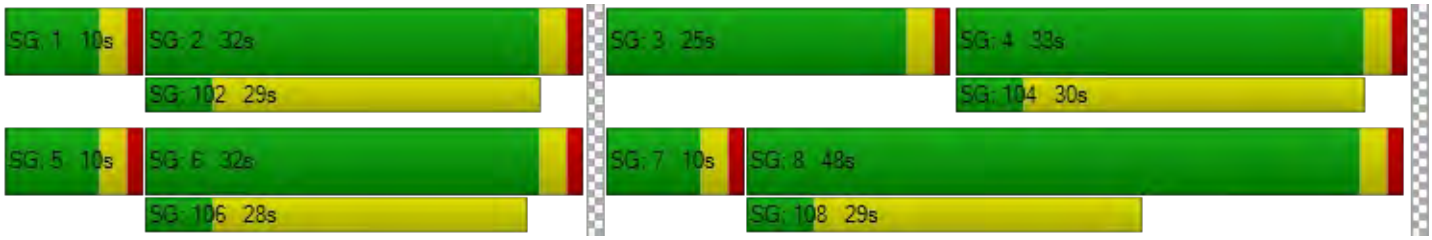
d_M, Delay for Movement [s/veh]	53.04	45.85	48.01	56.85	41.60	53.11	44.80	7.18	7.18	51.98	14.45	14.50
Movement LOS	D	D	D	E	D	D	D	A	A	D	B	B
d_A, Approach Delay [s/veh]	48.26			53.22			16.52			17.42		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	21.64											
Intersection LOS	C											
Intersection V/C	0.432											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.339	2.440	2.686	2.630
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	580	900	600
d_b, Bicycle Delay [s]	25.21	25.21	15.13	24.50
l_b,int, Bicycle LOS Score for Intersection	1.642	1.735	2.772	1.925
Bicycle LOS	A	A	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 41: Central Ave / 3rd St

Control Type:	Two-way stop	Delay (sec / veh):	65.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

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

Volumes

Name				Central Avenue								
Base Volume Input [veh/h]	1	3	0	21	0	24	177	728	0	0	212	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	186	0	0	147	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	3	0	21	0	24	177	914	0	0	359	20
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	1.0000	0.9160	0.9160	0.9160	1.0000	1.0000	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	6	0	7	48	249	0	0	98	5
Total Analysis Volume [veh/h]	1	3	0	23	0	26	193	998	0	0	392	22
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.04	0.00	0.22	0.00	0.03	0.17	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	65.45	61.84	15.35	45.99	0.00	15.72	8.74	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	C	E		C	A	A			A	A
95th-Percentile Queue Length [veh/ln]	0.19	0.19	0.19	0.97	0.00	0.97	0.60	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.70	4.70	4.70	24.26	0.00	24.26	14.96	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	62.75			29.93			1.42			0.00		
Approach LOS	F			D			A			A		
d_I, Intersection Delay [s/veh]	2.05											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 42: Palm Ave_Alabama St / 3rd St

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.450

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	192	769	6	12	391	84	419	32	0	9	3	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	3	0	2	43	92	16	168	8	0	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	205	772	6	14	434	176	435	200	8	9	10	23
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	1.0000	0.9360	1.0000	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	206	2	4	116	47	116	53	2	2	3	6
Total Analysis Volume [veh/h]	219	825	6	15	464	188	465	214	8	10	10	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	39	0	10	31	0	19	41	0	10	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	15	65	65	2	53	53	16	19	2	4
g / C, Green / Cycle	0.15	0.65	0.65	0.02	0.53	0.53	0.16	0.19	0.02	0.04
(v / s)_i Volume / Saturation Flow Rate	0.14	0.23	0.23	0.01	0.14	0.12	0.16	0.12	0.01	0.02
s, saturation flow rate [veh/h]	1619	1800	1795	1619	3427	1530	2959	1800	1619	1599
c, Capacity [veh/h]	243	1173	1170	39	1801	804	473	337	28	71
d1, Uniform Delay [s]	41.78	7.90	7.90	48.07	13.02	12.83	41.86	37.48	48.60	46.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.64	0.84	0.84	6.13	0.35	0.68	15.45	1.98	7.64	5.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.35	0.35	0.39	0.26	0.23	0.98	0.63	0.36	0.49
d, Delay for Lane Group [s/veh]	53.41	8.74	8.74	54.20	13.37	13.52	57.30	39.46	56.24	51.86
Lane Group LOS	D	A	A	D	B	B	E	D	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.03	3.94	3.93	0.43	2.85	2.36	6.66	4.97	0.30	0.95
50th-Percentile Queue Length [ft/ln]	150.86	98.58	98.35	10.83	71.14	58.91	166.41	124.26	7.62	23.74
95th-Percentile Queue Length [veh/ln]	10.06	7.10	7.08	0.78	5.12	4.24	10.89	8.63	0.55	1.71
95th-Percentile Queue Length [ft/ln]	251.57	177.45	177.03	19.49	128.06	106.03	272.19	215.67	13.71	42.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.41	8.74	8.74	54.20	13.37	13.52	57.30	39.46	0.00	56.24	51.86	51.86
Movement LOS	D	A	A	D	B	B	E	D		E	D	D
d_A, Approach Delay [s/veh]	18.06			14.33			51.68			52.83		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.03											
Intersection LOS	C											
Intersection V/C	0.450											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.604	2.877	2.520	2.038
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	720	560	760	580
d_b, Bicycle Delay [s]	20.48	25.92	19.22	25.21
l_b,int, Bicycle LOS Score for Intersection	2.426	2.110	2.680	1.634
Bicycle LOS	B	B	B	A

Sequence

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

Intersection Level Of Service Report
Intersection 43: Tippecanoe Ave / Rialto Ave

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.427

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	98	975	0	0	647	59	111	0	53	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	14	14	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	98	1041	0	0	878	73	125	0	53	0	0	0
Peak Hour Factor	0.9400	0.9400	1.0000	0.9400	0.9400	0.9400	0.9400	1.0000	0.9400	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	277	0	0	234	19	33	0	14	0	0	0
Total Analysis Volume [veh/h]	104	1107	0	0	934	78	133	0	56	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	0	8	0	0	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	0	7	0	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	30	0	0	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Split [s]	20	70	0	10	60	0	20	0	20	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No		No		No			
Maximum Recall	No	No		No	No		No		No			
Pedestrian Recall	No	No		No	No		No		No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	8	81	0	73	73	10	10	
g / C, Green / Cycle	0.08	0.81	0.00	0.73	0.73	0.10	0.10	
(v / s)_i Volume / Saturation Flow Rate	0.06	0.32	0.00	0.28	0.28	0.08	0.04	
s, saturation flow rate [veh/h]	1619	3427	1619	1800	1752	1714	1530	
c, Capacity [veh/h]	130	2787	2	1321	1285	164	147	
d1, Uniform Delay [s]	45.17	2.58	0.00	4.96	4.96	44.32	42.43	
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	10.52	0.43	0.00	0.86	0.89	9.11	1.63	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.80	0.40	0.00	0.39	0.39	0.81	0.38	
d, Delay for Lane Group [s/veh]	55.69	3.01	0.00	5.82	5.85	53.43	44.06	
Lane Group LOS	E	A	A	A	A	D	D	
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	
50th-Percentile Queue Length [veh/ln]	2.90	2.03	0.00	3.54	3.45	3.62	1.36	
50th-Percentile Queue Length [ft/ln]	72.52	50.75	0.00	88.43	86.27	90.57	33.98	
95th-Percentile Queue Length [veh/ln]	5.22	3.65	0.00	6.37	6.21	6.52	2.45	
95th-Percentile Queue Length [ft/ln]	130.53	91.35	0.00	159.17	155.28	163.02	61.17	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.69	3.01	0.00	0.00	5.83	5.85	53.43	0.00	44.06	0.00	0.00	0.00
Movement LOS	E	A		A	A	A	D		D			
d_A, Approach Delay [s/veh]	7.53			5.84			50.65			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	10.20											
Intersection LOS	B											
Intersection V/C	0.427											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.817	0.000	2.067	1.430
Crosswalk LOS	C	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1340	1140	0	0
d_b, Bicycle Delay [s]	5.45	9.25	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	2.559	2.395	4.132	4.132
Bicycle LOS	B	B	D	D

Sequence

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

Intersection Level Of Service Report
Intersection 44: Tippecanoe Ave / Mill St

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	109	1005	0	2	776	121	244	8	224	25	27	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	109	1071	0	2	1007	121	244	8	224	25	27	3
Peak Hour Factor	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920	0.8920
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	300	0	1	282	34	68	2	63	7	8	1
Total Analysis Volume [veh/h]	122	1201	0	2	1129	136	274	9	251	28	30	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	7	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	31	56	0	10	35	35	10	24	0	10	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	Yes	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	9	67	67	0	58	58	24	24	15	24	14	14
g / C, Green / Cycle	0.09	0.67	0.67	0.00	0.58	0.58	0.24	0.24	0.15	0.24	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.08	0.23	0.23	0.00	0.33	0.09	0.10	0.15	0.12	0.02	0.01	0.00
s, saturation flow rate [veh/h]	1619	3427	1800	1619	3427	1530	1475	1301	1530	1137	3427	1530
c, Capacity [veh/h]	152	2292	1204	7	1986	886	448	406	234	202	469	210
d1, Uniform Delay [s]	44.42	7.12	7.12	49.63	13.19	9.71	32.04	34.24	40.86	36.11	37.57	37.31
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.51	0.41	0.78	21.12	1.19	0.37	1.96	4.24	6.06	0.31	0.06	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.34	0.34	0.29	0.57	0.15	0.33	0.49	0.80	0.14	0.06	0.01
d, Delay for Lane Group [s/veh]	53.93	7.53	7.90	70.76	14.38	10.08	34.00	38.48	46.92	36.43	37.63	37.34
Lane Group LOS	D	A	A	E	B	B	C	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.34	3.35	3.64	0.09	7.71	1.40	3.23	4.73	4.76	0.61	0.32	0.07
50th-Percentile Queue Length [ft/ln]	83.59	83.73	91.04	2.26	192.84	35.01	80.64	118.27	119.01	15.18	8.08	1.63
95th-Percentile Queue Length [veh/ln]	6.02	6.03	6.56	0.16	12.27	2.52	5.81	8.30	8.34	1.09	0.58	0.12
95th-Percentile Queue Length [ft/ln]	150.46	150.71	163.88	4.07	306.71	63.01	145.15	207.44	208.46	27.33	14.54	2.93

Movement, Approach, & Intersection Results

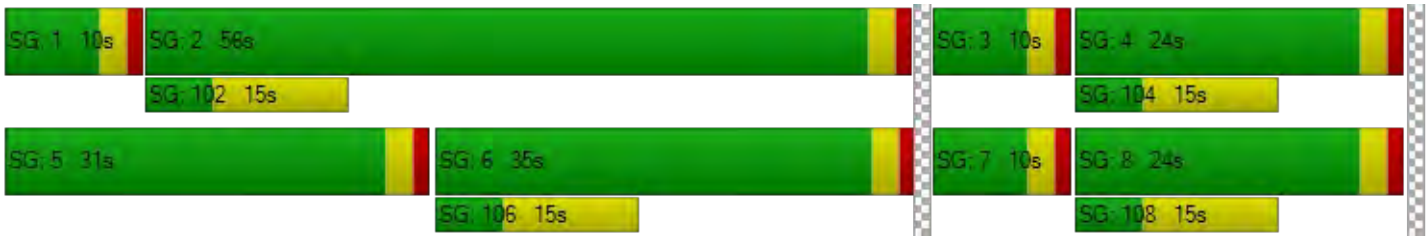
d_M, Delay for Movement [s/veh]	53.93	7.66	7.90	70.76	14.38	10.08	35.89	38.48	44.33	36.43	37.63	37.34
Movement LOS	D	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	11.93			14.01			40.17			37.06		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	17.97											
Intersection LOS	B											
Intersection V/C	0.547											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.021	3.301	2.467	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1060	640	620	420
d_b, Bicycle Delay [s]	11.05	23.12	23.81	31.21
l_b,int, Bicycle LOS Score for Intersection	2.287	2.605	2.441	1.610
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 45: Tippecanoe Ave / Central Ave

Control Type:	Signalized	Delay (sec / veh):	25.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.542

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	1	2	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	869	69	237	752	143	122	192	55	59	174	258
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	935	69	237	983	143	122	192	55	59	174	258
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	246	18	62	259	38	32	51	14	16	46	68
Total Analysis Volume [veh/h]	64	984	73	249	1035	151	128	202	58	62	183	272
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	5	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2			6			8			4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	10	23	23	12	25	25	12	44	44	21	53	53
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	10	10	0	10	10	0	10	10	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	50	50	9	53	53	9	24	24	6	20	20
g / C, Green / Cycle	0.06	0.50	0.50	0.09	0.53	0.53	0.09	0.24	0.24	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.20	0.05	0.08	0.21	0.10	0.08	0.06	0.04	0.04	0.05	0.18
s, saturation flow rate [veh/h]	2959	4903	1530	2959	4903	1530	1619	3427	1530	1619	3427	1530
c, Capacity [veh/h]	173	2429	758	266	2585	806	146	806	360	96	701	313
d1, Uniform Delay [s]	45.31	15.92	13.37	45.21	14.17	12.41	44.96	31.08	30.40	46.00	33.42	38.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.32	0.50	0.25	14.15	0.46	0.51	15.11	0.16	0.21	7.03	0.20	7.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.41	0.10	0.93	0.40	0.19	0.88	0.25	0.16	0.64	0.26	0.87
d, Delay for Lane Group [s/veh]	46.63	16.43	13.62	59.35	14.64	12.92	60.07	31.25	30.61	53.02	33.62	45.82
Lane Group LOS	D	B	B	E	B	B	E	C	C	D	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.79	4.67	0.91	3.57	4.59	1.83	3.72	1.99	1.13	1.69	1.88	7.00
50th-Percentile Queue Length [ft/ln]	19.82	116.83	22.63	89.19	114.63	45.73	93.10	49.70	28.18	42.20	46.95	175.00
95th-Percentile Queue Length [veh/ln]	1.43	8.22	1.63	6.42	8.10	3.29	6.70	3.58	2.03	3.04	3.38	11.34
95th-Percentile Queue Length [ft/ln]	35.68	205.46	40.73	160.53	202.42	82.31	167.58	89.46	50.73	75.95	84.51	283.47

Movement, Approach, & Intersection Results

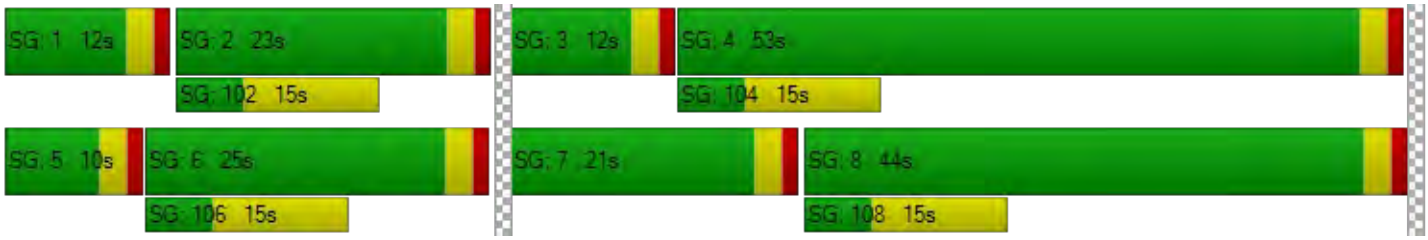
d_M, Delay for Movement [s/veh]	46.63	16.43	13.62	59.35	14.64	12.92	60.07	31.25	30.61	53.02	33.62	45.82
Movement LOS	D	B	B	E	B	B	E	C	C	D	C	D
d_A, Approach Delay [s/veh]	17.97			22.22			40.66			42.37		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	25.92											
Intersection LOS	C											
Intersection V/C	0.542											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.102	3.161	2.587	2.629
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	440	820	1000
d_b, Bicycle Delay [s]	32.00	30.42	17.41	12.50
l_b,int, Bicycle LOS Score for Intersection	2.176	2.349	1.880	1.986
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 46: Tippecanoe Ave / Orange Show Rd_San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	129	664	105	224	627	47	183	664	145	174	516	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	730	105	224	858	47	183	664	145	174	516	183
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	192	28	59	226	12	48	175	38	46	136	48
Total Analysis Volume [veh/h]	136	768	111	236	903	49	193	699	153	183	543	193
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	31	0	12	30	0	17	41	0	16	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	10	42	42	9	41	41	40	28	28	40	27	27
g / C, Green / Cycle	0.10	0.42	0.42	0.09	0.41	0.41	0.40	0.28	0.28	0.40	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.08	0.25	0.25	0.08	0.27	0.27	0.20	0.24	0.24	0.20	0.21	0.21
s, saturation flow rate [veh/h]	1619	1800	1722	2959	1800	1768	977	1800	1689	909	1800	1641
c, Capacity [veh/h]	162	746	713	266	728	715	368	503	472	332	494	450
d1, Uniform Delay [s]	44.21	22.86	22.86	44.99	24.20	24.21	22.28	34.34	34.35	23.11	33.51	33.51
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.22	0.17	0.17	0.11	0.12	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.95	3.59	3.75	9.57	4.65	4.75	2.31	7.35	7.81	1.43	2.94	3.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.60	0.60	0.89	0.66	0.66	0.52	0.87	0.87	0.55	0.78	0.78
d, Delay for Lane Group [s/veh]	55.16	26.45	26.61	54.57	28.85	28.96	24.58	41.70	42.15	24.54	36.45	36.73
Lane Group LOS	E	C	C	D	C	C	C	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.78	8.74	8.39	3.23	9.87	9.72	3.23	11.00	10.39	2.95	8.88	8.13
50th-Percentile Queue Length [ft/ln]	94.40	218.58	209.87	80.64	246.80	243.09	80.65	275.02	259.72	73.68	221.88	203.20
95th-Percentile Queue Length [veh/ln]	6.80	13.59	13.15	5.81	15.02	14.84	5.81	16.44	15.67	5.31	13.76	12.80
95th-Percentile Queue Length [ft/ln]	169.91	339.81	328.66	145.15	375.62	370.94	145.17	411.01	391.87	132.63	344.02	320.10

Movement, Approach, & Intersection Results

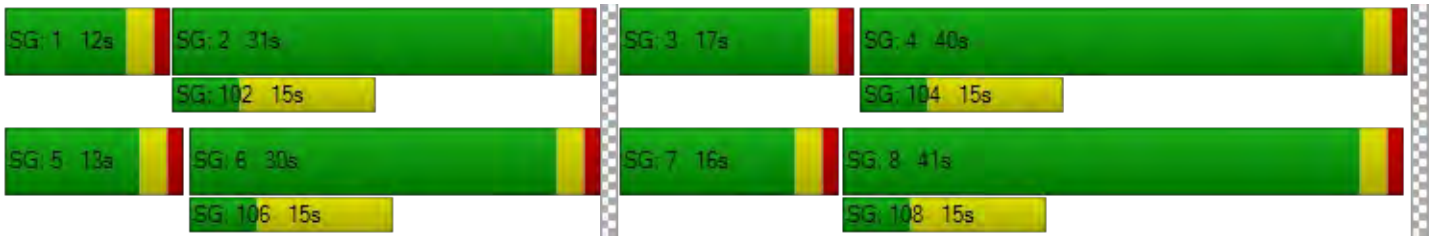
d_M, Delay for Movement [s/veh]	55.16	26.51	26.61	54.57	28.90	28.96	24.58	41.87	42.15	24.54	36.53	36.73
Movement LOS	E	C	C	D	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	30.36			34.00			38.72			34.18		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	34.34											
Intersection LOS	C											
Intersection V/C	0.674											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.903	3.007	2.652	2.690
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	540	760	740
d_b, Bicycle Delay [s]	25.92	26.65	19.22	19.85
l_b,int, Bicycle LOS Score for Intersection	2.397	2.540	2.422	2.318
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 47: Tippecanoe Ave / Hospitality Ln_Coulston St

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.640

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	425	516	78	45	816	114	213	88	306	82	65	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	425	582	78	45	1047	114	213	88	306	82	65	23
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	112	153	21	12	276	30	56	23	81	22	17	6
Total Analysis Volume [veh/h]	448	614	82	47	1104	120	225	93	323	86	69	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	8	7	4	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	30	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	27	35	0	10	18	0	0	44	44	11	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No			No	No	No	No	
Maximum Recall	No	No		No	No			No	No	No	No	
Pedestrian Recall	No	No		No	No			No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
g_i, Effective Green Time [s]	18	53	53	5	40	40	24	24	24	33	33
g / C, Green / Cycle	0.18	0.53	0.53	0.05	0.40	0.40	0.24	0.24	0.24	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.15	0.14	0.14	0.03	0.24	0.24	0.10	0.13	0.21	0.06	0.05
s, saturation flow rate [veh/h]	2959	3427	1694	1619	3427	1711	1324	1363	1530	1389	1722
c, Capacity [veh/h]	521	1798	889	83	1371	685	321	381	367	425	575
d1, Uniform Delay [s]	40.01	13.07	13.08	46.34	23.62	23.63	36.84	34.42	36.59	24.05	23.44
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.31	0.35	0.71	5.91	1.91	3.80	0.92	0.91	6.83	0.23	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.26	0.26	0.57	0.60	0.60	0.43	0.47	0.88	0.20	0.16
d, Delay for Lane Group [s/veh]	44.31	13.42	13.79	52.26	25.53	27.43	37.76	35.32	43.43	24.28	23.57
Lane Group LOS	D	B	B	D	C	C	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.59	2.86	2.93	1.27	7.74	8.09	3.13	3.95	8.16	1.45	1.56
50th-Percentile Queue Length [ft/ln]	139.84	71.56	73.16	31.82	193.46	202.35	78.28	98.70	204.01	36.16	38.92
95th-Percentile Queue Length [veh/ln]	9.47	5.15	5.27	2.29	12.30	12.76	5.64	7.11	12.85	2.60	2.80
95th-Percentile Queue Length [ft/ln]	236.81	128.80	131.69	57.27	307.52	318.99	140.90	177.66	321.13	65.09	70.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.31	13.51	13.79	52.26	26.03	27.43	36.91	35.32	43.43	24.28	23.57	23.57
Movement LOS	D	B	B	D	C	C	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	25.59			27.13			39.93			23.91		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	28.95											
Intersection LOS	C											
Intersection V/C	0.640											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.175	3.247	2.556	2.077
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	300	820	1040
d_b, Bicycle Delay [s]	23.12	36.13	17.41	11.52
l_b,int, Bicycle LOS Score for Intersection	2.189	2.259	2.617	1.855
Bicycle LOS	B	B	B	A

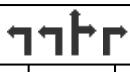
Sequence

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

Intersection Level Of Service Report
Intersection 48: Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	28.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.647

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	0	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	300	599	503	0	1174	180	157	0	670	180	215	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	300	665	503	0	1405	180	157	0	670	180	215	267
Peak Hour Factor	0.9740	0.9740	0.9740	1.0000	0.9740	0.9740	0.9740	1.0000	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	77	171	129	0	361	46	40	0	172	46	55	69
Total Analysis Volume [veh/h]	308	683	516	0	1443	185	161	0	688	185	221	274
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	5	2	0	0	6	0	3	0	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	0	7	7	7	0
Maximum Green [s]	30	30	0	0	30	0	30	0	30	30	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	15	41	0	0	26	0	36	0	49	10	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No			No		No		No	No	No	
Maximum Recall	No	No			No		No		No	No	No	
Pedestrian Recall	No	No			No		No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	61	46	46	12	38	7	18	18
g / C, Green / Cycle	0.12	0.61	0.46	0.46	0.12	0.38	0.07	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.10	0.16	0.25	0.24	0.10	0.27	0.06	0.15	0.15
s, saturation flow rate [veh/h]	2959	4358	4903	1666	1619	2558	2959	1752	1530
c, Capacity [veh/h]	355	2656	2252	765	196	974	207	315	275
d1, Uniform Delay [s]	43.22	9.05	19.46	19.34	42.92	26.24	46.13	39.54	39.68
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.46	0.23	0.94	2.64	8.39	0.96	12.46	5.64	7.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.26	0.54	0.53	0.82	0.71	0.89	0.83	0.85
d, Delay for Lane Group [s/veh]	49.68	9.28	20.40	21.98	51.31	27.19	58.59	45.18	46.79
Lane Group LOS	D	A	C	C	D	C	E	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.02	2.20	6.76	7.08	4.31	6.88	2.62	6.62	6.02
50th-Percentile Queue Length [ft/ln]	100.62	55.04	168.96	177.03	107.77	172.00	65.57	165.45	150.46
95th-Percentile Queue Length [veh/ln]	7.24	3.96	11.02	11.45	7.72	11.18	4.72	10.84	10.04
95th-Percentile Queue Length [ft/ln]	181.11	99.07	275.55	286.14	192.89	279.55	118.02	270.93	251.04

Movement, Approach, & Intersection Results

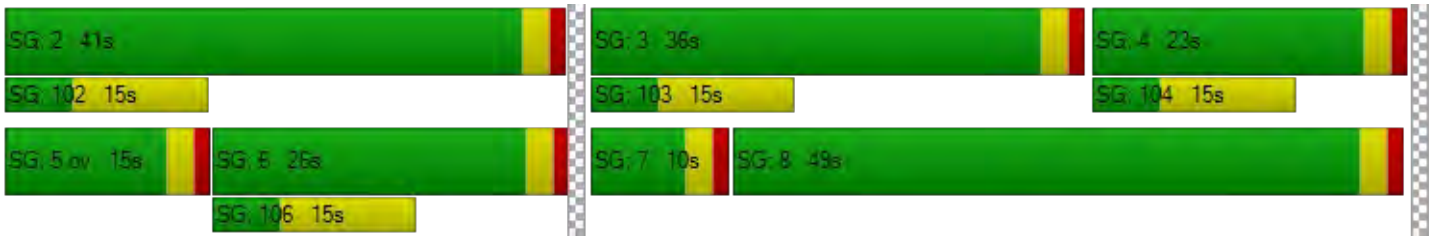
d_M, Delay for Movement [s/veh]	49.68	9.28	0.00	0.00	20.64	21.98	51.31	0.00	27.19	58.59	45.18	46.62
Movement LOS	D	A			C	C	D		C	E	D	D
d_A, Approach Delay [s/veh]	21.84			20.80			31.77			49.38		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	27.98											
Intersection LOS	C											
Intersection V/C	0.647											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.214	2.983	2.611	2.439
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	460	0	400
d_b, Bicycle Delay [s]	19.22	29.65	50.00	32.00
l_b,int, Bicycle LOS Score for Intersection	2.105	2.231	4.132	2.682
Bicycle LOS	B	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 49: Anderson St / SR-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.670

Intersection Setup

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

Volumes

Name												
Base Volume Input [veh/h]	0	952	343	674	664	0	425	2	302	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	0	0	51	0	50	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	968	343	674	715	0	475	2	302	0	0	0
Peak Hour Factor	1.0000	0.9690	0.9690	0.9690	0.9690	1.0000	0.9690	0.9690	0.9690	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	250	88	174	184	0	123	1	78	0	0	0
Total Analysis Volume [veh/h]	0	999	354	696	738	0	490	2	312	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	39	0	32	71	0	0	19	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	36	36	29	68	16	16	16	
g / C, Green / Cycle	0.40	0.40	0.32	0.76	0.18	0.18	0.18	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.23	0.24	0.22	0.14	0.14	0.12	
s, saturation flow rate [veh/h]	3427	1530	2959	3427	1714	1715	2708	
c, Capacity [veh/h]	1371	612	954	2589	305	305	481	
d1, Uniform Delay [s]	22.86	21.08	27.03	3.43	35.52	35.52	34.38	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.43	3.95	4.90	0.28	20.07	20.05	6.61	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.73	0.58	0.73	0.29	0.81	0.81	0.65	
d, Delay for Lane Group [s/veh]	26.30	25.03	31.93	3.70	55.59	55.57	40.99	
Lane Group LOS	C	C	C	A	E	E	D	
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	
50th-Percentile Queue Length [veh/ln]	9.19	6.25	7.05	1.62	6.77	6.77	3.56	
50th-Percentile Queue Length [ft/ln]	229.87	156.30	176.18	40.43	169.35	169.35	88.94	
95th-Percentile Queue Length [veh/ln]	14.17	10.35	11.40	2.91	11.04	11.04	6.40	
95th-Percentile Queue Length [ft/ln]	354.20	258.82	285.02	72.77	276.06	276.06	160.09	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	26.30	25.03	31.93	3.70	0.00	55.58	55.57	40.99	0.00	0.00	0.00
Movement LOS		C	C	C	A		E	E	D			
d_A, Approach Delay [s/veh]	25.96			17.41			49.92			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	27.91											
Intersection LOS	C											
Intersection V/C	0.670											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.770	2.929	2.329	2.229
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	1511	356	0
d_b, Bicycle Delay [s]	16.20	2.69	30.42	45.00
l_b,int, Bicycle LOS Score for Intersection	2.676	2.743	2.886	4.132
Bicycle LOS	B	B	C	D

Sequence

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

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Del Rosa Ave / SR-210 WB Ramps	Signalized	HCM 6th Edition	NB Left	0.993	64.2	E
2	Del Rosa Ave / SR-210 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.792	34.3	C
3	Del Rosa Ave / Date St_Date Pl	Signalized	HCM 6th Edition	EB Left	0.414	15.4	B
4	Del Rosa Ave / Highland Ave	Signalized	HCM 6th Edition	SB Left	0.404	28.3	C
5	Highland Ave / SR-210 EB Off Ramp	Signalized	HCM 6th Edition	SB Left	0.418	22.8	C
6	Highland Ave / SR-210 WB Off Ramp	Signalized	HCM 6th Edition	EB Left	0.410	12.3	B
7	Victoria Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.683	30.7	C
8	Del Rosa Dr / Pacific St	Signalized	HCM 6th Edition	WB Left	0.421	29.8	C
9	Victoria Ave / Pacific St	Signalized	HCM 6th Edition	SB Left	0.578	33.6	C
10	Victoria Ave / 14th St	Signalized	HCM 6th Edition	NB Left	0.260	6.5	A
11	Tippecanoe Ave / Baseline St	Signalized	HCM 6th Edition	WB Left	0.428	27.9	C
12	Del Rosa Dr / Baseline St	Signalized	HCM 6th Edition	WB Left	0.457	30.4	C
13	Sterling Ave / Baseline St	Signalized	HCM 6th Edition	EB Left	0.399	29.8	C
14	Victoria Ave / Baseline St	Signalized	HCM 6th Edition	EB Left	0.385	29.0	C
15	Tippecanoe Ave / 9th St	Signalized	HCM 6th Edition	WB Left	0.451	32.2	C
16	Del Rosa Dr / 9th St	Signalized	HCM 6th Edition	NB Left	0.480	32.4	C
17	Sterling Ave / 9th St	Signalized	HCM 6th Edition	EB Left	0.405	29.9	C

18	Victoria Ave / 9th St	Signalized	HCM 6th Edition	NB Left	0.291	27.0	C
19	Del Rosa Dr / 6th St	Signalized	HCM 6th Edition	WB Left	0.405	30.2	C
20	Sterling Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.481	148.2	F
21	Victoria Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.094	24.0	C
22	Central Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.063	10.2	B
23	I-215 SB Ramps / 5th St	Signalized	HCM 6th Edition	SB Right	0.555	26.3	C
24	I-215 NB Ramps / 5th St	Signalized	HCM 6th Edition	EB Left	0.430	30.2	C
25	E St / 5th St	Signalized	HCM 6th Edition	SB Thru	0.406	14.2	B
26	Arrowhead Ave / 5th St	Signalized	HCM 6th Edition	NB Left	0.364	13.0	B
27	Waterman Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.481	26.2	C
28	Tippecanoe Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.421	27.8	C
29	Del Rosa Dr / 5th St	Signalized	HCM 6th Edition	EB Left	0.604	19.6	B
30	Sterling Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.416	19.6	B
31	Victoria Ave / 5th St	Signalized	HCM 6th Edition	SB Right	0.510	15.8	B
32	Central Avenue / 5th Street	Signalized	HCM 6th Edition	NB Left	0.340	11.8	B
33	Palm Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.583	53.6	D
34	New Intersection	Signalized	HCM 6th Edition	EB Left	0.664	18.2	B
35	SR-210 EB Ramps / 5th Street	Signalized	HCM 6th Edition	SB Right	0.858	28.9	C
36	SR-210 WB Ramps / 5th Street	Signalized	HCM 6th Edition	EB Left	0.626	21.1	C
37	Tippecanoe Ave / 3rd St	Signalized	HCM 6th Edition	NB Left	0.511	29.9	C
38	Del Rosa Dr / 3rd St	Signalized	HCM 6th Edition	EB Left	0.535	32.0	C
			HCM 6th				

39	Sterling Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.772	30.6	C
40	Victoria Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.727	40.4	D
41	Central Ave / 3rd St	Two-way stop	HCM 6th Edition	SB Left	0.123	25.5	D
42	Palm Ave_Alabama St / 3rd St	Signalized	HCM 6th Edition	NB Left	0.772	44.6	D
43	Tippecanoe Ave / Rialto Ave	Signalized	HCM 6th Edition	NB Left	0.414	12.0	B
44	Tippecanoe Ave / Mill St	Signalized	HCM 6th Edition	WB Left	0.728	28.8	C
45	Tippecanoe Ave / Central Ave	Signalized	HCM 6th Edition	EB Left	0.497	22.1	C
46	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave	Signalized	HCM 6th Edition	NB Left	0.658	29.3	C
47	Tippecanoe Ave / Hospitality Ln_Coulston St	Signalized	HCM 6th Edition	SB Left	0.501	24.4	C
48	Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps	Signalized	HCM 6th Edition	EB Left	0.481	29.7	C
49	Anderson St / SR-10 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.645	25.4	C
308	Arden Ave / Highland Ave	Signalized	HCM 6th Edition	SB Left	0.460	32.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Del Rosa Ave / SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	64.2
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.993

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No						No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Base Volume Input [veh/h]	587	543	0	0	548	774	0	0	0	157	0	144
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	587	543	0	0	548	774	0	0	0	157	0	144
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	143	0	0	144	204	0	0	0	41	0	38
Total Analysis Volume [veh/h]	618	572	0	0	577	815	0	0	0	165	0	152
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	35	82	0	0	47	0	0	0	0	0	18	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Cycle Length [s]	100	100	100	100		100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	32	82	47	47		12	12
g / C, Green / Cycle	0.32	0.82	0.47	0.47		0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.36	0.17	0.32	0.53		0.10	0.10
s, saturation flow rate [veh/h]	1714	3427	1800	1530		1714	1530
c, Capacity [veh/h]	549	2807	844	717		208	185
d1, Uniform Delay [s]	34.00	1.97	20.75	26.55		42.74	42.89
k, delay calibration	0.50	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	78.22	0.16	4.47	77.67		6.78	8.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.13	0.20	0.68	1.14		0.80	0.82
d, Delay for Lane Group [s/veh]	112.22	2.13	25.22	104.22		49.52	51.57
Lane Group LOS	F	A	C	F		D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	24.83	0.79	11.11	31.49		4.32	4.08
50th-Percentile Queue Length [ft/ln]	620.76	19.85	277.73	787.19		108.12	102.08
95th-Percentile Queue Length [veh/ln]	35.58	1.43	16.58	44.64		7.74	7.35
95th-Percentile Queue Length [ft/ln]	889.46	35.73	414.39	1115.89		193.39	183.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	112.22	2.13	0.00	0.00	25.22	104.22	0.00	0.00	0.00	49.52	49.52	51.57
Movement LOS	F	A			C	F				D	D	D
d_A, Approach Delay [s/veh]	59.30			71.47			0.00			50.50		
Approach LOS	E			E			A			D		
d_I, Intersection Delay [s/veh]	64.18											
Intersection LOS	E											
Intersection V/C	0.993											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.773	2.653	2.827	1.876
Crosswalk LOS	C	B	C	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1580	880	0	300
d_b, Bicycle Delay [s]	2.21	15.68	50.00	36.13
l_b,int, Bicycle LOS Score for Intersection	2.541	2.708	4.132	2.083
Bicycle LOS	B	B	D	B

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Del Rosa Ave / SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.792

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Base Volume Input [veh/h]	0	817	112	232	477	0	360	1	713	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	817	112	232	477	0	360	1	713	0	0	0
Peak Hour Factor	1.0000	0.9900	0.9900	0.9900	0.9900	1.0000	0.9900	0.9900	0.9900	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	206	28	59	120	0	91	0	180	0	0	0
Total Analysis Volume [veh/h]	0	825	113	234	482	0	364	1	720	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	22	0	18	40	0	0	60	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	26	26	15	44	50	50	
g / C, Green / Cycle	0.26	0.26	0.15	0.44	0.50	0.50	
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.14	0.14	0.21	0.47	
s, saturation flow rate [veh/h]	3427	1692	1714	3427	1715	1530	
c, Capacity [veh/h]	904	446	257	1520	851	759	
d1, Uniform Delay [s]	33.16	33.26	41.84	18.01	16.11	23.96	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.35	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.34	8.87	11.83	0.55	0.34	17.45	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.69	0.70	0.91	0.32	0.43	0.95	
d, Delay for Lane Group [s/veh]	37.50	42.13	53.67	18.56	16.46	41.40	
Lane Group LOS	D	D	D	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.26	7.83	6.46	3.64	5.24	18.81	
50th-Percentile Queue Length [ft/ln]	181.44	195.78	161.55	90.90	130.98	470.23	
95th-Percentile Queue Length [veh/ln]	11.68	12.42	10.63	6.54	8.99	25.92	
95th-Percentile Queue Length [ft/ln]	291.90	310.51	265.78	163.62	224.83	648.04	

Movement, Approach, & Intersection Results

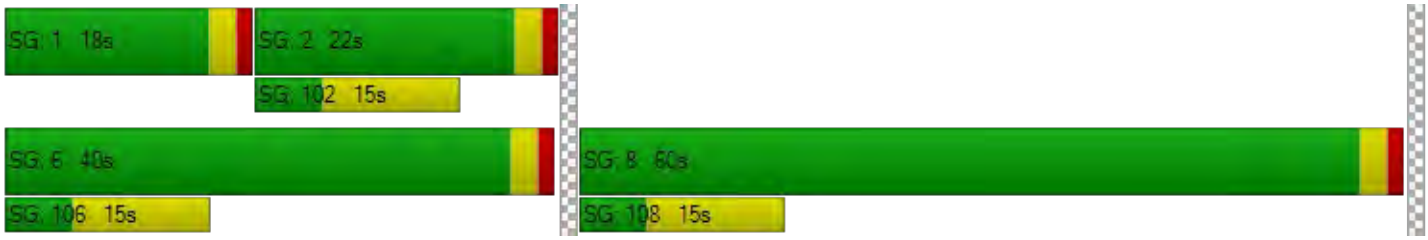
d_M, Delay for Movement [s/veh]	0.00	38.62	42.13	53.67	18.56	0.00	16.46	16.46	41.40	0.00	0.00	0.00
Movement LOS		D	D	D	B		B	B	D			
d_A, Approach Delay [s/veh]	39.05			30.03			33.01			0.00		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	34.30											
Intersection LOS	C											
Intersection V/C	0.792											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.807	2.769	2.250	1.769
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	740	1140	0
d_b, Bicycle Delay [s]	32.81	19.85	9.25	50.00
l_b,int, Bicycle LOS Score for Intersection	2.076	2.150	3.350	4.132
Bicycle LOS	B	B	C	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Del Rosa Ave / Date St_Date Pl

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.414

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Base Volume Input [veh/h]	31	639	21	181	925	80	128	31	43	15	28	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	639	21	181	925	80	128	31	43	15	28	153
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	163	5	46	236	20	33	8	11	4	7	39
Total Analysis Volume [veh/h]	32	652	21	185	944	82	131	32	44	15	29	156
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	55	0	10	55	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	69	59	59	69	62	62	25	25	25	25
g / C, Green / Cycle	0.69	0.59	0.59	0.69	0.62	0.62	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.05	0.19	0.19	0.21	0.29	0.29	0.11	0.05	0.01	0.12
s, saturation flow rate [veh/h]	645	1800	1780	886	1800	1750	1218	1633	1344	1567
c, Capacity [veh/h]	467	1058	1046	647	1109	1078	226	413	328	396
d1, Uniform Delay [s]	6.14	10.46	10.47	5.99	10.37	10.37	42.77	29.29	33.12	31.66
k, delay calibration	0.50	0.50	0.50	0.24	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.80	0.81	0.54	1.42	1.47	2.35	0.21	0.06	0.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.32	0.32	0.29	0.47	0.47	0.58	0.18	0.05	0.47
d, Delay for Lane Group [s/veh]	6.43	11.26	11.27	6.53	11.79	11.84	45.12	29.50	33.17	32.52
Lane Group LOS	A	B	B	A	B	B	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.23	3.81	3.77	1.30	6.14	5.99	3.28	1.45	0.30	3.84
50th-Percentile Queue Length [ft/ln]	5.66	95.21	94.33	32.59	153.40	149.80	82.11	36.20	7.55	96.02
95th-Percentile Queue Length [veh/ln]	0.41	6.86	6.79	2.35	10.20	10.01	5.91	2.61	0.54	6.91
95th-Percentile Queue Length [ft/ln]	10.19	171.38	169.79	58.67	254.96	250.16	147.80	65.16	13.60	172.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.43	11.27	11.27	6.53	11.81	11.84	45.12	29.50	29.50	33.17	32.52	32.52
Movement LOS	A	B	B	A	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.05			11.01			39.38			32.57		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	15.41											
Intersection LOS	B											
Intersection V/C	0.414											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.860	2.995	2.089	2.249
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1040	1040	640	640
d_b, Bicycle Delay [s]	11.52	11.52	23.12	23.12
l_b,int, Bicycle LOS Score for Intersection	2.141	2.559	1.901	1.890
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Del Rosa Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	139	449	43	122	632	128	51	297	157	51	279	135
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	1	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	449	43	122	632	128	51	297	157	51	280	135
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	114	11	31	160	32	13	75	40	13	71	34
Total Analysis Volume [veh/h]	141	455	44	124	641	130	52	301	159	52	284	137
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	5	2	0	1	6	6	3	8	0	7	4	4
Auxiliary Signal Groups						6						4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	7
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	32	21	0	37	26	26	14	31	0	11	28	28
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	10	60	60	9	59	59	5	13	13	5	13	13
g / C, Green / Cycle	0.10	0.60	0.60	0.09	0.59	0.59	0.05	0.13	0.13	0.05	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.08	0.14	0.14	0.07	0.19	0.08	0.03	0.09	0.10	0.03	0.08	0.09
s, saturation flow rate [veh/h]	1714	1800	1745	1714	3427	1530	1714	3427	1530	1714	3427	1530
c, Capacity [veh/h]	175	1086	1053	157	2033	908	92	450	201	92	449	200
d1, Uniform Delay [s]	43.94	9.14	9.15	44.48	10.18	9.04	46.15	41.37	42.11	46.18	41.17	41.47
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.49	0.50	0.52	8.56	0.41	0.33	5.27	1.73	6.87	5.34	1.48	4.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.23	0.23	0.79	0.32	0.14	0.56	0.67	0.79	0.56	0.63	0.68
d, Delay for Lane Group [s/veh]	52.43	9.65	9.67	53.05	10.59	9.38	51.42	43.10	48.98	51.52	42.65	45.55
Lane Group LOS	D	A	A	D	B	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.80	2.54	2.47	3.36	3.42	1.28	1.39	3.62	4.15	1.39	3.38	3.43
50th-Percentile Queue Length [ft/ln]	95.08	63.39	61.82	84.08	85.61	31.90	34.76	90.38	103.87	34.79	84.59	85.65
95th-Percentile Queue Length [veh/ln]	6.85	4.56	4.45	6.05	6.16	2.30	2.50	6.51	7.48	2.51	6.09	6.17
95th-Percentile Queue Length [ft/ln]	171.15	114.10	111.28	151.34	154.10	57.43	62.56	162.68	186.96	62.63	152.27	154.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.43	9.66	9.67	53.05	10.59	9.38	51.42	43.10	48.98	51.52	42.65	45.55
Movement LOS	D	A	A	D	B	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	19.08			16.29			45.77			44.46		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.28											
Intersection LOS	C											
Intersection V/C	0.404											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.597	2.815	2.633	2.732
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	460	560	500
d_b, Bicycle Delay [s]	33.62	29.65	25.92	28.13
l_b,int, Bicycle LOS Score for Intersection	2.088	2.298	1.982	1.950
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 5: Highland Ave / SR-210 EB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

Intersection Setup

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Base Volume Input [veh/h]	926	175	0	354	390	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	17	0	0	3	1	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	943	175	0	357	391	0
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	248	46	0	94	103	0
Total Analysis Volume [veh/h]	993	184	0	376	412	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	2.0	0.0	0.0	2.0	2.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	82	0	0	18	18	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	0.0	1.0	1.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	34	34	60	60
g / C, Green / Cycle	0.34	0.34	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.30	0.12	0.11	0.12
s, saturation flow rate [veh/h]	3329	1530	3427	3427
c, Capacity [veh/h]	1139	523	2049	2049
d1, Uniform Delay [s]	30.85	24.60	9.08	9.19
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.24	0.40	0.20	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.35	0.18	0.20
d, Delay for Lane Group [s/veh]	33.09	25.01	9.28	9.41
Lane Group LOS	C	C	A	A
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	11.26	3.28	1.80	2.00
50th-Percentile Queue Length [ft/ln]	281.43	82.04	45.04	49.96
95th-Percentile Queue Length [veh/ln]	16.76	5.91	3.24	3.60
95th-Percentile Queue Length [ft/ln]	419.00	147.67	81.08	89.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.09	25.01	0.00	9.28	9.41	0.00
Movement LOS	C	C		A	A	
d_A, Approach Delay [s/veh]	31.82		9.28		9.41	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	22.81					
Intersection LOS	C					
Intersection V/C	0.418					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.329	2.496	2.572
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.443	4.472
Bicycle LOS	D	E	E

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Highland Ave / SR-210 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.410

Intersection Setup

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	347	1	144	1	0	6	2	1014	0	0	933	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	20	0	0	6	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	347	1	144	1	0	6	2	1034	0	0	939	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	87	0	36	0	0	2	1	259	0	0	235	2
Total Analysis Volume [veh/h]	347	1	144	1	0	6	2	1034	0	0	939	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Permiss	Split	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	0	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	30	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	29	0	0	10	41	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	21	0	0	0	9	0	0	9	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	12	1	1	0	67	64	64
g / C, Green / Cycle	0.14	0.14	0.01	0.01	0.00	0.75	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.00	0.00	0.00	0.30	0.26	0.26
s, saturation flow rate [veh/h]	3329	1532	1714	1530	1714	3427	1800	1796
c, Capacity [veh/h]	460	212	23	21	7	2564	1279	1276
d1, Uniform Delay [s]	37.30	36.91	43.81	43.96	44.69	4.09	5.11	5.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.53	3.88	0.75	7.45	20.88	0.47	0.82	0.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.68	0.04	0.29	0.29	0.40	0.37	0.37
d, Delay for Lane Group [s/veh]	39.83	40.79	44.56	51.40	65.57	4.56	5.93	5.94
Lane Group LOS	D	D	D	D	E	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.78	3.22	0.03	0.17	0.08	2.68	3.07	3.07
50th-Percentile Queue Length [ft/ln]	94.39	80.42	0.67	4.35	2.12	67.12	76.65	76.73
95th-Percentile Queue Length [veh/ln]	6.80	5.79	0.05	0.31	0.15	4.83	5.52	5.52
95th-Percentile Queue Length [ft/ln]	169.90	144.75	1.20	7.84	3.81	120.81	137.98	138.12

Movement, Approach, & Intersection Results

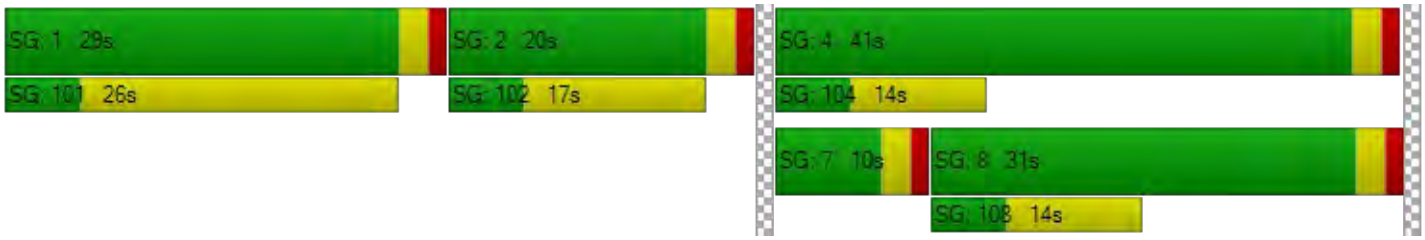
d_M, Delay for Movement [s/veh]	39.83	40.79	40.79	44.56	0.00	51.40	65.57	4.56	0.00	0.00	5.93	5.94
Movement LOS	D	D	D	D		D	E	A			A	A
d_A, Approach Delay [s/veh]	40.11			50.43			4.68			5.93		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	12.32											
Intersection LOS	B											
Intersection V/C	0.410											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.102	1.947	2.920	2.650
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	0	844	622
d_b, Bicycle Delay [s]	29.61	45.00	15.02	21.36
l_b,int, Bicycle LOS Score for Intersection	2.371	4.132	2.414	2.339
Bicycle LOS	B	D	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Victoria Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.683

Intersection Setup

Name							Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Highland Ave			Highland Ave		
Base Volume Input [veh/h]	241	646	89	162	479	286	566	376	119	86	348	224
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	6	1	0	3	0	0	0	20	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	241	652	90	162	482	286	566	376	139	86	348	224
Peak Hour Factor	0.8960	0.9500	0.9500	0.9500	0.9500	0.8960	0.8960	0.8960	0.8960	0.9500	0.8960	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	172	24	43	127	80	158	105	39	23	97	59
Total Analysis Volume [veh/h]	269	686	95	171	507	319	632	420	155	91	388	236
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	18	34	47	0	25	38	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	46	36	36	46	36	63	24	38	38	7	21	21
g / C, Green / Cycle	0.46	0.36	0.36	0.46	0.36	0.63	0.24	0.38	0.38	0.07	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.26	0.23	0.23	0.19	0.15	0.21	0.20	0.17	0.17	0.05	0.18	0.19
s, saturation flow rate [veh/h]	1047	1700	1629	879	3427	1530	3144	1800	1637	1714	1800	1576
c, Capacity [veh/h]	478	611	585	366	1232	956	741	686	624	119	387	339
d1, Uniform Delay [s]	20.40	26.80	26.80	18.99	24.07	8.88	36.57	23.00	23.02	45.72	37.77	37.85
k, delay calibration	0.50	0.50	0.50	0.21	0.50	0.23	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.73	5.35	5.58	1.78	1.02	0.43	2.92	0.44	0.49	9.68	5.53	6.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.65	0.65	0.47	0.41	0.33	0.85	0.44	0.44	0.76	0.86	0.86
d, Delay for Lane Group [s/veh]	25.13	32.15	32.38	20.76	25.09	9.31	39.49	23.44	23.51	55.40	43.30	44.44
Lane Group LOS	C	C	C	C	C	A	D	C	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.49	8.67	8.35	2.48	4.61	3.15	7.56	5.24	4.80	2.53	8.28	7.42
50th-Percentile Queue Length [ft/ln]	112.36	216.75	208.64	62.06	115.14	78.63	188.99	130.96	120.05	63.24	207.06	185.59
95th-Percentile Queue Length [veh/ln]	7.97	13.50	13.08	4.47	8.13	5.66	12.07	8.99	8.40	4.55	13.00	11.89
95th-Percentile Queue Length [ft/ln]	199.27	337.47	327.08	111.71	203.13	141.54	301.72	224.80	209.89	113.83	325.06	297.30

Movement, Approach, & Intersection Results

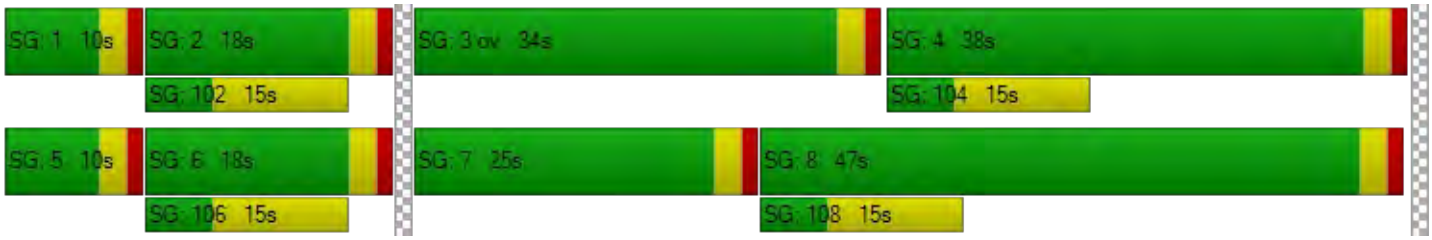
d_M, Delay for Movement [s/veh]	25.13	32.25	32.38	20.76	25.09	9.31	39.49	23.46	23.51	55.40	43.47	44.44
Movement LOS	C	C	C	C	C	A	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	30.43			19.30			31.86			45.31		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	30.75											
Intersection LOS	C											
Intersection V/C	0.683											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.658	2.874	2.960	2.672
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	880	700
d_b, Bicycle Delay [s]	36.13	36.13	15.68	21.13
l_b,int, Bicycle LOS Score for Intersection	2.426	2.382	2.555	2.149
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Del Rosa Dr / Pacific St

Control Type:	Signalized	Delay (sec / veh):	29.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

Intersection Setup

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Base Volume Input [veh/h]	48	236	37	44	432	200	154	262	33	94	291	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	236	37	44	432	200	154	262	33	94	291	44
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	62	10	12	114	53	41	69	9	25	77	12
Total Analysis Volume [veh/h]	51	248	39	46	455	211	162	276	35	99	306	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	54	27	0	45	18	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	59	59	5	59	59	12	17	17	7	13	13
g / C, Green / Cycle	0.05	0.59	0.59	0.05	0.59	0.59	0.12	0.17	0.17	0.07	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.03	0.03	0.19	0.20	0.09	0.09	0.09	0.06	0.10	0.10
s, saturation flow rate [veh/h]	1714	1800	1530	1714	1800	1610	1714	1800	1730	1714	1800	1719
c, Capacity [veh/h]	91	1057	899	87	1053	942	199	299	288	130	226	216
d1, Uniform Delay [s]	46.20	9.87	8.74	46.31	10.70	10.72	43.13	38.09	38.13	45.34	42.43	42.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.28	0.52	0.09	4.93	0.85	0.96	7.78	1.44	1.53	8.93	6.07	6.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.23	0.04	0.53	0.33	0.34	0.81	0.53	0.53	0.76	0.79	0.80
d, Delay for Lane Group [s/veh]	51.48	10.39	8.83	51.24	11.55	11.68	50.92	39.52	39.65	54.27	48.50	49.20
Lane Group LOS	D	B	A	D	B	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.36	2.61	0.36	1.23	4.00	3.64	4.31	3.62	3.53	2.72	4.63	4.52
50th-Percentile Queue Length [ft/ln]	34.12	65.33	9.12	30.73	99.97	90.95	107.77	90.61	88.24	67.98	115.82	113.06
95th-Percentile Queue Length [veh/ln]	2.46	4.70	0.66	2.21	7.20	6.55	7.72	6.52	6.35	4.89	8.16	8.01
95th-Percentile Queue Length [ft/ln]	61.41	117.59	16.42	55.32	179.95	163.70	192.90	163.11	158.83	122.36	204.06	200.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.48	10.39	8.83	51.24	11.58	11.68	50.92	39.58	39.65	54.27	48.79	49.20
Movement LOS	D	B	A	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.41			14.17			43.47			50.03		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.77											
Intersection LOS	C											
Intersection V/C	0.421											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.487	2.649	2.509	2.465
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	480	300
d_b, Bicycle Delay [s]	36.13	36.13	28.88	36.13
l_b,int, Bicycle LOS Score for Intersection	2.117	2.147	1.950	1.932
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 9: Victoria Ave / Pacific St

Control Type:	Signalized	Delay (sec / veh):	33.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	165	454	30	123	439	190	194	288	206	50	344	159
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	6	0	0	23	0	0	0	1	1	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	165	460	30	123	462	190	194	288	207	51	344	159
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	121	8	32	122	50	51	76	54	13	91	42
Total Analysis Volume [veh/h]	174	484	32	129	486	200	204	303	218	54	362	167
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	29	0	16	28	0	27	45	0	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	46	46	9	44	44	14	27	27	5	18	18
g / C, Green / Cycle	0.12	0.46	0.46	0.09	0.44	0.44	0.14	0.27	0.27	0.05	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.10	0.14	0.15	0.08	0.20	0.20	0.12	0.15	0.16	0.03	0.15	0.16
s, saturation flow rate [veh/h]	1714	1800	1761	1714	1800	1624	1714	1800	1554	1714	1800	1612
c, Capacity [veh/h]	205	836	817	158	787	710	239	484	418	94	331	296
d1, Uniform Delay [s]	43.15	16.78	16.79	44.54	19.80	19.82	42.01	31.63	31.68	46.14	39.37	39.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.43	0.97	1.00	9.66	1.92	2.13	8.31	1.08	1.28	5.50	5.61	6.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.31	0.31	0.81	0.46	0.46	0.85	0.58	0.58	0.58	0.84	0.85
d, Delay for Lane Group [s/veh]	52.58	17.76	17.79	54.20	21.72	21.95	50.31	32.71	32.96	51.64	44.98	46.32
Lane Group LOS	D	B	B	D	C	C	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.72	3.88	3.81	3.54	6.15	5.61	5.42	5.89	5.16	1.45	6.99	6.48
50th-Percentile Queue Length [ft/ln]	117.88	96.90	95.13	88.51	153.81	140.26	135.52	147.27	129.00	36.16	174.80	161.95
95th-Percentile Queue Length [veh/ln]	8.28	6.98	6.85	6.37	10.22	9.50	9.24	9.87	8.89	2.60	11.33	10.65
95th-Percentile Queue Length [ft/ln]	206.91	174.42	171.24	159.32	255.51	237.38	230.98	246.78	222.13	65.10	283.22	266.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.58	17.77	17.79	54.20	21.78	21.95	50.31	32.73	32.96	51.64	45.30	46.32
Movement LOS	D	B	B	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	26.55			26.95			37.75			46.18		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.62											
Intersection LOS	C											
Intersection V/C	0.578											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.589	2.632	2.591	2.511
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	500	840	500
d_b, Bicycle Delay [s]	27.38	28.13	16.82	28.13
l_b,int, Bicycle LOS Score for Intersection	2.129	2.232	2.158	2.041
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 10: Victoria Ave / 14th St

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.260

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	535	11	27	663	4	8	0	0	25	6	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	7	0	0	26	0	0	0	3	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	542	11	27	689	4	8	0	3	25	6	54
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	143	3	7	181	1	2	0	1	7	2	14
Total Analysis Volume [veh/h]	1	571	12	28	725	4	8	0	3	26	6	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	45	0	10	41	0	0	45	0	0	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	11	0	0	19	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	0	80	80	4	84	84	7	7
g / C, Green / Cycle	0.00	0.80	0.80	0.04	0.84	0.84	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.00	0.16	0.16	0.02	0.20	0.20	0.01	0.06
s, saturation flow rate [veh/h]	1714	1800	1787	1714	1800	1797	1353	1562
c, Capacity [veh/h]	4	1439	1429	65	1503	1501	160	160
d1, Uniform Delay [s]	49.80	2.40	2.40	47.04	1.70	1.70	43.30	45.54
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	29.60	0.32	0.32	4.43	0.38	0.38	0.18	3.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.20	0.20	0.43	0.24	0.24	0.07	0.56
d, Delay for Lane Group [s/veh]	79.40	2.72	2.72	51.48	2.09	2.09	43.48	48.56
Lane Group LOS	E	A	A	D	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.06	1.06	1.05	0.76	0.92	0.92	0.26	2.29
50th-Percentile Queue Length [ft/ln]	1.45	26.39	26.26	18.97	23.05	23.02	6.54	57.34
95th-Percentile Queue Length [veh/ln]	0.10	1.90	1.89	1.37	1.66	1.66	0.47	4.13
95th-Percentile Queue Length [ft/ln]	2.60	47.50	47.26	34.15	41.49	41.43	11.77	103.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	79.40	2.72	2.72	51.48	2.09	2.09	43.48	43.48	43.48	48.56	48.56	48.56
Movement LOS	E	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.85			3.91			43.48			48.56		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.54											
Intersection LOS	A											
Intersection V/C	0.260											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.604	2.589	1.732	1.784
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	840	760	840	840
d_b, Bicycle Delay [s]	16.82	19.22	16.82	16.82
l_b,int, Bicycle LOS Score for Intersection	2.041	2.184	1.578	1.706
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 11: Tippecanoe Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.428

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	193	161	351	227	191	488
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	193	161	351	227	191	488
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	42	92	60	50	128
Total Analysis Volume [veh/h]	203	169	369	239	201	514
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	2.0	0.0	2.0	0.0	2.0	2.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	28	0	44	0	44	72
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	0.0	1.0	1.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	116	116	116	116	116	116
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	16	16	59	59	16	78
g / C, Green / Cycle	0.14	0.14	0.51	0.51	0.14	0.67
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.17	0.19	0.12	0.15
s, saturation flow rate [veh/h]	1714	1530	1800	1581	1714	3427
c, Capacity [veh/h]	239	213	918	806	235	2307
d1, Uniform Delay [s]	48.73	48.29	16.75	17.24	48.91	7.29
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.20	6.51	0.97	1.34	8.59	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.79	0.33	0.38	0.85	0.22
d, Delay for Lane Group [s/veh]	56.93	54.81	17.72	18.58	57.50	7.51
Lane Group LOS	E	D	B	B	E	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.27	5.11	4.97	5.16	6.24	2.39
50th-Percentile Queue Length [ft/ln]	156.70	127.70	124.15	128.93	156.01	59.79
95th-Percentile Queue Length [veh/ln]	10.37	8.81	8.62	8.88	10.34	4.31
95th-Percentile Queue Length [ft/ln]	259.35	220.37	215.51	222.04	258.43	107.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.93	54.81	17.87	18.58	57.50	7.51
Movement LOS	E	D	B	B	E	A
d_A, Approach Delay [s/veh]	55.97		18.15		21.56	
Approach LOS	E		B		C	
d_I, Intersection Delay [s/veh]	27.89					
Intersection LOS	C					
Intersection V/C	0.428					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.336	2.461	2.551
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.634	4.722
Bicycle LOS	D	E	E

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 12: Del Rosa Dr / Baseline St

Control Type:	Signalized	Delay (sec / veh):	30.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.457

Intersection Setup

Name				Del Rosa Dr								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Del Rosa Dr								
Base Volume Input [veh/h]	50	233	77	39	406	146	55	232	155	106	378	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	233	77	39	406	146	55	232	155	106	378	39
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	61	20	10	107	38	14	61	41	28	99	10
Total Analysis Volume [veh/h]	53	245	81	41	427	154	58	244	163	112	398	41
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	20	36	0	33	42	0	12	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	60	60	5	60	60	6	15	15	8	17	17
g / C, Green / Cycle	0.05	0.60	0.60	0.05	0.60	0.60	0.06	0.15	0.15	0.08	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.09	0.10	0.02	0.24	0.10	0.03	0.12	0.12	0.07	0.12	0.12
s, saturation flow rate [veh/h]	1714	1800	1651	1714	1800	1530	1714	1800	1567	1714	1800	1742
c, Capacity [veh/h]	93	1082	992	83	1072	911	99	270	235	138	311	301
d1, Uniform Delay [s]	46.17	8.78	8.81	46.37	10.73	9.10	45.93	41.01	41.21	45.21	39.06	39.09
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.45	0.30	0.34	4.45	1.11	0.40	5.35	5.23	7.04	10.66	3.08	3.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.15	0.16	0.49	0.40	0.17	0.58	0.79	0.82	0.81	0.72	0.72
d, Delay for Lane Group [s/veh]	51.62	9.08	9.15	50.82	11.84	9.50	51.27	46.24	48.25	55.87	42.14	42.34
Lane Group LOS	D	A	A	D	B	A	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.42	1.60	1.53	1.09	5.00	1.53	1.55	5.43	5.03	3.12	5.36	5.24
50th-Percentile Queue Length [ft/ln]	35.49	40.04	38.22	27.31	124.99	38.25	38.67	135.71	125.64	78.10	134.08	130.95
95th-Percentile Queue Length [veh/ln]	2.56	2.88	2.75	1.97	8.67	2.75	2.78	9.25	8.70	5.62	9.16	8.99
95th-Percentile Queue Length [ft/ln]	63.89	72.07	68.80	49.16	216.66	68.85	69.61	231.24	217.55	140.58	229.03	224.79

Movement, Approach, & Intersection Results

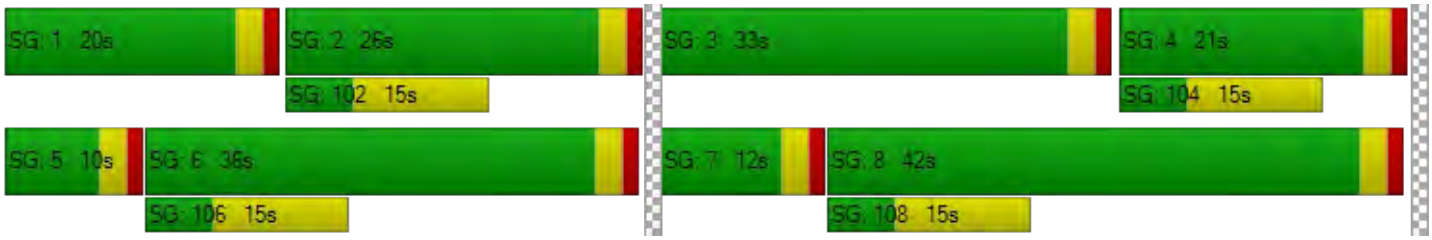
d_M, Delay for Movement [s/veh]	51.62	9.11	9.15	50.82	11.84	9.50	51.27	46.49	48.25	55.87	42.23	42.34
Movement LOS	D	A	A	D	B	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	15.06			13.83			47.71			45.01		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	30.39											
Intersection LOS	C											
Intersection V/C	0.457											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.517	2.495	2.515	2.485
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	660	780	360
d_b, Bicycle Delay [s]	29.65	22.45	18.61	33.62
l_b,int, Bicycle LOS Score for Intersection	1.872	2.586	1.943	2.014
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Sterling Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	29.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.399

Intersection Setup

Name				Sterling Ave								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Sterling Ave								
Base Volume Input [veh/h]	30	256	35	163	479	84	71	225	48	44	338	195
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	256	35	163	479	84	71	225	48	44	338	195
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	67	9	43	126	22	19	59	13	12	89	51
Total Analysis Volume [veh/h]	32	269	37	172	504	88	75	237	51	46	356	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	29	0	16	35	0	10	45	0	10	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	65	51	51	12	58	58	6	21	21	5	20	20
g / C, Green / Cycle	0.65	0.51	0.51	0.12	0.58	0.58	0.06	0.21	0.21	0.05	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.09	0.10	0.17	0.17	0.04	0.08	0.08	0.03	0.16	0.17
s, saturation flow rate [veh/h]	907	1800	1725	1714	1800	1708	1714	1800	1692	1714	1800	1584
c, Capacity [veh/h]	616	908	870	202	1045	992	105	372	350	87	353	311
d1, Uniform Delay [s]	6.66	13.43	13.46	43.24	10.57	10.58	46.06	34.25	34.32	46.29	38.66	38.79
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	0.41	0.43	9.61	0.70	0.74	8.58	0.68	0.75	4.89	5.31	6.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.17	0.17	0.85	0.29	0.29	0.71	0.39	0.40	0.53	0.84	0.85
d, Delay for Lane Group [s/veh]	6.82	13.84	13.89	52.85	11.28	11.32	54.64	34.92	35.07	51.18	43.97	45.38
Lane Group LOS	A	B	B	D	B	B	D	C	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.25	1.94	1.90	4.67	3.39	3.24	2.07	3.13	3.03	1.23	7.42	6.76
50th-Percentile Queue Length [ft/ln]	6.19	48.59	47.60	116.82	84.84	81.00	51.74	78.28	75.66	30.71	185.38	169.00
95th-Percentile Queue Length [veh/ln]	0.45	3.50	3.43	8.22	6.11	5.83	3.73	5.64	5.45	2.21	11.88	11.02
95th-Percentile Queue Length [ft/ln]	11.15	87.45	85.69	205.45	152.71	145.79	93.13	140.90	136.18	55.28	297.03	275.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.82	13.86	13.89	52.85	11.29	11.32	54.64	34.98	35.07	51.18	44.21	45.38
Movement LOS	A	B	B	D	B	B	D	C	D	D	D	D
d_A, Approach Delay [s/veh]	13.20			20.65			39.05			45.13		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	29.83											
Intersection LOS	C											
Intersection V/C	0.399											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.490	2.673	2.497	2.512
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	640	840	840
d_b, Bicycle Delay [s]	27.38	23.12	16.82	16.82
l_b,int, Bicycle LOS Score for Intersection	1.838	2.190	1.859	2.060
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 14: Victoria Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	320	22	134	422	125	105	211	30	41	245	121
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	8	0	0	29	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	328	22	134	451	125	105	211	30	41	245	121
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	86	6	35	119	33	28	56	8	11	64	32
Total Analysis Volume [veh/h]	51	345	23	141	475	132	111	222	32	43	258	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	31	0	22	43	0	11	37	0	10	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	22	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	56	56	10	61	61	8	17	17	5	14	14
g / C, Green / Cycle	0.05	0.56	0.56	0.10	0.61	0.61	0.08	0.17	0.17	0.05	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.10	0.08	0.17	0.18	0.06	0.07	0.07	0.03	0.11	0.12
s, saturation flow rate [veh/h]	1714	1800	1761	1714	1800	1667	1714	1800	1722	1714	1800	1605
c, Capacity [veh/h]	91	1005	983	173	1091	1010	137	309	296	84	254	226
d1, Uniform Delay [s]	46.20	10.87	10.88	44.06	9.41	9.41	45.26	36.93	36.98	46.39	41.51	41.70
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.28	0.40	0.42	9.04	0.67	0.72	10.80	0.89	0.96	4.76	5.42	7.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.18	0.19	0.82	0.29	0.29	0.81	0.42	0.42	0.51	0.79	0.82
d, Delay for Lane Group [s/veh]	51.48	11.27	11.29	53.10	10.07	10.14	56.06	37.82	37.94	51.15	46.93	48.75
Lane Group LOS	D	B	B	D	B	B	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.36	2.05	2.02	3.83	3.27	3.06	3.10	2.87	2.80	1.15	5.11	4.83
50th-Percentile Queue Length [ft/ln]	34.12	51.22	50.56	95.73	81.75	76.46	77.54	71.67	69.95	28.73	127.72	120.66
95th-Percentile Queue Length [veh/ln]	2.46	3.69	3.64	6.89	5.89	5.51	5.58	5.16	5.04	2.07	8.82	8.43
95th-Percentile Queue Length [ft/ln]	61.41	92.19	91.02	172.31	147.15	137.63	139.58	129.01	125.91	51.71	220.39	210.73

Movement, Approach, & Intersection Results

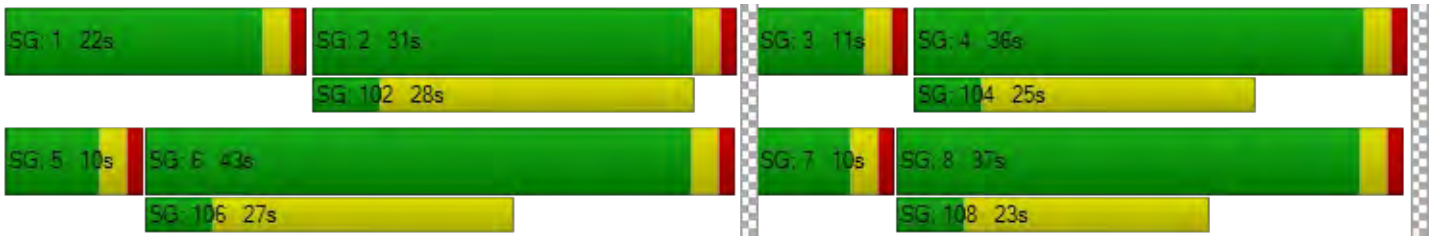
d_M, Delay for Movement [s/veh]	51.48	11.28	11.29	53.10	10.09	10.14	56.06	37.87	37.94	51.15	47.34	48.75
Movement LOS	D	B	B	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.18			18.21			43.41			48.14		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.00											
Intersection LOS	C											
Intersection V/C	0.385											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.495	2.566	2.464	2.465
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	800	680	660
d_b, Bicycle Delay [s]	25.92	18.00	21.78	22.45
l_b,int, Bicycle LOS Score for Intersection	1.905	2.177	1.861	1.913
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Tippecanoe Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.451

Intersection Setup

Name	Tippacanoe Avenue											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippacanoe Avenue											
Base Volume Input [veh/h]	122	257	76	24	378	23	42	429	184	110	327	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	1	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	257	76	24	378	23	42	430	184	110	327	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	68	20	6	99	6	11	113	48	29	86	6
Total Analysis Volume [veh/h]	128	271	80	25	398	24	44	453	194	116	344	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	36	0	11	34	0	11	38	0	15	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	54	54	4	49	49	5	22	22	8	25	25
g / C, Green / Cycle	0.09	0.54	0.54	0.04	0.49	0.49	0.05	0.22	0.22	0.08	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.07	0.10	0.10	0.01	0.12	0.12	0.03	0.19	0.19	0.07	0.10	0.10
s, saturation flow rate [veh/h]	1714	1800	1662	1714	1800	1764	1714	1800	1620	1714	1800	1761
c, Capacity [veh/h]	156	974	900	61	875	858	85	394	355	144	456	446
d1, Uniform Delay [s]	44.65	11.70	11.72	47.18	14.97	14.99	46.33	37.58	37.66	45.00	31.09	31.11
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.17	0.42	0.47	4.30	0.66	0.68	4.73	5.59	6.49	10.03	0.58	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.19	0.19	0.41	0.24	0.24	0.51	0.86	0.87	0.81	0.41	0.41
d, Delay for Lane Group [s/veh]	54.82	12.12	12.19	51.48	15.63	15.66	51.05	43.17	44.15	55.02	31.67	31.71
Lane Group LOS	D	B	B	D	B	B	D	D	D	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.53	2.09	1.98	0.68	2.90	2.87	1.17	8.48	7.79	3.21	3.76	3.70
50th-Percentile Queue Length [ft/ln]	88.36	52.25	49.56	17.00	72.54	71.65	29.35	211.92	194.78	80.22	93.96	92.52
95th-Percentile Queue Length [veh/ln]	6.36	3.76	3.57	1.22	5.22	5.16	2.11	13.25	12.37	5.78	6.76	6.66
95th-Percentile Queue Length [ft/ln]	159.05	94.05	89.21	30.59	130.57	128.98	52.84	331.29	309.22	144.39	169.12	166.54

Movement, Approach, & Intersection Results

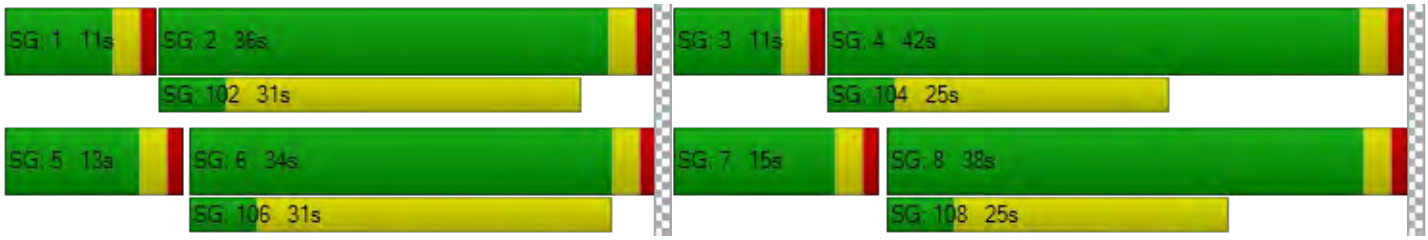
d_M, Delay for Movement [s/veh]	54.82	12.14	12.19	51.48	15.65	15.66	51.05	43.42	44.15	55.02	31.69	31.71
Movement LOS	D	B	B	D	B	B	D	D	D	E	C	C
d_A, Approach Delay [s/veh]	23.55			17.65			44.11			37.29		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	32.22											
Intersection LOS	C											
Intersection V/C	0.451											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.538	2.460	2.538	2.509
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	620	700	780
d_b, Bicycle Delay [s]	22.45	23.81	21.13	18.61
l_b,int, Bicycle LOS Score for Intersection	1.955	1.928	2.130	1.958
Bicycle LOS	A	A	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Del Rosa Dr / 9th St

Control Type:	Signalized	Delay (sec / veh):	32.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.480

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	95	131	137	163	290	108	57	452	153	33	264	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	1	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	95	131	137	163	290	108	57	453	153	33	264	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	34	36	43	76	28	15	119	40	9	69	12
Total Analysis Volume [veh/h]	100	138	144	172	305	114	60	477	161	35	278	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	18	0	16	18	0	10	56	0	10	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	43	43	12	47	47	6	29	29	4	28	28
g / C, Green / Cycle	0.07	0.43	0.43	0.12	0.47	0.47	0.06	0.29	0.29	0.04	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.06	0.08	0.09	0.10	0.12	0.12	0.04	0.27	0.11	0.02	0.15	0.03
s, saturation flow rate [veh/h]	1714	1800	1530	1714	1800	1636	1714	1800	1530	1714	1800	1530
c, Capacity [veh/h]	127	768	653	202	847	770	98	525	446	75	501	426
d1, Uniform Delay [s]	45.54	17.81	18.15	43.24	15.95	15.98	46.08	34.13	28.04	46.66	30.77	26.85
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.38	0.51	0.78	9.61	0.74	0.82	6.12	6.38	0.49	4.40	0.96	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.18	0.22	0.85	0.26	0.26	0.61	0.91	0.36	0.46	0.55	0.11
d, Delay for Lane Group [s/veh]	55.92	18.32	18.93	52.85	16.68	16.80	52.20	40.52	28.53	51.06	31.74	26.96
Lane Group LOS	E	B	B	D	B	B	D	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.79	2.06	2.21	4.67	3.10	2.88	1.62	11.83	3.08	0.94	5.78	0.85
50th-Percentile Queue Length [ft/ln]	69.80	51.44	55.33	116.82	77.52	72.02	40.39	295.79	77.08	23.45	144.41	21.14
95th-Percentile Queue Length [veh/ln]	5.03	3.70	3.98	8.22	5.58	5.19	2.91	17.47	5.55	1.69	9.72	1.52
95th-Percentile Queue Length [ft/ln]	125.63	92.58	99.59	205.45	139.53	129.64	72.71	436.82	138.75	42.22	242.95	38.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.92	18.32	18.93	52.85	16.72	16.80	52.20	40.52	28.53	51.06	31.74	26.96
Movement LOS	E	B	B	D	B	B	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	28.39			27.25			38.76			32.99		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	32.44											
Intersection LOS	C											
Intersection V/C	0.480											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.479	2.469	2.539	2.419
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1060	1060
d_b, Bicycle Delay [s]	36.13	36.13	11.05	11.05
l_b,int, Bicycle LOS Score for Intersection	1.875	2.047	2.711	2.154
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 17: Sterling Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	207	59	55	452	83	80	192	63	122	287	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	1	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	207	59	55	452	83	80	193	63	122	287	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	54	16	14	119	22	21	51	17	32	76	22
Total Analysis Volume [veh/h]	46	218	62	58	476	87	84	203	66	128	302	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	11	27	0	10	32	0	31	53	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	19	0	0	22	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	57	57	6	57	57	6	16	16	9	19	19
g / C, Green / Cycle	0.05	0.57	0.57	0.06	0.57	0.57	0.06	0.16	0.16	0.09	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.08	0.03	0.16	0.16	0.05	0.11	0.04	0.07	0.17	0.06
s, saturation flow rate [veh/h]	1714	1800	1667	1714	1800	1705	1714	1800	1530	1714	1800	1530
c, Capacity [veh/h]	87	1021	945	97	1031	976	109	292	248	162	348	296
d1, Uniform Delay [s]	46.29	10.18	10.21	46.08	10.87	10.89	46.13	39.58	36.70	44.30	39.10	34.55
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.89	0.29	0.32	5.84	0.68	0.72	11.06	2.99	0.57	8.27	6.62	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.14	0.14	0.60	0.28	0.28	0.77	0.70	0.27	0.79	0.87	0.30
d, Delay for Lane Group [s/veh]	51.18	10.47	10.53	51.92	11.55	11.61	57.19	42.57	37.26	52.57	45.73	35.12
Lane Group LOS	D	B	B	D	B	B	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.23	1.50	1.44	1.56	3.27	3.13	2.38	4.91	1.45	3.46	7.73	1.89
50th-Percentile Queue Length [ft/ln]	30.71	37.45	36.12	38.94	81.70	78.29	59.43	122.69	36.14	86.41	193.33	47.34
95th-Percentile Queue Length [veh/ln]	2.21	2.70	2.60	2.80	5.88	5.64	4.28	8.54	2.60	6.22	12.29	3.41
95th-Percentile Queue Length [ft/ln]	55.28	67.41	65.01	70.09	147.06	140.91	106.97	213.51	65.05	155.54	307.34	85.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.18	10.49	10.53	51.92	11.57	11.61	57.19	42.57	37.26	52.57	45.73	35.12
Movement LOS	D	B	B	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.24			15.35			45.06			45.59		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.90											
Intersection LOS	C											
Intersection V/C	0.405											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.621	2.504	2.330	2.343
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	480	580	1000
d_b, Bicycle Delay [s]	29.65	28.88	25.21	12.50
l_b,int, Bicycle LOS Score for Intersection	1.829	2.072	2.142	2.416
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 18: Victoria Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	27.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.291

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	161	17	44	333	84	59	115	67	47	141	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	8	0	0	29	0	0	0	4	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	169	17	44	362	84	59	115	71	47	141	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	44	4	12	95	22	16	30	19	12	37	14
Total Analysis Volume [veh/h]	64	178	18	46	381	88	62	121	75	49	148	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	38	0	20	44	0	14	30	0	12	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	67	67	5	66	66	6	11	11	5	10	10
g / C, Green / Cycle	0.06	0.67	0.67	0.05	0.66	0.66	0.06	0.11	0.11	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.05	0.06	0.03	0.13	0.14	0.04	0.07	0.05	0.03	0.08	0.04
s, saturation flow rate [veh/h]	1714	1800	1743	1714	1800	1685	1714	1800	1530	1714	1800	1530
c, Capacity [veh/h]	100	1199	1161	88	1186	1110	99	198	169	90	188	160
d1, Uniform Delay [s]	46.03	5.90	5.91	46.23	6.72	6.73	46.04	42.44	41.62	46.22	43.67	41.66
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.54	0.13	0.14	4.71	0.39	0.42	6.29	3.01	1.83	5.09	7.04	1.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.08	0.08	0.52	0.20	0.21	0.62	0.61	0.44	0.55	0.79	0.36
d, Delay for Lane Group [s/veh]	52.58	6.04	6.05	50.94	7.10	7.15	52.33	45.45	43.46	51.31	50.71	43.03
Lane Group LOS	D	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.73	0.71	0.70	1.23	1.95	1.87	1.67	3.00	1.81	1.31	3.92	1.39
50th-Percentile Queue Length [ft/ln]	43.24	17.75	17.54	30.63	48.80	46.66	41.79	74.98	45.21	32.73	97.88	34.67
95th-Percentile Queue Length [veh/ln]	3.11	1.28	1.26	2.21	3.51	3.36	3.01	5.40	3.26	2.36	7.05	2.50
95th-Percentile Queue Length [ft/ln]	77.84	31.95	31.57	55.13	87.84	83.98	75.22	134.97	81.38	58.92	176.19	62.41

Movement, Approach, & Intersection Results

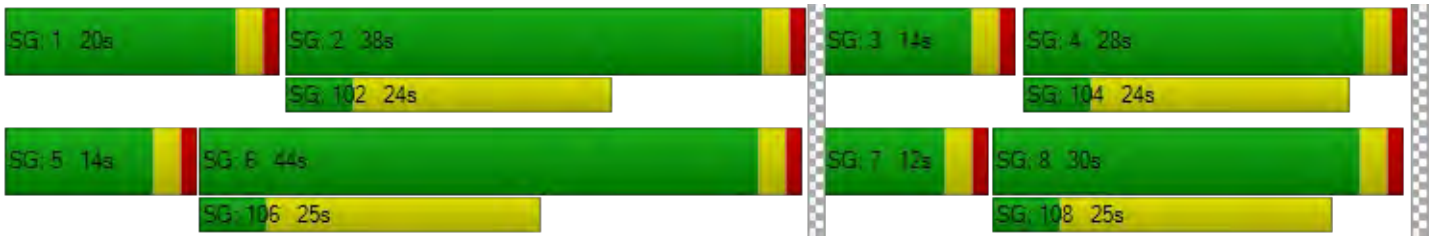
d_M, Delay for Movement [s/veh]	52.58	6.04	6.05	50.94	7.12	7.15	52.33	45.45	43.46	51.31	50.71	43.03
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	17.50			11.04			46.52			49.08		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	26.98											
Intersection LOS	C											
Intersection V/C	0.291											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.584	2.465	2.274	2.245
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	820	540	500
d_b, Bicycle Delay [s]	21.13	17.41	26.65	28.13
l_b,int, Bicycle LOS Score for Intersection	1.774	1.984	1.985	1.980
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Del Rosa Dr / 6th St

Control Type:	Signalized	Delay (sec / veh):	30.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

Intersection Setup

Name							6th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							6th Street					
Base Volume Input [veh/h]	71	232	40	54	404	95	155	144	56	97	144	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	232	40	54	404	95	155	144	56	97	144	44
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	61	11	14	106	25	41	38	15	26	38	12
Total Analysis Volume [veh/h]	75	244	42	57	425	100	163	152	59	102	152	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	29	50	0	22	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	57	57	6	57	57	11	18	8	14
g / C, Green / Cycle	0.06	0.57	0.57	0.06	0.57	0.57	0.11	0.18	0.08	0.14
(v / s)_i Volume / Saturation Flow Rate	0.04	0.08	0.08	0.03	0.15	0.15	0.10	0.12	0.06	0.11
s, saturation flow rate [veh/h]	1714	1800	1710	1714	1800	1684	1714	1715	1714	1729
c, Capacity [veh/h]	105	1031	979	96	1021	955	197	302	130	236
d1, Uniform Delay [s]	46.07	9.93	9.95	46.11	11.03	11.05	43.26	38.71	45.42	42.10
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.62	0.29	0.31	5.83	0.63	0.69	8.43	2.93	9.98	7.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.14	0.14	0.60	0.26	0.27	0.83	0.70	0.79	0.84
d, Delay for Lane Group [s/veh]	54.68	10.22	10.26	51.94	11.66	11.73	51.69	41.64	55.40	49.85
Lane Group LOS	D	B	B	D	B	B	D	D	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.07	1.50	1.46	1.53	3.08	2.92	4.37	5.06	2.83	5.23
50th-Percentile Queue Length [ft/ln]	51.76	37.46	36.48	38.28	76.89	73.12	109.29	126.54	70.81	130.73
95th-Percentile Queue Length [veh/ln]	3.73	2.70	2.63	2.76	5.54	5.26	7.80	8.75	5.10	8.98
95th-Percentile Queue Length [ft/ln]	93.18	67.43	65.66	68.91	138.41	131.61	195.02	218.79	127.46	224.49

Movement, Approach, & Intersection Results

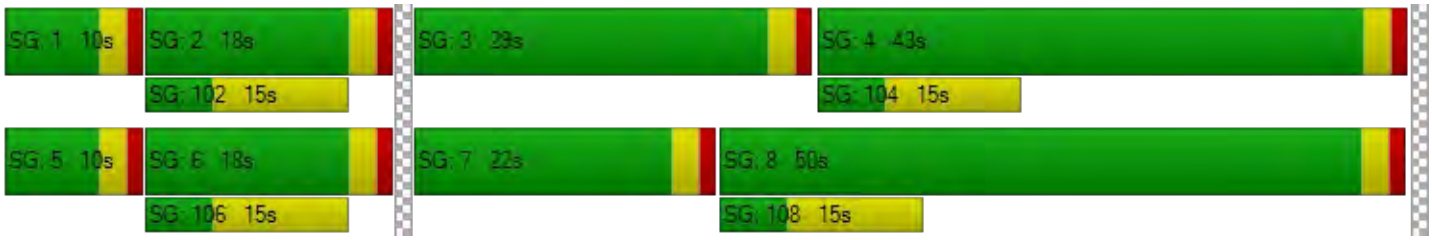
d_M, Delay for Movement [s/veh]	54.68	10.24	10.26	51.94	11.69	11.73	51.69	41.64	41.64	55.40	49.85	49.85
Movement LOS	D	B	B	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	19.47			15.64			46.02			51.74		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	30.22											
Intersection LOS	C											
Intersection V/C	0.405											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.491	2.508	2.175	2.126
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	940	800
d_b, Bicycle Delay [s]	36.13	36.13	14.05	18.00
l_b,int, Bicycle LOS Score for Intersection	1.857	2.040	2.177	2.055
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Sterling Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	148.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	259	13	28	677	43	44	102	14	9	116	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	259	13	28	677	43	44	102	14	9	116	15
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	68	3	7	178	11	12	27	4	2	31	4
Total Analysis Volume [veh/h]	16	273	14	29	713	45	46	107	15	9	122	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.02	0.01	0.00	0.48	0.52	0.02	0.06	0.62	0.02
d_M, Delay for Movement [s/veh]	9.25	0.00	0.00	7.86	0.00	0.00	148.16	127.95	116.10	58.96	55.02	40.74
Movement LOS	A	A	A	A	A	A	F	F	F	F	F	E
95th-Percentile Queue Length [veh/ln]	0.06	0.03	0.00	0.07	0.03	0.00	8.17	8.17	8.17	4.43	4.43	4.43
95th-Percentile Queue Length [ft/ln]	1.42	0.71	0.00	1.73	0.86	0.00	204.23	204.23	204.23	110.64	110.64	110.64
d_A, Approach Delay [s/veh]	0.49			0.29			132.43			53.71		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	21.72											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 21: Victoria Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.094

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	120	7	39	423	23	23	57	41	62	46	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	9	0	0	33	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	129	7	39	456	23	23	57	41	62	46	38
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	34	2	10	120	6	6	15	11	16	12	10
Total Analysis Volume [veh/h]	33	136	7	41	480	24	24	60	43	65	48	40
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.03	0.00	0.00	0.09	0.19	0.06	0.20	0.16	0.04
d_M, Delay for Movement [s/veh]	8.47	0.00	0.00	7.55	0.00	0.00	23.99	21.50	14.65	22.33	22.95	14.78
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.10	0.05	0.00	0.09	0.04	0.00	1.49	1.49	1.49	1.88	1.88	1.88
95th-Percentile Queue Length [ft/ln]	2.38	1.19	0.00	2.18	1.09	0.00	37.17	37.17	37.17	46.94	46.94	46.94
d_A, Approach Delay [s/veh]	1.59			0.57			19.65			20.55		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	6.22											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 22: Central Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.063

Intersection Setup

Name	Central Avenue					
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Central Avenue					
Base Volume Input [veh/h]	10	82	111	38	45	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	82	111	38	45	27
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	22	29	10	12	7
Total Analysis Volume [veh/h]	11	86	117	40	47	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.06	0.03
d_M, Delay for Movement [s/veh]	7.53	0.00	0.00	0.00	10.18	9.05
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.20	0.09
95th-Percentile Queue Length [ft/ln]	0.58	0.58	0.00	0.00	5.06	2.36
d_A, Approach Delay [s/veh]	0.85		0.00		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.48					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 23: I-215 SB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

Intersection Setup

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	532	7	241	0	442	350	458	700	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	532	7	241	0	442	350	458	704	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9580	0.9580	0.9580	1.0000	0.9580	0.9580	0.9580	0.9580	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	139	2	63	0	115	91	120	184	0
Total Analysis Volume [veh/h]	0	0	0	555	7	252	0	461	365	478	735	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	23	0	0	54	0	23	77	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	C	L	C
C, Cycle Length [s]		100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		19	19	19	55	55	17	75
g / C, Green / Cycle		0.19	0.19	0.19	0.55	0.55	0.17	0.75
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.16	0.09	0.24	0.15	0.21
s, saturation flow rate [veh/h]		1714	1716	1530	4903	1530	3144	3427
c, Capacity [veh/h]		320	320	286	2687	838	551	2582
d1, Uniform Delay [s]		39.56	39.56	39.60	11.27	13.41	40.10	3.87
k, delay calibration		0.13	0.13	0.13	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		9.07	9.01	10.48	0.14	1.64	4.29	0.28
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.88	0.88	0.88	0.17	0.44	0.87	0.28
d, Delay for Lane Group [s/veh]		48.63	48.57	50.08	11.41	15.06	44.39	4.15
Lane Group LOS		D	D	D	B	B	D	A
Critical Lane Group		No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		7.43	7.43	6.78	1.67	5.01	5.97	1.95
50th-Percentile Queue Length [ft/ln]		185.74	185.74	169.49	41.80	125.26	149.37	48.79
95th-Percentile Queue Length [veh/ln]		11.90	11.90	11.05	3.01	8.68	9.98	3.51
95th-Percentile Queue Length [ft/ln]		297.50	297.50	276.24	75.23	217.03	249.59	87.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	48.60	48.57	50.08	0.00	11.41	15.06	44.39	4.15	0.00
Movement LOS				D	D	D		B	B	D	A	
d_A, Approach Delay [s/veh]	0.00			49.06			13.02			20.01		
Approach LOS	A			D			B			C		
d_I, Intersection Delay [s/veh]	26.27											
Intersection LOS	C											
Intersection V/C	0.555											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.136	2.211	2.754	3.004
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	400	1020	1480
d_b, Bicycle Delay [s]	50.00	32.00	12.01	3.38
l_b,int, Bicycle LOS Score for Intersection	4.132	2.903	1.900	2.560
Bicycle LOS	D	C	A	B

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 24: I-215 NB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	30.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	312	0	542	0	0	0	150	840	0	0	825	148
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	312	0	542	0	0	0	150	840	0	0	829	148
Peak Hour Factor	0.9940	0.9940	0.9940	0.9940	1.0000	0.9940	0.9940	0.9940	1.0000	1.0000	0.9940	0.9940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	0	136	0	0	0	38	211	0	0	209	37
Total Analysis Volume [veh/h]	314	0	545	0	0	0	151	845	0	0	834	149
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	44	0	0	0	0	11	56	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	67	67	67		7	27	17	17
g / C, Green / Cycle	0.67	0.67	0.67		0.07	0.27	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.17	0.18	0.18		0.05	0.25	0.13	0.10
s, saturation flow rate [veh/h]	1714	1541	1530		3144	3427	6538	1530
c, Capacity [veh/h]	1144	1028	1021		217	935	1135	266
d1, Uniform Delay [s]	6.69	6.78	6.78		45.51	35.10	39.13	37.83
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.66	0.67		3.96	3.61	0.94	1.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.27	0.28		0.69	0.90	0.73	0.56
d, Delay for Lane Group [s/veh]	7.24	7.44	7.45		49.47	38.71	40.08	39.68
Lane Group LOS	A	A	A		D	D	D	D
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.44	2.38	2.37		1.94	10.19	4.88	3.45
50th-Percentile Queue Length [ft/ln]	60.91	59.40	59.30		48.54	254.85	121.91	86.34
95th-Percentile Queue Length [veh/ln]	4.39	4.28	4.27		3.50	15.43	8.50	6.22
95th-Percentile Queue Length [ft/ln]	109.65	106.92	106.74		87.38	385.76	212.45	155.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.26	7.44	7.45	0.00	0.00	0.00	49.47	38.71	0.00	0.00	40.08	39.68
Movement LOS	A	A	A				D	D			D	D
d_A, Approach Delay [s/veh]	7.37			0.00			40.34			40.02		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	30.25											
Intersection LOS	C											
Intersection V/C	0.430											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.226	1.868	2.993	2.931
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	820	0	1060	840
d_b, Bicycle Delay [s]	17.41	50.00	11.05	16.82
l_b,int, Bicycle LOS Score for Intersection	2.977	4.132	2.381	1.965
Bicycle LOS	C	D	B	A

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 25: E St / 5th St

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.406

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	27	109	26	11	143	17	75	994	40	14	421	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	109	26	11	143	17	75	994	40	14	425	12
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	28	7	3	37	4	19	255	10	4	109	3
Total Analysis Volume [veh/h]	28	112	27	11	147	17	77	1019	41	14	436	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	9	9	0	9	9	0	0	9	0	0	9	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	2.0	0.0	1.0	2.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	43	0	13	43	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	21	0	0	20	0	0	19	0	0	22	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	4.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	2.00	4.00	3.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	5	11	2	11	60	60	60	62	62	62
g / C, Green / Cycle	0.05	0.12	0.02	0.12	0.67	0.67	0.67	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.02	0.08	0.01	0.09	0.08	0.30	0.30	0.03	0.12	0.13
s, saturation flow rate [veh/h]	1714	1740	1714	1768	957	1800	1776	424	1800	1783
c, Capacity [veh/h]	87	206	42	209	642	1196	1179	346	1243	1231
d1, Uniform Delay [s]	41.22	38.01	43.09	38.55	8.34	7.21	7.21	5.49	4.93	4.93
k, delay calibration	0.11	0.15	0.11	0.15	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.11	5.38	3.21	8.80	0.38	1.21	1.22	0.22	0.32	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.67	0.26	0.78	0.12	0.45	0.45	0.04	0.18	0.18
d, Delay for Lane Group [s/veh]	43.33	43.40	46.30	47.36	8.73	8.42	8.44	5.71	5.25	5.26
Lane Group LOS	D	D	D	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.64	3.20	0.28	3.98	0.69	4.56	4.51	0.09	1.35	1.34
50th-Percentile Queue Length [ft/ln]	16.11	80.11	6.89	99.44	17.23	114.09	112.74	2.23	33.80	33.61
95th-Percentile Queue Length [veh/ln]	1.16	5.77	0.50	7.16	1.24	8.07	7.99	0.16	2.43	2.42
95th-Percentile Queue Length [ft/ln]	29.00	144.19	12.41	178.99	31.02	201.67	199.80	4.02	60.84	60.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.33	43.40	43.40	46.30	47.36	47.36	8.73	8.43	8.44	5.71	5.25	5.26
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	43.38			47.29			8.45			5.27		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	14.20											
Intersection LOS	B											
Intersection V/C	0.406											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.073	2.171	2.922	2.596
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	822	644	644
d_b, Bicycle Delay [s]	15.61	15.61	20.67	20.67
l_b,int, Bicycle LOS Score for Intersection	1.835	1.848	2.498	1.941
Bicycle LOS	A	A	B	A

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 26: Arrowhead Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	46	98	38	40	227	38	46	806	144	39	433	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	98	38	40	227	38	46	806	144	39	437	12
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	26	10	10	60	10	12	211	38	10	115	3
Total Analysis Volume [veh/h]	48	103	40	42	238	40	48	846	151	41	459	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	4	0	1	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	18	0	0	18	0	0	17	0	0	17	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	34	0	0	34	0	0	56	0	0	56	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	62	62	62	62	62	62
g / C, Green / Cycle	0.20	0.20	0.20	0.20	0.20	0.20	0.69	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.04	0.03	0.08	0.08	0.05	0.28	0.28	0.07	0.13	0.13
s, saturation flow rate [veh/h]	1119	1800	1636	1265	1800	1712	936	1800	1706	574	1800	1783
c, Capacity [veh/h]	211	363	330	270	363	346	651	1237	1172	384	1237	1225
d1, Uniform Delay [s]	36.66	29.87	29.95	33.62	31.10	31.16	7.22	6.16	6.16	10.69	5.08	5.08
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.54	0.27	0.32	0.27	0.68	0.74	0.22	1.02	1.08	0.56	0.34	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.20	0.21	0.16	0.39	0.40	0.07	0.41	0.41	0.11	0.19	0.19
d, Delay for Lane Group [s/veh]	37.20	30.14	30.27	33.88	31.78	31.90	7.44	7.18	7.24	11.24	5.42	5.43
Lane Group LOS	D	C	C	C	C	C	A	A	A	B	A	A
Critical Lane Group	No	No	No	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.00	1.32	1.28	0.82	2.68	2.62	0.39	3.87	3.69	0.45	1.46	1.45
50th-Percentile Queue Length [ft/ln]	24.89	33.07	32.10	20.47	67.05	65.44	9.65	96.66	92.13	11.24	36.48	36.25
95th-Percentile Queue Length [veh/ln]	1.79	2.38	2.31	1.47	4.83	4.71	0.70	6.96	6.63	0.81	2.63	2.61
95th-Percentile Queue Length [ft/ln]	44.80	59.53	57.78	36.84	120.70	117.79	17.38	174.00	165.83	20.23	65.67	65.25

Movement, Approach, & Intersection Results

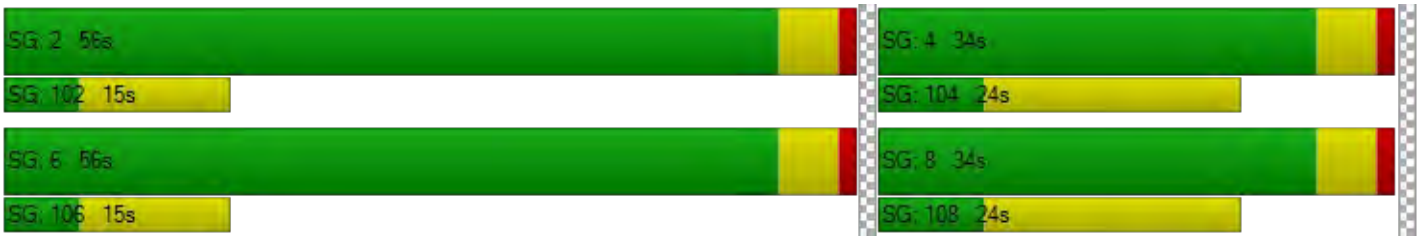
d_M, Delay for Movement [s/veh]	37.20	30.18	30.27	33.88	31.83	31.90	7.44	7.20	7.24	11.24	5.42	5.43
Movement LOS	D	C	C	C	C	C	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	31.97			32.11			7.22			5.89		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	13.02											
Intersection LOS	B											
Intersection V/C	0.364											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.481	2.464	2.678	2.640
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	644	644	1133	1133
d_b, Bicycle Delay [s]	20.67	20.67	8.45	8.45
l_b,int, Bicycle LOS Score for Intersection	1.717	1.824	2.422	1.983
Bicycle LOS	A	A	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Waterman Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	128	413	104	18	656	110	70	283	248	152	310	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	413	104	18	656	110	70	283	248	152	314	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	109	27	5	173	29	18	74	65	40	83	4
Total Analysis Volume [veh/h]	135	435	109	19	691	116	74	298	261	160	331	17
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	36.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	5.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	35	0	9	31	0	9	34	0	12	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	4.00	2.00	4.00	4.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	9	43	43	2	36	36	30	18	18	30	22	22
g / C, Green / Cycle	0.10	0.48	0.48	0.02	0.40	0.40	0.34	0.20	0.20	0.34	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.07	0.01	0.16	0.16	0.06	0.17	0.17	0.14	0.10	0.01
s, saturation flow rate [veh/h]	1714	3427	1530	1714	3427	1672	1200	1800	1530	1143	3427	1530
c, Capacity [veh/h]	165	1631	728	38	1377	672	442	365	311	369	836	373
d1, Uniform Delay [s]	39.90	14.16	13.31	43.52	19.12	19.17	21.03	34.26	34.47	23.21	28.48	26.02
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.54	0.40	0.43	9.91	0.84	1.76	0.18	4.47	6.09	0.80	0.30	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.27	0.15	0.50	0.39	0.40	0.17	0.82	0.84	0.43	0.40	0.05
d, Delay for Lane Group [s/veh]	49.44	14.56	13.75	53.43	19.96	20.92	21.21	38.73	40.55	24.02	28.78	26.07
Lane Group LOS	D	B	B	D	B	C	C	D	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.33	2.63	1.28	0.52	4.03	4.16	1.08	6.55	5.89	2.51	2.97	0.28
50th-Percentile Queue Length [ft/ln]	83.14	65.78	32.12	12.97	100.67	104.01	27.11	163.67	147.35	62.67	74.27	7.02
95th-Percentile Queue Length [veh/ln]	5.99	4.74	2.31	0.93	7.25	7.49	1.95	10.74	9.88	4.51	5.35	0.51
95th-Percentile Queue Length [ft/ln]	149.65	118.41	57.81	23.34	181.21	187.23	48.79	268.58	246.88	112.81	133.69	12.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.44	14.56	13.75	53.43	20.17	20.92	21.21	38.73	40.55	24.02	28.78	26.07
Movement LOS	D	B	B	D	C	C	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	21.37			21.04			37.44			27.19		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	26.23											
Intersection LOS	C											
Intersection V/C	0.481											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.894	2.700	2.536	2.604
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	644	556	644	711
d_b, Bicycle Delay [s]	20.67	23.47	20.67	18.69
l_b,int, Bicycle LOS Score for Intersection	2.120	2.014	2.082	1.979
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 28: Tippecanoe Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	27.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

Intersection Setup

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	36	176	23	41	494	41	32	218	72	50	344	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	176	23	41	494	41	32	218	72	50	348	40
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	46	6	11	130	11	8	57	19	13	92	11
Total Analysis Volume [veh/h]	38	185	24	43	520	43	34	229	76	53	366	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	23	0	10	23	0	10	55	0	12	57	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	56	56	5	56	56	4	22	22	5	23	23
g / C, Green / Cycle	0.05	0.56	0.56	0.05	0.56	0.56	0.04	0.22	0.22	0.05	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.06	0.03	0.16	0.16	0.02	0.13	0.05	0.03	0.20	0.03
s, saturation flow rate [veh/h]	1714	1800	1729	1714	1800	1752	1714	1800	1530	1714	1800	1530
c, Capacity [veh/h]	79	1008	968	84	1014	987	74	389	331	93	410	348
d1, Uniform Delay [s]	46.54	10.28	10.30	46.37	11.34	11.34	46.70	35.18	32.31	46.12	37.44	30.67
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.49	0.21	0.22	4.72	0.69	0.71	4.38	1.41	0.35	5.31	6.94	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.10	0.11	0.51	0.28	0.28	0.46	0.59	0.23	0.57	0.89	0.12
d, Delay for Lane Group [s/veh]	51.03	10.49	10.52	51.09	12.03	12.06	51.08	36.60	32.66	51.43	44.37	30.82
Lane Group LOS	D	B	B	D	B	B	D	D	C	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.02	1.10	1.09	1.15	3.32	3.25	0.91	5.11	1.54	1.42	9.33	0.82
50th-Percentile Queue Length [ft/ln]	25.41	27.53	27.14	28.71	82.89	81.19	22.80	127.78	38.58	35.42	233.19	20.43
95th-Percentile Queue Length [veh/ln]	1.83	1.98	1.95	2.07	5.97	5.85	1.64	8.82	2.78	2.55	14.34	1.47
95th-Percentile Queue Length [ft/ln]	45.74	49.56	48.86	51.67	149.20	146.13	41.05	220.47	69.45	63.76	358.40	36.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.03	10.50	10.52	51.09	12.04	12.06	51.08	36.60	32.66	51.43	44.37	30.82
Movement LOS	D	B	B	D	B	B	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	16.74			14.81			37.17			43.95		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.81											
Intersection LOS	C											
Intersection V/C	0.421											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.481	2.476	2.460	2.454
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1040	1080
d_b, Bicycle Delay [s]	32.00	32.00	11.52	10.58
l_b,int, Bicycle LOS Score for Intersection	1.763	2.060	2.119	2.320
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 29: Del Rosa Dr / 5th St

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.604

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	14	192	7	32	316	380	224	74	16	27	284	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	192	7	32	316	380	224	74	16	27	288	47
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	51	2	8	83	100	59	19	4	7	76	12
Total Analysis Volume [veh/h]	15	202	7	34	333	400	236	78	17	28	303	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	53	0	0	53	0	0	47	0	0	47	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	59	59	59	59	35	35	35	35
g / C, Green / Cycle	0.59	0.59	0.59	0.59	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.21	0.29	0.32	0.06	0.12	0.11
s, saturation flow rate [veh/h]	1386	1621	1739	1392	745	1588	1742	1563
c, Capacity [veh/h]	854	951	1060	817	335	561	656	552
d1, Uniform Delay [s]	9.33	9.20	10.72	11.98	36.16	22.25	23.54	23.63
k, delay calibration	0.50	0.50	0.50	0.50	0.27	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.26	0.90	2.09	6.53	0.14	0.26	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.12	0.35	0.49	0.70	0.17	0.31	0.32
d, Delay for Lane Group [s/veh]	9.63	9.46	11.62	14.07	42.69	22.39	23.80	23.97
Lane Group LOS	A	A	B	B	D	C	C	C
Critical Lane Group	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.05	1.14	4.22	5.29	6.07	1.55	3.46	3.11
50th-Percentile Queue Length [ft/ln]	26.33	28.62	105.41	132.17	151.76	38.70	86.46	77.79
95th-Percentile Queue Length [veh/ln]	1.90	2.06	7.58	9.06	10.11	2.79	6.22	5.60
95th-Percentile Queue Length [ft/ln]	47.39	51.52	189.59	226.45	252.78	69.66	155.62	140.03

Movement, Approach, & Intersection Results

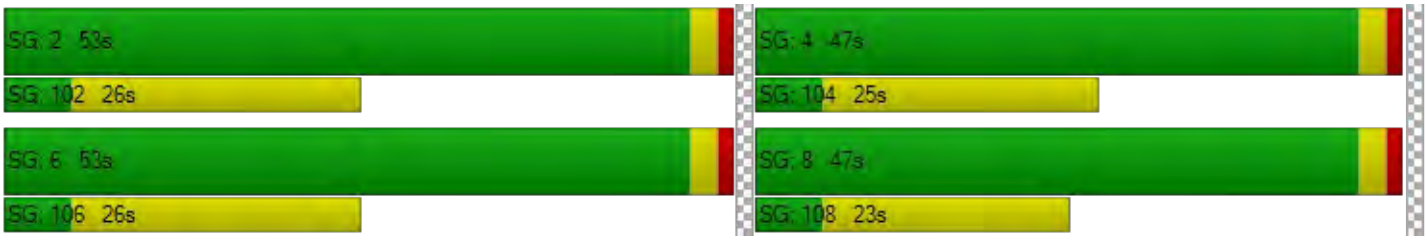
d_M, Delay for Movement [s/veh]	9.63	9.54	9.46	11.62	11.62	14.07	42.69	22.39	22.39	23.80	23.87	23.97
Movement LOS	A	A	A	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.54			12.90			36.86			23.88		
Approach LOS	A			B			D			C		
d_I, Intersection Delay [s/veh]	19.57											
Intersection LOS	B											
Intersection V/C	0.604											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.324	2.779	2.415	2.452
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	1000	880	880
d_b, Bicycle Delay [s]	12.50	12.50	15.68	15.68
l_b,int, Bicycle LOS Score for Intersection	1.744	2.192	1.833	1.873
Bicycle LOS	A	B	A	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Sterling Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.416

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	149	17	80	519	55	22	90	11	237	269	102
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	4	2	0	0	7	0	0	0	18	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	151	17	80	526	55	22	90	29	237	269	102
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	40	4	21	138	14	6	24	8	62	71	27
Total Analysis Volume [veh/h]	13	159	18	84	554	58	23	95	31	249	283	107
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	49	0	0	49	0	0	51	0	0	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	6	0	0	6	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	66	66	66	66	66	66	28	28	28	28	28	28
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.28	0.28	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.02	0.05	0.05	0.07	0.17	0.17	0.07	0.05	0.02	0.24	0.17	0.07
s, saturation flow rate [veh/h]	823	1800	1737	1227	1800	1741	574	1638	1530	1026	1638	1530
c, Capacity [veh/h]	544	1183	1142	839	1183	1144	219	463	433	362	463	433
d1, Uniform Delay [s]	9.23	6.18	6.19	7.53	7.10	7.11	29.86	27.02	26.25	37.52	31.09	27.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	0.12	0.13	0.24	0.54	0.56	0.38	0.17	0.07	2.32	1.31	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.08	0.08	0.10	0.26	0.26	0.18	0.17	0.07	0.69	0.61	0.25
d, Delay for Lane Group [s/veh]	9.31	6.31	6.32	7.77	7.64	7.67	30.24	27.19	26.32	39.84	32.40	27.95
Lane Group LOS	A	A	A	A	A	A	C	C	C	D	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.13	0.66	0.66	0.73	2.67	2.60	0.89	1.44	0.55	6.00	6.00	2.00
50th-Percentile Queue Length [ft/ln]	3.26	16.58	16.43	18.35	66.81	64.97	22.16	35.89	13.68	149.95	149.89	49.88
95th-Percentile Queue Length [veh/ln]	0.24	1.19	1.18	1.32	4.81	4.68	1.60	2.58	0.99	10.01	10.01	3.59
95th-Percentile Queue Length [ft/ln]	5.88	29.84	29.57	33.04	120.26	116.95	39.90	64.61	24.63	250.36	250.28	89.78

Movement, Approach, & Intersection Results

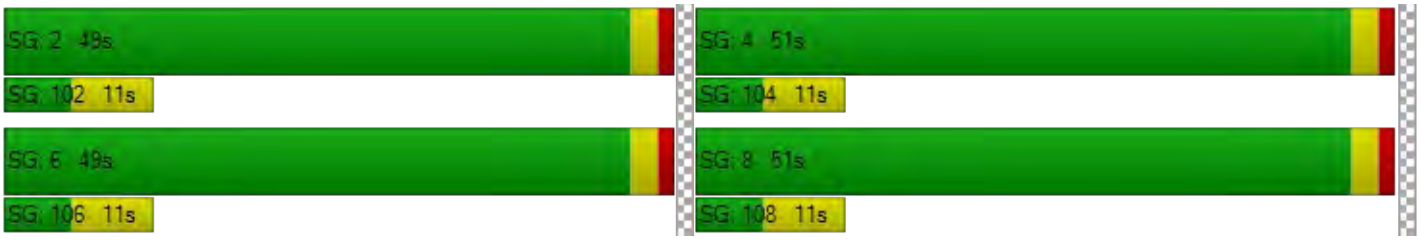
d_M, Delay for Movement [s/veh]	9.31	6.31	6.32	7.77	7.65	7.67	30.24	27.71	26.32	39.84	32.40	27.95
Movement LOS	A	A	A	A	A	A	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	6.52			7.67			27.81			34.55		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	19.59											
Intersection LOS	B											
Intersection V/C	0.416											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.980	2.531	2.423	2.589
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	920	920	960	960
d_b, Bicycle Delay [s]	14.58	14.58	13.52	13.52
l_b,int, Bicycle LOS Score for Intersection	1.716	2.134	1.683	2.087
Bicycle LOS	A	B	A	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Victoria Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

Intersection Setup

Name										5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name										5th Street		
Base Volume Input [veh/h]	19	130	17	76	421	77	21	109	55	284	413	78
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	9	3	0	33	0	0	0	6	13	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	139	20	76	454	77	21	109	61	297	413	78
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	37	5	20	119	20	6	29	16	78	109	21
Total Analysis Volume [veh/h]	21	146	21	80	478	81	22	115	64	313	435	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.8	0.0	0.0	4.8	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	28	0	0	28	0
Vehicle Extension [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.8	0.0	0.0	3.8	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		Yes			Yes			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.80	5.80	5.80	5.80	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.80	3.80	3.80	3.80	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	15	15	15	15	28	28	28	28
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.51	0.51	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.09	0.08	0.22	0.20	0.02	0.11	0.26	0.30
s, saturation flow rate [veh/h]	744	1589	1482	1568	898	1693	1224	1751
c, Capacity [veh/h]	289	434	486	428	379	868	647	897
d1, Uniform Delay [s]	15.73	15.74	18.71	18.27	14.78	7.31	12.38	9.27
k, delay calibration	0.15	0.15	0.15	0.15	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	0.50	2.14	3.72	0.29	0.54	2.58	2.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.28	0.66	0.75	0.06	0.21	0.48	0.58
d, Delay for Lane Group [s/veh]	16.30	16.23	20.85	21.99	15.08	7.85	14.96	11.96
Lane Group LOS	B	B	C	C	B	A	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.61	1.14	3.69	3.74	0.22	1.05	2.98	4.03
50th-Percentile Queue Length [ft/ln]	15.36	28.43	92.16	93.55	5.39	26.17	74.45	100.79
95th-Percentile Queue Length [veh/ln]	1.11	2.05	6.64	6.74	0.39	1.88	5.36	7.26
95th-Percentile Queue Length [ft/ln]	27.64	51.18	165.88	168.40	9.71	47.11	134.01	181.43

Movement, Approach, & Intersection Results

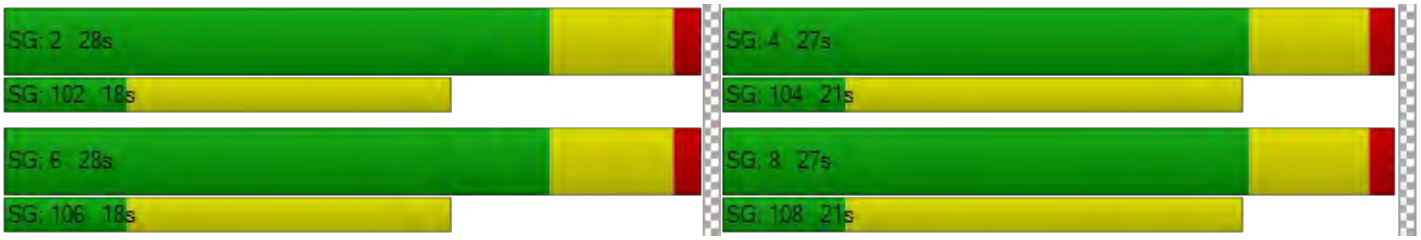
d_M, Delay for Movement [s/veh]	16.30	16.25	16.23	20.85	21.42	21.99	15.08	7.85	7.85	14.96	11.96	11.96
Movement LOS	B	B	B	C	C	C	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	16.26			21.42			8.64			13.09		
Approach LOS	B			C			A			B		
d_I, Intersection Delay [s/veh]	15.79											
Intersection LOS	B											
Intersection V/C	0.510											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersection	2.806	2.480	2.186	2.476
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	771	771	800	800
d_b, Bicycle Delay [s]	10.39	10.39	9.90	9.90
l_b,int, Bicycle LOS Score for Intersection	1.715	2.087	1.891	2.929
Bicycle LOS	A	B	A	C

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Central Avenue / 5th Street

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.340

Intersection Setup

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	6	19	5	44	56	33	15	235	17	40	798	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	3	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	19	5	44	56	33	15	238	17	40	798	45
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	5	1	12	15	9	4	62	4	10	209	12
Total Analysis Volume [veh/h]	6	20	5	46	59	35	16	250	18	42	837	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	35	51	0	10	27	0	12	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	15	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	1	4	5	8	3	75	75	5	77	77
g / C, Green / Cycle	0.01	0.04	0.05	0.08	0.03	0.75	0.75	0.05	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.03	0.06	0.01	0.07	0.08	0.02	0.24	0.03
s, saturation flow rate [veh/h]	1619	1642	1714	1689	1714	1800	1758	1714	3427	1530
c, Capacity [veh/h]	18	59	88	129	43	1340	1309	83	2630	1174
d1, Uniform Delay [s]	49.09	47.20	46.22	45.17	47.95	3.53	3.54	46.42	3.58	2.79
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.76	4.80	4.68	7.62	5.15	0.15	0.16	4.72	0.32	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.43	0.52	0.73	0.37	0.10	0.10	0.51	0.32	0.04
d, Delay for Lane Group [s/veh]	59.85	52.01	50.90	52.79	53.10	3.68	3.69	51.13	3.90	2.86
Lane Group LOS	E	D	D	D	D	A	A	D	A	A
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.20	0.69	1.22	2.54	0.45	0.67	0.66	1.12	2.08	0.19
50th-Percentile Queue Length [ft/ln]	5.03	17.14	30.61	63.55	11.32	16.67	16.52	28.07	52.07	4.83
95th-Percentile Queue Length [veh/ln]	0.36	1.23	2.20	4.58	0.82	1.20	1.19	2.02	3.75	0.35
95th-Percentile Queue Length [ft/ln]	9.06	30.84	55.10	114.39	20.38	30.00	29.74	50.52	93.72	8.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.85	52.01	52.01	50.90	52.79	52.79	53.10	3.69	3.69	51.13	3.90	2.86
Movement LOS	E	D	D	D	D	D	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	53.52			52.17			6.47			5.99		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	11.84											
Intersection LOS	B											
Intersection V/C	0.340											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	1.996	2.019	2.533	2.659
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	960	480	520
d_b, Bicycle Delay [s]	29.65	13.52	28.88	27.38
l_b,int, Bicycle LOS Score for Intersection	1.611	1.791	1.794	2.324
Bicycle LOS	A	A	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 33: Palm Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	53.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	35	157	258	145	664	98	14	224	68	360	671	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	5	9	0	21	0	0	0	3	33	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	162	267	145	685	98	14	224	71	393	671	107
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	43	70	38	180	26	4	59	19	103	177	28
Total Analysis Volume [veh/h]	38	171	281	153	721	103	15	236	75	414	706	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	0	12	35	0	10	34	0	21	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	0	0	27	0	0	26	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	52	52	9	56	56	2	9	9	18	25	25
g / C, Green / Cycle	0.05	0.52	0.52	0.09	0.56	0.56	0.02	0.09	0.09	0.18	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.05	0.18	0.09	0.21	0.07	0.01	0.07	0.05	0.24	0.21	0.07
s, saturation flow rate [veh/h]	1714	3427	1530	1714	3427	1530	1714	3427	1530	1714	3427	1530
c, Capacity [veh/h]	79	1767	789	154	1918	856	42	323	144	309	857	383
d1, Uniform Delay [s]	46.55	12.35	14.37	45.46	12.27	10.39	48.03	44.04	43.12	41.00	35.41	30.35
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.33	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.55	0.11	1.26	31.72	0.56	0.29	5.21	3.16	2.87	167.49	2.06	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.10	0.36	0.99	0.38	0.12	0.36	0.73	0.52	1.34	0.82	0.30
d, Delay for Lane Group [s/veh]	51.10	12.46	15.63	77.18	12.84	10.68	53.24	47.20	45.99	208.49	37.47	30.78
Lane Group LOS	D	B	B	E	B	B	D	D	D	F	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.02	0.98	3.91	5.12	4.41	1.10	0.43	2.97	1.87	21.84	8.23	2.24
50th-Percentile Queue Length [ft/ln]	25.43	24.42	97.73	128.03	110.21	27.46	10.67	74.16	46.82	546.06	205.69	55.89
95th-Percentile Queue Length [veh/ln]	1.83	1.76	7.04	8.83	7.85	1.98	0.77	5.34	3.37	33.66	12.93	4.02
95th-Percentile Queue Length [ft/ln]	45.78	43.95	175.91	220.81	196.29	49.42	19.20	133.48	84.28	841.40	323.29	100.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.10	12.46	15.63	77.18	12.84	10.68	53.24	47.20	45.99	208.49	37.47	30.78
Movement LOS	D	B	B	E	B	B	D	D	D	F	D	C
d_A, Approach Delay [s/veh]	17.27			22.68			47.20			94.28		
Approach LOS	B			C			D			F		
d_I, Intersection Delay [s/veh]	53.62											
Intersection LOS	D											
Intersection V/C	0.583											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.837	2.667	2.875	2.769
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	640	620	840
d_b, Bicycle Delay [s]	24.50	23.12	23.81	16.82
l_b,int, Bicycle LOS Score for Intersection	1.964	2.366	1.829	2.577
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 34: New Intersection

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

Intersection Setup

Name	Church Ave		5th Street		5th Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Church Ave		5th Street		5th Street	
Base Volume Input [veh/h]	308	84	25	564	1142	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	16	3	32	4	99	40
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	324	87	57	568	1241	169
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	85	23	15	149	327	44
Total Analysis Volume [veh/h]	341	92	60	598	1306	178
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	42	0	10	58	48	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	22	22	6	72	63	63
g / C, Green / Cycle	0.22	0.22	0.06	0.72	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.20	0.06	0.04	0.17	0.41	0.43
s, saturation flow rate [veh/h]	1714	1530	1714	3427	1800	1727
c, Capacity [veh/h]	383	342	98	2456	1133	1087
d1, Uniform Delay [s]	37.64	32.08	46.08	4.87	11.67	12.03
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.18	0.42	6.12	0.24	2.96	3.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.27	0.61	0.24	0.65	0.68
d, Delay for Lane Group [s/veh]	44.82	32.50	52.20	5.10	14.63	15.51
Lane Group LOS	D	C	D	A	B	B
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	8.72	1.87	1.62	1.88	10.27	10.67
50th-Percentile Queue Length [ft/ln]	218.06	46.74	40.39	47.12	256.64	266.75
95th-Percentile Queue Length [veh/ln]	13.57	3.37	2.91	3.39	15.52	16.03
95th-Percentile Queue Length [ft/ln]	339.14	84.13	72.71	84.81	388.01	400.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.82	32.50	52.20	5.10	15.01	15.51
Movement LOS	D	C	D	A	B	B
d_A, Approach Delay [s/veh]	42.20		9.40		15.07	
Approach LOS	D		A		B	
d_I, Intersection Delay [s/veh]	18.18					
Intersection LOS	B					
Intersection V/C	0.664					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.165	2.707	2.728
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.675	5.357
Bicycle LOS	D	E	F

Sequence

Ring 1	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 35: SR-210 EB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.858

Intersection Setup

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	211	11	207	0	417	458	958	1337	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	58	0	10	10	0	81	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	211	11	265	0	427	468	958	1418	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9500	0.9500	0.8920	1.0000	0.8920	0.8920	0.9500	0.8920	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	56	3	74	0	120	131	252	397	0
Total Analysis Volume [veh/h]	0	0	0	222	12	297	0	479	525	1008	1590	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	10	0	0	52	0	38	90	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	15	0	0	12	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		20	20	37	37	34	74
g / C, Green / Cycle		0.20	0.20	0.37	0.37	0.34	0.74
(v / s)_i Volume / Saturation Flow Rate		0.14	0.19	0.14	0.34	0.32	0.46
s, saturation flow rate [veh/h]		1718	1530	3427	1530	3144	3427
c, Capacity [veh/h]		338	301	1280	572	1068	2547
d1, Uniform Delay [s]		37.34	40.02	22.81	29.87	32.09	6.15
k, delay calibration		0.50	0.50	0.11	0.24	0.11	0.30
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		11.06	48.51	0.18	12.82	5.10	0.71
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.69	0.99	0.37	0.92	0.94	0.62
d, Delay for Lane Group [s/veh]		48.40	88.54	22.99	42.69	37.19	6.86
Lane Group LOS		D	F	C	D	D	A
Critical Lane Group		No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		6.30	11.21	4.08	13.64	12.23	6.57
50th-Percentile Queue Length [ft/ln]		157.47	280.32	101.91	341.12	305.67	164.26
95th-Percentile Queue Length [veh/ln]		10.41	16.70	7.34	19.70	17.96	10.77
95th-Percentile Queue Length [ft/ln]		260.37	417.61	183.44	492.56	449.04	269.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	48.40	48.40	88.54	0.00	22.99	42.69	37.19	6.86	0.00
Movement LOS				D	D	F		C	D	D	A	
d_A, Approach Delay [s/veh]	0.00			70.85			33.29			18.63		
Approach LOS	A			E			C			B		
d_I, Intersection Delay [s/veh]	28.90											
Intersection LOS	C											
Intersection V/C	0.858											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.870	3.060
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	140	980	1740
d_b, Bicycle Delay [s]	50.00	43.25	13.01	0.85
l_b,int, Bicycle LOS Score for Intersection	4.132	2.436	2.388	3.703
Bicycle LOS	D	B	B	D

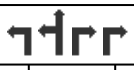
Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 36: SR-210 WB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No						No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	487	0	401	0	0	0	94	538	0	0	1812	393
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	76	0	0	0	0	0	9	1	0	0	5	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	563	0	401	0	0	0	103	539	0	0	1817	393
Peak Hour Factor	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	148	0	106	0	0	0	27	142	0	0	478	103
Total Analysis Volume [veh/h]	593	0	422	0	0	0	108	567	0	0	1913	414
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	0	0	14	79	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	24	0	0	15	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	28	28	28		8	66	55	55
g / C, Green / Cycle	0.28	0.28	0.28		0.08	0.66	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.16		0.06	0.17	0.39	0.27
s, saturation flow rate [veh/h]	1714	1714	2708		1714	3427	4903	1530
c, Capacity [veh/h]	483	483	764		137	2255	2688	839
d1, Uniform Delay [s]	31.17	31.17	30.54		45.18	7.01	16.74	13.99
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.72	5.72	2.87		9.64	0.06	0.36	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.61	0.55		0.79	0.25	0.71	0.49
d, Delay for Lane Group [s/veh]	36.89	36.89	33.41		54.82	7.06	17.09	14.44
Lane Group LOS	D	D	C		D	A	B	B
Critical Lane Group	Yes	No	No		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.88	6.88	4.57		2.98	2.27	10.18	5.58
50th-Percentile Queue Length [ft/ln]	172.02	172.02	114.16		74.57	56.72	254.59	139.62
95th-Percentile Queue Length [veh/ln]	11.18	11.18	8.07		5.37	4.08	15.42	9.46
95th-Percentile Queue Length [ft/ln]	279.57	279.57	201.77		134.22	102.10	385.43	236.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.89	36.89	33.41	0.00	0.00	0.00	54.82	7.06	0.00	0.00	17.09	14.44
Movement LOS	D	D	C				D	A			B	B
d_A, Approach Delay [s/veh]	35.44			0.00			14.70			16.62		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	21.06											
Intersection LOS	C											
Intersection V/C	0.626											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	3.044	2.998
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	0	1520	1240
d_b, Bicycle Delay [s]	33.62	50.00	2.88	7.22
l_b,int, Bicycle LOS Score for Intersection	3.234	4.132	2.116	2.839
Bicycle LOS	C	D	B	C

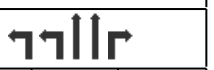
Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 37: Tippecanoe Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name				Tippecanoe Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Tippecanoe Avenue								
Base Volume Input [veh/h]	91	272	215	52	664	58	33	220	54	302	716	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	23	0	0	0	0	6	0	6	2	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	272	238	52	664	58	33	226	54	308	718	25
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	72	63	14	175	15	9	59	14	81	189	7
Total Analysis Volume [veh/h]	96	286	251	55	699	61	35	238	57	324	756	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	37	37	10	36	0	10	23	0	30	43	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	53	53	5	51	51	4	17	17	12	25	25
g / C, Green / Cycle	0.07	0.53	0.53	0.05	0.51	0.51	0.04	0.17	0.17	0.12	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.06	0.08	0.16	0.03	0.21	0.21	0.02	0.08	0.09	0.10	0.22	0.02
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1750	1714	1800	1683	3329	3427	1530
c, Capacity [veh/h]	120	1814	810	94	925	900	75	309	289	412	863	385
d1, Uniform Delay [s]	45.80	12.09	13.26	46.13	15.02	15.02	46.66	37.41	37.51	42.52	35.91	28.47
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.39	0.19	1.00	5.59	1.38	1.42	4.40	1.18	1.34	3.34	3.02	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.16	0.31	0.58	0.42	0.42	0.46	0.49	0.50	0.79	0.88	0.07
d, Delay for Lane Group [s/veh]	57.19	12.28	14.25	51.72	16.40	16.44	51.06	38.60	38.85	45.86	38.93	28.55
Lane Group LOS	E	B	B	D	B	B	D	D	D	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.71	1.63	3.28	1.47	5.55	5.41	0.94	3.40	3.29	4.04	9.04	0.48
50th-Percentile Queue Length [ft/ln]	67.85	40.87	82.01	36.86	138.75	135.25	23.45	85.02	82.27	101.11	226.12	12.03
95th-Percentile Queue Length [veh/ln]	4.89	2.94	5.90	2.65	9.41	9.22	1.69	6.12	5.92	7.28	13.98	0.87
95th-Percentile Queue Length [ft/ln]	122.13	73.57	147.61	66.35	235.34	230.62	42.22	153.03	148.08	182.00	349.43	21.66

Movement, Approach, & Intersection Results

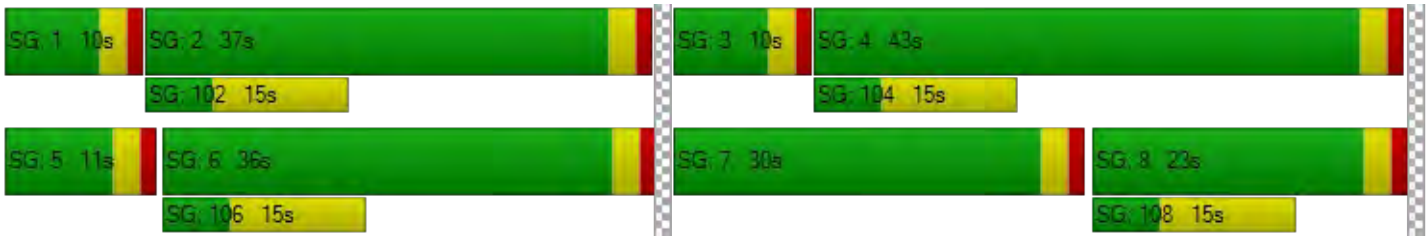
d_M, Delay for Movement [s/veh]	57.19	12.28	14.25	51.72	16.42	16.44	51.06	38.69	38.85	45.86	38.93	28.55
Movement LOS	E	B	B	D	B	B	D	D	D	D	D	C
d_A, Approach Delay [s/veh]	19.87			18.80			40.03			40.71		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.87											
Intersection LOS	C											
Intersection V/C	0.511											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.738	2.533	2.549	2.933
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	660	400	800
d_b, Bicycle Delay [s]	21.78	22.45	32.00	18.00
l_b,int, Bicycle LOS Score for Intersection	2.082	2.232	1.832	2.472
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Del Rosa Dr / 3rd St

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	89	318	26	228	86	73	351	34	716	1075	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	29	0	0	8	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	89	318	26	228	86	73	380	34	716	1083	13
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	23	84	7	60	23	19	100	9	188	285	3
Total Analysis Volume [veh/h]	14	94	335	27	240	91	77	400	36	754	1140	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	18	10	18	0	10	19	0	53	62	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	42	73	4	43	43	6	14	14	28	36	36
g / C, Green / Cycle	0.02	0.42	0.73	0.04	0.43	0.43	0.06	0.14	0.14	0.28	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.22	0.02	0.09	0.10	0.04	0.12	0.02	0.24	0.32	0.32
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1636	1714	3427	1530	3144	1800	1792
c, Capacity [veh/h]	40	1432	1117	64	778	707	106	489	218	887	653	650
d1, Uniform Delay [s]	48.09	17.42	4.67	47.07	17.82	17.89	46.07	41.61	37.64	33.90	29.88	29.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.13	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.17	0.09	0.69	4.32	0.65	0.75	9.04	3.44	0.35	2.40	4.95	5.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.07	0.30	0.42	0.22	0.23	0.73	0.82	0.16	0.85	0.88	0.89
d, Delay for Lane Group [s/veh]	53.26	17.51	5.36	51.39	18.46	18.63	55.11	45.05	37.99	36.31	34.83	35.11
Lane Group LOS	D	B	A	D	B	B	E	D	D	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.40	0.66	2.19	0.73	2.56	2.44	2.13	4.97	0.79	8.76	13.49	13.54
50th-Percentile Queue Length [ft/ln]	9.99	16.47	54.78	18.29	64.05	61.02	53.37	124.33	19.83	218.98	337.20	338.61
95th-Percentile Queue Length [veh/ln]	0.72	1.19	3.94	1.32	4.61	4.39	3.84	8.63	1.43	13.61	19.51	19.58
95th-Percentile Queue Length [ft/ln]	17.99	29.65	98.60	32.93	115.30	109.84	96.07	215.76	35.69	340.32	487.78	489.50

Movement, Approach, & Intersection Results

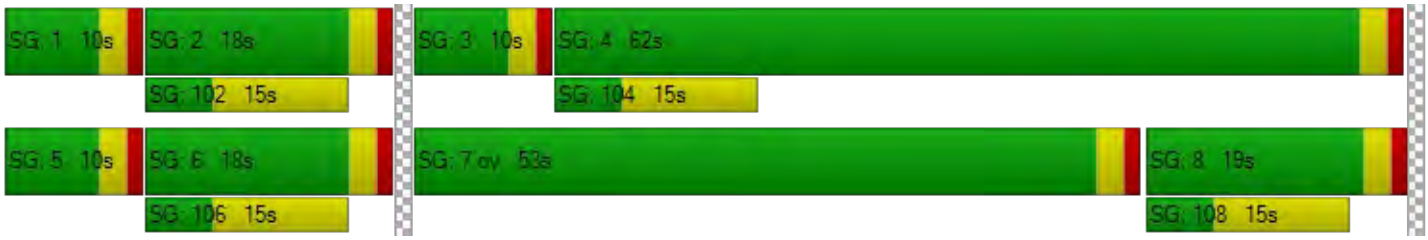
d_M, Delay for Movement [s/veh]	53.26	17.51	5.36	51.39	18.51	18.63	55.11	45.05	37.99	36.31	34.97	35.11
Movement LOS	D	B	A	D	B	B	E	D	D	D	C	D
d_A, Approach Delay [s/veh]	9.45			21.02			46.06			35.50		
Approach LOS	A			C			D			D		
d_I, Intersection Delay [s/veh]	31.99											
Intersection LOS	C											
Intersection V/C	0.535											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.699	2.412	2.745	2.972
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	320	1180
d_b, Bicycle Delay [s]	36.13	36.13	35.28	8.41
l_b,int, Bicycle LOS Score for Intersection	1.925	1.855	1.983	3.134
Bicycle LOS	A	A	A	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 39: Sterling Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	30.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.772

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	39	781	175	385	1190	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	25	0	0	29	8	5
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	781	175	414	1198	28
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	206	46	109	315	7
Total Analysis Volume [veh/h]	67	822	184	436	1261	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	14	51	37	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	34	34	13	60	45	45
g / C, Green / Cycle	0.34	0.34	0.13	0.60	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.04	0.30	0.11	0.13	0.36	0.36
s, saturation flow rate [veh/h]	1714	2708	1714	3427	1800	1786
c, Capacity [veh/h]	579	915	215	2064	804	798
d1, Uniform Delay [s]	22.82	31.48	42.84	9.07	23.85	23.96
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	3.50	9.36	0.23	8.30	8.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.90	0.86	0.21	0.80	0.81
d, Delay for Lane Group [s/veh]	22.90	34.97	52.20	9.30	32.16	32.62
Lane Group LOS	C	C	D	A	C	C
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.10	9.61	4.97	2.10	14.41	14.53
50th-Percentile Queue Length [ft/ln]	27.42	240.18	124.18	52.56	360.26	363.27
95th-Percentile Queue Length [veh/ln]	1.97	14.69	8.62	3.78	20.64	20.78
95th-Percentile Queue Length [ft/ln]	49.35	367.26	215.55	94.60	515.91	519.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.90	34.97	52.20	9.30	32.38	32.62
Movement LOS	C	C	D	A	C	C
d_A, Approach Delay [s/veh]	34.06		22.03		32.39	
Approach LOS	C		C		C	
d_I, Intersection Delay [s/veh]	30.63					
Intersection LOS	C					
Intersection V/C	0.772					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.521	2.834	2.575
Crosswalk LOS	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.644	5.197
Bicycle LOS	D	E	F

Sequence

Ring 1	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 40: Victoria Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	40.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	12	26	156	30	603	134	262	24	33	628	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	11	4	2	0	51	2	8	10	0	22	27	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	16	28	156	81	605	142	272	24	55	655	52
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	4	7	41	21	159	37	72	6	14	172	14
Total Analysis Volume [veh/h]	24	17	29	164	85	637	149	286	25	58	689	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	32	0	25	47	0	10	32	0	11	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	24	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	35	35	12	44	44	10	35	35	6	31	31
g / C, Green / Cycle	0.03	0.35	0.35	0.12	0.44	0.44	0.10	0.35	0.35	0.06	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.02	0.10	0.05	0.42	0.09	0.09	0.09	0.03	0.21	0.21
s, saturation flow rate [veh/h]	1714	1800	1530	1714	1800	1530	1714	1800	1750	1714	1800	1754
c, Capacity [veh/h]	59	637	542	198	783	666	175	637	619	97	554	540
d1, Uniform Delay [s]	47.26	21.06	21.26	43.24	16.74	27.33	44.13	22.87	22.89	46.08	30.29	30.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.39	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.38	0.02	0.04	8.45	0.06	21.91	10.78	0.92	0.96	5.84	6.59	6.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.03	0.05	0.83	0.11	0.96	0.85	0.25	0.25	0.60	0.68	0.68
d, Delay for Lane Group [s/veh]	51.64	21.08	21.30	51.69	16.80	49.24	54.91	23.80	23.85	51.92	36.88	37.07
Lane Group LOS	D	C	C	D	B	D	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.65	0.26	0.45	4.40	1.16	18.03	4.12	2.75	2.71	1.56	8.81	8.62
50th-Percentile Queue Length [ft/ln]	16.37	6.53	11.28	109.99	28.89	450.66	103.01	68.86	67.63	38.94	220.18	215.39
95th-Percentile Queue Length [veh/ln]	1.18	0.47	0.81	7.84	2.08	24.99	7.42	4.96	4.87	2.80	13.67	13.43
95th-Percentile Queue Length [ft/ln]	29.47	11.76	20.30	195.99	51.99	624.73	185.41	123.94	121.74	70.09	341.86	335.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.64	21.08	21.30	51.69	16.80	49.24	54.91	23.82	23.85	51.92	36.97	37.07
Movement LOS	D	C	C	D	B	D	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	31.65			46.58			33.89			38.05		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	40.40											
Intersection LOS	D											
Intersection V/C	0.727											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.353	2.522	2.659	2.556
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	880	580	600
d_b, Bicycle Delay [s]	25.21	15.68	25.21	24.50
l_b,int, Bicycle LOS Score for Intersection	1.617	2.291	1.939	2.221
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 41: Central Ave / 3rd St

Control Type:	Two-way stop	Delay (sec / veh):	25.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.123

Intersection Setup

Name				Central Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Central Avenue								
Base Volume Input [veh/h]	0	0	0	24	0	80	23	411	0	0	623	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	3	1	11	0	0	46	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	24	0	83	24	422	0	0	669	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	6	0	22	6	111	0	0	176	1
Total Analysis Volume [veh/h]	0	0	0	25	0	87	25	444	0	0	704	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.12	0.00	0.13	0.03	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	21.41	24.89	9.57	25.54	0.00	13.39	9.11	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	C	A	D		B	A	A			A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	1.01	0.00	1.01	0.09	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	25.33	0.00	25.33	2.14	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.62			16.10			0.49			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	1.58											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 42: Palm Ave_Alabama St / 3rd St

Control Type:	Signalized	Delay (sec / veh):	44.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.772

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	385	364	33	78	831	159	106	18	0	122	104	235
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	16	8	0	0	27	30	8	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	401	372	33	78	858	189	114	18	0	122	104	235
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	98	9	21	226	50	30	5	0	32	27	62
Total Analysis Volume [veh/h]	422	392	35	82	903	199	120	19	0	128	109	247
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	28	0	30	31	0	10	31	0	11	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	24	51	51	6	33	33	7	23	8	24
g / C, Green / Cycle	0.24	0.51	0.51	0.06	0.33	0.33	0.07	0.23	0.08	0.24
(v / s)_i Volume / Saturation Flow Rate	0.25	0.12	0.12	0.05	0.26	0.13	0.04	0.01	0.07	0.22
s, saturation flow rate [veh/h]	1714	1800	1749	1619	3427	1530	2959	1800	1714	1604
c, Capacity [veh/h]	411	910	884	106	1134	506	200	412	137	387
d1, Uniform Delay [s]	38.00	13.89	13.89	46.02	30.39	25.73	45.31	30.04	45.73	36.97
k, delay calibration	0.34	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.28
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	43.21	0.62	0.63	11.47	5.83	2.28	2.88	0.05	22.63	19.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.03	0.24	0.24	0.78	0.80	0.39	0.60	0.05	0.93	0.92
d, Delay for Lane Group [s/veh]	81.21	14.50	14.52	57.49	36.22	28.01	48.19	30.08	68.37	56.16
Lane Group LOS	F	B	B	E	D	C	D	C	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	14.81	2.82	2.75	2.33	10.54	3.91	1.52	0.36	4.00	10.39
50th-Percentile Queue Length [ft/ln]	370.13	70.52	68.65	58.30	263.55	97.81	37.98	9.03	99.95	259.64
95th-Percentile Queue Length [veh/ln]	21.43	5.08	4.94	4.20	15.87	7.04	2.73	0.65	7.20	15.67
95th-Percentile Queue Length [ft/ln]	535.71	126.93	123.58	104.93	396.67	176.06	68.37	16.25	179.92	391.77

Movement, Approach, & Intersection Results

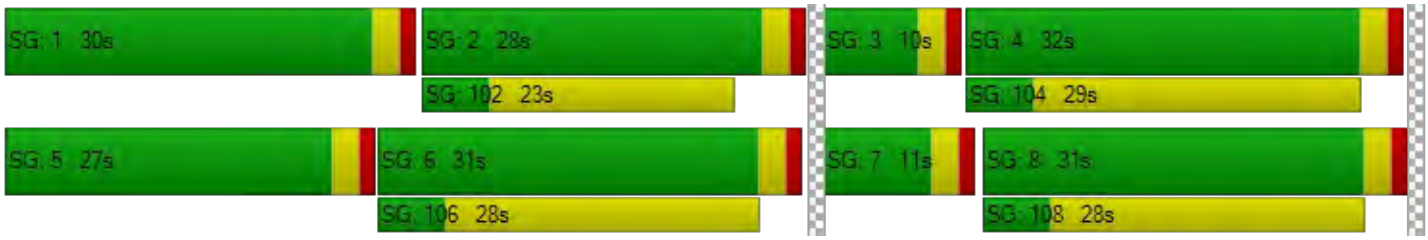
d_M, Delay for Movement [s/veh]	81.21	14.51	14.52	57.49	36.22	28.01	48.19	30.08	0.00	68.37	56.16	56.16
Movement LOS	F	B	B	E	D	C	D	C		E	E	E
d_A, Approach Delay [s/veh]	47.66			36.31			45.72			59.39		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	44.64											
Intersection LOS	D											
Intersection V/C	0.772											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.673	2.871	2.476	2.148
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	560	560	580
d_b, Bicycle Delay [s]	28.13	25.92	25.92	25.21
l_b,int, Bicycle LOS Score for Intersection	2.260	2.536	1.789	2.358
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 43: Tippecanoe Ave / Rialto Ave

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.414

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	90	528	0	0	841	101	87	0	110	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	23	0	0	6	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	551	0	0	847	101	87	0	110	0	0	0
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	145	0	0	223	27	23	0	29	0	0	0
Total Analysis Volume [veh/h]	95	580	0	0	892	106	92	0	116	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	0	8	0	0	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	0	7	0	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	30	0	0	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Split [s]	11	19	0	10	18	0	71	0	71	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No		No		No			
Maximum Recall	No	No		No	No		No		No			
Pedestrian Recall	No	No		No	No		No		No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	7	82	0	75	75	9	9	
g / C, Green / Cycle	0.07	0.82	0.00	0.75	0.75	0.09	0.09	
(v / s)_i Volume / Saturation Flow Rate	0.06	0.17	0.00	0.28	0.28	0.05	0.08	
s, saturation flow rate [veh/h]	1714	3427	1714	1800	1734	1714	1530	
c, Capacity [veh/h]	119	2793	0	1342	1293	163	145	
d1, Uniform Delay [s]	45.84	2.06	0.00	4.50	4.50	43.29	44.33	
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	11.52	0.17	0.00	0.81	0.85	3.07	9.66	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.80	0.21	0.00	0.38	0.38	0.57	0.80	
d, Delay for Lane Group [s/veh]	57.37	2.23	0.00	5.32	5.35	46.36	53.99	
Lane Group LOS	E	A	A	A	A	D	D	
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	
50th-Percentile Queue Length [veh/ln]	2.69	0.85	0.00	3.25	3.14	2.30	3.19	
50th-Percentile Queue Length [ft/ln]	67.26	21.14	0.00	81.23	78.53	57.61	79.64	
95th-Percentile Queue Length [veh/ln]	4.84	1.52	0.00	5.85	5.65	4.15	5.73	
95th-Percentile Queue Length [ft/ln]	121.07	38.06	0.00	146.22	141.35	103.70	143.35	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.37	2.23	0.00	0.00	5.33	5.35	46.36	0.00	53.99	0.00	0.00	0.00
Movement LOS	E	A		A	A	A	D		D			
d_A, Approach Delay [s/veh]	9.99			5.33			50.61			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	12.01											
Intersection LOS	B											
Intersection V/C	0.414											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.733	0.000	2.080	1.430
Crosswalk LOS	B	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	320	300	0	0
d_b, Bicycle Delay [s]	35.28	36.13	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	2.116	2.383	4.132	4.132
Bicycle LOS	B	B	D	D

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 44: Tippecanoe Ave / Mill St

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.728

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	143	1077	142	167	1162	95	244	64	53	120	211	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	11	0	2	2	12	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	1088	142	169	1164	107	244	64	53	120	211	165
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	286	37	44	306	28	64	17	14	32	56	43
Total Analysis Volume [veh/h]	151	1145	149	178	1225	113	257	67	56	126	222	174
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	7	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	34	28	0	38	32	32	15	18	0	16	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	Yes	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	11	47	47	13	49	49	31	31	15	31	16	16
g / C, Green / Cycle	0.11	0.47	0.47	0.13	0.49	0.49	0.31	0.31	0.15	0.31	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.09	0.25	0.25	0.10	0.36	0.07	0.07	0.30	0.04	0.10	0.06	0.11
s, saturation flow rate [veh/h]	1714	3427	1696	1714	3427	1530	1402	771	1530	1288	3427	1530
c, Capacity [veh/h]	187	1625	804	216	1682	751	473	317	230	144	548	245
d1, Uniform Delay [s]	43.50	18.51	18.51	42.62	20.18	14.00	25.40	34.91	37.50	39.71	37.72	39.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.13	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.93	1.26	2.52	7.69	2.80	0.42	0.25	13.25	0.55	14.94	0.48	3.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.53	0.53	0.82	0.73	0.15	0.20	0.72	0.24	0.88	0.40	0.71
d, Delay for Lane Group [s/veh]	51.43	19.76	21.03	50.32	22.98	14.42	25.65	48.16	38.04	54.65	38.21	43.60
Lane Group LOS	D	B	C	D	C	B	C	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.04	7.06	7.27	4.72	11.36	1.46	1.69	4.58	1.24	1.73	2.46	4.27
50th-Percentile Queue Length [ft/ln]	100.91	176.47	181.72	117.91	284.11	36.48	42.16	114.41	30.99	43.35	61.59	106.82
95th-Percentile Queue Length [veh/ln]	7.27	11.42	11.69	8.28	16.89	2.63	3.04	8.08	2.23	3.12	4.43	7.66
95th-Percentile Queue Length [ft/ln]	181.63	285.40	292.26	206.95	422.32	65.67	75.90	202.12	55.78	78.04	110.87	191.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.43	20.07	21.03	50.32	22.98	14.42	38.76	48.16	38.04	54.65	38.21	43.60
Movement LOS	D	C	C	D	C	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	23.45			25.55			40.99			43.97		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	28.77											
Intersection LOS	C											
Intersection V/C	0.728											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.177	3.380	2.475	2.485
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	580	620	320
d_b, Bicycle Delay [s]	28.13	25.21	23.81	35.28
l_b,int, Bicycle LOS Score for Intersection	2.354	2.810	2.187	1.990
Bicycle LOS	B	C	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 45: Tippecanoe Ave / Central Ave

Control Type:	Signalized	Delay (sec / veh):	22.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	1	2	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	87	1029	170	238	1169	131	101	204	86	37	95	195
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	1029	170	238	1171	131	101	204	86	37	95	195
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	271	45	63	308	34	27	54	23	10	25	51
Total Analysis Volume [veh/h]	92	1083	179	251	1233	138	106	215	91	39	100	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	5	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2			6			8			4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	10	18	18	13	21	21	10	59	59	10	59	59
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	10	10	0	10	10	0	10	10	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	55	55	10	59	59	7	18	18	5	16	16
g / C, Green / Cycle	0.06	0.55	0.55	0.10	0.59	0.59	0.07	0.18	0.18	0.05	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.12	0.08	0.25	0.09	0.06	0.06	0.06	0.02	0.03	0.13
s, saturation flow rate [veh/h]	3144	4903	1530	3144	4903	1530	1714	3427	1530	1714	3427	1530
c, Capacity [veh/h]	203	2711	846	309	2876	898	120	625	279	80	544	243
d1, Uniform Delay [s]	45.07	12.83	11.32	44.18	11.42	9.39	46.10	35.67	35.55	46.52	36.45	40.86
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.57	0.44	0.57	5.13	0.47	0.36	18.22	0.33	0.67	4.58	0.16	7.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.40	0.21	0.81	0.43	0.15	0.88	0.34	0.33	0.49	0.18	0.84
d, Delay for Lane Group [s/veh]	46.64	13.27	11.89	49.31	11.88	9.76	64.31	36.00	36.22	51.10	36.61	48.64
Lane Group LOS	D	B	B	D	B	A	E	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.14	4.52	2.06	3.24	4.84	1.39	3.20	2.30	1.97	1.04	1.07	5.38
50th-Percentile Queue Length [ft/ln]	28.48	113.03	51.59	81.08	120.94	34.82	80.00	57.60	49.30	26.09	26.70	134.44
95th-Percentile Queue Length [veh/ln]	2.05	8.01	3.71	5.84	8.44	2.51	5.76	4.15	3.55	1.88	1.92	9.18
95th-Percentile Queue Length [ft/ln]	51.26	200.21	92.86	145.94	211.11	62.67	144.01	103.69	88.74	46.96	48.05	229.52

Movement, Approach, & Intersection Results

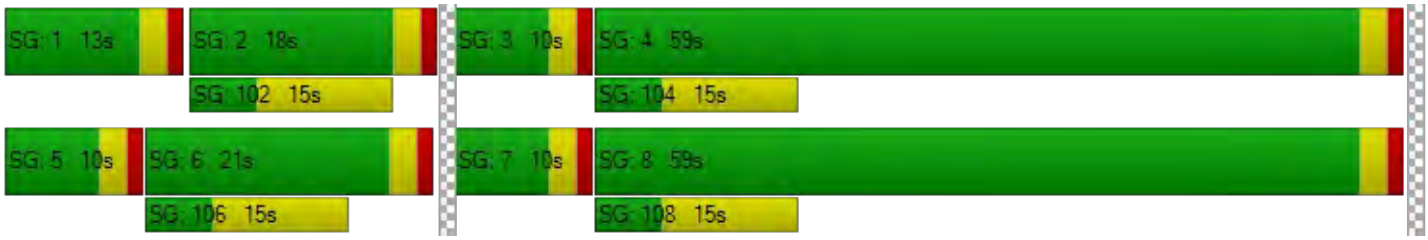
d_M, Delay for Movement [s/veh]	46.64	13.27	11.89	49.31	11.88	9.76	64.31	36.00	36.22	51.10	36.61	48.64
Movement LOS	D	B	B	D	B	A	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.35			17.50			43.33			45.42		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.14											
Intersection LOS	C											
Intersection V/C	0.497											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.150	3.183	2.580	2.620
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	360	1120	1120
d_b, Bicycle Delay [s]	36.13	33.62	9.68	9.68
l_b,int, Bicycle LOS Score for Intersection	2.304	2.452	1.900	1.843
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 46: Tippecanoe Ave / Orange Show Rd_San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	29.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	75	918	94	330	945	76	122	161	128	121	263	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	918	94	330	947	76	122	161	128	121	263	276
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	242	25	87	249	20	32	42	34	32	69	73
Total Analysis Volume [veh/h]	79	966	99	347	997	80	128	169	135	127	277	291
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	22	0	17	29	0	11	51	0	10	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	6	46	46	13	52	52	32	22	22	32	22	22
g / C, Green / Cycle	0.06	0.46	0.46	0.13	0.52	0.52	0.32	0.22	0.22	0.32	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.05	0.30	0.30	0.11	0.30	0.30	0.12	0.09	0.09	0.10	0.15	0.19
s, saturation flow rate [veh/h]	1714	1800	1742	3144	1800	1754	1074	1800	1544	1246	1800	1530
c, Capacity [veh/h]	107	823	796	407	944	919	308	403	345	432	399	339
d1, Uniform Delay [s]	46.09	21.08	21.09	42.59	16.22	16.26	26.44	33.08	33.23	25.00	35.82	37.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.55	4.10	4.24	5.11	2.56	2.66	0.90	0.64	0.80	0.37	2.19	6.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.66	0.66	0.85	0.58	0.58	0.42	0.40	0.42	0.29	0.70	0.86
d, Delay for Lane Group [s/veh]	55.64	25.17	25.33	47.70	18.79	18.93	27.34	33.72	34.03	25.37	38.01	43.79
Lane Group LOS	E	C	C	D	B	B	C	C	C	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.20	10.36	10.08	4.44	8.72	8.59	2.28	3.36	3.04	2.23	6.38	7.34
50th-Percentile Queue Length [ft/ln]	55.05	259.12	251.89	111.06	218.05	214.64	56.95	83.96	75.99	55.69	159.58	183.47
95th-Percentile Queue Length [veh/ln]	3.96	15.64	15.28	7.90	13.57	13.39	4.10	6.05	5.47	4.01	10.53	11.78
95th-Percentile Queue Length [ft/ln]	99.08	391.12	382.03	197.48	339.14	334.78	102.51	151.13	136.79	100.25	263.16	294.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.64	25.24	25.33	47.70	18.85	18.93	27.34	33.73	34.03	25.37	38.01	43.79
Movement LOS	E	C	C	D	B	B	C	C	C	C	D	D
d_A, Approach Delay [s/veh]	27.35			25.89			31.93			38.12		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	29.35											
Intersection LOS	C											
Intersection V/C	0.658											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.894	3.036	2.476	2.562
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	520	960	940
d_b, Bicycle Delay [s]	32.81	27.38	13.52	14.05
l_b,int, Bicycle LOS Score for Intersection	2.503	2.734	1.916	2.133
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 47: Tippecanoe Ave / Hospitality Ln_Coulston St

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	458	1008	104	101	587	43	64	46	77	180	107	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	458	1008	104	101	589	43	64	46	77	180	107	82
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	262	27	26	153	11	17	12	20	47	28	21
Total Analysis Volume [veh/h]	476	1047	108	105	612	45	66	48	80	187	111	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	8	7	4	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	30	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	54	62	0	10	18	0	0	18	18	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No			No	No	No	No	
Maximum Recall	No	No		No	No			No	No	No	No	
Pedestrian Recall	No	No		No	No			No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
g_i, Effective Green Time [s]	18	59	59	7	48	48	15	15	15	25	25
g / C, Green / Cycle	0.18	0.59	0.59	0.07	0.48	0.48	0.15	0.15	0.15	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.15	0.22	0.22	0.06	0.13	0.13	0.03	0.12	0.05	0.13	0.12
s, saturation flow rate [veh/h]	3144	3427	1715	1714	3427	1738	1206	650	1530	1486	1672
c, Capacity [veh/h]	573	2022	1012	120	1638	830	109	148	230	294	418
d1, Uniform Delay [s]	39.41	10.84	10.84	46.07	15.61	15.63	48.29	40.66	38.12	34.11	31.86
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.21	0.55	1.09	17.34	0.40	0.79	1.53	3.13	0.90	2.28	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.38	0.38	0.88	0.27	0.27	0.30	0.55	0.35	0.64	0.47
d, Delay for Lane Group [s/veh]	42.62	11.38	11.93	63.41	16.01	16.42	49.82	43.78	39.02	36.39	32.68
Lane Group LOS	D	B	B	E	B	B	D	D	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.83	4.37	4.53	3.14	2.98	3.14	0.86	2.11	1.81	3.95	4.08
50th-Percentile Queue Length [ft/ln]	145.63	109.34	113.35	78.62	74.42	78.41	21.49	52.71	45.18	98.85	102.01
95th-Percentile Queue Length [veh/ln]	9.78	7.80	8.03	5.66	5.36	5.65	1.55	3.79	3.25	7.12	7.34
95th-Percentile Queue Length [ft/ln]	244.58	195.08	200.65	141.52	133.96	141.14	38.68	94.87	81.33	177.93	183.61

Movement, Approach, & Intersection Results

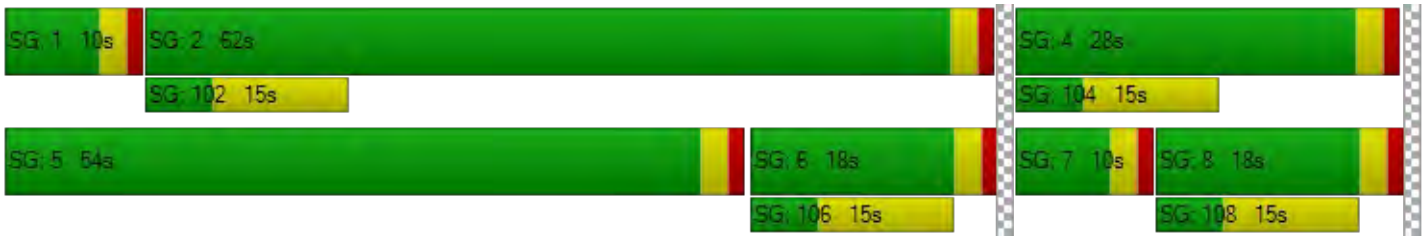
d_M, Delay for Movement [s/veh]	42.62	11.53	11.93	63.41	16.13	16.42	48.13	43.78	39.02	36.39	32.68	32.68
Movement LOS	D	B	B	E	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	20.63			22.66			42.84			34.49		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	24.39											
Intersection LOS	C											
Intersection V/C	0.501											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.173	3.002	2.468	2.156
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1180	300	300	500
d_b, Bicycle Delay [s]	8.41	36.13	36.13	28.13
l_b,int, Bicycle LOS Score for Intersection	2.457	1.979	1.880	2.192
Bicycle LOS	B	A	A	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 48: Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	0	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	125	817	770	0	742	92	77	0	231	528	177	512
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	817	770	0	744	92	77	0	231	528	177	512
Peak Hour Factor	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	215	203	0	196	24	20	0	61	139	47	135
Total Analysis Volume [veh/h]	132	860	811	0	783	97	81	0	243	556	186	539
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	5	2	0	0	6	0	3	0	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	0	7	7	7	0
Maximum Green [s]	30	30	0	0	30	0	30	0	30	30	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	10	59	0	0	49	0	18	0	14	27	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No			No		No		No	No	No	
Maximum Recall	No	No			No		No		No	No	No	
Pedestrian Recall	No	No			No		No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	59	49	49	6	22	20	26	26
g / C, Green / Cycle	0.07	0.59	0.49	0.49	0.06	0.22	0.20	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.04	0.20	0.13	0.13	0.05	0.09	0.18	0.22	0.24
s, saturation flow rate [veh/h]	3144	4358	4903	1670	1714	2708	3144	1658	1530
c, Capacity [veh/h]	220	2567	2397	817	109	598	630	427	394
d1, Uniform Delay [s]	45.14	10.53	15.09	15.04	46.05	33.36	38.84	35.25	36.10
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.27	0.32
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.61	0.35	0.29	0.81	9.72	0.45	4.29	10.93	20.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.34	0.28	0.27	0.75	0.41	0.88	0.85	0.92
d, Delay for Lane Group [s/veh]	47.75	10.88	15.38	15.85	55.76	33.80	43.12	46.19	56.90
Lane Group LOS	D	B	B	B	E	C	D	D	E
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.66	3.14	2.94	3.05	2.26	2.54	6.90	9.52	10.69
50th-Percentile Queue Length [ft/ln]	41.52	78.39	73.54	76.32	56.52	63.50	172.57	237.90	267.34
95th-Percentile Queue Length [veh/ln]	2.99	5.64	5.30	5.50	4.07	4.57	11.21	14.58	16.06
95th-Percentile Queue Length [ft/ln]	74.74	141.11	132.38	137.38	101.73	114.29	280.29	364.38	401.42

Movement, Approach, & Intersection Results

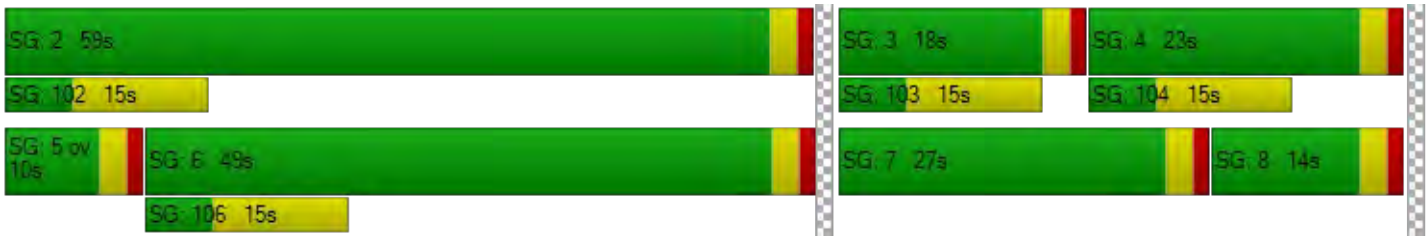
d_M, Delay for Movement [s/veh]	47.75	10.88	0.00	0.00	15.45	15.85	55.76	0.00	33.80	43.12	46.19	53.39
Movement LOS	D	B			B	B	E		C	D	D	D
d_A, Approach Delay [s/veh]	15.79			15.50			39.29			47.89		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.73											
Intersection LOS	C											
Intersection V/C	0.481											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.135	2.929	2.451	2.556
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1120	920	0	400
d_b, Bicycle Delay [s]	9.68	14.58	50.00	32.00
l_b,int, Bicycle LOS Score for Intersection	2.105	1.923	4.132	3.673
Bicycle LOS	B	A	D	D

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 49: Anderson St / SR-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No			No				
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	641	308	161	850	0	989	6	976	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	641	308	161	852	0	989	6	976	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	169	81	42	224	0	260	2	257	0	0	0
Total Analysis Volume [veh/h]	0	675	324	169	897	0	1041	6	1027	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	30	0	10	40	0	0	50	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	41	41	7	51	42	42	42	
g / C, Green / Cycle	0.41	0.41	0.07	0.51	0.42	0.42	0.42	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.21	0.05	0.26	0.31	0.31	0.38	
s, saturation flow rate [veh/h]	3427	1530	3144	3427	1714	1715	2708	
c, Capacity [veh/h]	1418	633	220	1760	728	729	1150	
d1, Uniform Delay [s]	21.41	21.81	45.70	16.02	23.82	23.81	26.65	
k, delay calibration	0.50	0.50	0.11	0.50	0.21	0.21	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.15	2.94	5.55	1.06	2.66	2.65	2.67	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.48	0.51	0.77	0.51	0.72	0.72	0.89	
d, Delay for Lane Group [s/veh]	22.55	24.75	51.25	17.08	26.48	26.46	29.32	
Lane Group LOS	C	C	D	B	C	C	C	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.85	6.02	2.22	6.70	10.41	10.40	11.26	
50th-Percentile Queue Length [ft/ln]	146.24	150.44	55.48	167.49	260.17	260.07	281.46	
95th-Percentile Queue Length [veh/ln]	9.82	10.04	3.99	10.94	15.70	15.69	16.76	
95th-Percentile Queue Length [ft/ln]	245.40	251.01	99.86	273.62	392.44	392.31	419.03	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	22.55	24.75	51.25	17.08	0.00	26.47	26.46	29.32	0.00	0.00	0.00
Movement LOS		C	C	D	B		C	C	C			
d_A, Approach Delay [s/veh]	23.27			22.49			27.88			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	25.38											
Intersection LOS	C											
Intersection V/C	0.645											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.876	2.912	2.643	1.965
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	540	740	940	0
d_b, Bicycle Delay [s]	26.65	19.85	14.05	50.00
l_b,int, Bicycle LOS Score for Intersection	2.384	2.439	4.982	4.132
Bicycle LOS	B	B	E	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 308: Arden Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.460

Intersection Setup

Name	Arden Ave			Arden Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Arden Ave			Arden Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	230	1	144	1	0	6	2	917	0	0	933	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1	144	1	0	6	2	917	0	0	933	6
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	0	40	0	0	2	1	255	0	0	259	2
Total Analysis Volume [veh/h]	256	1	160	1	0	7	2	1019	0	0	1037	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	28	0	11	18	0	10	51	0	10	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	18	54	54	0	37	37	0	33	33	0	33	33
g / C, Green / Cycle	0.18	0.54	0.54	0.00	0.37	0.37	0.00	0.33	0.33	0.00	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.16	0.00	0.10	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.20	0.20
s, saturation flow rate [veh/h]	1619	1800	1530	1619	1800	1530	2959	3427	1530	1619	3427	1794
c, Capacity [veh/h]	284	977	830	4	666	566	13	1145	511	1	1132	593
d1, Uniform Delay [s]	40.41	10.46	11.67	49.78	19.84	19.93	49.60	31.55	0.00	0.00	28.02	28.02
k, delay calibration	0.12	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.93	0.00	0.52	28.36	0.00	0.04	5.62	2.61	0.00	0.00	0.52	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.00	0.19	0.24	0.00	0.01	0.16	0.89	0.00	0.00	0.61	0.61
d, Delay for Lane Group [s/veh]	51.34	10.46	12.19	78.14	19.84	19.97	55.22	34.15	0.00	0.00	28.55	29.02
Lane Group LOS	D	B	B	E	B	B	E	C	A	A	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	6.95	0.01	1.87	0.06	0.00	0.11	0.03	11.73	0.00	0.00	6.81	7.21
50th-Percentile Queue Length [ft/ln]	173.79	0.26	46.76	1.43	0.00	2.72	0.87	293.36	0.00	0.00	170.33	180.32
95th-Percentile Queue Length [veh/ln]	11.28	0.02	3.37	0.10	0.00	0.20	0.06	17.35	0.00	0.00	11.09	11.62
95th-Percentile Queue Length [ft/ln]	281.88	0.46	84.16	2.57	0.00	4.90	1.56	433.81	0.00	0.00	277.34	290.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.34	10.46	12.19	78.14	19.84	19.97	55.22	34.15	0.00	0.00	28.71	29.02
Movement LOS	D	B	B	E	B	B	E	C	A	A	C	C
d_A, Approach Delay [s/veh]	36.22			27.24			34.19			28.71		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	32.21											
Intersection LOS	C											
Intersection V/C	0.460											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.527	2.310	3.015	2.910
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	300	960	960
d_b, Bicycle Delay [s]	28.13	36.13	13.52	13.52
l_b,int, Bicycle LOS Score for Intersection	1.904	1.566	2.402	2.134
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Del Rosa Ave / SR-210 WB Ramps	Signalized	HCM 6th Edition	WB Right	0.836	35.9	D
2	Del Rosa Ave / SR-210 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.807	34.7	C
3	Del Rosa Ave / Date St_Date Pl	Signalized	HCM 6th Edition	EB Left	0.487	20.1	C
4	Del Rosa Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.541	36.8	D
5	Highland Ave / SR-210 EB Off Ramp	Signalized	HCM 6th Edition	SB Left	0.524	20.2	C
6	Highland Ave / SR-210 WB Off Ramp	Signalized	HCM 6th Edition	EB Left	0.575	13.7	B
7	Victoria Ave / Highland Ave	Signalized	HCM 6th Edition	SB Left	0.945	51.9	D
8	Del Rosa Dr / Pacific St	Signalized	HCM 6th Edition	SB Left	0.494	27.1	C
9	Victoria Ave / Pacific St	Signalized	HCM 6th Edition	NB Left	0.514	32.7	C
10	Victoria Ave / 14th St	Signalized	HCM 6th Edition	NB Left	0.253	11.5	B
11	Tippecanoe Ave / Baseline St	Signalized	HCM 6th Edition	WB Left	0.492	23.6	C
12	Del Rosa Dr / Baseline St	Signalized	HCM 6th Edition	SB Left	0.461	32.6	C
13	Sterling Ave / Base Line	Signalized	HCM 6th Edition	EB Left	0.556	32.6	C
14	Victoria Ave / Base Line	Signalized	HCM 6th Edition	EB Left	0.448	32.0	C
15	Tippecanoe Ave / 9th St	Signalized	HCM 6th Edition	EB Left	0.381	30.4	C
16	Del Rosa Dr / 9th St	Signalized	HCM 6th Edition	NB Left	0.436	31.7	C
17	Sterling Ave / 9th St	Signalized	HCM 6th Edition	WB Left	0.461	29.5	C

18	Victoria Ave / 9th St	Signalized	HCM 6th Edition	NB Left	0.316	29.0	C
19	Del Rosa Dr / 6th St	Signalized	HCM 6th Edition	NB Left	0.305	19.0	B
20	Sterling Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.462	195.9	F
21	Victoria Ave / 6th St	Two-way stop	HCM 6th Edition	WB Left	0.215	45.5	E
22	Central Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.091	11.1	B
23	I-215 SB Ramps / 5th St	Signalized	HCM 6th Edition	SB Right	0.514	20.1	C
24	I-215 NB Ramps / 5th St	Signalized	HCM 6th Edition	EB Left	0.648	22.9	C
25	E St / 5th St	Signalized	HCM 6th Edition	NB Left	0.475	18.2	B
26	Arrowhead Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.358	16.3	B
27	Waterman Ave / 5th St	Signalized	HCM 6th Edition	NB Left	0.526	30.0	C
28	Tippecanoe Ave / 5th St	Signalized	HCM 6th Edition	NB Left	0.696	33.2	C
29	Del Rosa Dr / 5th St	Signalized	HCM 6th Edition	EB Left	0.686	22.4	C
30	Sterling Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.477	20.4	C
31	Victoria Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.622	17.7	B
32	Central Avenue / 5th Street	Signalized	HCM 6th Edition	NB Left	0.421	16.3	B
33	Palm Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.848	42.1	D
34	Church Ave / 5th St	Signalized	HCM 6th Edition	EB Left	0.689	13.5	B
35	SR-210 EB Ramps / 5th Street	Signalized	HCM 6th Edition	SB Left	0.899	39.0	D
36	SR-210 WB Ramps / 5th Street	Signalized	HCM 6th Edition	EB Left	0.698	28.1	C
37	Tippecanoe Ave / 3rd St	Signalized	HCM 6th Edition	NB Left	0.727	36.3	D
38	Del Rosa Dr / 3rd St	Signalized	HCM 6th Edition	NB Right	0.742	57.6	E
			HCM 6th				

39	Sterling Ave / 3rd St	Signalized	HCM 6th Edition	SB Right	0.713	21.8	C
40	Victoria Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.618	30.5	C
41	Central Ave / 3rd St	Two-way stop	HCM 6th Edition	NB Left	0.028	115.4	F
42	Palm Ave_Alabama St / 3rd St	Signalized	HCM 6th Edition	NB Left	0.635	71.5	E
43	Tippecanoe Ave / Rialto Ave	Signalized	HCM 6th Edition	NB Left	0.428	11.1	B
44	Tippecanoe Ave / Mill St	Signalized	HCM 6th Edition	SB Left	0.751	28.9	C
45	Tippecanoe Ave / Central Ave	Signalized	HCM 6th Edition	EB Left	0.639	25.7	C
46	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave	Signalized	HCM 6th Edition	NB Right	0.917	65.6	E
47	Tippecanoe Ave / Hospitality Ln_Coulston St	Signalized	HCM 6th Edition	SB Left	0.652	31.5	C
48	Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps	Signalized	HCM 6th Edition	EB Left	0.741	35.5	D
49	Anderson St / SR-10 EB Ramps	Signalized	HCM 6th Edition	EB Left	0.745	31.9	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Del Rosa Ave / SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.836

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No						No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Base Volume Input [veh/h]	640	802	0	0	399	373	0	0	0	186	0	305
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	640	802	0	0	399	373	0	0	0	186	0	305
Peak Hour Factor	0.9560	0.9560	1.0000	1.0000	0.9560	0.9560	1.0000	1.0000	1.0000	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	167	210	0	0	104	98	0	0	0	49	0	80
Total Analysis Volume [veh/h]	669	839	0	0	417	390	0	0	0	195	0	319
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	45	75	0	0	30	0	0	0	0	0	25	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Cycle Length [s]	100	100	100	100		100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	41	73	29	29		21	21
g / C, Green / Cycle	0.41	0.73	0.29	0.29		0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.39	0.23	0.21	0.25		0.11	0.20
s, saturation flow rate [veh/h]	1714	3618	1900	1623		1810	1615
c, Capacity [veh/h]	695	2623	550	470		389	347
d1, Uniform Delay [s]	28.97	4.92	32.05	33.60		34.54	38.40
k, delay calibration	0.43	0.50	0.50	0.50		0.11	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	23.58	0.32	8.43	18.14		1.00	17.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.96	0.32	0.73	0.86		0.50	0.92
d, Delay for Lane Group [s/veh]	52.55	5.24	40.48	51.74		35.54	55.61
Lane Group LOS	D	A	D	D		D	E
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	19.51	2.71	9.92	11.41		4.24	9.18
50th-Percentile Queue Length [ft/ln]	487.77	67.76	247.91	285.31		106.12	229.60
95th-Percentile Queue Length [veh/ln]	26.75	4.88	15.08	16.95		7.62	14.15
95th-Percentile Queue Length [ft/ln]	668.87	121.97	377.02	423.82		190.60	353.85

Movement, Approach, & Intersection Results

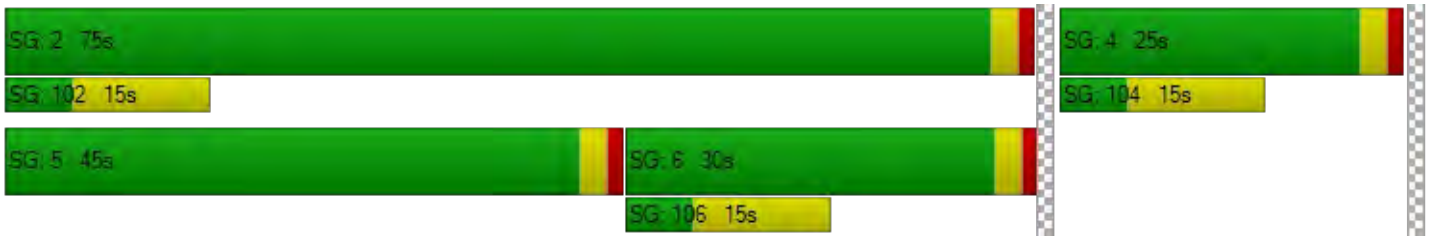
d_M, Delay for Movement [s/veh]	52.55	5.24	0.00	0.00	40.85	51.74	0.00	0.00	0.00	35.54	35.54	55.61
Movement LOS	D	A			D	D				D	D	E
d_A, Approach Delay [s/veh]	26.23			46.11			0.00			48.00		
Approach LOS	C			D			A			D		
d_I, Intersection Delay [s/veh]	35.86											
Intersection LOS	D											
Intersection V/C	0.836											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.804	2.617	2.463	1.972
Crosswalk LOS	C	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1440	540	0	440
d_b, Bicycle Delay [s]	3.92	26.65	50.00	30.42
l_b,int, Bicycle LOS Score for Intersection	2.804	2.225	4.132	2.408
Bicycle LOS	C	B	D	B

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Del Rosa Ave / SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	34.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.807

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Base Volume Input [veh/h]	0	1032	148	161	425	0	406	1	751	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1032	148	161	425	0	406	1	751	0	0	0
Peak Hour Factor	1.0000	0.9660	0.9660	0.9660	0.9660	1.0000	0.9660	0.9660	0.9660	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	267	38	42	110	0	105	0	194	0	0	0
Total Analysis Volume [veh/h]	0	1068	153	167	440	0	420	1	777	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	28	0	14	42	0	0	58	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	30	30	11	44	50	50	
g / C, Green / Cycle	0.30	0.30	0.11	0.44	0.50	0.50	
(v / s)_i Volume / Saturation Flow Rate	0.23	0.23	0.10	0.12	0.23	0.48	
s, saturation flow rate [veh/h]	3618	1782	1714	3618	1810	1615	
c, Capacity [veh/h]	1067	525	189	1573	914	816	
d1, Uniform Delay [s]	32.08	32.22	43.88	18.18	15.95	23.59	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.39	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	5.19	10.66	12.79	0.44	0.36	18.46	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.76	0.77	0.89	0.28	0.46	0.95	
d, Delay for Lane Group [s/veh]	37.27	42.89	56.67	18.63	16.32	42.06	
Lane Group LOS	D	D	E	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.53	10.36	4.71	3.30	6.06	20.47	
50th-Percentile Queue Length [ft/ln]	238.31	258.97	117.76	82.56	151.49	511.82	
95th-Percentile Queue Length [veh/ln]	14.60	15.64	8.27	5.94	10.10	27.89	
95th-Percentile Queue Length [ft/ln]	364.89	390.93	206.75	148.62	252.42	697.33	

Movement, Approach, & Intersection Results

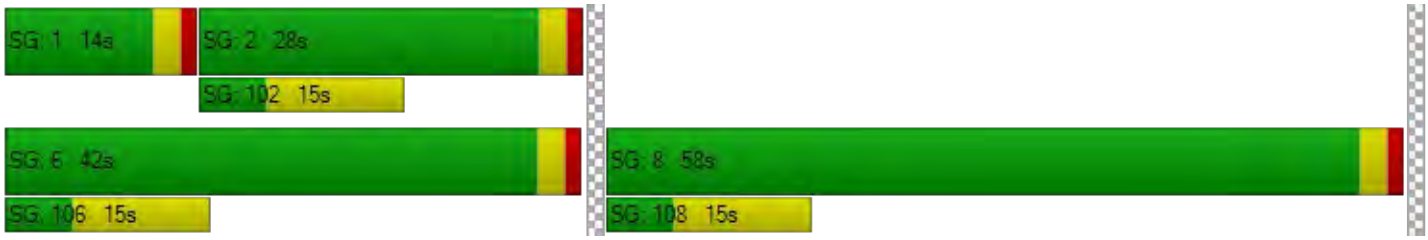
d_M, Delay for Movement [s/veh]	0.00	38.61	42.89	56.67	18.63	0.00	16.32	16.32	42.06	0.00	0.00	0.00
Movement LOS		D	D	E	B		B	B	D			
d_A, Approach Delay [s/veh]	39.14			29.09			33.01			0.00		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	34.70											
Intersection LOS	C											
Intersection V/C	0.807											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.856	2.800	2.306	1.743
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	780	1100	0
d_b, Bicycle Delay [s]	28.13	18.61	10.13	50.00
l_b,int, Bicycle LOS Score for Intersection	2.231	2.060	3.536	4.132
Bicycle LOS	B	B	D	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Del Rosa Ave / Date St_Date Pl

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Base Volume Input [veh/h]	63	826	48	244	805	130	142	57	54	46	71	209
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	826	48	244	805	130	142	57	54	46	71	209
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	215	13	64	210	34	37	15	14	12	19	54
Total Analysis Volume [veh/h]	66	861	50	254	839	136	148	59	56	48	74	218
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	39	0	24	53	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	62	50	50	62	53	53	32	32	32	32
g / C, Green / Cycle	0.62	0.50	0.50	0.62	0.53	0.53	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.09	0.24	0.24	0.32	0.26	0.26	0.13	0.07	0.04	0.17
s, saturation flow rate [veh/h]	711	1900	1864	799	1900	1809	1104	1750	1298	1679
c, Capacity [veh/h]	452	948	930	503	1008	959	240	561	394	538
d1, Uniform Delay [s]	9.00	16.56	16.56	10.61	14.95	14.97	41.52	24.70	29.34	27.93
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	1.77	1.81	3.59	1.74	1.83	2.57	0.18	0.14	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.49	0.49	0.50	0.49	0.50	0.62	0.20	0.12	0.54
d, Delay for Lane Group [s/veh]	9.68	18.33	18.36	14.20	16.68	16.80	44.09	24.88	29.48	28.78
Lane Group LOS	A	B	B	B	B	B	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.61	7.17	7.04	2.80	7.36	7.06	3.70	1.99	0.91	5.78
50th-Percentile Queue Length [ft/ln]	15.34	179.27	176.05	69.94	184.01	176.58	92.57	49.86	22.79	144.38
95th-Percentile Queue Length [veh/ln]	1.10	11.56	11.39	5.04	11.81	11.42	6.67	3.59	1.64	9.72
95th-Percentile Queue Length [ft/ln]	27.62	289.06	284.85	125.90	295.24	285.54	166.63	89.75	41.02	242.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.68	18.35	18.36	14.20	16.73	16.80	44.09	24.88	24.88	29.48	28.78	28.78
Movement LOS	A	B	B	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.76			16.22			35.69			28.88		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	20.11											
Intersection LOS	C											
Intersection V/C	0.487											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.936	3.069	2.174	2.363
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	720	1000	680	680
d_b, Bicycle Delay [s]	20.48	12.50	21.78	21.78
l_b,int, Bicycle LOS Score for Intersection	2.366	2.574	1.994	2.121
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Del Rosa Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	36.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	205	563	75	174	438	122	174	649	169	88	516	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	2	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	205	563	75	174	438	122	174	649	169	88	518	183
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	147	20	45	114	32	45	169	44	23	135	48
Total Analysis Volume [veh/h]	214	588	78	182	457	127	182	677	176	92	541	191
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	5	2	0	1	6	6	3	8	0	7	4	4
Auxiliary Signal Groups						6						4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	7
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	22	32	0	21	31	31	22	36	0	11	25	25
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	19	29	29	18	28	28	19	33	33	8	22	22
g / C, Green / Cycle	0.19	0.29	0.29	0.18	0.28	0.28	0.19	0.33	0.33	0.08	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.12	0.18	0.18	0.11	0.13	0.08	0.11	0.19	0.11	0.05	0.15	0.12
s, saturation flow rate [veh/h]	1714	1900	1823	1714	3618	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	326	551	529	309	1013	452	326	1194	533	137	796	355
d1, Uniform Delay [s]	37.48	30.69	30.70	37.61	29.67	28.13	36.70	27.61	25.19	44.72	35.77	34.50
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.95	5.11	5.32	8.04	1.45	1.55	6.77	1.96	1.66	23.14	4.65	5.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.62	0.62	0.59	0.45	0.28	0.56	0.57	0.33	0.67	0.68	0.54
d, Delay for Lane Group [s/veh]	47.43	35.80	36.02	45.65	31.12	29.68	43.47	29.57	26.85	67.86	40.42	40.23
Lane Group LOS	D	D	D	D	C	C	D	C	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.70	7.75	7.47	4.74	4.68	2.55	4.61	6.87	3.35	3.09	6.49	4.63
50th-Percentile Queue Length [ft/ln]	142.41	193.74	186.76	118.49	117.02	63.84	115.16	171.84	83.79	77.13	162.20	115.86
95th-Percentile Queue Length [veh/ln]	9.61	12.32	11.95	8.31	8.23	4.60	8.13	11.17	6.03	5.55	10.67	8.16
95th-Percentile Queue Length [ft/ln]	240.26	307.88	298.82	207.75	205.72	114.91	203.16	279.33	150.82	138.84	266.64	204.12

Movement, Approach, & Intersection Results

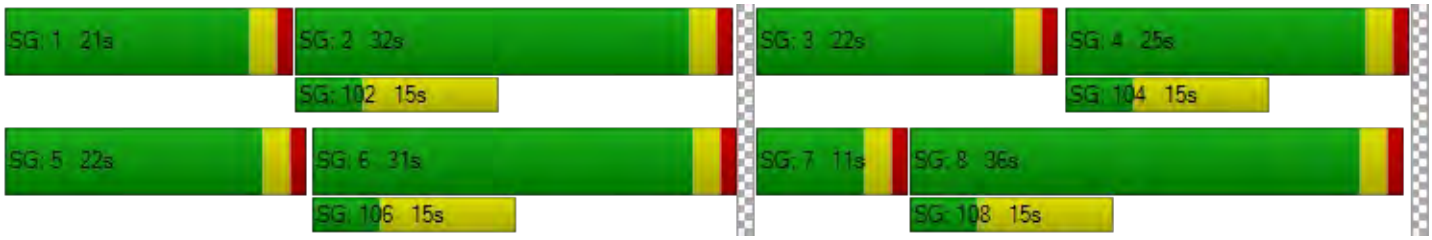
d_M, Delay for Movement [s/veh]	47.43	35.89	36.02	45.65	31.12	29.68	43.47	29.57	26.85	67.86	40.42	40.23
Movement LOS	D	D	D	D	C	C	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	38.71			34.33			31.55			43.44		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	36.75											
Intersection LOS	D											
Intersection V/C	0.541											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.619	2.841	2.771	2.846
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	560	660	440
d_b, Bicycle Delay [s]	25.21	25.92	22.45	30.42
l_b,int, Bicycle LOS Score for Intersection	2.286	2.192	2.413	2.239
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Highland Ave / SR-210 EB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Base Volume Input [veh/h]	1025	190	0	765	728	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	7	0	0	1	2	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1032	190	0	766	730	0
Peak Hour Factor	0.9650	0.9650	1.0000	0.9650	0.9650	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	267	49	0	198	189	0
Total Analysis Volume [veh/h]	1069	197	0	794	756	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	2.0	0.0	0.0	2.0	2.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	68	0	0	32	32	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	0.0	1.0	1.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	35	35	59	59
g / C, Green / Cycle	0.35	0.35	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.30	0.12	0.22	0.21
s, saturation flow rate [veh/h]	3514	1615	3618	3618
c, Capacity [veh/h]	1229	565	2135	2135
d1, Uniform Delay [s]	30.38	24.07	10.76	10.62
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.04	0.37	0.50	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.35	0.37	0.35
d, Delay for Lane Group [s/veh]	32.41	24.44	11.26	11.08
Lane Group LOS	C	C	B	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	12.01	3.47	4.47	4.19
50th-Percentile Queue Length [ft/ln]	300.36	86.63	111.64	104.84
95th-Percentile Queue Length [veh/ln]	17.70	6.24	7.93	7.55
95th-Percentile Queue Length [ft/ln]	442.47	155.93	198.28	188.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.41	24.44	0.00	11.26	11.08	0.00
Movement LOS	C	C		B	B	
d_A, Approach Delay [s/veh]	31.17		11.26		11.08	
Approach LOS	C		B		B	
d_I, Intersection Delay [s/veh]	20.16					
Intersection LOS	C					
Intersection V/C	0.524					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.358	2.647	2.776
Crosswalk LOS	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.787	4.756
Bicycle LOS	D	E	E

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Highland Ave / SR-210 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.575

Intersection Setup

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	364	1	175	3	0	9	14	1405	0	0	1696	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	8	0	0	14	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	364	1	175	3	0	9	14	1413	0	0	1710	8
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	0	44	1	0	2	4	353	0	0	428	2
Total Analysis Volume [veh/h]	364	1	175	3	0	9	14	1413	0	0	1710	8
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Permiss	Split	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	0	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	30	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	29	0	0	10	41	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	21	0	0	0	9	0	0	9	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	13	13	2	2	2	66	61	61
g / C, Green / Cycle	0.14	0.14	0.02	0.02	0.02	0.74	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.00	0.01	0.01	0.39	0.45	0.45
s, saturation flow rate [veh/h]	3514	1616	1810	1615	1810	3618	1900	1897
c, Capacity [veh/h]	506	233	38	34	42	2658	1289	1286
d1, Uniform Delay [s]	36.77	36.99	43.18	43.35	43.27	5.20	8.51	8.52
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.93	4.94	0.86	4.00	4.57	0.77	2.74	2.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.76	0.08	0.26	0.33	0.53	0.67	0.67
d, Delay for Lane Group [s/veh]	38.71	41.93	44.04	47.35	47.85	5.96	11.25	11.28
Lane Group LOS	D	D	D	D	D	A	B	B
Critical Lane Group	No	Yes	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.89	3.98	0.07	0.23	0.36	4.61	9.05	9.06
50th-Percentile Queue Length [ft/ln]	97.37	99.40	1.85	5.84	8.93	115.32	226.22	226.62
95th-Percentile Queue Length [veh/ln]	7.01	7.16	0.13	0.42	0.64	8.14	13.98	14.00
95th-Percentile Queue Length [ft/ln]	175.27	178.93	3.33	10.51	16.07	203.38	349.56	350.06

Movement, Approach, & Intersection Results

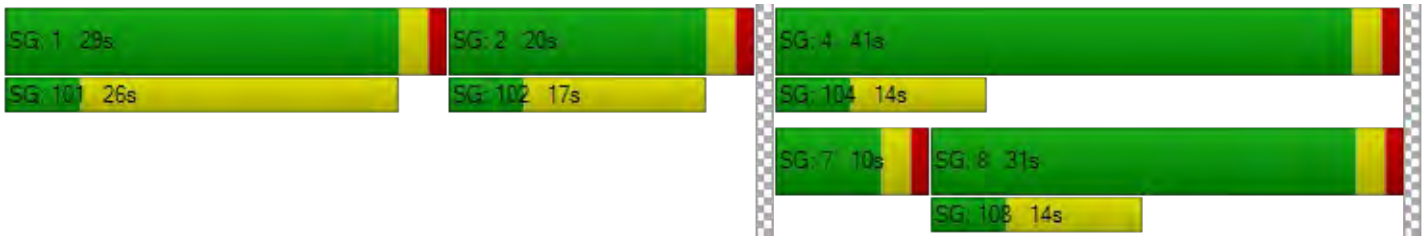
d_M, Delay for Movement [s/veh]	38.71	41.93	41.93	44.04	0.00	47.35	47.85	5.96	0.00	0.00	11.27	11.28
Movement LOS	D	D	D	D		D	D	A			B	B
d_A, Approach Delay [s/veh]	39.76			46.52			6.37			11.27		
Approach LOS	D			D			A			B		
d_I, Intersection Delay [s/veh]	13.65											
Intersection LOS	B											
Intersection V/C	0.575											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.117	1.953	3.084	2.939
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	0	844	622
d_b, Bicycle Delay [s]	29.61	45.00	15.02	21.36
l_b,int, Bicycle LOS Score for Intersection	2.451	4.132	2.737	2.977
Bicycle LOS	B	D	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Victoria Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	51.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.945

Intersection Setup

Name							Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Highland Ave			Highland Ave		
Base Volume Input [veh/h]	293	594	120	395	489	746	806	507	207	153	567	298
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	14	2	0	0	1	0	0	0	8	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	307	596	120	395	490	746	806	507	215	153	567	298
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	154	31	102	127	193	208	131	56	40	147	77
Total Analysis Volume [veh/h]	317	616	124	408	507	771	834	524	222	158	586	308
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	28	0	15	30	30	29	43	0	14	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	40	25	25	40	27	56	26	40	40	11	25	25
g / C, Green / Cycle	0.40	0.25	0.25	0.40	0.27	0.56	0.26	0.40	0.40	0.11	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.28	0.22	0.22	0.39	0.14	0.48	0.27	0.20	0.21	0.09	0.25	0.25
s, saturation flow rate [veh/h]	1129	1700	1602	1050	3618	1615	3144	1900	1714	1714	1900	1682
c, Capacity [veh/h]	450	425	401	373	977	904	817	761	687	187	475	421
d1, Uniform Delay [s]	25.49	36.25	36.25	38.82	30.99	18.52	37.00	22.52	22.75	43.70	37.47	37.48
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.12	0.11	0.35	0.35
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.95	24.11	25.24	74.22	1.97	10.00	20.01	0.52	0.68	9.82	33.89	36.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.90	0.90	1.09	0.52	0.85	1.02	0.51	0.53	0.84	1.00	1.00
d, Delay for Lane Group [s/veh]	34.44	60.35	61.49	113.04	32.96	28.52	57.01	23.04	23.43	53.52	71.36	73.74
Lane Group LOS	C	E	E	F	C	C	F	C	C	D	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.48	11.66	11.12	14.26	5.40	16.29	12.03	6.75	6.42	4.32	15.81	14.28
50th-Percentile Queue Length [ft/ln]	161.96	291.40	277.94	356.52	134.88	407.20	300.81	168.82	160.60	107.89	395.19	357.06
95th-Percentile Queue Length [veh/ln]	10.65	17.25	16.59	21.67	9.20	22.91	17.93	11.01	10.58	7.72	22.33	20.48
95th-Percentile Queue Length [ft/ln]	266.32	431.37	414.64	541.81	230.12	572.67	448.19	275.37	264.51	193.07	558.20	512.00

Movement, Approach, & Intersection Results

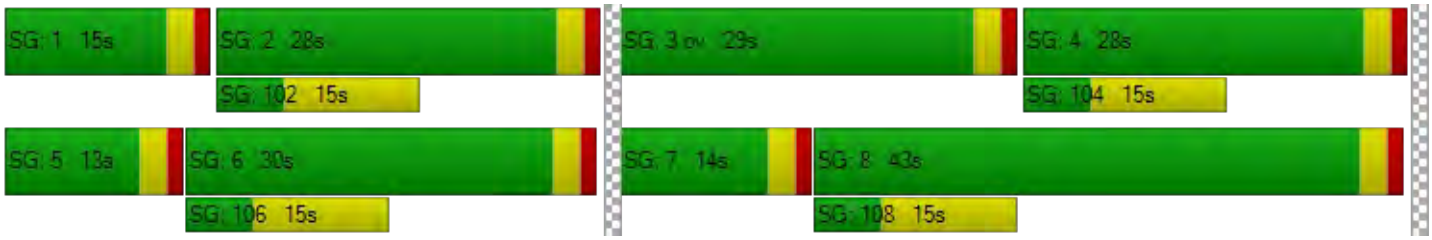
d_M, Delay for Movement [s/veh]	34.44	60.79	61.49	113.04	32.96	28.52	57.01	23.14	23.43	53.52	71.82	73.74
Movement LOS	C	E	E	F	C	C	F	C	C	D	E	E
d_A, Approach Delay [s/veh]	52.97			50.31			41.06			69.63		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	51.89											
Intersection LOS	D											
Intersection V/C	0.945											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.686	3.019	3.122	2.932
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	540	800	500
d_b, Bicycle Delay [s]	28.13	26.65	18.00	28.13
l_b,int, Bicycle LOS Score for Intersection	2.432	2.951	2.863	2.428
Bicycle LOS	B	C	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Del Rosa Dr / Pacific St

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

Intersection Setup

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Base Volume Input [veh/h]	27	521	99	66	366	146	147	369	31	41	228	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	521	99	66	366	146	147	369	31	41	228	40
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	136	26	17	96	38	38	97	8	11	60	10
Total Analysis Volume [veh/h]	28	546	104	69	383	153	154	386	32	43	239	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	46	0	10	46	0	26	34	0	10	18	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	61	61	6	63	63	11	16	16	5	10	10
g / C, Green / Cycle	0.04	0.61	0.61	0.06	0.63	0.63	0.11	0.16	0.16	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.02	0.29	0.06	0.04	0.15	0.15	0.09	0.11	0.11	0.03	0.08	0.08
s, saturation flow rate [veh/h]	1714	1900	1615	1714	1900	1719	1714	1900	1849	1714	1900	1803
c, Capacity [veh/h]	65	1160	986	102	1201	1087	187	306	297	84	191	181
d1, Uniform Delay [s]	47.03	10.65	8.11	46.05	7.93	7.95	43.58	39.62	39.64	46.39	43.74	43.82
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.40	1.37	0.22	7.44	0.45	0.51	8.65	2.80	2.91	4.76	5.71	6.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.47	0.11	0.67	0.23	0.24	0.82	0.69	0.69	0.51	0.75	0.76
d, Delay for Lane Group [s/veh]	51.43	12.02	8.33	53.50	8.39	8.46	52.23	42.41	42.55	51.15	49.45	50.35
Lane Group LOS	D	B	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.76	6.52	0.94	1.88	2.55	2.36	4.15	5.10	4.99	1.15	3.71	3.64
50th-Percentile Queue Length [ft/ln]	18.96	162.89	23.50	47.06	63.79	59.02	103.74	127.41	124.87	28.73	92.74	91.09
95th-Percentile Queue Length [veh/ln]	1.36	10.70	1.69	3.39	4.59	4.25	7.47	8.80	8.66	2.07	6.68	6.56
95th-Percentile Queue Length [ft/ln]	34.12	267.54	42.30	84.70	114.82	106.24	186.74	219.97	216.50	51.71	166.94	163.97

Movement, Approach, & Intersection Results

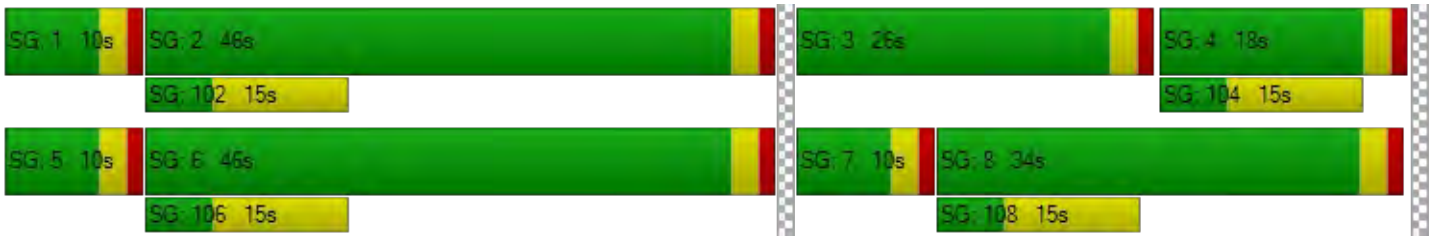
d_M, Delay for Movement [s/veh]	51.43	12.02	8.33	53.50	8.41	8.46	52.23	42.48	42.55	51.15	49.81	50.35
Movement LOS	D	B	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.08			13.57			45.11			50.06		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.12											
Intersection LOS	C											
Intersection V/C	0.494											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.528	2.678	2.500	2.479
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	860	860	620	300
d_b, Bicycle Delay [s]	16.25	16.25	23.81	36.13
l_b,int, Bicycle LOS Score for Intersection	2.678	2.059	2.032	1.827
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Victoria Ave / Pacific St

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.514

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	145	554	55	152	473	191	170	429	190	42	284	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	16	1	0	9	0	0	0	1	1	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	146	570	56	152	482	191	170	429	191	43	284	134
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	150	15	40	127	50	45	113	50	11	75	35
Total Analysis Volume [veh/h]	154	600	59	160	507	201	179	452	201	45	299	141
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	28	0	17	28	0	26	45	0	10	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	49	49	11	50	50	12	22	22	5	15	15
g / C, Green / Cycle	0.11	0.49	0.49	0.11	0.50	0.50	0.12	0.22	0.22	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.18	0.18	0.09	0.20	0.20	0.10	0.18	0.18	0.03	0.12	0.12
s, saturation flow rate [veh/h]	1714	1900	1841	1714	1900	1719	1714	1900	1704	1714	1900	1699
c, Capacity [veh/h]	185	936	907	191	943	853	214	429	384	86	287	257
d1, Uniform Delay [s]	43.73	15.61	15.61	43.55	15.76	15.77	42.76	36.61	36.63	46.32	40.99	41.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.37	1.06	1.10	9.38	1.23	1.37	8.36	3.54	3.97	4.83	5.11	6.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.36	0.36	0.84	0.39	0.39	0.84	0.80	0.80	0.52	0.80	0.82
d, Delay for Lane Group [s/veh]	53.11	16.67	16.71	52.93	17.00	17.13	51.12	40.16	40.60	51.14	46.09	47.58
Lane Group LOS	D	B	B	D	B	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.19	4.82	4.68	4.35	5.44	4.96	4.78	8.25	7.47	1.20	5.81	5.44
50th-Percentile Queue Length [ft/ln]	104.68	120.38	116.97	108.63	135.99	123.96	119.54	206.26	186.64	30.04	145.19	135.99
95th-Percentile Queue Length [veh/ln]	7.54	8.41	8.23	7.76	9.26	8.61	8.37	12.96	11.95	2.16	9.76	9.26
95th-Percentile Queue Length [ft/ln]	188.43	210.35	205.66	194.09	231.61	215.26	209.20	324.02	298.66	54.07	243.99	231.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.11	16.69	16.71	52.93	17.03	17.13	51.12	40.26	40.60	51.14	46.44	47.58
Movement LOS	D	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	23.59			23.67			42.68			47.20		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.73											
Intersection LOS	C											
Intersection V/C	0.514											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.612	2.655	2.596	2.532
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	500	840	520
d_b, Bicycle Delay [s]	28.13	28.13	16.82	27.38
l_b,int, Bicycle LOS Score for Intersection	2.230	2.276	2.246	1.960
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 10: Victoria Ave / 14th St

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.253

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	39	121	82	31	611	12	29	10	3	27	4	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	2	18	0	0	10	0	0	0	1	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	139	82	31	621	12	29	10	4	27	4	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	37	22	8	163	3	8	3	1	7	1	14
Total Analysis Volume [veh/h]	43	146	86	33	654	13	31	11	4	28	4	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	25	0	46	61	0	0	29	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	11	0	0	19	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	80	80	4	80	80	6	6
g / C, Green / Cycle	0.05	0.80	0.80	0.04	0.80	0.80	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.07	0.02	0.18	0.18	0.03	0.05
s, saturation flow rate [veh/h]	1714	1900	1674	1714	1900	1887	1547	1748
c, Capacity [veh/h]	84	1524	1343	73	1512	1502	161	162
d1, Uniform Delay [s]	46.40	2.09	2.10	46.75	2.53	2.53	44.88	45.97
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.81	0.10	0.12	4.37	0.34	0.34	0.96	2.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.08	0.08	0.45	0.22	0.22	0.28	0.56
d, Delay for Lane Group [s/veh]	51.21	2.19	2.22	51.13	2.87	2.87	45.83	48.96
Lane Group LOS	D	A	A	D	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.15	0.37	0.36	0.89	1.27	1.26	1.14	2.32
50th-Percentile Queue Length [ft/ln]	28.75	9.34	8.95	22.16	31.73	31.56	28.39	57.99
95th-Percentile Queue Length [veh/ln]	2.07	0.67	0.64	1.60	2.28	2.27	2.04	4.18
95th-Percentile Queue Length [ft/ln]	51.74	16.82	16.10	39.89	57.12	56.81	51.10	104.38

Movement, Approach, & Intersection Results

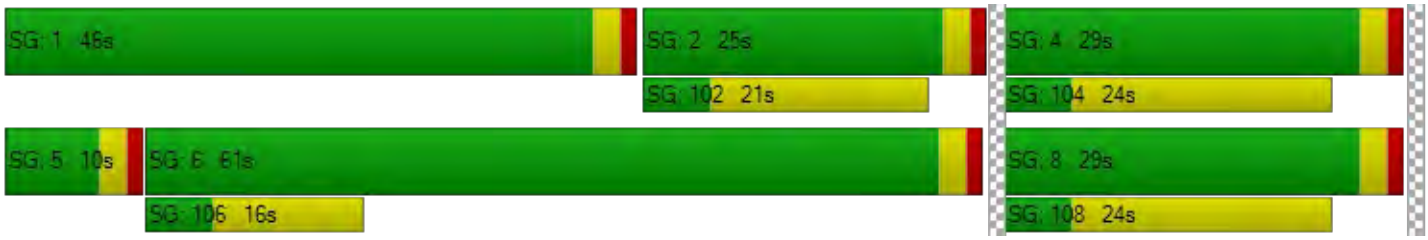
d_M, Delay for Movement [s/veh]	51.21	2.19	2.22	51.13	2.87	2.87	45.83	45.83	45.83	48.96	48.96	48.96
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.87			5.15			45.83			48.96		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	11.55											
Intersection LOS	B											
Intersection V/C	0.253											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.534	2.533	1.773	1.829
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	440	1160	520	520
d_b, Bicycle Delay [s]	30.42	8.82	27.38	27.38
l_b,int, Bicycle LOS Score for Intersection	1.786	2.137	1.636	1.708
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Tippecanoe Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.492

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	283	249	651	167	165	499
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	283	249	651	167	165	499
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	63	166	43	42	127
Total Analysis Volume [veh/h]	288	254	663	170	168	508
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	2.0	0.0	2.0	0.0	2.0	2.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	33	0	47	0	20	67
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	0.0	1.0	1.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	30	30	44	44	17	64
g / C, Green / Cycle	0.30	0.30	0.44	0.44	0.17	0.64
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.22	0.23	0.10	0.14
s, saturation flow rate [veh/h]	1810	1615	1900	1772	1714	3618
c, Capacity [veh/h]	543	485	836	780	291	2315
d1, Uniform Delay [s]	29.14	29.07	20.08	20.50	38.19	7.54
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.68	4.02	2.12	2.61	8.07	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.52	0.50	0.53	0.58	0.22
d, Delay for Lane Group [s/veh]	32.82	33.09	22.20	23.11	46.25	7.76
Lane Group LOS	C	C	C	C	D	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.23	5.53	7.25	7.46	4.41	2.17
50th-Percentile Queue Length [ft/ln]	155.69	138.30	181.28	186.62	110.25	54.32
95th-Percentile Queue Length [veh/ln]	10.32	9.39	11.67	11.95	7.85	3.91
95th-Percentile Queue Length [ft/ln]	258.00	234.74	291.68	298.64	196.35	97.78

Movement, Approach, & Intersection Results

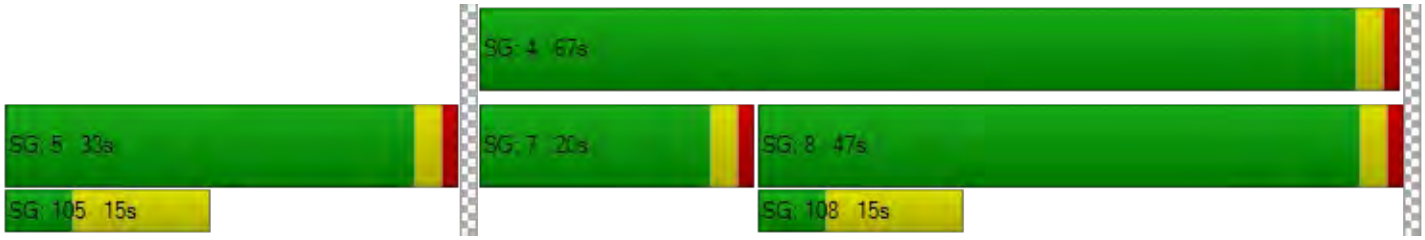
d_M, Delay for Movement [s/veh]	32.82	33.09	22.54	23.11	46.25	7.76
Movement LOS	C	C	C	C	D	A
d_A, Approach Delay [s/veh]	32.95		22.66		17.32	
Approach LOS	C		C		B	
d_I, Intersection Delay [s/veh]	23.62					
Intersection LOS	C					
Intersection V/C	0.492					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
I_p,int, Pedestrian LOS Score for Intersection	2.352	2.535	2.617
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
I_b,int, Bicycle LOS Score for Intersection	4.132	4.820	4.690
Bicycle LOS	D	E	E

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Del Rosa Dr / Baseline St

Control Type:	Signalized	Delay (sec / veh):	32.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

Intersection Setup

Name				Del Rosa Dr								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Del Rosa Dr								
Base Volume Input [veh/h]	57	445	64	85	253	128	187	693	43	26	472	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	445	64	85	253	128	187	693	43	26	472	56
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	117	17	22	67	34	49	182	11	7	124	15
Total Analysis Volume [veh/h]	60	468	67	89	266	135	197	729	45	27	497	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	23	0	10	23	0	28	57	0	10	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	50	50	7	51	51	14	28	28	4	18	18
g / C, Green / Cycle	0.06	0.50	0.50	0.07	0.51	0.51	0.14	0.28	0.28	0.04	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.14	0.05	0.14	0.08	0.11	0.21	0.21	0.02	0.15	0.15
s, saturation flow rate [veh/h]	1714	1900	1818	1714	1900	1615	1714	1900	1861	1714	1900	1830
c, Capacity [veh/h]	98	953	912	112	969	824	232	524	514	64	338	325
d1, Uniform Delay [s]	46.09	14.49	14.51	46.08	13.96	13.10	42.23	33.01	33.01	47.09	39.71	39.75
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.16	0.75	0.80	12.02	0.70	0.43	8.39	2.14	2.18	4.41	5.47	5.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.29	0.29	0.80	0.27	0.16	0.85	0.75	0.75	0.42	0.84	0.84
d, Delay for Lane Group [s/veh]	52.25	15.25	15.30	58.10	14.66	13.53	50.63	35.15	35.19	51.50	45.18	45.60
Lane Group LOS	D	B	B	E	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.62	3.68	3.56	2.54	3.50	1.68	5.25	8.80	8.62	0.73	7.13	6.95
50th-Percentile Queue Length [ft/ln]	40.41	92.05	88.98	63.50	87.56	41.90	131.15	219.92	215.61	18.32	178.35	173.78
95th-Percentile Queue Length [veh/ln]	2.91	6.63	6.41	4.57	6.30	3.02	9.00	13.66	13.44	1.32	11.51	11.28
95th-Percentile Queue Length [ft/ln]	72.74	165.69	160.16	114.30	157.60	75.42	225.06	341.53	336.02	32.97	287.86	281.88

Movement, Approach, & Intersection Results

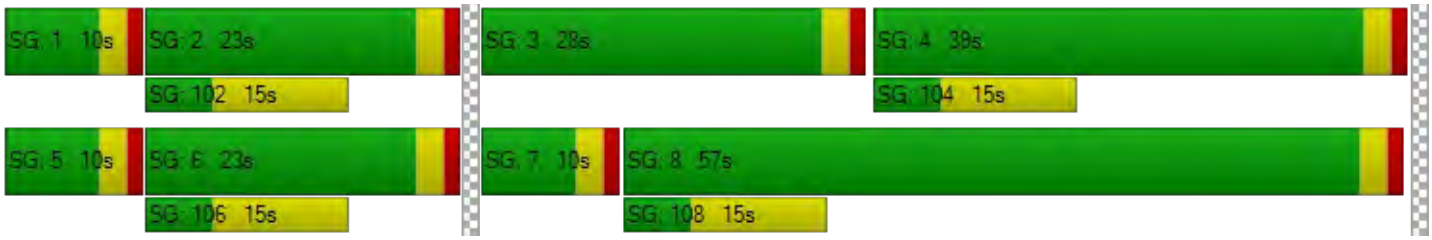
d_M, Delay for Movement [s/veh]	52.25	15.27	15.30	58.10	14.66	13.53	50.63	35.17	35.19	51.50	45.36	45.60
Movement LOS	D	B	B	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	19.00			22.24			38.30			45.67		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	32.60											
Intersection LOS	C											
Intersection V/C	0.461											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.488	2.543	2.631	2.593
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1080	720
d_b, Bicycle Delay [s]	32.00	32.00	10.58	20.48
l_b,int, Bicycle LOS Score for Intersection	2.050	2.368	2.361	2.041
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Sterling Ave / Base Line

Control Type:	Signalized	Delay (sec / veh):	32.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

Intersection Setup

Name				Sterling Ave								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Sterling Ave								
Base Volume Input [veh/h]	85	529	76	202	317	100	147	551	51	60	354	216
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	529	76	202	317	100	147	551	51	60	354	216
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	139	20	53	83	26	39	145	13	16	93	57
Total Analysis Volume [veh/h]	89	557	80	213	334	105	155	580	54	63	373	227
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	29	0	21	39	0	18	39	0	11	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	60	43	43	14	51	51	11	25	25	6	20	20
g / C, Green / Cycle	0.60	0.43	0.43	0.14	0.51	0.51	0.11	0.25	0.25	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.08	0.17	0.17	0.12	0.12	0.12	0.09	0.17	0.17	0.04	0.17	0.17
s, saturation flow rate [veh/h]	1057	1900	1818	1714	1900	1747	1714	1900	1844	1714	1900	1664
c, Capacity [veh/h]	673	818	783	245	968	890	186	472	458	100	376	329
d1, Uniform Delay [s]	8.59	19.56	19.58	41.92	13.68	13.69	43.67	34.02	34.03	46.04	38.65	38.75
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.41	1.44	1.52	9.04	0.57	0.63	9.23	1.75	1.81	6.44	5.31	6.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.40	0.40	0.87	0.24	0.24	0.83	0.68	0.68	0.63	0.85	0.86
d, Delay for Lane Group [s/veh]	9.00	21.01	21.09	50.95	14.25	14.32	52.90	35.77	35.84	52.48	43.96	45.21
Lane Group LOS	A	C	C	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.84	5.40	5.19	5.70	2.93	2.73	4.21	7.20	7.00	1.70	7.97	7.18
50th-Percentile Queue Length [ft/ln]	20.95	134.89	129.85	142.61	73.27	68.35	105.15	179.99	175.07	42.53	199.15	179.51
95th-Percentile Queue Length [veh/ln]	1.51	9.21	8.93	9.62	5.28	4.92	7.57	11.60	11.34	3.06	12.59	11.58
95th-Percentile Queue Length [ft/ln]	37.70	230.13	223.29	240.53	131.88	123.04	189.24	290.00	283.56	76.55	314.86	289.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.00	21.04	21.09	50.95	14.27	14.32	52.90	35.80	35.84	52.48	44.15	45.21
Movement LOS	A	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	19.57			26.26			39.16			45.30		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	32.60											
Intersection LOS	C											
Intersection V/C	0.556											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.536	2.718	2.638	2.606
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	720	720	580
d_b, Bicycle Delay [s]	27.38	20.48	20.48	25.21
l_b,int, Bicycle LOS Score for Intersection	2.159	2.098	2.211	2.107
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 14: Victoria Ave / Base Line

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.448

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	434	92	150	349	123	116	494	59	45	327	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	20	0	0	11	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	454	92	150	360	123	116	494	59	45	327	145
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	117	24	39	92	32	30	127	15	12	84	37
Total Analysis Volume [veh/h]	64	467	95	154	370	126	119	508	61	46	336	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	31	0	16	35	0	13	43	0	10	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	22	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	52	52	11	57	57	9	20	20	5	16	16
g / C, Green / Cycle	0.06	0.52	0.52	0.11	0.57	0.57	0.09	0.20	0.20	0.05	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.04	0.15	0.15	0.09	0.14	0.14	0.07	0.15	0.15	0.03	0.13	0.14
s, saturation flow rate [veh/h]	1714	1900	1790	1714	1900	1738	1714	1900	1830	1714	1900	1707
c, Capacity [veh/h]	101	994	936	184	1086	994	146	378	364	87	312	280
d1, Uniform Delay [s]	46.02	13.41	13.43	43.76	10.61	10.62	44.95	37.87	37.89	46.29	40.29	40.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.51	0.74	0.79	9.53	0.51	0.57	10.29	3.28	3.44	4.89	5.05	6.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.29	0.29	0.84	0.24	0.24	0.81	0.77	0.77	0.53	0.81	0.83
d, Delay for Lane Group [s/veh]	52.53	14.15	14.22	53.30	11.12	11.19	55.24	41.14	41.33	51.18	45.34	46.63
Lane Group LOS	D	B	B	D	B	B	E	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.73	3.72	3.55	4.20	2.84	2.64	3.30	6.96	6.75	1.23	6.38	5.95
50th-Percentile Queue Length [ft/ln]	43.22	92.98	88.68	104.88	70.90	65.90	82.47	174.09	168.66	30.71	159.39	148.72
95th-Percentile Queue Length [veh/ln]	3.11	6.69	6.38	7.55	5.10	4.74	5.94	11.29	11.01	2.21	10.52	9.95
95th-Percentile Queue Length [ft/ln]	77.80	167.36	159.62	188.79	127.62	118.61	148.45	282.29	275.15	55.28	262.91	248.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.53	14.18	14.22	53.30	11.14	11.19	55.24	41.23	41.33	51.18	45.66	46.63
Movement LOS	D	B	B	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.11			21.14			43.66			46.41		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	31.97											
Intersection LOS	C											
Intersection V/C	0.448											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.522	2.577	2.543	2.558
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	640	800	740
d_b, Bicycle Delay [s]	25.92	23.12	18.00	19.85
l_b,int, Bicycle LOS Score for Intersection	2.076	2.096	2.127	1.998
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 15: Tippecanoe Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	30.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

Intersection Setup

Name	Tippacanoe Avenue											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippacanoe Avenue											
Base Volume Input [veh/h]	183	613	57	12	265	48	89	428	103	49	350	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	3	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	613	57	12	265	48	89	431	103	49	350	24
Peak Hour Factor	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	159	15	3	69	12	23	112	27	13	91	6
Total Analysis Volume [veh/h]	190	637	59	12	275	50	93	448	107	51	364	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	45	0	10	34	0	16	35	0	10	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	13	63	63	2	52	52	7	18	18	5	16	16
g / C, Green / Cycle	0.13	0.63	0.63	0.02	0.52	0.52	0.07	0.18	0.18	0.05	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.11	0.19	0.19	0.01	0.09	0.09	0.05	0.15	0.15	0.03	0.10	0.10
s, saturation flow rate [veh/h]	1714	1900	1844	1714	1900	1801	1714	1900	1775	1714	1900	1858
c, Capacity [veh/h]	223	1190	1155	35	983	931	119	341	319	91	311	304
d1, Uniform Delay [s]	42.56	8.57	8.57	48.30	12.77	12.80	45.80	39.61	39.67	46.19	39.00	39.03
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.89	0.64	0.66	5.55	0.37	0.40	10.71	5.48	6.07	5.24	2.11	2.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.30	0.30	0.34	0.17	0.17	0.78	0.84	0.84	0.56	0.63	0.63
d, Delay for Lane Group [s/veh]	51.45	9.20	9.22	53.84	13.14	13.20	56.52	45.09	45.74	51.43	41.10	41.22
Lane Group LOS	D	A	A	D	B	B	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.10	3.45	3.35	0.35	2.00	1.95	2.61	7.22	6.86	1.36	4.63	4.57
50th-Percentile Queue Length [ft/ln]	127.49	86.22	83.86	8.71	50.00	48.72	65.32	180.54	171.38	34.10	115.77	114.18
95th-Percentile Queue Length [veh/ln]	8.80	6.21	6.04	0.63	3.60	3.51	4.70	11.63	11.15	2.46	8.16	8.07
95th-Percentile Queue Length [ft/ln]	220.07	155.20	150.95	15.68	90.00	87.69	117.58	290.71	278.73	61.38	204.00	201.81

Movement, Approach, & Intersection Results

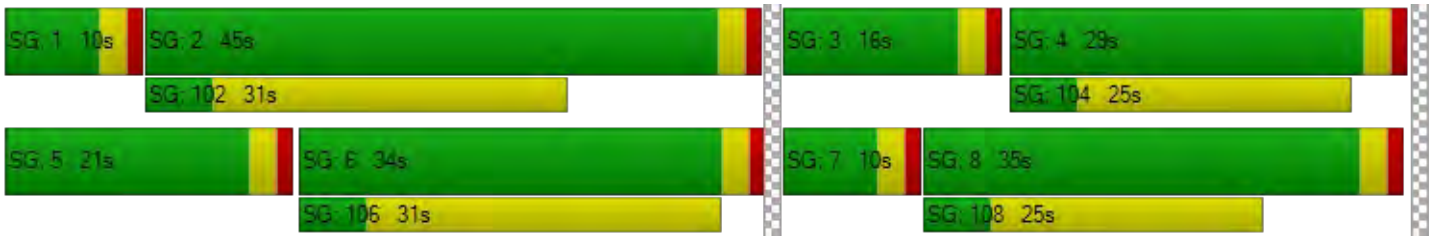
d_M, Delay for Movement [s/veh]	51.45	9.21	9.22	53.84	13.16	13.20	56.52	45.33	45.74	51.43	41.16	41.22
Movement LOS	D	A	A	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.27			14.61			47.00			42.35		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	30.38											
Intersection LOS	C											
Intersection V/C	0.381											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.564	2.519	2.551	2.493
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	840	620	640	520
d_b, Bicycle Delay [s]	16.82	23.81	23.12	27.38
l_b,int, Bicycle LOS Score for Intersection	2.291	1.838	2.094	1.923
Bicycle LOS	B	A	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Del Rosa Dr / 9th St

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	123	513	84	57	287	64	53	258	77	40	359	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	3	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	513	84	57	287	64	53	261	77	40	359	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	135	22	15	76	17	14	69	20	11	94	13
Total Analysis Volume [veh/h]	129	540	88	60	302	67	56	275	81	42	378	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	10	62	0	10	62	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	54	54	6	53	53	6	23	23	5	22	22
g / C, Green / Cycle	0.07	0.54	0.54	0.06	0.53	0.53	0.06	0.23	0.23	0.05	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.08	0.17	0.17	0.04	0.10	0.10	0.03	0.14	0.05	0.02	0.20	0.03
s, saturation flow rate [veh/h]	1714	1900	1808	1714	1900	1783	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	120	1033	983	98	1008	946	95	439	373	83	426	362
d1, Uniform Delay [s]	46.50	12.54	12.55	46.08	12.24	12.26	46.11	34.57	31.13	46.40	37.58	31.10
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	59.92	0.79	0.83	6.12	0.41	0.45	5.69	1.47	0.29	4.66	6.42	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.08	0.31	0.31	0.61	0.19	0.19	0.59	0.63	0.22	0.50	0.89	0.14
d, Delay for Lane Group [s/veh]	106.42	13.33	13.38	52.20	12.65	12.71	51.80	36.05	31.42	51.07	44.00	31.28
Lane Group LOS	F	B	B	D	B	B	D	D	C	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.96	4.01	3.83	1.62	2.24	2.15	1.50	6.13	1.61	1.12	9.58	1.02
50th-Percentile Queue Length [ft/ln]	123.96	100.14	95.86	40.39	55.93	53.82	37.56	153.15	40.18	28.04	239.42	25.55
95th-Percentile Queue Length [veh/ln]	8.80	7.21	6.90	2.91	4.03	3.87	2.70	10.19	2.89	2.02	14.65	1.84
95th-Percentile Queue Length [ft/ln]	220.11	180.25	172.55	72.71	100.67	96.87	67.61	254.63	72.32	50.48	366.30	46.00

Movement, Approach, & Intersection Results

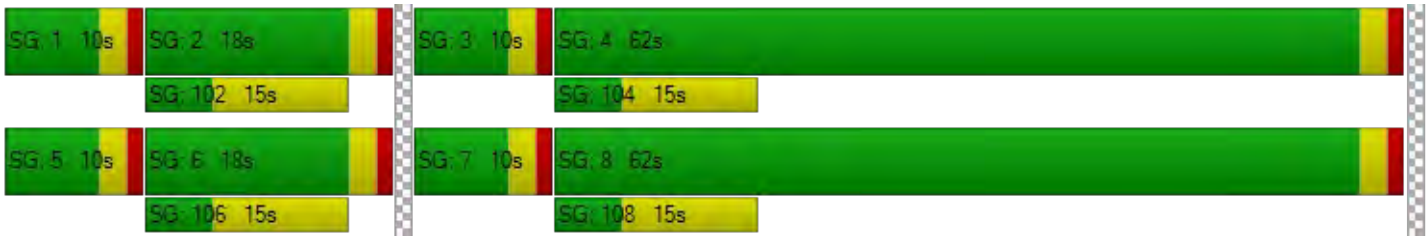
d_M, Delay for Movement [s/veh]	106.42	13.35	13.38	52.20	12.67	12.71	51.80	36.05	31.42	51.07	44.00	31.28
Movement LOS	F	B	B	D	B	B	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	29.21			18.21			37.28			43.22		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	31.73											
Intersection LOS	C											
Intersection V/C	0.436											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.537	2.516	2.499	2.356
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1180	1180
d_b, Bicycle Delay [s]	36.13	36.13	8.41	8.41
l_b,int, Bicycle LOS Score for Intersection	2.184	1.914	2.239	2.338
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 17: Sterling Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	29.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	78	461	195	71	248	75	97	302	77	92	207	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	3	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	461	195	71	248	75	97	305	77	92	207	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	121	51	19	65	20	26	80	20	24	54	19
Total Analysis Volume [veh/h]	82	485	205	75	261	79	102	321	81	97	218	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	11	27	0	17	53	0	10	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	19	0	0	22	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	55	55	6	55	55	8	19	19	7	19	19
g / C, Green / Cycle	0.06	0.55	0.55	0.06	0.55	0.55	0.08	0.19	0.19	0.07	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.05	0.19	0.19	0.04	0.09	0.09	0.06	0.17	0.05	0.06	0.11	0.05
s, saturation flow rate [veh/h]	1714	1900	1711	1714	1900	1752	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	108	1052	948	106	1050	968	129	370	314	120	359	305
d1, Uniform Delay [s]	46.11	12.30	12.31	46.05	11.03	11.06	45.45	39.03	34.15	45.84	37.14	34.52
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.41	0.90	1.00	8.49	0.34	0.38	10.16	6.28	0.43	12.00	1.65	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.34	0.35	0.71	0.17	0.17	0.79	0.87	0.26	0.81	0.61	0.25
d, Delay for Lane Group [s/veh]	56.52	13.19	13.31	54.54	11.37	11.44	55.61	45.31	34.58	57.84	38.79	34.95
Lane Group LOS	E	B	B	D	B	B	E	D	C	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.31	4.51	4.11	2.07	1.93	1.84	2.84	8.18	1.70	2.76	5.00	1.63
50th-Percentile Queue Length [ft/ln]	57.64	112.69	102.68	51.69	48.29	46.03	70.97	204.51	42.53	68.99	125.10	40.63
95th-Percentile Queue Length [veh/ln]	4.15	7.99	7.39	3.72	3.48	3.31	5.11	12.87	3.06	4.97	8.67	2.93
95th-Percentile Queue Length [ft/ln]	103.75	199.73	184.82	93.04	86.93	82.86	127.74	321.78	76.56	124.18	216.81	73.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.52	13.22	13.31	54.54	11.39	11.44	55.61	45.31	34.58	57.84	38.79	34.95
Movement LOS	E	B	B	D	B	B	E	D	C	E	D	C
d_A, Approach Delay [s/veh]	17.84			19.20			45.67			42.75		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.53											
Intersection LOS	C											
Intersection V/C	0.461											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.656	2.517	2.353	2.380
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	480	1000	860
d_b, Bicycle Delay [s]	29.65	28.88	12.50	16.25
l_b,int, Bicycle LOS Score for Intersection	2.197	1.902	2.391	2.206
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 18: Victoria Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.316

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	79	400	39	59	227	66	100	236	68	24	161	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	3	20	0	0	11	0	0	0	2	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	420	39	59	238	66	100	236	70	24	161	57
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	111	10	16	63	17	26	62	18	6	42	15
Total Analysis Volume [veh/h]	86	442	41	62	251	69	105	248	74	25	169	60
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	27	0	11	28	0	35	52	0	10	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	63	63	6	63	63	8	15	15	4	11	11
g / C, Green / Cycle	0.06	0.63	0.63	0.06	0.63	0.63	0.08	0.15	0.15	0.04	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.05	0.13	0.13	0.04	0.09	0.09	0.06	0.13	0.05	0.01	0.09	0.04
s, saturation flow rate [veh/h]	1714	1900	1844	1714	1900	1763	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	109	1201	1166	99	1190	1104	134	295	250	60	213	181
d1, Uniform Delay [s]	46.16	7.76	7.77	46.07	7.65	7.67	45.25	41.06	37.42	47.23	43.29	40.96
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.84	0.38	0.40	6.41	0.24	0.27	9.50	6.46	0.65	4.49	6.62	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.20	0.20	0.63	0.14	0.14	0.78	0.84	0.30	0.41	0.79	0.33
d, Delay for Lane Group [s/veh]	58.00	8.14	8.16	52.48	7.89	7.93	54.75	47.52	38.07	51.72	49.90	42.02
Lane Group LOS	E	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.45	2.18	2.13	1.67	1.42	1.37	2.90	6.40	1.64	0.68	4.43	1.41
50th-Percentile Queue Length [ft/ln]	61.32	54.53	53.33	41.86	35.55	34.13	72.40	160.08	41.07	17.05	110.81	35.28
95th-Percentile Queue Length [veh/ln]	4.41	3.93	3.84	3.01	2.56	2.46	5.21	10.55	2.96	1.23	7.89	2.54
95th-Percentile Queue Length [ft/ln]	110.37	98.16	96.00	75.34	64.00	61.43	130.33	263.83	73.92	30.69	197.13	63.51

Movement, Approach, & Intersection Results

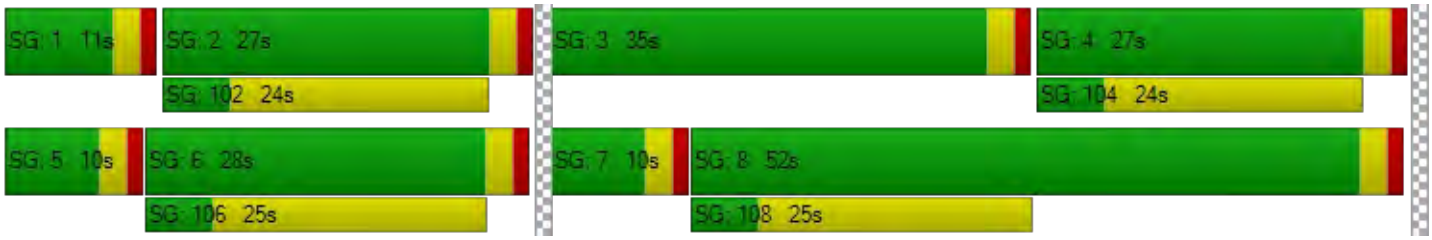
d_M, Delay for Movement [s/veh]	58.00	8.15	8.16	52.48	7.90	7.93	54.75	47.52	38.07	51.72	49.90	42.02
Movement LOS	E	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.69			15.14			47.66			48.22		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.99											
Intersection LOS	C											
Intersection V/C	0.316											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.609	2.499	2.321	2.285
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	500	980	480
d_b, Bicycle Delay [s]	28.88	28.13	13.01	28.88
l_b,int, Bicycle LOS Score for Intersection	2.029	1.875	2.264	1.979
Bicycle LOS	B	A	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Del Rosa Dr / 6th St

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.305

Intersection Setup

Name							6th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							6th Street					
Base Volume Input [veh/h]	10	523	132	19	261	30	55	124	14	40	86	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	523	132	19	261	30	55	124	14	40	86	36
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	138	35	5	69	8	14	33	4	11	23	9
Total Analysis Volume [veh/h]	11	551	139	20	275	32	58	131	15	42	91	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	38	0	10	38	0	18	42	0	10	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	70	70	3	71	71	6	10	5	9
g / C, Green / Cycle	0.02	0.70	0.70	0.03	0.71	0.71	0.06	0.10	0.05	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.19	0.19	0.01	0.08	0.08	0.03	0.08	0.02	0.07
s, saturation flow rate [veh/h]	1714	1900	1770	1714	1900	1832	1714	1866	1714	1806
c, Capacity [veh/h]	32	1336	1244	51	1357	1309	97	184	83	164
d1, Uniform Delay [s]	48.47	5.43	5.43	47.60	4.44	4.45	46.08	44.06	46.43	44.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.26	0.49	0.53	4.73	0.17	0.18	5.84	7.47	4.74	8.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.27	0.27	0.39	0.11	0.12	0.60	0.79	0.51	0.79
d, Delay for Lane Group [s/veh]	54.73	5.92	5.96	52.33	4.61	4.63	51.92	51.54	51.16	52.68
Lane Group LOS	D	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.33	2.53	2.38	0.55	0.91	0.90	1.56	3.89	1.12	3.48
50th-Percentile Queue Length [ft/ln]	8.14	63.21	59.59	13.86	22.87	22.49	38.94	97.32	28.08	87.01
95th-Percentile Queue Length [veh/ln]	0.59	4.55	4.29	1.00	1.65	1.62	2.80	7.01	2.02	6.26
95th-Percentile Queue Length [ft/ln]	14.65	113.78	107.26	24.95	41.16	40.49	70.09	175.17	50.54	156.61

Movement, Approach, & Intersection Results

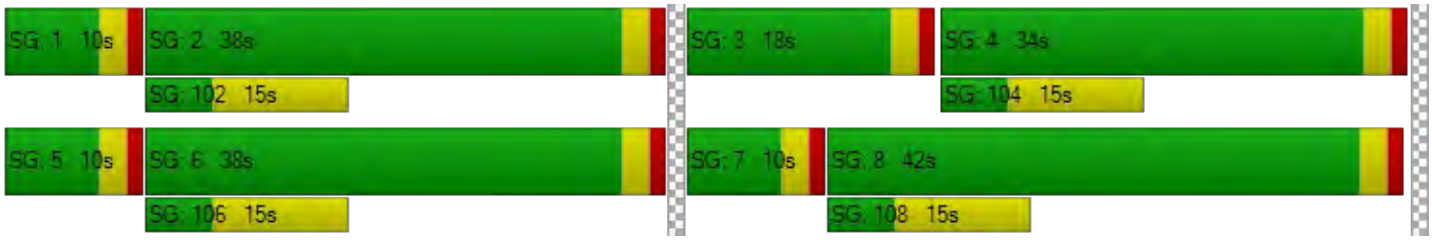
d_M, Delay for Movement [s/veh]	54.73	5.93	5.96	52.33	4.62	4.63	51.92	51.54	51.54	51.16	52.68	52.68
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.71			7.54			51.65			52.31		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	18.99											
Intersection LOS	B											
Intersection V/C	0.305											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.508	2.496	2.057	2.097
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	700	780	620
d_b, Bicycle Delay [s]	21.13	21.13	18.61	23.81
l_b,int, Bicycle LOS Score for Intersection	2.138	1.829	1.896	1.842
Bicycle LOS	B	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Sterling Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	195.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.462

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	725	41	28	372	29	55	104	11	10	76	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	725	41	28	372	29	55	104	11	10	76	18
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	191	11	7	98	8	14	27	3	3	20	5
Total Analysis Volume [veh/h]	20	763	43	29	392	31	58	109	12	11	80	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.04	0.00	0.00	0.46	0.71	0.01	0.17	0.53	0.03
d_M, Delay for Movement [s/veh]	8.19	0.00	0.00	9.51	0.00	0.00	195.87	190.66	171.61	107.85	75.55	57.77
Movement LOS	A	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.05	0.03	0.00	0.11	0.05	0.00	10.13	10.13	10.13	4.37	4.37	4.37
95th-Percentile Queue Length [ft/ln]	1.33	0.67	0.00	2.72	1.36	0.00	253.35	253.35	253.35	109.25	109.25	109.25
d_A, Approach Delay [s/veh]	0.20			0.61			191.07			75.71		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	27.42											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 21: Victoria Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	45.5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.215

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	46	484	74	62	227	24	26	65	25	30	52	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	22	0	0	13	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	506	74	62	240	24	26	65	25	30	52	32
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	133	19	16	63	6	7	17	7	8	14	8
Total Analysis Volume [veh/h]	48	533	78	65	253	25	27	68	26	32	55	34
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.07	0.00	0.00	0.13	0.35	0.03	0.22	0.27	0.05
d_M, Delay for Movement [s/veh]	7.88	0.00	0.00	8.94	0.00	0.00	37.84	38.84	24.12	45.48	38.63	26.12
Movement LOS	A	A	A	A	A	A	E	E	C	E	E	D
95th-Percentile Queue Length [veh/ln]	0.12	0.06	0.00	0.21	0.11	0.00	2.68	2.68	2.68	2.78	2.78	2.78
95th-Percentile Queue Length [ft/ln]	2.88	1.44	0.00	5.33	2.67	0.00	66.89	66.89	66.89	69.41	69.41	69.41
d_A, Approach Delay [s/veh]	0.57			1.69			35.45			36.93		
Approach LOS	A			A			E			E		
d_I, Intersection Delay [s/veh]	7.81											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 22: Central Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.091

Intersection Setup

Name	Central Avenue					
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Central Avenue					
Base Volume Input [veh/h]	22	185	81	31	56	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	185	81	31	56	28
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	49	21	8	15	7
Total Analysis Volume [veh/h]	23	195	85	33	59	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.09	0.03
d_M, Delay for Movement [s/veh]	7.47	0.00	0.00	0.00	11.13	8.87
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.30	0.09
95th-Percentile Queue Length [ft/ln]	1.18	1.18	0.00	0.00	7.50	2.34
d_A, Approach Delay [s/veh]	0.79		0.00		10.38	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.56					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 23: I-215 SB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.514

Intersection Setup

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			Yes			No			No	

Volumes

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	311	6	186	0	858	393	498	805	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	311	6	186	0	858	393	498	816	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9700	0.9700	0.9700	1.0000	0.9700	0.9700	0.9700	0.9700	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	80	2	48	0	221	101	128	210	0
Total Analysis Volume [veh/h]	0	0	0	321	6	192	0	885	405	513	841	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	20	0	0	49	0	31	80	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	C	L	C
C, Cycle Length [s]		100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		12	12	12	59	59	19	82
g / C, Green / Cycle		0.12	0.12	0.12	0.59	0.59	0.19	0.82
(v / s)_i Volume / Saturation Flow Rate		0.10	0.10	0.10	0.17	0.25	0.16	0.23
s, saturation flow rate [veh/h]		1810	1775	1615	5176	1615	3144	3618
c, Capacity [veh/h]		226	222	202	3067	957	605	2948
d1, Uniform Delay [s]		42.51	42.51	42.52	10.01	11.08	38.98	2.23
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.33	6.45	7.06	0.24	1.37	3.43	0.24
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.80	0.80	0.80	0.29	0.42	0.85	0.29
d, Delay for Lane Group [s/veh]		48.85	48.96	49.57	10.25	12.45	42.41	2.48
Lane Group LOS		D	D	D	B	B	D	A
Critical Lane Group		No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		4.70	4.62	4.23	3.06	4.91	6.29	1.33
50th-Percentile Queue Length [ft/ln]		117.43	115.40	105.87	76.46	122.70	157.14	33.24
95th-Percentile Queue Length [veh/ln]		8.25	8.14	7.61	5.50	8.54	10.40	2.39
95th-Percentile Queue Length [ft/ln]		206.29	203.48	190.25	137.62	213.53	259.94	59.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	48.90	48.96	49.51	0.00	10.25	12.45	42.41	2.48	0.00
Movement LOS				D	D	D		B	B	D	A	
d_A, Approach Delay [s/veh]	0.00			49.11			10.94			17.61		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	20.06											
Intersection LOS	C											
Intersection V/C	0.514											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	41.41	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.115	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	340	920	1540
d_b, Bicycle Delay [s]	50.00	34.45	14.58	2.65
l_b,int, Bicycle LOS Score for Intersection	4.132	2.416	2.092	2.677
Bicycle LOS	D	B	B	B

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 24: I-215 NB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	22.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.648

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	380	3	480	0	0	0	225	951	0	0	925	644
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	380	3	480	0	0	0	225	951	0	0	936	644
Peak Hour Factor	0.9960	0.9960	0.9960	0.9960	1.0000	0.9960	0.9960	0.9960	1.0000	1.0000	0.9960	0.9960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	1	120	0	0	0	56	239	0	0	235	162
Total Analysis Volume [veh/h]	382	3	482	0	0	0	226	955	0	0	940	647
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	12	82	0	0	70	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	37	37	37		9	57	45	45
g / C, Green / Cycle	0.37	0.37	0.37		0.09	0.57	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.16	0.17	0.18		0.07	0.26	0.14	0.40
s, saturation flow rate [veh/h]	1810	1671	1615		3144	3618	6901	1615
c, Capacity [veh/h]	671	620	599		283	2058	3098	725
d1, Uniform Delay [s]	23.66	23.88	23.98		44.61	12.62	17.58	25.33
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.11	2.48	2.66		5.16	0.16	0.05	6.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.46	0.47		0.80	0.46	0.30	0.89
d, Delay for Lane Group [s/veh]	25.76	26.36	26.64		49.77	12.79	17.63	31.79
Lane Group LOS	C	C	C		D	B	B	C
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.56	5.48	5.44		2.93	5.96	3.40	14.74
50th-Percentile Queue Length [ft/ln]	139.01	136.91	136.01		73.23	149.02	84.97	368.49
95th-Percentile Queue Length [veh/ln]	9.43	9.31	9.27		5.27	9.96	6.12	21.04
95th-Percentile Queue Length [ft/ln]	235.69	232.86	231.64		131.81	249.12	152.94	525.90

Movement, Approach, & Intersection Results

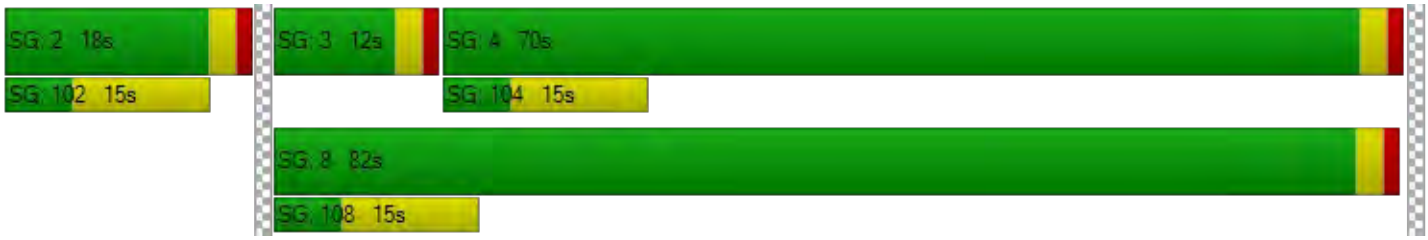
d_M, Delay for Movement [s/veh]	25.91	26.36	26.53	0.00	0.00	0.00	49.77	12.79	0.00	0.00	17.63	31.79
Movement LOS	C	C	C				D	B			B	C
d_A, Approach Delay [s/veh]	26.25			0.00			19.86			23.40		
Approach LOS	C			A			B			C		
d_I, Intersection Delay [s/veh]	22.93											
Intersection LOS	C											
Intersection V/C	0.648											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.229	2.149	3.037	3.022
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	0	1580	1340
d_b, Bicycle Delay [s]	36.13	50.00	2.21	5.45
l_b,int, Bicycle LOS Score for Intersection	2.990	4.132	2.534	2.214
Bicycle LOS	C	D	B	B

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: E St / 5th St

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	94	309	45	28	163	60	26	611	42	44	893	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	309	45	28	163	60	26	611	42	44	904	24
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	81	12	7	43	16	7	161	11	12	238	6
Total Analysis Volume [veh/h]	99	325	47	29	172	63	27	643	44	46	952	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	28.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	25	63	0	10	48	0	0	17	0	0	17	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	6	0	0	6	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	20	4	17	57	57	57	57	57	57
g / C, Green / Cycle	0.07	0.23	0.04	0.19	0.63	0.63	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.02	0.13	0.05	0.18	0.18	0.06	0.26	0.26
s, saturation flow rate [veh/h]	1714	1859	1714	1814	585	1900	1858	767	1900	1883
c, Capacity [veh/h]	130	422	70	348	348	1201	1174	468	1201	1191
d1, Uniform Delay [s]	40.79	33.61	42.12	33.76	13.81	7.45	7.45	11.71	8.20	8.20
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.82	6.15	3.91	2.29	0.43	0.61	0.62	0.42	1.03	1.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.88	0.42	0.68	0.08	0.29	0.29	0.10	0.41	0.41
d, Delay for Lane Group [s/veh]	49.60	39.77	46.03	36.05	14.24	8.05	8.07	12.13	9.23	9.24
Lane Group LOS	D	D	D	D	B	A	A	B	A	A
Critical Lane Group	No	Yes	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.45	8.38	0.70	4.90	0.34	2.87	2.82	0.52	4.50	4.46
50th-Percentile Queue Length [ft/ln]	61.14	209.41	17.46	122.42	8.56	71.76	70.41	12.92	112.49	111.56
95th-Percentile Queue Length [veh/ln]	4.40	13.12	1.26	8.53	0.62	5.17	5.07	0.93	7.98	7.93
95th-Percentile Queue Length [ft/ln]	110.06	328.07	31.42	213.15	15.41	129.18	126.74	23.26	199.46	198.17

Movement, Approach, & Intersection Results

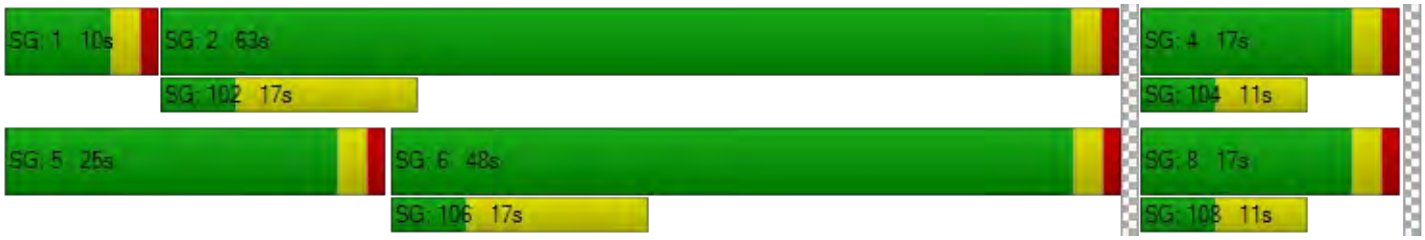
d_M, Delay for Movement [s/veh]	49.60	39.77	39.77	46.03	36.05	36.05	14.24	8.06	8.07	12.13	9.24	9.24
Movement LOS	D	D	D	D	D	D	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	41.83			37.14			8.30			9.37		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	18.21											
Intersection LOS	B											
Intersection V/C	0.475											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.245	2.188	2.950	2.641
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	1000	311	311
d_b, Bicycle Delay [s]	5.00	11.25	32.09	32.09
l_b,int, Bicycle LOS Score for Intersection	2.337	1.995	2.149	2.404
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Arrowhead Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.358

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	107	411	77	28	146	51	60	575	35	52	741	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	411	77	28	146	51	60	575	35	52	752	30
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	108	20	7	38	13	16	151	9	14	198	8
Total Analysis Volume [veh/h]	113	433	81	29	154	54	63	605	37	55	792	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	4	0	1	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	20	0	0	20	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	37	0	0	53	0	0	53	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	19	19	19	19	19	19	61	61	61	61	61	61
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.21	0.21	0.67	0.67	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.09	0.14	0.14	0.03	0.06	0.06	0.09	0.17	0.17	0.07	0.22	0.22
s, saturation flow rate [veh/h]	1192	1900	1798	901	1900	1738	675	1900	1862	800	1900	1874
c, Capacity [veh/h]	242	405	383	131	405	370	466	1284	1258	555	1284	1266
d1, Uniform Delay [s]	37.11	32.34	32.38	41.40	29.51	29.60	9.13	5.70	5.71	7.96	6.05	6.05
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.40	1.76	1.90	0.85	0.34	0.40	0.60	0.47	0.48	0.36	0.67	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.65	0.65	0.22	0.26	0.28	0.14	0.25	0.25	0.10	0.32	0.32
d, Delay for Lane Group [s/veh]	38.51	34.11	34.28	42.25	29.85	30.00	9.73	6.18	6.19	8.31	6.72	6.73
Lane Group LOS	D	C	C	D	C	C	A	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.43	5.32	5.09	0.65	1.92	1.86	0.62	2.22	2.18	0.49	3.02	2.98
50th-Percentile Queue Length [ft/ln]	60.69	133.04	127.19	16.26	48.03	46.42	15.61	55.43	54.50	12.13	75.52	74.59
95th-Percentile Queue Length [veh/ln]	4.37	9.10	8.79	1.17	3.46	3.34	1.12	3.99	3.92	0.87	5.44	5.37
95th-Percentile Queue Length [ft/ln]	109.24	227.62	219.67	29.27	86.45	83.56	28.09	99.77	98.10	21.83	135.94	134.26

Movement, Approach, & Intersection Results

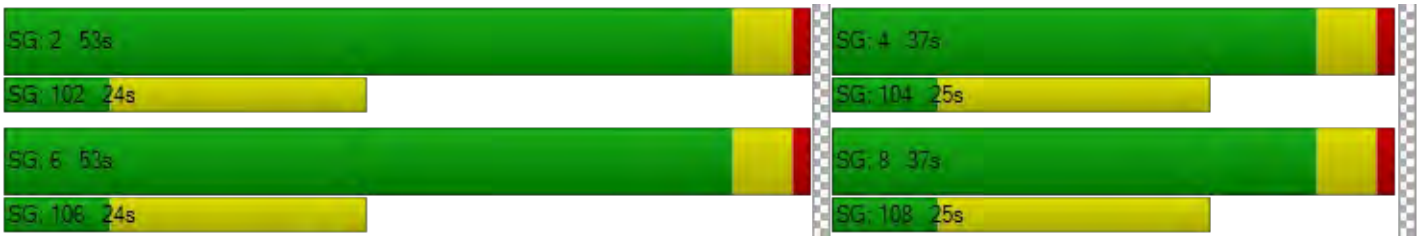
d_M, Delay for Movement [s/veh]	38.51	34.17	34.28	42.25	29.90	30.00	9.73	6.18	6.19	8.31	6.72	6.73
Movement LOS	D	C	C	D	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	34.97			31.43			6.50			6.82		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	16.32											
Intersection LOS	B											
Intersection V/C	0.358											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.548	2.538	2.785	2.651
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	1067	1067
d_b, Bicycle Delay [s]	18.69	18.69	9.80	9.80
l_b,int, Bicycle LOS Score for Intersection	2.077	1.755	2.141	2.285
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Waterman Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	30.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	254	898	207	59	597	132	137	514	159	94	291	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	898	207	59	597	132	137	514	159	94	302	34
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	230	53	15	153	34	35	132	41	24	78	9
Total Analysis Volume [veh/h]	261	922	213	61	613	136	141	528	163	97	310	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	5.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	36	0	12	31	0	9	33	0	9	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	4.00	2.00	4.00	4.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	13	42	42	4	33	33	29	20	20	29	20	20
g / C, Green / Cycle	0.14	0.47	0.47	0.05	0.37	0.37	0.32	0.22	0.22	0.32	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.15	0.25	0.13	0.04	0.14	0.14	0.11	0.19	0.19	0.10	0.09	0.02
s, saturation flow rate [veh/h]	1714	3618	1615	1714	3618	1731	1238	1900	1748	993	3618	1615
c, Capacity [veh/h]	248	1679	749	79	1324	633	446	424	390	306	807	360
d1, Uniform Delay [s]	38.50	17.35	14.89	42.44	21.02	21.08	22.70	33.50	33.51	23.40	29.71	27.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.12	0.12	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	42.04	1.30	0.95	14.31	0.83	1.79	0.40	5.31	5.83	0.59	0.30	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.05	0.55	0.28	0.77	0.38	0.39	0.32	0.85	0.85	0.32	0.38	0.10
d, Delay for Lane Group [s/veh]	80.54	18.65	15.84	56.75	21.86	22.87	23.10	38.81	39.34	23.99	30.01	27.88
Lane Group LOS	F	B	B	E	C	C	C	D	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.25	6.79	2.77	1.64	3.94	4.02	2.21	7.97	7.40	1.49	2.84	0.60
50th-Percentile Queue Length [ft/ln]	206.18	169.80	69.29	41.05	98.61	100.44	55.22	199.15	184.98	37.37	70.99	15.09
95th-Percentile Queue Length [veh/ln]	13.26	11.07	4.99	2.96	7.10	7.23	3.98	12.59	11.86	2.69	5.11	1.09
95th-Percentile Queue Length [ft/ln]	331.46	276.66	124.72	73.89	177.50	180.80	99.39	314.86	296.51	67.26	127.78	27.17

Movement, Approach, & Intersection Results

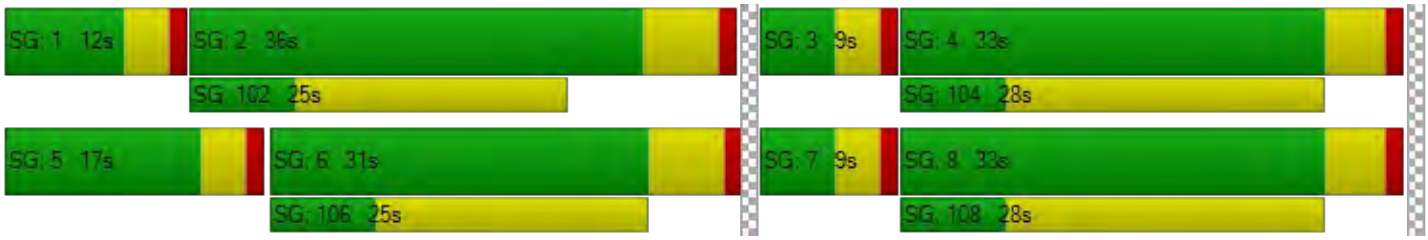
d_M, Delay for Movement [s/veh]	80.54	18.65	15.84	56.75	22.04	22.87	23.10	38.98	39.34	23.99	30.01	27.88
Movement LOS	F	B	B	E	C	C	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	29.79			24.79			36.36			28.52		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	30.04											
Intersection LOS	C											
Intersection V/C	0.526											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.943	2.812	2.599	2.655
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	556	622	622
d_b, Bicycle Delay [s]	20.00	23.47	21.36	21.36
l_b,int, Bicycle LOS Score for Intersection	2.711	2.005	2.246	1.924
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Tippecanoe Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	33.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

Intersection Setup

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	72	582	77	60	320	24	59	734	54	62	257	58
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	582	77	60	320	24	59	734	54	62	268	58
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	153	20	16	84	6	16	193	14	16	71	15
Total Analysis Volume [veh/h]	76	613	81	63	337	25	62	773	57	65	282	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	54	62	0	10	18	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	33	33	6	33	33	6	43	43	6	43	43
g / C, Green / Cycle	0.06	0.33	0.33	0.06	0.33	0.33	0.06	0.43	0.43	0.06	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.04	0.19	0.19	0.04	0.10	0.10	0.04	0.41	0.04	0.04	0.15	0.04
s, saturation flow rate [veh/h]	1714	1900	1823	1714	1900	1854	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	106	630	605	99	623	608	102	820	697	100	819	696
d1, Uniform Delay [s]	46.08	27.44	27.45	46.07	24.97	24.99	45.91	27.21	16.73	46.06	19.00	16.82
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.24	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.86	3.59	3.75	6.55	1.19	1.23	5.80	11.71	0.05	6.83	0.25	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.56	0.56	0.63	0.29	0.30	0.61	0.94	0.08	0.65	0.34	0.09
d, Delay for Lane Group [s/veh]	54.94	31.03	31.20	52.63	26.16	26.23	51.71	38.92	16.78	52.90	19.25	16.87
Lane Group LOS	D	C	C	D	C	C	D	D	B	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.10	7.45	7.19	1.70	3.39	3.34	1.66	19.48	0.77	1.76	4.33	0.83
50th-Percentile Queue Length [ft/ln]	52.59	186.13	179.66	42.59	84.80	83.61	41.52	486.95	19.29	44.06	108.17	20.69
95th-Percentile Queue Length [veh/ln]	3.79	11.92	11.58	3.07	6.11	6.02	2.99	26.72	1.39	3.17	7.74	1.49
95th-Percentile Queue Length [ft/ln]	94.66	298.00	289.57	76.66	152.64	150.49	74.73	667.89	34.73	79.31	193.45	37.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.94	31.10	31.20	52.63	26.19	26.23	51.71	38.92	16.78	52.90	19.25	16.87
Movement LOS	D	C	C	D	C	C	D	D	B	D	B	B
d_A, Approach Delay [s/veh]	33.46			30.11			38.40			24.26		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	33.15											
Intersection LOS	C											
Intersection V/C	0.696											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.546	2.533	2.555	2.565
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1180	300
d_b, Bicycle Delay [s]	36.13	36.13	8.41	36.13
l_b,int, Bicycle LOS Score for Intersection	2.195	1.910	3.031	2.233
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 29: Del Rosa Dr / 5th St

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.686

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	39	343	24	48	215	268	526	398	21	16	119	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	343	24	48	215	268	526	398	21	16	130	36
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	90	6	13	56	70	138	104	6	4	34	9
Total Analysis Volume [veh/h]	41	360	25	50	226	281	552	418	22	17	136	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	71	0	0	71	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	41	41	41	41	53	53	53	53
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.53	0.53	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.15	0.14	0.18	0.19	0.49	0.26	0.07	0.06
s, saturation flow rate [veh/h]	1256	1698	1576	1470	1116	1714	1367	1622
c, Capacity [veh/h]	566	705	697	610	658	899	760	851
d1, Uniform Delay [s]	19.44	19.89	20.28	21.14	24.88	15.20	12.32	12.05
k, delay calibration	0.50	0.50	0.50	0.50	0.28	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.57	1.30	1.68	2.49	7.22	0.41	0.07	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.34	0.40	0.46	0.84	0.49	0.12	0.12
d, Delay for Lane Group [s/veh]	21.01	21.19	21.97	23.63	32.10	15.61	12.39	12.11
Lane Group LOS	C	C	C	C	C	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	3.03	3.97	4.65	5.07	12.98	6.20	0.98	1.13
50th-Percentile Queue Length [ft/ln]	75.69	99.28	116.17	126.79	324.40	154.92	24.62	28.14
95th-Percentile Queue Length [veh/ln]	5.45	7.15	8.18	8.77	18.88	10.28	1.77	2.03
95th-Percentile Queue Length [ft/ln]	136.24	178.70	204.56	219.13	472.09	256.99	44.32	50.64

Movement, Approach, & Intersection Results

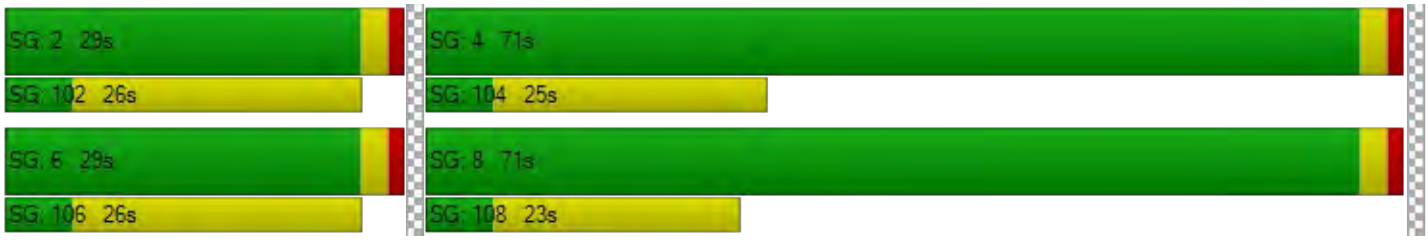
d_M, Delay for Movement [s/veh]	21.01	21.12	21.19	21.97	21.97	23.63	32.10	15.61	15.61	12.39	12.26	12.11
Movement LOS	C	C	C	C	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	21.11			22.80			24.79			12.24		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.45											
Intersection LOS	C											
Intersection V/C	0.686											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.330	3.290	2.549	2.511
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	520	1360	1360
d_b, Bicycle Delay [s]	27.38	27.38	5.12	5.12
l_b,int, Bicycle LOS Score for Intersection	1.911	2.019	2.378	1.717
Bicycle LOS	A	B	B	A

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Sterling Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	518	162	170	223	42	83	367	29	106	124	166
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	11	5	0	0	3	0	0	0	6	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	523	162	170	226	42	83	367	35	106	124	166
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	138	43	45	59	11	22	97	9	28	33	44
Total Analysis Volume [veh/h]	18	551	171	179	238	44	87	386	37	112	131	175
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	51	0	0	51	0	0	49	0	0	49	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	6	0	0	6	0	0	6	0	0	6	0
Pedestrian Clearance [s]	0	13	0	0	13	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	58	58	58	58	58	58	31	31	31	31	31	31
g / C, Green / Cycle	0.58	0.58	0.58	0.58	0.58	0.58	0.31	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.02	0.20	0.20	0.24	0.08	0.08	0.16	0.15	0.02	0.24	0.08	0.11
s, saturation flow rate [veh/h]	1115	1900	1748	743	1900	1799	1278	1729	1615	475	1729	1615
c, Capacity [veh/h]	679	1109	1020	429	1109	1050	442	530	495	217	530	495
d1, Uniform Delay [s]	10.55	10.80	10.81	17.79	9.38	9.39	31.13	28.36	24.62	41.23	26.03	26.98
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.07	0.83	0.91	2.98	0.24	0.26	0.80	0.72	0.06	1.91	0.24	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.34	0.34	0.42	0.13	0.13	0.48	0.50	0.07	0.52	0.25	0.35
d, Delay for Lane Group [s/veh]	10.62	11.63	11.72	20.77	9.62	9.65	31.93	29.07	24.68	43.15	26.27	27.41
Lane Group LOS	B	B	B	C	A	A	C	C	C	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.19	4.32	4.01	3.08	1.43	1.38	4.48	5.17	0.63	2.75	2.36	3.27
50th-Percentile Queue Length [ft/ln]	4.81	107.91	100.36	76.99	35.65	34.40	111.98	129.20	15.72	68.68	58.92	81.84
95th-Percentile Queue Length [veh/ln]	0.35	7.72	7.23	5.54	2.57	2.48	7.95	8.90	1.13	4.95	4.24	5.89
95th-Percentile Queue Length [ft/ln]	8.66	193.09	180.65	138.59	64.17	61.92	198.76	222.40	28.30	123.63	106.06	147.31

Movement, Approach, & Intersection Results

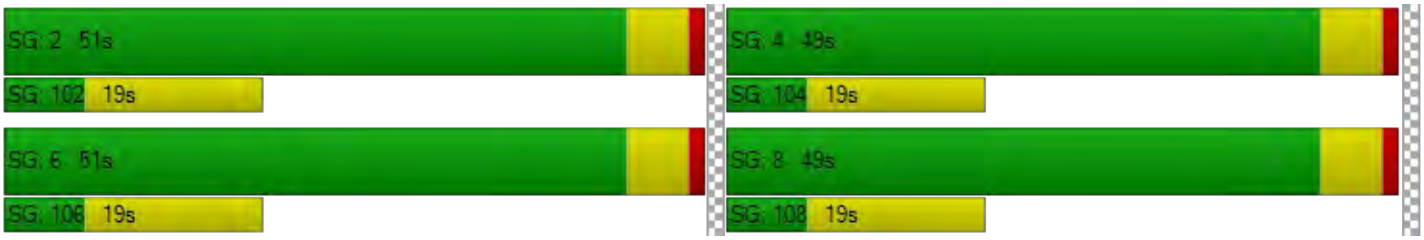
d_M, Delay for Movement [s/veh]	10.62	11.66	11.72	20.77	9.63	9.65	31.93	29.99	24.68	43.15	26.27	27.41
Movement LOS	B	B	B	C	A	A	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	11.65			13.96			29.94			31.27		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.38											
Intersection LOS	C											
Intersection V/C	0.477											

Other Modes

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	40.50	40.50	40.50	40.50
l_p,int, Pedestrian LOS Score for Intersection	2.801	2.678	2.468	2.785
Crosswalk LOS	C	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	910	910	870	870
d_b, Bicycle Delay [s]	14.85	14.85	15.96	15.96
l_b,int, Bicycle LOS Score for Intersection	2.170	1.940	1.980	1.904
Bicycle LOS	B	A	A	A

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Victoria Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.622

Intersection Setup

Name										5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name										5th Street		
Base Volume Input [veh/h]	42	501	149	75	217	39	101	482	137	30	238	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	4	22	8	0	13	0	0	0	2	5	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	523	157	75	230	39	101	482	139	35	238	109
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	138	41	20	61	10	27	127	37	9	63	29
Total Analysis Volume [veh/h]	48	551	165	79	242	41	106	507	146	37	251	115
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	18.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.8	0.0	0.0	4.8	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	28	0	0	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.8	0.0	0.0	3.8	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		Yes			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.80	5.80	5.80	5.80	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.80	3.80	3.80	3.80	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	19	19	19	19	24	24	24	24
g / C, Green / Cycle	0.35	0.35	0.35	0.35	0.44	0.44	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.23	0.23	0.26	0.15	0.10	0.36	0.05	0.20
s, saturation flow rate [veh/h]	1757	1600	414	1681	1032	1828	792	1800
c, Capacity [veh/h]	682	555	256	583	391	802	194	790
d1, Uniform Delay [s]	15.03	15.17	19.38	13.82	17.16	13.47	24.41	10.87
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	1.30	1.13	0.51	1.71	8.88	2.17	1.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.65	0.43	0.43	0.27	0.81	0.19	0.46
d, Delay for Lane Group [s/veh]	15.85	16.47	20.51	14.33	18.86	22.35	26.58	12.82
Lane Group LOS	B	B	C	B	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.78	3.52	1.32	2.19	1.19	7.76	0.55	3.04
50th-Percentile Queue Length [ft/ln]	94.48	87.98	33.02	54.83	29.86	193.88	13.76	76.00
95th-Percentile Queue Length [veh/ln]	6.80	6.33	2.38	3.95	2.15	12.32	0.99	5.47
95th-Percentile Queue Length [ft/ln]	170.06	158.37	59.44	98.70	53.75	308.06	24.76	136.81

Movement, Approach, & Intersection Results

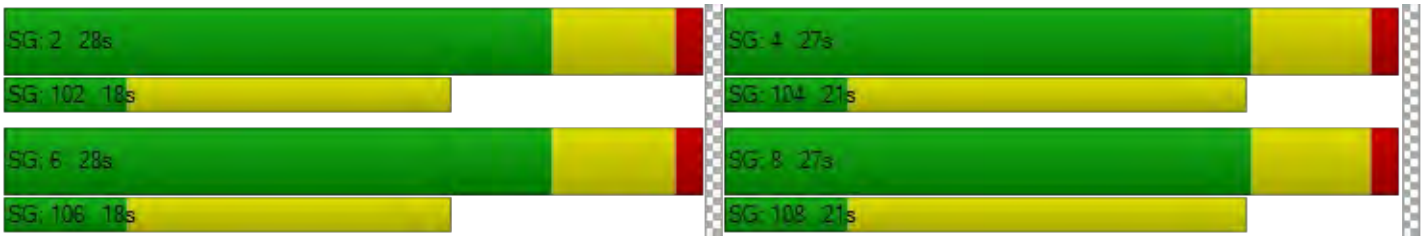
d_M, Delay for Movement [s/veh]	15.85	16.07	16.47	20.51	15.10	14.33	18.86	22.35	22.35	26.58	12.82	12.82
Movement LOS	B	B	B	C	B	B	B	C	C	C	B	B
d_A, Approach Delay [s/veh]	16.14			16.19			21.87			14.08		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	17.69											
Intersection LOS	B											
Intersection V/C	0.622											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersection	2.449	2.648	2.342	2.501
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	771	771	800	800
d_b, Bicycle Delay [s]	10.39	10.39	9.90	9.90
l_b,int, Bicycle LOS Score for Intersection	2.190	1.858	2.812	2.225
Bicycle LOS	B	A	C	B

Sequence

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Central Avenue / 5th Street

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

Intersection Setup

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	2	88	124	51	33	16	24	723	7	7	345	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	8	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	88	124	51	33	16	24	731	7	7	345	75
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	23	33	13	9	4	6	192	2	2	91	20
Total Analysis Volume [veh/h]	2	93	131	54	35	17	25	769	7	7	363	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	31	0	10	31	0	10	39	0	10	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	15	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	0	15	5	20	3	56	56	1	54	54
g / C, Green / Cycle	0.00	0.17	0.06	0.22	0.04	0.63	0.63	0.01	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.00	0.15	0.03	0.03	0.01	0.20	0.20	0.00	0.10	0.05
s, saturation flow rate [veh/h]	1619	1541	1810	1796	1714	1900	1894	1714	3618	1615
c, Capacity [veh/h]	8	260	105	399	63	1190	1186	23	2181	974
d1, Uniform Delay [s]	44.61	36.36	41.17	28.05	42.37	7.90	7.90	43.97	7.88	7.46
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.44	8.15	3.87	0.15	3.99	0.73	0.73	7.12	0.16	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.86	0.52	0.13	0.40	0.33	0.33	0.30	0.17	0.08
d, Delay for Lane Group [s/veh]	60.05	44.51	45.04	28.20	46.36	8.63	8.64	51.09	8.05	7.62
Lane Group LOS	E	D	D	C	D	A	A	D	A	A
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.08	5.28	1.26	0.90	0.61	3.38	3.37	0.20	1.47	0.63
50th-Percentile Queue Length [ft/ln]	1.96	132.03	31.58	22.58	15.20	84.60	84.36	4.97	36.65	15.68
95th-Percentile Queue Length [veh/ln]	0.14	9.05	2.27	1.63	1.09	6.09	6.07	0.36	2.64	1.13
95th-Percentile Queue Length [ft/ln]	3.53	226.26	56.85	40.65	27.35	152.27	151.84	8.95	65.96	28.22

Movement, Approach, & Intersection Results

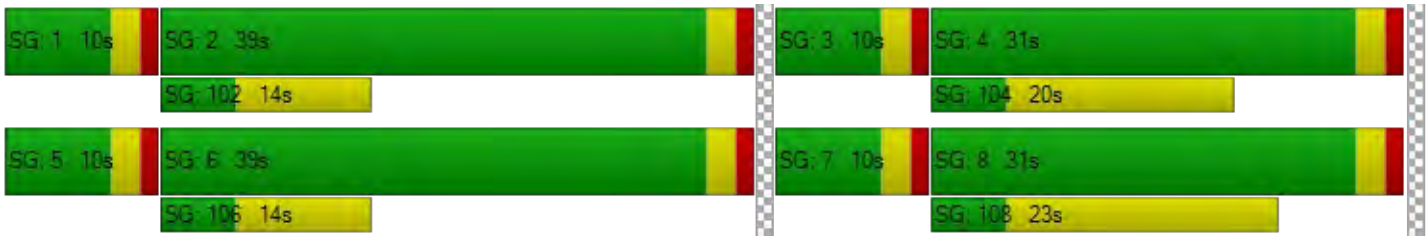
d_M, Delay for Movement [s/veh]	60.05	44.51	44.51	45.04	28.20	28.20	46.36	8.63	8.64	51.09	8.05	7.62
Movement LOS	E	D	D	D	C	C	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	44.65			36.78			9.81			8.64		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	16.26											
Intersection LOS	B											
Intersection V/C	0.421											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.031	2.040	2.532	2.682
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	622	622	800	800
d_b, Bicycle Delay [s]	21.36	21.36	16.20	16.20
l_b,int, Bicycle LOS Score for Intersection	1.933	1.735	2.220	1.930
Bicycle LOS	A	A	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Palm Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	42.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.848

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	95	638	534	201	280	40	95	794	67	190	267	146
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	4	17	30	0	8	0	0	0	2	14	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	655	564	201	288	40	95	794	69	204	267	146
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	172	148	53	76	11	25	209	18	54	70	38
Total Analysis Volume [veh/h]	104	689	594	212	303	42	100	836	73	215	281	154
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	36	0	15	35	0	15	34	0	15	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	0	0	27	0	0	26	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	38	38	12	42	42	7	26	26	12	31	31
g / C, Green / Cycle	0.08	0.38	0.38	0.12	0.42	0.42	0.07	0.26	0.26	0.12	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.37	0.12	0.08	0.03	0.06	0.23	0.05	0.13	0.08	0.10
s, saturation flow rate [veh/h]	1714	3618	1615	1714	3618	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	132	1376	614	206	1531	684	127	939	419	206	1104	493
d1, Uniform Delay [s]	45.33	23.70	30.35	44.00	18.15	17.07	45.51	35.66	28.71	44.00	26.17	26.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.81	1.30	28.97	37.27	0.29	0.17	10.13	3.17	0.20	41.66	0.12	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.50	0.97	1.03	0.20	0.06	0.79	0.89	0.17	1.05	0.25	0.31
d, Delay for Lane Group [s/veh]	55.14	25.01	59.33	81.27	18.44	17.24	55.64	38.82	28.91	85.66	26.29	27.03
Lane Group LOS	E	C	E	F	B	B	E	D	C	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.88	6.34	18.40	7.17	2.23	0.60	2.78	10.03	1.38	7.42	2.52	2.84
50th-Percentile Queue Length [ft/ln]	72.03	158.56	459.96	179.25	55.74	14.95	69.61	250.75	34.38	185.51	62.93	71.04
95th-Percentile Queue Length [veh/ln]	5.19	10.47	25.43	11.70	4.01	1.08	5.01	15.22	2.48	12.10	4.53	5.11
95th-Percentile Queue Length [ft/ln]	129.65	261.81	635.83	292.60	100.32	26.91	125.30	380.60	61.89	302.57	113.28	127.87

Movement, Approach, & Intersection Results

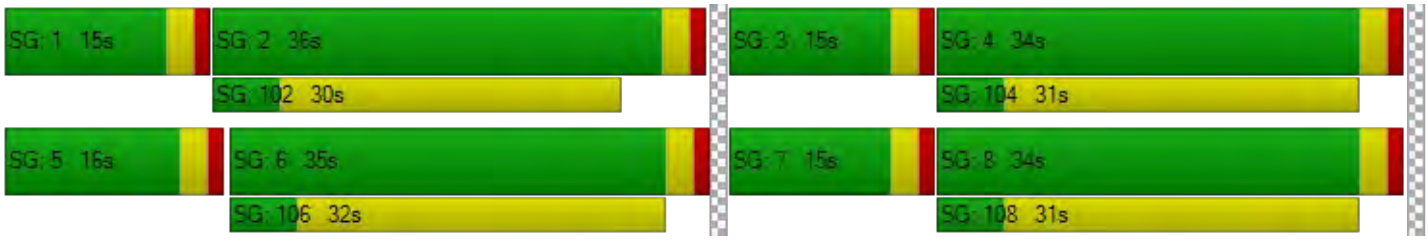
d_M, Delay for Movement [s/veh]	55.14	25.01	59.33	81.27	18.44	17.24	55.64	38.82	28.91	85.66	26.29	27.03
Movement LOS	E	C	E	F	B	B	E	D	C	F	C	C
d_A, Approach Delay [s/veh]	41.96			42.26			39.77			46.10		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	42.14											
Intersection LOS	D											
Intersection V/C	0.848											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.876	2.703	2.907	2.832
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	640	620	620
d_b, Bicycle Delay [s]	22.45	23.12	23.81	23.81
l_b,int, Bicycle LOS Score for Intersection	2.704	2.019	2.392	2.096
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Church Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.689

Intersection Setup

Name	Church Ave		5th Street		5th Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Church Ave		5th Street		5th Street	
Base Volume Input [veh/h]	198	30	58	1704	544	253
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	129	1	7	10	18	6
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	327	31	65	1714	562	259
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	8	17	451	148	68
Total Analysis Volume [veh/h]	344	33	68	1804	592	273
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	62	0	10	28	18	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	20	20	6	64	56	56
g / C, Green / Cycle	0.22	0.22	0.06	0.72	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.19	0.02	0.04	0.50	0.23	0.25
s, saturation flow rate [veh/h]	1810	1615	1810	3618	1900	1710
c, Capacity [veh/h]	394	352	115	2589	1175	1057
d1, Uniform Delay [s]	34.00	28.11	40.98	7.26	8.48	8.77
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.12	0.11	4.71	1.58	0.89	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.09	0.59	0.70	0.37	0.41
d, Delay for Lane Group [s/veh]	40.12	28.22	45.69	8.84	9.37	9.94
Lane Group LOS	D	C	D	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.76	0.57	1.60	8.14	4.00	4.18
50th-Percentile Queue Length [ft/ln]	194.00	14.34	40.03	203.39	100.09	104.60
95th-Percentile Queue Length [veh/ln]	12.33	1.03	2.88	12.81	7.21	7.53
95th-Percentile Queue Length [ft/ln]	308.22	25.81	72.05	320.34	180.16	188.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.12	28.22	45.69	8.84	9.53	9.94
Movement LOS	D	C	D	A	A	A
d_A, Approach Delay [s/veh]	39.08		10.18		9.66	
Approach LOS	D		B		A	
d_I, Intersection Delay [s/veh]	13.53					
Intersection LOS	B					
Intersection V/C	0.689					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.175	2.788	2.867
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	5.677	4.846
Bicycle LOS	D	F	E

Sequence

Ring 1	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 35: SR-210 EB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.899

Intersection Setup

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	559	9	170	0	1338	595	389	631	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	13	0	68	79	0	12	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	559	9	183	0	1406	674	389	643	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	147	2	48	0	370	177	102	169	0
Total Analysis Volume [veh/h]	0	0	0	588	9	193	0	1480	709	409	677	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	34	0	0	50	0	16	66	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		32	32	46	46	13	62
g / C, Green / Cycle		0.32	0.32	0.46	0.46	0.13	0.62
(v / s)_i Volume / Saturation Flow Rate		0.33	0.12	0.41	0.44	0.13	0.19
s, saturation flow rate [veh/h]		1811	1615	3618	1615	3144	3618
c, Capacity [veh/h]		571	509	1682	751	409	2260
d1, Uniform Delay [s]		34.24	26.63	24.23	25.52	43.50	8.66
k, delay calibration		0.50	0.50	0.11	0.43	0.11	0.11
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		50.28	2.14	1.65	19.73	20.84	0.07
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		1.05	0.38	0.88	0.94	1.00	0.30
d, Delay for Lane Group [s/veh]		84.53	28.78	25.88	45.25	64.34	8.73
Lane Group LOS		F	C	C	D	F	A
Critical Lane Group		Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		21.41	3.84	15.41	19.28	6.18	3.17
50th-Percentile Queue Length [ft/ln]		535.17	95.93	385.22	481.89	154.56	79.20
95th-Percentile Queue Length [veh/ln]		29.87	6.91	21.85	26.48	10.26	5.70
95th-Percentile Queue Length [ft/ln]		746.64	172.68	546.17	661.89	256.58	142.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	84.53	84.53	28.78	0.00	25.88	45.25	64.34	8.73	0.00
Movement LOS				F	F	C		C	D	F	A	
d_A, Approach Delay [s/veh]	0.00			70.91			32.15			29.67		
Approach LOS	A			E			C			C		
d_I, Intersection Delay [s/veh]	39.02											
Intersection LOS	D											
Intersection V/C	0.899											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.903	3.040
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	620	940	1260
d_b, Bicycle Delay [s]	50.00	23.81	14.05	6.85
l_b,int, Bicycle LOS Score for Intersection	4.132	2.863	3.366	2.456
Bicycle LOS	D	C	C	B

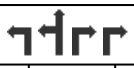
Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 36: SR-210 WB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	28.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.698

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No						No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	240	0	610	0	0	0	251	1628	0	0	802	398
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	11	0	0	0	0	0	63	5	0	0	1	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	251	0	610	0	0	0	314	1633	0	0	803	398
Peak Hour Factor	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000	0.9530	0.9530	1.0000	1.0000	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	0	160	0	0	0	82	428	0	0	211	104
Total Analysis Volume [veh/h]	263	0	640	0	0	0	329	1714	0	0	843	418
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	0	0	39	71	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	24	0	0	15	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	39	39	39		21	55	30	30
g / C, Green / Cycle	0.39	0.39	0.39		0.21	0.55	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.07	0.07	0.22		0.19	0.47	0.16	0.26
s, saturation flow rate [veh/h]	1810	1810	2859		1714	3618	5176	1615
c, Capacity [veh/h]	712	712	1125		368	1976	1560	487
d1, Uniform Delay [s]	19.82	19.82	23.68		38.14	19.56	29.15	32.92
k, delay calibration	0.50	0.50	0.50		0.12	0.32	0.11	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	0.57	2.09		8.51	3.54	0.29	7.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.18	0.57		0.89	0.87	0.54	0.86
d, Delay for Lane Group [s/veh]	20.39	20.39	25.77		46.65	23.10	29.44	39.95
Lane Group LOS	C	C	C		D	C	C	D
Critical Lane Group	No	No	Yes		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.09	2.09	6.08		8.58	16.82	5.58	10.26
50th-Percentile Queue Length [ft/ln]	52.27	52.27	151.92		214.61	420.40	139.61	256.55
95th-Percentile Queue Length [veh/ln]	3.76	3.76	10.12		13.39	23.54	9.46	15.52
95th-Percentile Queue Length [ft/ln]	94.09	94.09	252.99		334.73	588.53	236.50	387.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.39	20.39	25.77	0.00	0.00	0.00	46.65	23.10	0.00	0.00	29.44	39.95
Movement LOS	C	C	C				D	C			C	D
d_A, Approach Delay [s/veh]	24.21			0.00			26.89			32.92		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	28.12											
Intersection LOS	C											
Intersection V/C	0.698											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	3.039	3.047
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	0	1360	580
d_b, Bicycle Delay [s]	27.38	50.00	5.12	25.21
l_b,int, Bicycle LOS Score for Intersection	3.050	4.132	3.245	2.253
Bicycle LOS	C	D	C	B

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 37: Tippecanoe Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	36.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

Intersection Setup

Name				Tippecanoe Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Tippecanoe Avenue								
Base Volume Input [veh/h]	119	643	520	42	338	39	70	846	108	257	330	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	9	0	0	0	0	3	0	15	5	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	643	529	42	338	39	70	849	108	272	335	54
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	169	139	11	89	10	18	223	28	72	88	14
Total Analysis Volume [veh/h]	125	677	557	44	356	41	74	894	114	286	353	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	40	40	10	38	0	15	33	0	17	35	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	43	43	5	39	39	6	30	30	11	34	34
g / C, Green / Cycle	0.09	0.43	0.43	0.05	0.39	0.39	0.06	0.30	0.30	0.11	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.07	0.19	0.34	0.03	0.11	0.11	0.04	0.27	0.27	0.09	0.10	0.04
s, saturation flow rate [veh/h]	1714	3618	1615	1714	1900	1832	1714	1900	1826	3329	3618	1615
c, Capacity [veh/h]	152	1544	689	86	737	711	108	562	540	358	1231	549
d1, Uniform Delay [s]	44.78	20.20	25.07	46.31	20.94	20.96	45.89	34.01	34.01	43.58	24.12	22.56
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.34	0.34	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.36	0.91	9.85	4.68	0.91	0.96	7.50	16.29	16.86	4.14	0.13	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.44	0.81	0.51	0.27	0.28	0.69	0.92	0.92	0.80	0.29	0.10
d, Delay for Lane Group [s/veh]	55.13	21.11	34.92	50.99	21.85	21.92	53.39	50.30	50.88	47.72	24.25	22.65
Lane Group LOS	E	C	C	D	C	C	D	D	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.46	5.62	12.96	1.17	3.36	3.29	2.02	14.29	13.82	3.63	3.04	0.92
50th-Percentile Queue Length [ft/ln]	86.55	140.43	323.98	29.33	83.97	82.14	50.42	357.25	345.60	90.87	75.95	23.09
95th-Percentile Queue Length [veh/ln]	6.23	9.50	18.86	2.11	6.05	5.91	3.63	20.49	19.92	6.54	5.47	1.66
95th-Percentile Queue Length [ft/ln]	155.79	237.60	471.57	52.80	151.15	147.85	90.75	512.23	498.05	163.57	136.71	41.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.13	21.11	34.92	50.99	21.88	21.92	53.39	50.54	50.88	47.72	24.25	22.65
Movement LOS	E	C	C	D	C	C	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	29.90			24.79			50.77			33.76		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	36.33											
Intersection LOS	D											
Intersection V/C	0.727											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.803	2.550	2.619	2.999
Crosswalk LOS	C	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	740	700	600	640
d_b, Bicycle Delay [s]	19.85	21.13	24.50	23.12
l_b,int, Bicycle LOS Score for Intersection	2.681	1.923	2.452	2.134
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 38: Del Rosa Dr / 3rd St

Control Type:	Signalized	Delay (sec / veh):	57.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.742

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	207	811	44	131	69	116	1394	7	351	569	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	11	0	0	20	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	207	811	44	131	69	116	1405	7	351	589	26
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	54	213	12	34	18	31	370	2	92	155	7
Total Analysis Volume [veh/h]	13	218	854	46	138	73	122	1479	7	369	620	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	25	25	13	28	0	20	47	0	15	42	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	28	43	5	31	31	9	43	43	12	46	46
g / C, Green / Cycle	0.02	0.28	0.43	0.05	0.31	0.31	0.09	0.43	0.43	0.12	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.01	0.06	0.53	0.03	0.06	0.06	0.07	0.41	0.00	0.12	0.17	0.17
s, saturation flow rate [veh/h]	1714	3618	1615	1714	1900	1688	1714	3618	1615	3144	1900	1872
c, Capacity [veh/h]	39	1001	689	89	581	516	154	1561	697	377	877	864
d1, Uniform Delay [s]	48.12	27.85	28.67	46.17	25.55	25.65	44.59	27.35	16.24	43.87	17.50	17.50
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.91	0.50	119.99	4.55	0.71	0.86	8.78	3.88	0.01	16.92	0.26	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.22	1.24	0.52	0.19	0.20	0.79	0.95	0.01	0.98	0.37	0.37
d, Delay for Lane Group [s/veh]	53.03	28.35	148.66	50.72	26.26	26.51	53.37	31.22	16.24	60.78	17.76	17.77
Lane Group LOS	D	C	F	D	C	C	D	C	B	E	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.37	2.06	38.61	1.22	2.00	1.91	3.32	16.99	0.09	5.39	4.80	4.73
50th-Percentile Queue Length [ft/ln]	9.28	51.58	965.13	30.55	49.95	47.79	83.03	424.79	2.30	134.83	120.07	118.35
95th-Percentile Queue Length [veh/ln]	0.67	3.71	56.30	2.20	3.60	3.44	5.98	23.75	0.17	9.20	8.40	8.30
95th-Percentile Queue Length [ft/ln]	16.71	92.85	1407.44	54.99	89.91	86.02	149.45	593.80	4.13	230.05	209.93	207.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.03	28.35	148.66	50.72	26.31	26.51	53.37	31.22	16.24	60.78	17.76	17.77
Movement LOS	D	C	F	D	C	C	D	C	B	E	B	B
d_A, Approach Delay [s/veh]	123.34			30.74			32.84			33.39		
Approach LOS	F			C			C			C		
d_I, Intersection Delay [s/veh]	57.60											
Intersection LOS	E											
Intersection V/C	0.742											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.719	2.428	2.836	3.073
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	440	500	880	780
d_b, Bicycle Delay [s]	30.42	28.13	15.68	18.61
l_b,int, Bicycle LOS Score for Intersection	2.455	1.772	2.886	2.398
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 39: Sterling Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	21.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.713

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	59	335	653	1542	585	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	9	0	0	11	20	16
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	335	653	1553	605	56
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	88	172	409	159	15
Total Analysis Volume [veh/h]	72	353	687	1635	637	59
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	18	0	64	82	18	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	14	14	42	80	34	34
g / C, Green / Cycle	0.14	0.14	0.42	0.80	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.40	0.45	0.18	0.19
s, saturation flow rate [veh/h]	1810	2859	1714	3618	1900	1845
c, Capacity [veh/h]	258	407	727	2885	652	633
d1, Uniform Delay [s]	38.29	41.95	27.66	3.74	26.40	26.58
k, delay calibration	0.11	0.11	0.22	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.58	5.67	12.28	0.81	3.11	3.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.87	0.94	0.57	0.53	0.55
d, Delay for Lane Group [s/veh]	38.87	47.61	39.93	4.55	29.51	29.99
Lane Group LOS	D	D	D	A	C	C
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.61	4.54	17.51	4.41	7.10	7.18
50th-Percentile Queue Length [ft/ln]	40.30	113.43	437.81	110.18	177.59	179.60
95th-Percentile Queue Length [veh/ln]	2.90	8.03	24.38	7.85	11.47	11.58
95th-Percentile Queue Length [ft/ln]	72.54	200.77	609.39	196.25	286.86	289.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.87	47.61	39.93	4.55	29.73	29.99
Movement LOS	D	D	D	A	C	C
d_A, Approach Delay [s/veh]	46.13		15.02		29.75	
Approach LOS	D		B		C	
d_I, Intersection Delay [s/veh]	21.84					
Intersection LOS	C					
Intersection V/C	0.713					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.535	2.952	2.723
Crosswalk LOS	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	6.048	4.707
Bicycle LOS	D	F	E

Sequence

Ring 1	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 40: Victoria Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	39	42	166	21	187	509	1125	7	35	300	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	32	13	6	0	18	2	21	27	0	8	10	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	52	48	166	39	189	530	1152	7	43	310	156
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	14	13	44	10	50	139	303	2	11	82	41
Total Analysis Volume [veh/h]	53	55	51	175	41	199	558	1213	7	45	326	164
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	32	0	15	36	0	20	43	0	10	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	24	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	8	8	12	15	15	34	63	63	5	34	34
g / C, Green / Cycle	0.05	0.08	0.08	0.12	0.15	0.15	0.34	0.63	0.63	0.05	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.03	0.10	0.02	0.12	0.33	0.32	0.32	0.03	0.14	0.14
s, saturation flow rate [veh/h]	1714	1900	1618	1714	1900	1615	1714	1900	1896	1714	1900	1690
c, Capacity [veh/h]	92	153	130	204	277	235	589	1198	1195	86	640	570
d1, Uniform Delay [s]	46.18	43.53	43.68	43.20	37.30	41.62	31.95	10.06	10.06	46.35	25.41	25.50
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.37	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.49	1.40	1.95	9.85	0.24	8.13	21.44	1.55	1.56	4.92	1.87	2.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.36	0.40	0.86	0.15	0.85	0.95	0.51	0.51	0.53	0.40	0.41
d, Delay for Lane Group [s/veh]	51.67	44.93	45.63	53.05	37.54	49.75	53.40	11.61	11.62	51.27	27.28	27.68
Lane Group LOS	D	D	D	D	D	D	D	B	B	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.42	1.33	1.28	4.77	0.89	5.26	16.20	7.15	7.15	1.20	4.94	4.55
50th-Percentile Queue Length [ft/ln]	35.51	33.18	31.99	119.13	22.31	131.57	405.05	178.75	178.79	30.08	123.54	113.86
95th-Percentile Queue Length [veh/ln]	2.56	2.39	2.30	8.35	1.61	9.03	22.80	11.54	11.54	2.17	8.59	8.05
95th-Percentile Queue Length [ft/ln]	63.92	59.73	57.58	208.63	40.16	225.63	570.08	288.38	288.43	54.15	214.68	201.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.67	44.94	45.63	53.05	37.54	49.75	53.40	11.61	11.62	51.27	27.36	27.68
Movement LOS	D	D	D	D	D	D	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	47.40			49.93			24.73			29.47		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	30.48											
Intersection LOS	C											
Intersection V/C	0.618											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.356	2.539	2.766	2.691
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	660	800	600
d_b, Bicycle Delay [s]	25.21	22.45	18.00	24.50
l_b,int, Bicycle LOS Score for Intersection	1.691	1.902	3.026	2.001
Bicycle LOS	A	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 41: Central Ave / 3rd St

Control Type:	Two-way stop	Delay (sec / veh):	115.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name				Central Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Central Avenue								
Base Volume Input [veh/h]	1	3	0	22	0	30	191	1130	0	0	464	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	1	2	31	0	0	17	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	3	0	22	0	31	193	1161	0	0	481	26
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	6	0	8	51	306	0	0	127	7
Total Analysis Volume [veh/h]	1	3	0	23	0	33	203	1222	0	0	506	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.08	0.00	0.36	0.00	0.04	0.19	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	115.36	108.89	23.99	77.09	0.00	26.17	9.27	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	C	F		D	A	A			A	A
95th-Percentile Queue Length [veh/ln]	0.33	0.33	0.33	1.73	0.00	1.73	0.72	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	8.19	8.19	8.19	43.13	0.00	43.13	17.96	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	110.51			47.08			1.32			0.00		
Approach LOS	F			E			A			A		
d_I, Intersection Delay [s/veh]	2.46											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 42: Palm Ave_Alabama St / 3rd St

Control Type:	Signalized	Delay (sec / veh):	71.5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	434	829	95	80	391	84	419	362	0	77	27	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	6	32	0	0	13	11	20	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	440	861	95	80	404	95	439	362	0	77	27	100
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	116	227	25	21	106	25	116	95	0	20	7	26
Total Analysis Volume [veh/h]	463	906	100	84	425	100	462	381	0	81	28	105
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	42	0	12	31	0	16	36	0	10	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	20	53	53	6	39	39	13	22	6	16
g / C, Green / Cycle	0.20	0.53	0.53	0.06	0.39	0.39	0.13	0.22	0.06	0.16
(v / s)_i Volume / Saturation Flow Rate	0.27	0.27	0.27	0.05	0.12	0.06	0.16	0.20	0.05	0.08
s, saturation flow rate [veh/h]	1714	1900	1835	1619	3618	1615	2959	1900	1714	1668
c, Capacity [veh/h]	343	1005	970	105	1425	636	385	424	108	260
d1, Uniform Delay [s]	40.00	15.16	15.21	46.09	20.80	19.57	43.50	37.75	46.09	38.71
k, delay calibration	0.40	0.50	0.50	0.11	0.50	0.50	0.11	0.17	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	172.45	1.83	1.93	12.71	0.54	0.53	96.10	10.39	10.03	1.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.35	0.51	0.51	0.80	0.30	0.16	1.20	0.90	0.75	0.51
d, Delay for Lane Group [s/veh]	212.45	16.99	17.14	58.80	21.34	20.10	139.60	48.14	56.12	40.26
Lane Group LOS	F	B	B	E	C	C	F	D	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	24.71	7.59	7.44	2.42	3.46	1.58	9.84	10.14	2.27	3.09
50th-Percentile Queue Length [ft/ln]	617.79	189.85	186.11	60.46	86.51	39.45	246.01	253.50	56.71	77.16
95th-Percentile Queue Length [veh/ln]	37.81	12.11	11.92	4.35	6.23	2.84	16.11	15.36	4.08	5.56
95th-Percentile Queue Length [ft/ln]	945.26	302.84	297.98	108.82	155.72	71.02	402.68	384.06	102.08	138.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	212.45	17.05	17.14	58.80	21.34	20.10	139.60	48.14	0.00	56.12	40.26	40.26
Movement LOS	F	B	B	E	C	C	F	D		E	D	D
d_A, Approach Delay [s/veh]	78.64			26.30			98.27			46.26		
Approach LOS	E			C			F			D		
d_I, Intersection Delay [s/veh]	71.54											
Intersection LOS	E											
Intersection V/C	0.635											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.692	2.891	2.586	2.200
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	780	560	660	540
d_b, Bicycle Delay [s]	18.61	25.92	22.45	26.65
l_b,int, Bicycle LOS Score for Intersection	2.772	2.062	2.951	1.913
Bicycle LOS	C	B	C	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 43: Tippecanoe Ave / Rialto Ave

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.428

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	126	1184	0	0	773	64	140	0	78	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	9	0	0	15	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	126	1193	0	0	788	64	140	0	78	0	0	0
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	314	0	0	207	17	37	0	21	0	0	0
Total Analysis Volume [veh/h]	133	1256	0	0	829	67	147	0	82	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	0	8	0	0	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	0	7	0	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	30	0	0	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Split [s]	23	67	0	10	54	0	23	0	23	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No		No		No			
Maximum Recall	No	No		No	No		No		No			
Pedestrian Recall	No	No		No	No		No		No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	10	81	0	71	71	10	10	
g / C, Green / Cycle	0.10	0.81	0.00	0.71	0.71	0.10	0.10	
(v / s)_i Volume / Saturation Flow Rate	0.08	0.35	0.00	0.24	0.24	0.08	0.05	
s, saturation flow rate [veh/h]	1714	3618	1714	1900	1851	1810	1615	
c, Capacity [veh/h]	164	2927	1	1356	1321	181	162	
d1, Uniform Delay [s]	44.31	2.79	0.00	5.38	5.38	44.05	42.64	
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	9.07	0.46	0.00	0.67	0.68	8.32	2.44	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.81	0.43	0.00	0.33	0.33	0.81	0.51	
d, Delay for Lane Group [s/veh]	53.38	3.25	0.00	6.05	6.06	52.38	45.07	
Lane Group LOS	D	A	A	A	A	D	D	
Critical Lane Group	No	Yes	No	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	3.62	2.50	0.00	3.26	3.19	3.96	2.02	
50th-Percentile Queue Length [ft/ln]	90.51	62.48	0.00	81.59	79.65	98.94	50.50	
95th-Percentile Queue Length [veh/ln]	6.52	4.50	0.00	5.87	5.73	7.12	3.64	
95th-Percentile Queue Length [ft/ln]	162.92	112.47	0.00	146.87	143.37	178.10	90.90	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.38	3.25	0.00	0.00	6.05	6.06	52.38	0.00	45.07	0.00	0.00	0.00
Movement LOS	D	A		A	A	A	D		D			
d_A, Approach Delay [s/veh]	8.05			6.06			49.76			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	11.14											
Intersection LOS	B											
Intersection V/C	0.428											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.833	0.000	2.086	1.430
Crosswalk LOS	C	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1280	1020	0	0
d_b, Bicycle Delay [s]	6.48	12.01	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	2.706	2.299	4.132	4.132
Bicycle LOS	B	B	D	D

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 44: Tippecanoe Ave / Mill St

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.751

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	245	1498	0	2	1213	291	504	8	453	25	33	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	4	0	0	7	7	4	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	245	1502	0	2	1220	298	508	8	453	25	33	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	395	0	1	321	78	134	2	119	7	9	1
Total Analysis Volume [veh/h]	258	1581	0	2	1284	314	535	8	477	26	35	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	7	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	45	55	0	10	20	20	11	25	0	10	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	Yes	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	17	59	59	0	42	42	32	32	23	32	21	21
g / C, Green / Cycle	0.17	0.59	0.59	0.00	0.42	0.42	0.32	0.32	0.23	0.32	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.15	0.29	0.29	0.00	0.35	0.19	0.20	0.27	0.22	0.03	0.01	0.00
s, saturation flow rate [veh/h]	1714	3618	1900	1714	3618	1615	1485	1340	1615	925	3618	1615
c, Capacity [veh/h]	296	2123	1115	7	1514	676	568	523	375	156	755	337
d1, Uniform Delay [s]	40.27	11.96	11.96	49.63	26.22	20.99	28.58	30.59	37.98	32.13	31.61	31.36
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.50	0.28	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.80	0.81	1.53	18.59	6.10	2.29	3.46	7.30	26.91	0.50	0.03	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.49	0.49	0.27	0.85	0.46	0.53	0.69	0.96	0.17	0.05	0.01
d, Delay for Lane Group [s/veh]	48.07	12.76	13.49	68.22	32.32	23.28	32.04	37.88	64.89	32.63	31.64	31.37
Lane Group LOS	D	B	B	E	C	C	C	D	E	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.75	6.48	7.03	0.09	14.50	5.61	6.34	6.90	11.36	0.51	0.34	0.06
50th-Percentile Queue Length [ft/ln]	168.67	162.06	175.84	2.19	362.42	140.13	158.38	172.47	284.10	12.83	8.49	1.46
95th-Percentile Queue Length [veh/ln]	11.01	10.66	11.38	0.16	20.74	9.49	10.46	11.21	16.89	0.92	0.61	0.10
95th-Percentile Queue Length [ft/ln]	275.16	266.45	284.57	3.95	518.53	237.20	261.57	280.16	422.31	23.09	15.29	2.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.07	13.01	13.49	68.22	32.32	23.28	34.43	37.88	57.13	32.63	31.64	31.37
Movement LOS	D	B	B	E	C	C	C	D	E	C	C	C
d_A, Approach Delay [s/veh]	17.93			30.59			45.73			32.03		
Approach LOS	B			C			D			C		
d_I, Intersection Delay [s/veh]	28.88											
Intersection LOS	C											
Intersection V/C	0.751											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.143	3.788	2.624	2.321
Crosswalk LOS	C	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1040	340	640	420
d_b, Bicycle Delay [s]	11.52	34.45	23.12	31.21
l_b,int, Bicycle LOS Score for Intersection	2.571	2.880	3.243	1.612
Bicycle LOS	B	C	C	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 45: Tippecanoe Ave / Central Ave

Control Type:	Signalized	Delay (sec / veh):	25.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	1	2	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	106	1504	100	237	1441	154	139	192	112	96	174	258
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	1504	100	237	1448	154	139	192	112	96	174	258
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	396	26	62	381	41	37	51	29	25	46	68
Total Analysis Volume [veh/h]	112	1583	105	249	1524	162	146	202	118	101	183	272
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	5	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2			6			8			4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	10	23	23	12	25	25	12	44	44	21	53	53
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	10	10	0	10	10	0	10	10	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	51	51	9	53	53	9	21	21	7	19	19
g / C, Green / Cycle	0.07	0.51	0.51	0.09	0.53	0.53	0.09	0.21	0.21	0.07	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.04	0.31	0.07	0.08	0.29	0.10	0.09	0.06	0.07	0.06	0.05	0.17
s, saturation flow rate [veh/h]	3144	5176	1615	3144	5176	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	210	2611	815	283	2730	852	154	760	339	129	707	316
d1, Uniform Delay [s]	45.14	17.69	13.13	44.97	15.82	12.41	45.26	33.05	33.66	45.41	34.08	38.91
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.08	1.06	0.33	8.68	0.83	0.50	22.84	0.19	0.61	9.72	0.19	6.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.61	0.13	0.88	0.56	0.19	0.95	0.27	0.35	0.78	0.26	0.86
d, Delay for Lane Group [s/veh]	47.22	18.74	13.46	53.64	16.65	12.90	68.10	33.23	34.27	55.12	34.27	45.79
Lane Group LOS	D	B	B	D	B	B	E	C	C	E	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.40	8.51	1.29	3.37	7.57	1.96	4.55	2.06	2.48	2.80	1.90	6.98
50th-Percentile Queue Length [ft/ln]	34.96	212.78	32.34	84.22	189.19	48.93	113.81	51.47	62.10	69.94	47.41	174.41
95th-Percentile Queue Length [veh/ln]	2.52	13.30	2.33	6.06	12.08	3.52	8.05	3.71	4.47	5.04	3.41	11.31
95th-Percentile Queue Length [ft/ln]	62.93	332.39	58.21	151.60	301.98	88.08	201.29	92.64	111.79	125.90	85.34	282.70

Movement, Approach, & Intersection Results

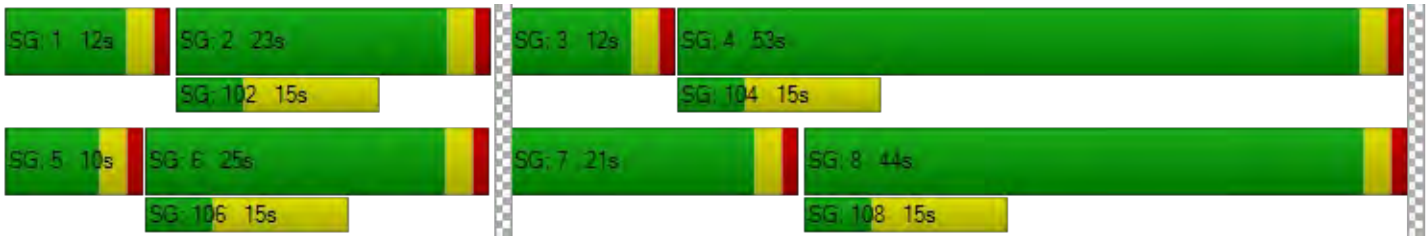
d_M, Delay for Movement [s/veh]	47.22	18.74	13.46	53.64	16.65	12.90	68.10	33.23	34.27	55.12	34.27	45.79
Movement LOS	D	B	B	D	B	B	E	C	C	E	C	D
d_A, Approach Delay [s/veh]	20.21			21.10			44.42			43.70		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	25.69											
Intersection LOS	C											
Intersection V/C	0.639											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.240	3.282	2.609	2.640
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	440	820	1000
d_b, Bicycle Delay [s]	32.00	30.42	17.41	12.50
l_b,int, Bicycle LOS Score for Intersection	2.550	2.624	1.944	2.018
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 46: Tippecanoe Ave / Orange Show Rd_San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	65.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.917

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	129	1176	164	507	1110	63	219	699	145	237	535	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	1176	164	507	1117	63	219	699	145	237	535	362
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	309	43	133	294	17	58	184	38	62	141	95
Total Analysis Volume [veh/h]	136	1238	173	534	1176	66	231	736	153	249	563	381
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	38	0	19	45	0	15	29	0	14	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	9	35	35	16	42	42	40	26	26	40	25	25
g / C, Green / Cycle	0.09	0.35	0.35	0.16	0.42	0.42	0.40	0.26	0.26	0.40	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.08	0.38	0.38	0.17	0.33	0.33	0.24	0.24	0.24	0.26	0.27	0.27
s, saturation flow rate [veh/h]	1714	1900	1820	3144	1900	1865	953	1900	1788	960	1900	1648
c, Capacity [veh/h]	154	669	640	503	802	787	336	490	462	342	480	417
d1, Uniform Delay [s]	44.97	32.41	32.41	42.00	24.86	25.02	24.58	36.25	36.27	24.77	37.36	37.36
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.33	0.33	0.33	0.37	0.39	0.39
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.70	55.11	61.18	37.51	7.30	7.82	7.38	20.02	21.12	9.66	49.64	54.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	1.07	1.09	1.06	0.78	0.79	0.69	0.93	0.93	0.73	1.05	1.06
d, Delay for Lane Group [s/veh]	59.67	87.51	93.59	79.51	32.16	32.83	31.95	56.27	57.39	34.43	87.00	92.04
Lane Group LOS	E	F	F	F	C	C	C	E	E	C	F	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.94	25.84	25.83	8.74	13.84	13.93	4.38	13.41	12.78	4.95	18.10	16.28
50th-Percentile Queue Length [ft/ln]	98.45	645.89	645.75	218.61	345.97	348.13	109.50	335.23	319.47	123.68	452.38	407.02
95th-Percentile Queue Length [veh/ln]	7.09	35.79	36.12	13.97	19.94	20.05	7.81	19.41	18.64	8.59	25.80	23.64
95th-Percentile Queue Length [ft/ln]	177.20	894.76	902.99	349.18	498.50	501.13	195.31	485.36	466.04	214.87	644.96	591.06

Movement, Approach, & Intersection Results

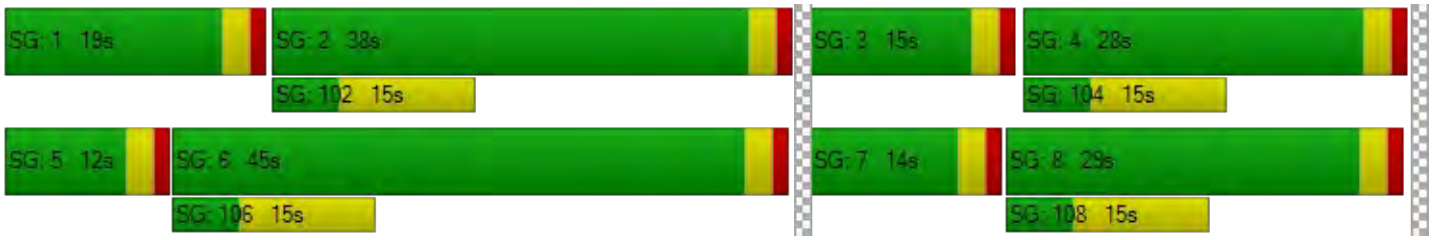
d_M, Delay for Movement [s/veh]	59.67	90.08	93.59	79.51	32.48	32.83	31.95	56.69	57.39	34.43	87.53	92.04
Movement LOS	E	F	F	F	C	C	C	E	E	C	F	F
d_A, Approach Delay [s/veh]	87.80			46.63			51.68			77.89		
Approach LOS	F			D			D			E		
d_I, Intersection Delay [s/veh]	65.55											
Intersection LOS	E											
Intersection V/C	0.917											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.066	3.196	2.674	2.820
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	840	520	500
d_b, Bicycle Delay [s]	21.13	16.82	27.38	28.13
l_b,int, Bicycle LOS Score for Intersection	2.836	3.025	2.484	2.544
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 47: Tippecanoe Ave / Hospitality Ln_Coulston St

Control Type:	Signalized	Delay (sec / veh):	31.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	487	782	260	130	946	114	262	238	332	154	105	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	487	782	260	130	953	114	262	238	332	154	105	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	128	206	68	34	251	30	69	63	87	41	28	13
Total Analysis Volume [veh/h]	513	823	274	137	1003	120	276	251	349	162	111	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	8	7	4	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	30	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	26	26	0	18	18	0	0	46	46	10	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No			No	No	No	No	
Maximum Recall	No	No		No	No			No	No	No	No	
Pedestrian Recall	No	No		No	No			No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
g_i, Effective Green Time [s]	19	42	42	10	33	33	29	29	29	39	39
g / C, Green / Cycle	0.19	0.42	0.42	0.10	0.33	0.33	0.29	0.29	0.29	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.16	0.21	0.21	0.08	0.21	0.21	0.17	0.19	0.22	0.13	0.09
s, saturation flow rate [veh/h]	3144	3618	1667	1714	3618	1798	1242	1666	1615	1262	1799
c, Capacity [veh/h]	587	1512	697	167	1189	591	331	534	476	396	710
d1, Uniform Delay [s]	39.52	21.38	21.39	44.28	28.44	28.44	37.88	30.64	31.72	22.16	20.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.28	1.17	2.53	9.54	2.55	5.07	2.16	1.01	2.20	0.68	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.50	0.50	0.82	0.63	0.63	0.65	0.58	0.73	0.41	0.23
d, Delay for Lane Group [s/veh]	43.80	22.55	23.91	53.82	30.99	33.51	40.04	31.65	33.93	22.84	20.30
Lane Group LOS	D	C	C	D	C	C	D	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.39	6.53	6.29	3.75	7.87	8.25	5.18	6.61	7.73	2.57	2.53
50th-Percentile Queue Length [ft/ln]	159.73	163.30	157.33	93.66	196.84	206.23	129.55	165.22	193.34	64.21	63.26
95th-Percentile Queue Length [veh/ln]	10.53	10.72	10.41	6.74	12.48	12.96	8.92	10.82	12.29	4.62	4.55
95th-Percentile Queue Length [ft/ln]	263.37	268.08	260.18	168.59	311.89	323.99	222.88	270.62	307.36	115.58	113.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.80	22.67	23.91	53.82	31.62	33.51	40.04	31.65	33.93	22.84	20.30	20.30
Movement LOS	D	C	C	D	C	C	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	29.61			34.22			34.62			21.57		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	31.47											
Intersection LOS	C											
Intersection V/C	0.652											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.267	3.415	2.622	2.268
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	300	860	1060
d_b, Bicycle Delay [s]	29.65	36.13	16.25	11.05
l_b,int, Bicycle LOS Score for Intersection	2.445	2.253	3.005	2.096
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 48: Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	35.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.741

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	0	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	300	599	1166	0	1185	180	379	0	794	180	215	464
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	300	599	1166	0	1192	180	379	0	794	180	215	464
Peak Hour Factor	0.9740	0.9740	0.9740	1.0000	0.9740	0.9740	0.9740	1.0000	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	77	154	299	0	306	46	97	0	204	46	55	119
Total Analysis Volume [veh/h]	308	615	1197	0	1224	185	389	0	815	185	221	476
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	5	2	0	0	6	0	3	0	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	0	7	7	7	0
Maximum Green [s]	30	30	0	0	30	0	30	0	30	30	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	14	43	0	0	29	0	30	0	43	14	27	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No			No		No		No	No	No	
Maximum Recall	No	No			No		No		No	No	No	
Pedestrian Recall	No	No			No		No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	43	29	29	24	54	8	23	23
g / C, Green / Cycle	0.11	0.43	0.29	0.29	0.24	0.54	0.08	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.10	0.14	0.20	0.20	0.23	0.32	0.06	0.20	0.21
s, saturation flow rate [veh/h]	3144	4358	5176	1739	1714	2558	3144	1781	1615
c, Capacity [veh/h]	346	1876	1504	505	420	1380	252	417	378
d1, Uniform Delay [s]	43.91	18.88	31.63	31.56	36.84	15.57	44.95	36.61	37.21
k, delay calibration	0.11	0.50	0.50	0.50	0.29	0.12	0.11	0.22	0.25
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.89	0.47	2.77	7.77	19.45	0.45	4.13	9.43	16.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.33	0.70	0.70	0.93	0.59	0.73	0.85	0.90
d, Delay for Lane Group [s/veh]	51.79	19.35	34.40	39.33	56.29	16.02	49.08	46.04	53.67
Lane Group LOS	D	B	C	D	E	B	D	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.11	3.17	7.83	8.52	11.37	6.00	2.37	9.24	9.71
50th-Percentile Queue Length [ft/ln]	102.68	79.19	195.79	213.01	284.33	150.03	59.36	230.89	242.84
95th-Percentile Queue Length [veh/ln]	7.39	5.70	12.42	13.31	16.90	10.02	4.27	14.22	14.83
95th-Percentile Queue Length [ft/ln]	184.82	142.55	310.53	332.68	422.61	250.47	106.85	355.49	370.63

Movement, Approach, & Intersection Results

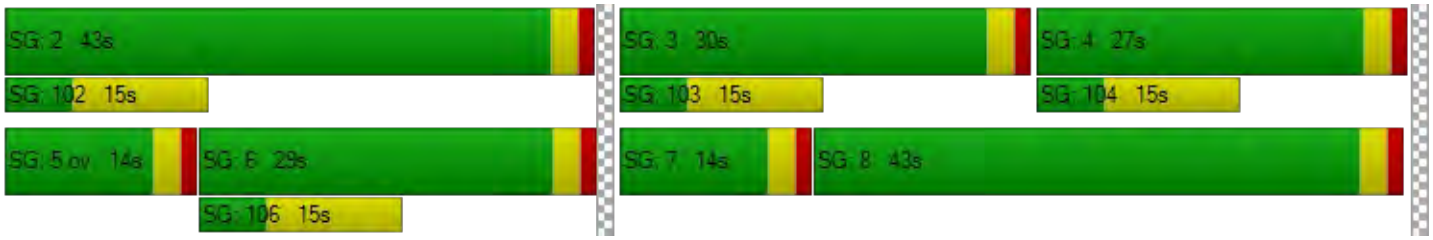
d_M, Delay for Movement [s/veh]	51.79	19.35	0.00	0.00	35.07	39.33	56.29	0.00	16.02	49.08	46.04	51.57
Movement LOS	D	B			D	D	E		B	D	D	D
d_A, Approach Delay [s/veh]	30.17			35.63			29.03			49.64		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	35.49											
Intersection LOS	D											
Intersection V/C	0.741											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.197	3.003	2.680	2.478
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	520	0	480
d_b, Bicycle Delay [s]	18.00	27.38	50.00	28.88
l_b,int, Bicycle LOS Score for Intersection	2.067	2.141	4.132	3.015
Bicycle LOS	B	B	D	C

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 49: Anderson St / SR-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.745

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No			No				
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1031	343	692	754	0	781	3	551	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1031	343	692	761	0	781	3	551	0	0	0
Peak Hour Factor	1.0000	0.9690	0.9690	0.9690	0.9690	1.0000	0.9690	0.9690	0.9690	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	266	88	179	196	0	201	1	142	0	0	0
Total Analysis Volume [veh/h]	0	1064	354	714	785	0	806	3	569	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	35	0	28	63	0	0	27	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	32	32	25	60	24	24	24	
g / C, Green / Cycle	0.36	0.36	0.28	0.67	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.22	0.23	0.22	0.22	0.22	0.20	
s, saturation flow rate [veh/h]	3618	1615	3144	3618	1810	1810	2859	
c, Capacity [veh/h]	1286	574	873	2412	483	483	762	
d1, Uniform Delay [s]	26.48	23.94	30.37	6.39	31.17	31.16	30.21	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	6.20	4.90	8.38	0.36	15.87	15.84	6.57	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.83	0.62	0.82	0.33	0.84	0.84	0.75	
d, Delay for Lane Group [s/veh]	32.68	28.84	38.75	6.75	47.04	47.01	36.79	
Lane Group LOS	C	C	D	A	D	D	D	
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	
50th-Percentile Queue Length [veh/ln]	11.08	6.78	8.02	2.85	10.18	10.17	6.18	
50th-Percentile Queue Length [ft/ln]	276.93	169.46	200.59	71.30	254.40	254.30	154.59	
95th-Percentile Queue Length [veh/ln]	16.54	11.05	12.67	5.13	15.41	15.40	10.26	
95th-Percentile Queue Length [ft/ln]	413.38	276.20	316.73	128.34	385.19	385.06	256.54	

Movement, Approach, & Intersection Results

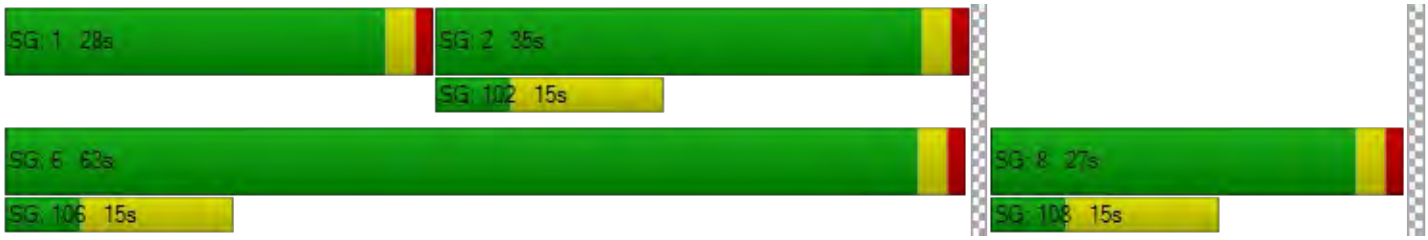
d_M, Delay for Movement [s/veh]	0.00	32.68	28.84	38.75	6.75	0.00	47.02	47.01	36.79	0.00	0.00	0.00
Movement LOS		C	C	D	A		D	D	D			
d_A, Approach Delay [s/veh]	31.72			21.99			42.80			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	31.88											
Intersection LOS	C											
Intersection V/C	0.745											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.842	3.002	2.468	2.238
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	1333	533	0
d_b, Bicycle Delay [s]	18.69	5.00	24.20	45.00
l_b,int, Bicycle LOS Score for Intersection	2.729	2.796	3.833	4.132
Bicycle LOS	B	C	D	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Del Rosa Ave / SR-210 WB Ramps	Signalized	HCM 6th Edition	NB Left	0.969	59.0	E
2	Del Rosa Ave / SR-210 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.808	35.4	D
3	Del Rosa Ave / Date St_Date Pl	Signalized	HCM 6th Edition	EB Left	0.409	15.1	B
4	Del Rosa Ave / Highland Ave	Signalized	HCM 6th Edition	SB Left	0.402	27.8	C
5	Highland Ave / SR-210 EB Off Ramp	Signalized	HCM 6th Edition	SB Left	0.412	22.8	C
6	Highland Ave / SR-210 WB Off Ramp	Signalized	HCM 6th Edition	EB Left	0.396	11.9	B
7	Victoria Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.674	31.4	C
8	Del Rosa Dr / Pacific St	Signalized	HCM 6th Edition	WB Left	0.419	29.2	C
9	Victoria Ave / Pacific St	Signalized	HCM 6th Edition	SB Left	0.578	33.2	C
10	Victoria Ave / 14th St	Signalized	HCM 6th Edition	NB Left	0.271	6.2	A
11	Tippecanoe Ave / Baseline St	Signalized	HCM 6th Edition	WB Left	0.438	19.7	B
12	Del Rosa Dr / Baseline St	Signalized	HCM 6th Edition	WB Left	0.506	29.9	C
13	Sterling Ave / Baseline St	Signalized	HCM 6th Edition	EB Left	0.391	28.9	C
14	Victoria Ave / Baseline St	Signalized	HCM 6th Edition	EB Left	0.393	27.9	C
15	Tippecanoe Ave / 9th St	Signalized	HCM 6th Edition	WB Left	0.440	32.1	C
16	Del Rosa Dr / 9th St	Signalized	HCM 6th Edition	NB Left	0.479	31.4	C
17	Sterling Ave / 9th St	Signalized	HCM 6th Edition	SB Left	0.400	30.1	C

18	Victoria Ave / 9th St	Signalized	HCM 6th Edition	NB Left	0.303	25.3	C
19	Del Rosa Dr / 6th St	Signalized	HCM 6th Edition	NB Left	0.439	30.5	C
20	Sterling Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	1.136	587.4	F
21	Victoria Ave / 6th St	Two-way stop	HCM 6th Edition	WB Left	0.400	85.5	F
22	Central Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.084	11.1	B
23	I-215 SB Ramps / 5th St	Signalized	HCM 6th Edition	SB Right	0.547	25.5	C
24	I-215 NB Ramps / 5th St	Signalized	HCM 6th Edition	EB Left	0.477	29.0	C
25	E St / 5th St	Signalized	HCM 6th Edition	SB Thru	0.451	13.7	B
26	Arrowhead Ave / 5th St	Signalized	HCM 6th Edition	NB Left	0.413	12.6	B
27	Waterman Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.526	28.1	C
28	Tippecanoe Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.465	30.3	C
29	Del Rosa Dr / 5th St	Signalized	HCM 6th Edition	EB Left	0.665	20.9	C
30	Sterling Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.540	19.9	B
31	Victoria Ave / 5th St	Signalized	HCM 6th Edition	EB Left	0.661	20.2	C
32	Central Avenue / 5th Street	Signalized	HCM 6th Edition	NB Left	0.445	12.0	B
33	Palm Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.680	77.1	E
34	New Intersection	Signalized	HCM 6th Edition	SB Left	0.773	21.7	C
35	SR-210 EB Ramps / 5th Street	Signalized	HCM 6th Edition	SB Right	0.989	50.0	D
36	SR-210 WB Ramps / 5th Street	Signalized	HCM 6th Edition	EB Left	0.720	28.2	C
37	Tippecanoe Ave / 3rd St	Signalized	HCM 6th Edition	SB Left	0.539	30.3	C
38	Del Rosa Dr / 3rd St	Signalized	HCM 6th Edition	EB Left	0.572	30.7	C

39	Sterling Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.828	37.4	D
40	Victoria Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.726	39.1	D
41	Central Ave / 3rd St	Two-way stop	HCM 6th Edition	SB Left	0.157	31.7	D
42	Palm Ave_Alabama St / 3rd St	Signalized	HCM 6th Edition	NB Left	0.756	46.2	D
43	Tippecanoe Ave / Rialto Ave	Signalized	HCM 6th Edition	NB Left	0.406	10.9	B
44	Tippecanoe Ave / Mill St	Signalized	HCM 6th Edition	WB Left	0.712	28.3	C
45	Tippecanoe Ave / Central Ave	Signalized	HCM 6th Edition	EB Left	0.520	21.5	C
46	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave	Signalized	HCM 6th Edition	NB Left	0.691	29.4	C
47	Tippecanoe Ave / Hospitality Ln_Coulston St	Signalized	HCM 6th Edition	SB Left	0.512	23.5	C
48	Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps	Signalized	HCM 6th Edition	EB Left	0.519	28.1	C
49	Anderson St / SR-10 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.614	26.1	C
308	Arden Ave / Highland Ave	Signalized	HCM 6th Edition	SB Left	0.453	32.1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Del Rosa Ave / SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	59.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.969

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Base Volume Input [veh/h]	587	543	0	0	548	774	0	0	0	157	0	144
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	602	543	0	0	548	774	0	0	0	157	0	144
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	158	143	0	0	144	204	0	0	0	41	0	38
Total Analysis Volume [veh/h]	634	572	0	0	577	815	0	0	0	165	0	152
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	35	82	0	0	47	0	0	0	0	0	18	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Cycle Length [s]	100	100	100	100		100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	32	82	47	47		12	12
g / C, Green / Cycle	0.32	0.82	0.47	0.47		0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.37	0.16	0.30	0.50		0.09	0.09
s, saturation flow rate [veh/h]	1714	3618	1900	1615		1810	1615
c, Capacity [veh/h]	549	2979	900	765		211	188
d1, Uniform Delay [s]	34.00	1.85	19.90	26.32		42.95	43.09
k, delay calibration	0.50	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	89.21	0.14	3.50	51.48		6.26	7.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.16	0.19	0.64	1.07		0.78	0.81
d, Delay for Lane Group [s/veh]	123.21	1.99	23.40	77.80		49.21	51.06
Lane Group LOS	F	A	C	F		D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	26.50	0.74	10.58	27.96		4.30	4.05
50th-Percentile Queue Length [ft/ln]	662.62	18.43	264.62	698.95		107.56	101.36
95th-Percentile Queue Length [veh/ln]	38.24	1.33	15.92	38.45		7.70	7.30
95th-Percentile Queue Length [ft/ln]	955.97	33.18	398.01	961.19		192.61	182.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	123.21	1.99	0.00	0.00	23.40	77.80	0.00	0.00	0.00	49.21	49.21	51.06
Movement LOS	F	A			C	F				D	D	D
d_A, Approach Delay [s/veh]	65.72			55.25			0.00			50.10		
Approach LOS	E			E			A			D		
d_I, Intersection Delay [s/veh]	59.02											
Intersection LOS	E											
Intersection V/C	0.969											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.776	2.653	2.843	1.876
Crosswalk LOS	C	B	C	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1580	880	0	300
d_b, Bicycle Delay [s]	2.21	15.68	50.00	36.13
l_b,int, Bicycle LOS Score for Intersection	2.555	2.708	4.132	2.083
Bicycle LOS	B	B	D	B

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Del Rosa Ave / SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	35.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Base Volume Input [veh/h]	0	817	112	232	477	0	360	1	713	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	15	0	0	0	0	0	0	76	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	832	112	232	477	0	360	1	789	0	0	0
Peak Hour Factor	1.0000	0.9900	0.9900	0.9900	0.9900	1.0000	0.9900	0.9900	0.9900	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	210	28	59	120	0	91	0	199	0	0	0
Total Analysis Volume [veh/h]	0	840	113	234	482	0	364	1	797	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	22	0	18	40	0	0	60	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	24	24	15	42	52	52	
g / C, Green / Cycle	0.24	0.24	0.15	0.42	0.52	0.52	
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.14	0.13	0.20	0.49	
s, saturation flow rate [veh/h]	3618	1788	1714	3618	1810	1615	
c, Capacity [veh/h]	878	434	257	1529	936	836	
d1, Uniform Delay [s]	34.79	34.88	41.84	19.23	14.59	22.99	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.38	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	5.16	10.45	11.83	0.54	0.27	18.19	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.72	0.73	0.91	0.32	0.39	0.95	
d, Delay for Lane Group [s/veh]	39.95	45.33	53.67	19.77	14.85	41.18	
Lane Group LOS	D	D	D	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.62	8.27	6.46	3.77	4.88	20.79	
50th-Percentile Queue Length [ft/ln]	190.52	206.70	161.55	94.24	122.11	519.86	
95th-Percentile Queue Length [veh/ln]	12.15	12.98	10.63	6.78	8.51	28.27	
95th-Percentile Queue Length [ft/ln]	303.70	324.59	265.78	169.62	212.73	706.82	

Movement, Approach, & Intersection Results

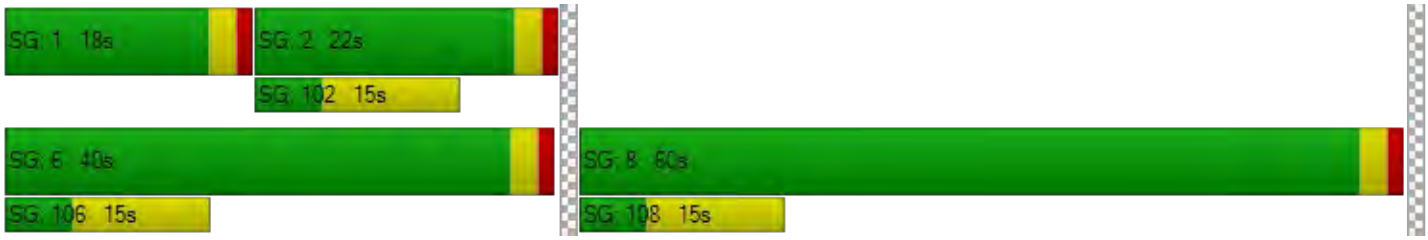
d_M, Delay for Movement [s/veh]	0.00	41.26	45.33	53.67	19.77	0.00	14.85	14.85	41.18	0.00	0.00	0.00
Movement LOS		D	D	D	B		B	B	D			
d_A, Approach Delay [s/veh]	41.74			30.85			32.91			0.00		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	35.36											
Intersection LOS	D											
Intersection V/C	0.808											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.822	2.771	2.288	1.769
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	740	1140	0
d_b, Bicycle Delay [s]	32.81	19.85	9.25	50.00
l_b,int, Bicycle LOS Score for Intersection	2.084	2.150	3.477	4.132
Bicycle LOS	B	B	C	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Del Rosa Ave / Date St_Date Pl

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.409

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Base Volume Input [veh/h]	31	639	21	181	925	80	128	31	43	15	28	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	26	50	0	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	650	21	207	975	80	128	31	43	15	28	157
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	166	5	53	249	20	33	8	11	4	7	40
Total Analysis Volume [veh/h]	32	663	21	211	995	82	131	32	44	15	29	160
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	55	0	10	55	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	69	59	59	69	62	62	25	25	25	25
g / C, Green / Cycle	0.69	0.59	0.59	0.69	0.62	0.62	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.05	0.18	0.18	0.24	0.29	0.29	0.11	0.04	0.01	0.11
s, saturation flow rate [veh/h]	620	1900	1880	879	1900	1850	1213	1724	1344	1653
c, Capacity [veh/h]	457	1122	1110	649	1176	1145	225	430	327	413
d1, Uniform Delay [s]	6.01	10.23	10.23	5.94	10.17	10.19	42.77	29.45	33.21	31.79
k, delay calibration	0.50	0.50	0.50	0.32	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.71	0.72	0.86	1.31	1.36	2.36	0.19	0.06	0.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.31	0.31	0.33	0.46	0.46	0.58	0.18	0.05	0.46
d, Delay for Lane Group [s/veh]	6.31	10.94	10.95	6.81	11.49	11.54	45.14	29.65	33.27	32.58
Lane Group LOS	A	B	B	A	B	B	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.22	3.79	3.76	1.54	6.33	6.19	3.29	1.45	0.30	3.92
50th-Percentile Queue Length [ft/ln]	5.62	94.77	93.89	38.39	158.14	154.85	82.13	36.24	7.57	97.98
95th-Percentile Queue Length [veh/ln]	0.40	6.82	6.76	2.76	10.45	10.28	5.91	2.61	0.54	7.05
95th-Percentile Queue Length [ft/ln]	10.11	170.58	169.01	69.10	261.26	256.89	147.83	65.23	13.62	176.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.31	10.94	10.95	6.81	11.51	11.54	45.14	29.65	29.65	33.27	32.58	32.58
Movement LOS	A	B	B	A	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.74			10.74			39.45			32.63		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	15.05											
Intersection LOS	B											
Intersection V/C	0.409											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.868	3.010	2.090	2.282
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1040	1040	640	640
d_b, Bicycle Delay [s]	11.52	11.52	23.12	23.12
l_b,int, Bicycle LOS Score for Intersection	2.150	2.622	1.901	1.896
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Del Rosa Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	27.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	139	449	43	122	632	128	51	297	157	51	279	135
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	1	0
Site-Generated Trips [veh/h]	0	11	0	0	50	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	139	460	43	122	682	128	51	297	157	51	280	135
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	117	11	31	173	32	13	75	40	13	71	34
Total Analysis Volume [veh/h]	141	467	44	124	692	130	52	301	159	52	284	137
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	5	2	0	1	6	6	3	8	0	7	4	4
Auxiliary Signal Groups						6						4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	7
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	40	23	0	47	30	30	10	20	0	10	20	20
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	10	61	61	9	60	60	5	12	12	5	12	12
g / C, Green / Cycle	0.10	0.61	0.61	0.09	0.60	0.60	0.05	0.12	0.12	0.05	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.08	0.14	0.14	0.07	0.19	0.08	0.03	0.08	0.10	0.03	0.08	0.08
s, saturation flow rate [veh/h]	1714	1900	1843	1714	3618	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	176	1162	1127	158	2174	971	92	444	198	92	444	198
d1, Uniform Delay [s]	43.88	8.74	8.75	44.42	9.84	8.66	46.18	41.96	42.67	46.18	41.75	42.04
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.22	0.44	0.46	8.26	0.39	0.29	5.36	1.81	7.31	5.36	1.53	4.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.22	0.22	0.78	0.32	0.13	0.57	0.68	0.80	0.57	0.64	0.69
d, Delay for Lane Group [s/veh]	52.11	9.19	9.21	52.68	10.23	8.94	51.55	43.77	49.98	51.55	43.28	46.28
Lane Group LOS	D	A	A	D	B	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.79	2.51	2.45	3.35	3.62	1.23	1.39	3.64	4.19	1.39	3.41	3.45
50th-Percentile Queue Length [ft/ln]	94.78	62.68	61.14	83.78	90.39	30.84	34.80	90.97	104.79	34.80	85.13	86.25
95th-Percentile Queue Length [veh/ln]	6.82	4.51	4.40	6.03	6.51	2.22	2.51	6.55	7.55	2.51	6.13	6.21
95th-Percentile Queue Length [ft/ln]	170.60	112.82	110.06	150.80	162.69	55.51	62.65	163.74	188.63	62.65	153.24	155.25

Movement, Approach, & Intersection Results

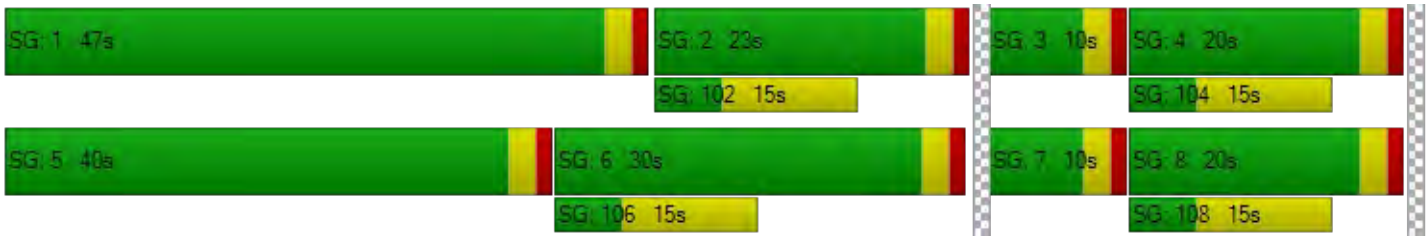
d_M, Delay for Movement [s/veh]	52.11	9.20	9.21	52.68	10.23	8.94	51.55	43.77	49.98	51.55	43.28	46.28
Movement LOS	D	A	A	D	B	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.48			15.62			46.49			45.06		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.85											
Intersection LOS	C											
Intersection V/C	0.402											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.610	2.824	2.633	2.732
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	540	340	340
d_b, Bicycle Delay [s]	32.00	26.65	34.45	34.45
l_b,int, Bicycle LOS Score for Intersection	2.098	2.340	1.982	1.950
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Highland Ave / SR-210 EB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.412

Intersection Setup

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Base Volume Input [veh/h]	926	175	0	354	390	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	17	0	0	3	1	0
Site-Generated Trips [veh/h]	46	0	0	0	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	989	175	0	357	396	0
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	260	46	0	94	104	0
Total Analysis Volume [veh/h]	1041	184	0	376	417	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	2.0	0.0	0.0	2.0	2.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	82	0	0	18	18	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	0.0	1.0	1.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	34	34	60	60
g / C, Green / Cycle	0.34	0.34	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.30	0.11	0.10	0.12
s, saturation flow rate [veh/h]	3514	1615	3618	3618
c, Capacity [veh/h]	1201	552	2164	2164
d1, Uniform Delay [s]	30.79	24.45	9.00	9.12
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.04	0.35	0.17	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.33	0.17	0.19
d, Delay for Lane Group [s/veh]	32.83	24.81	9.18	9.32
Lane Group LOS	C	C	A	A
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	11.74	3.26	1.78	2.01
50th-Percentile Queue Length [ft/ln]	293.62	81.40	44.62	50.13
95th-Percentile Queue Length [veh/ln]	17.37	5.86	3.21	3.61
95th-Percentile Queue Length [ft/ln]	434.13	146.52	80.31	90.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.83	24.81	0.00	9.18	9.32	0.00
Movement LOS	C	C		A	A	
d_A, Approach Delay [s/veh]	31.62		9.18		9.32	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	22.83					
Intersection LOS	C					
Intersection V/C	0.412					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.345	2.497	2.585
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.443	4.476
Bicycle LOS	D	E	E

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Highland Ave / SR-210 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.396

Intersection Setup

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	347	1	144	1	0	6	2	1014	0	0	933	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	20	0	0	6	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	29	0	0	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	347	1	144	1	0	6	2	1063	0	0	957	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	87	0	36	0	0	2	1	266	0	0	239	2
Total Analysis Volume [veh/h]	347	1	144	1	0	6	2	1063	0	0	957	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Permiss	Split	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	0	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	30	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	29	0	0	10	41	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	21	0	0	0	9	0	0	9	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	12	1	1	0	68	65	65
g / C, Green / Cycle	0.13	0.13	0.01	0.01	0.00	0.75	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.00	0.00	0.00	0.29	0.25	0.25
s, saturation flow rate [veh/h]	3514	1617	1810	1615	1810	3618	1900	1896
c, Capacity [veh/h]	467	215	25	22	7	2726	1361	1358
d1, Uniform Delay [s]	37.54	37.16	43.81	43.95	44.68	3.87	4.86	4.86
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.35	3.66	0.67	6.56	18.50	0.42	0.72	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.67	0.04	0.27	0.27	0.39	0.35	0.35
d, Delay for Lane Group [s/veh]	39.89	40.82	44.48	50.51	63.19	4.29	5.58	5.59
Lane Group LOS	D	D	D	D	E	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.77	3.21	0.03	0.17	0.08	2.62	2.98	2.98
50th-Percentile Queue Length [ft/ln]	94.26	80.30	0.66	4.28	2.05	65.42	74.49	74.57
95th-Percentile Queue Length [veh/ln]	6.79	5.78	0.05	0.31	0.15	4.71	5.36	5.37
95th-Percentile Queue Length [ft/ln]	169.67	144.53	1.19	7.70	3.69	117.76	134.09	134.22

Movement, Approach, & Intersection Results

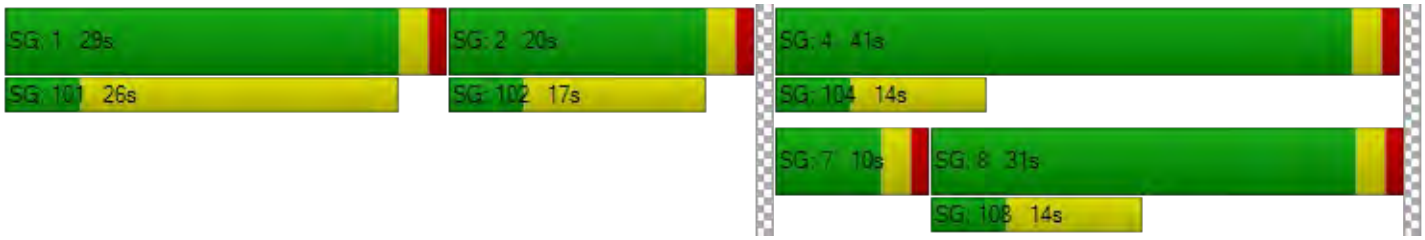
d_M, Delay for Movement [s/veh]	39.89	40.82	40.82	44.48	0.00	50.51	63.19	4.29	0.00	0.00	5.59	5.59
Movement LOS	D	D	D	D		D	E	A			A	A
d_A, Approach Delay [s/veh]	40.16			49.65			4.41			5.59		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	11.94											
Intersection LOS	B											
Intersection V/C	0.396											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.102	1.947	2.926	2.662
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	0	844	622
d_b, Bicycle Delay [s]	29.61	45.00	15.02	21.36
l_b,int, Bicycle LOS Score for Intersection	2.371	4.132	2.438	2.354
Bicycle LOS	B	D	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Victoria Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

Intersection Setup

Name							Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Highland Ave			Highland Ave		
Base Volume Input [veh/h]	241	646	89	162	479	286	566	376	119	86	348	224
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	6	1	0	3	0	0	0	20	0	0	0
Site-Generated Trips [veh/h]	18	6	0	0	39	0	0	0	29	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	259	658	90	162	521	286	566	376	168	86	348	224
Peak Hour Factor	0.8960	0.9500	0.9500	0.9500	0.9500	0.8960	0.8960	0.8960	0.8960	0.9500	0.8960	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	173	24	43	137	80	158	105	47	23	97	59
Total Analysis Volume [veh/h]	289	693	95	171	548	319	632	420	188	91	388	236
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	32	0	10	27	27	30	44	0	14	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	48	38	38	48	33	59	23	37	37	7	20	20
g / C, Green / Cycle	0.48	0.38	0.38	0.48	0.33	0.59	0.23	0.37	0.37	0.07	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.26	0.24	0.24	0.20	0.15	0.20	0.20	0.17	0.17	0.05	0.17	0.18
s, saturation flow rate [veh/h]	1103	1700	1629	869	3618	1615	3144	1900	1704	1714	1900	1663
c, Capacity [veh/h]	520	639	613	379	1180	948	726	695	623	117	386	338
d1, Uniform Delay [s]	17.72	25.49	25.49	17.93	26.76	10.63	37.02	24.17	24.21	45.87	38.47	38.54
k, delay calibration	0.50	0.50	0.50	0.21	0.50	0.22	0.11	0.11	0.11	0.11	0.16	0.16
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.24	4.64	4.85	1.65	1.32	0.41	3.41	0.47	0.54	10.72	7.95	9.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.63	0.63	0.45	0.46	0.34	0.87	0.46	0.46	0.78	0.86	0.87
d, Delay for Lane Group [s/veh]	21.96	30.14	30.34	19.58	28.07	11.04	40.43	24.64	24.75	56.58	46.42	48.16
Lane Group LOS	C	C	C	B	C	B	D	C	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.66	8.43	8.12	2.39	5.32	3.52	7.66	5.75	5.21	2.56	8.58	7.74
50th-Percentile Queue Length [ft/ln]	116.59	210.77	202.96	59.70	133.11	88.01	191.39	143.63	130.29	63.98	214.55	193.56
95th-Percentile Queue Length [veh/ln]	8.21	13.19	12.79	4.30	9.11	6.34	12.19	9.68	8.96	4.61	13.39	12.31
95th-Percentile Queue Length [ft/ln]	205.13	329.81	319.78	107.45	227.72	158.43	304.83	241.91	223.89	115.16	334.66	307.64

Movement, Approach, & Intersection Results

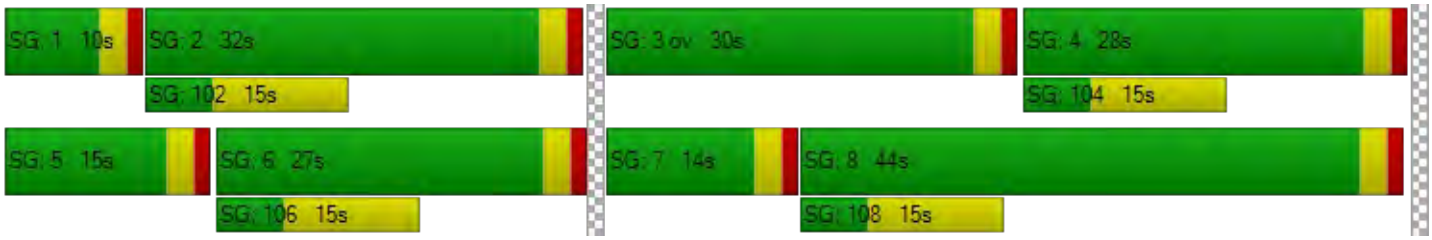
d_M, Delay for Movement [s/veh]	21.96	30.22	30.34	19.58	28.07	11.04	40.43	24.67	24.75	56.58	46.67	48.16
Movement LOS	C	C	C	B	C	B	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	28.01			21.44			32.71			48.43		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	31.36											
Intersection LOS	C											
Intersection V/C	0.674											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.678	2.882	2.965	2.676
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	480	820	500
d_b, Bicycle Delay [s]	25.21	28.88	17.41	28.13
l_b,int, Bicycle LOS Score for Intersection	2.448	2.416	2.583	2.149
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Del Rosa Dr / Pacific St

Control Type:	Signalized	Delay (sec / veh):	29.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.419

Intersection Setup

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Base Volume Input [veh/h]	48	236	37	44	432	200	154	262	33	94	291	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	50	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	247	37	44	482	200	154	262	33	94	291	44
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	65	10	12	127	53	41	69	9	25	77	12
Total Analysis Volume [veh/h]	51	260	39	46	507	211	162	276	35	99	306	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	22	0	19	31	0	39	47	0	12	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	59	59	5	59	59	11	16	16	7	12	12
g / C, Green / Cycle	0.05	0.59	0.59	0.05	0.59	0.59	0.11	0.16	0.16	0.07	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.02	0.03	0.20	0.20	0.09	0.08	0.08	0.06	0.09	0.10
s, saturation flow rate [veh/h]	1714	1900	1615	1714	1900	1713	1714	1900	1826	1714	1900	1815
c, Capacity [veh/h]	91	1128	959	87	1124	1013	197	310	298	124	229	219
d1, Uniform Delay [s]	46.21	9.57	8.46	46.28	10.41	10.42	43.26	38.17	38.21	45.68	42.69	42.75
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.30	0.48	0.08	4.85	0.81	0.90	8.28	1.29	1.37	11.18	5.72	6.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.23	0.04	0.53	0.34	0.34	0.82	0.51	0.51	0.80	0.78	0.79
d, Delay for Lane Group [s/veh]	51.51	10.04	8.54	51.13	11.22	11.32	51.54	39.46	39.58	56.86	48.41	49.06
Lane Group LOS	D	B	A	D	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.37	2.68	0.36	1.23	4.23	3.86	4.34	3.62	3.52	2.79	4.62	4.51
50th-Percentile Queue Length [ft/ln]	34.13	66.93	8.91	30.69	105.64	96.42	108.42	90.38	87.99	69.73	115.48	112.67
95th-Percentile Queue Length [veh/ln]	2.46	4.82	0.64	2.21	7.60	6.94	7.75	6.51	6.34	5.02	8.14	7.99
95th-Percentile Queue Length [ft/ln]	61.43	120.47	16.04	55.25	189.92	173.55	193.81	162.68	158.38	125.52	203.59	199.70

Movement, Approach, & Intersection Results

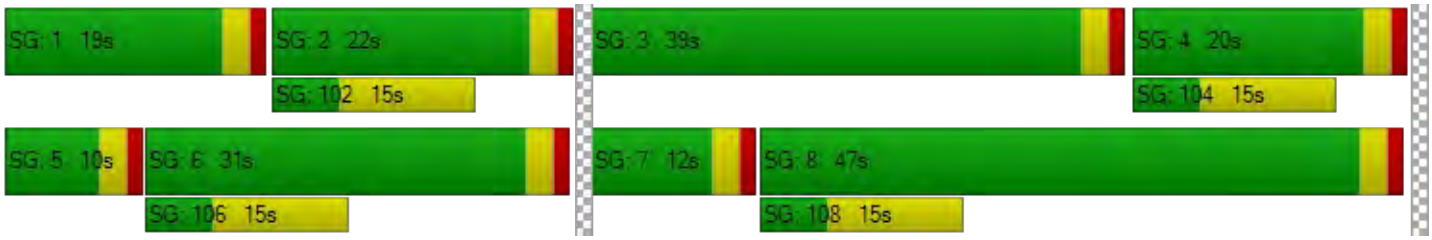
d_M, Delay for Movement [s/veh]	51.51	10.04	8.54	51.13	11.24	11.32	51.54	39.51	39.58	56.86	48.68	49.06
Movement LOS	D	B	A	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	15.92			13.67			43.64			50.52		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.16											
Intersection LOS	C											
Intersection V/C	0.419											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.500	2.660	2.509	2.465
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	560	880	340
d_b, Bicycle Delay [s]	32.81	25.92	15.68	34.45
l_b,int, Bicycle LOS Score for Intersection	2.137	2.190	1.950	1.932
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Victoria Ave / Pacific St

Control Type:	Signalized	Delay (sec / veh):	33.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	165	454	30	123	439	190	194	288	206	50	344	159
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	6	0	0	23	0	0	0	1	1	0	0
Site-Generated Trips [veh/h]	0	24	0	0	68	0	0	0	17	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	165	484	30	123	530	190	194	288	224	51	344	159
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	127	8	32	139	50	51	76	59	13	91	42
Total Analysis Volume [veh/h]	174	509	32	129	558	200	204	303	236	54	362	167
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	37	0	14	34	0	21	39	0	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	12	48	48	9	45	45	14	26	26	5	17	17
g / C, Green / Cycle	0.12	0.48	0.48	0.09	0.45	0.45	0.14	0.26	0.26	0.05	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.10	0.14	0.14	0.08	0.21	0.21	0.12	0.15	0.15	0.03	0.15	0.15
s, saturation flow rate [veh/h]	1714	1900	1861	1714	1900	1731	1714	1900	1629	1714	1900	1701
c, Capacity [veh/h]	205	903	884	157	850	775	237	491	421	94	333	298
d1, Uniform Delay [s]	43.15	16.09	16.09	44.59	19.29	19.29	42.17	32.43	32.48	46.14	39.84	39.95
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.43	0.86	0.88	9.98	1.84	2.02	8.97	1.13	1.34	5.50	5.43	6.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.30	0.30	0.82	0.47	0.47	0.86	0.59	0.59	0.58	0.83	0.85
d, Delay for Lane Group [s/veh]	52.58	16.95	16.98	54.57	21.12	21.31	51.14	33.56	33.82	51.64	45.26	46.55
Lane Group LOS	D	B	B	D	C	C	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.72	3.94	3.87	3.55	6.67	6.12	5.47	6.20	5.39	1.45	7.00	6.48
50th-Percentile Queue Length [ft/ln]	117.88	98.58	96.82	88.84	166.80	153.06	136.68	154.95	134.66	36.16	174.89	161.92
95th-Percentile Queue Length [veh/ln]	8.28	7.10	6.97	6.40	10.91	10.18	9.30	10.28	9.19	2.60	11.33	10.65
95th-Percentile Queue Length [ft/ln]	206.91	177.44	174.28	159.91	272.71	254.51	232.54	257.03	229.82	65.10	283.33	266.26

Movement, Approach, & Intersection Results

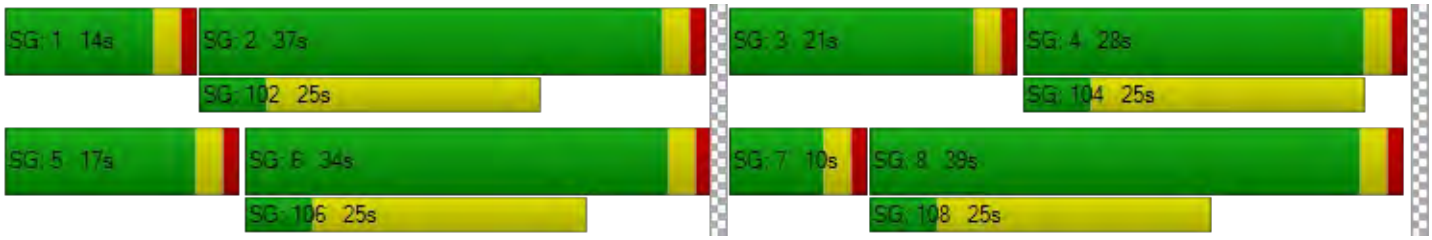
d_M, Delay for Movement [s/veh]	52.58	16.96	16.98	54.57	21.18	21.31	51.14	33.57	33.82	51.64	45.57	46.55
Movement LOS	D	B	B	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	25.63			26.06			38.47			46.41		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.16											
Intersection LOS	C											
Intersection V/C	0.578											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.611	2.651	2.595	2.511
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	620	720	500
d_b, Bicycle Delay [s]	21.78	23.81	20.48	28.13
l_b,int, Bicycle LOS Score for Intersection	2.149	2.291	2.173	2.041
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Victoria Ave / 14th St

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.271

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	535	11	27	663	4	8	0	0	25	6	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	7	0	0	26	0	0	0	3	0	0	0
Site-Generated Trips [veh/h]	0	24	0	0	85	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	566	11	27	774	4	8	0	3	25	6	54
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	149	3	7	204	1	2	0	1	7	2	14
Total Analysis Volume [veh/h]	1	596	12	28	815	4	8	0	3	26	6	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	17	49	0	10	42	0	0	41	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	11	0	0	19	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	0	80	80	4	84	84	7	7
g / C, Green / Cycle	0.00	0.80	0.80	0.04	0.84	0.84	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.00	0.16	0.16	0.02	0.22	0.22	0.01	0.05
s, saturation flow rate [veh/h]	1714	1900	1887	1714	1900	1897	1440	1642
c, Capacity [veh/h]	4	1526	1515	65	1593	1591	162	160
d1, Uniform Delay [s]	49.81	2.31	2.31	47.05	1.66	1.66	43.59	45.71
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.18	0.29	0.30	4.45	0.39	0.39	0.18	3.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.20	0.20	0.43	0.26	0.26	0.07	0.56
d, Delay for Lane Group [s/veh]	83.99	2.61	2.61	51.50	2.05	2.05	43.76	48.71
Lane Group LOS	F	A	A	D	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.06	1.06	1.05	0.76	1.00	1.00	0.26	2.29
50th-Percentile Queue Length [ft/ln]	1.51	26.49	26.36	18.98	24.96	24.92	6.56	57.35
95th-Percentile Queue Length [veh/ln]	0.11	1.91	1.90	1.37	1.80	1.79	0.47	4.13
95th-Percentile Queue Length [ft/ln]	2.72	47.69	47.45	34.16	44.92	44.86	11.80	103.23

Movement, Approach, & Intersection Results

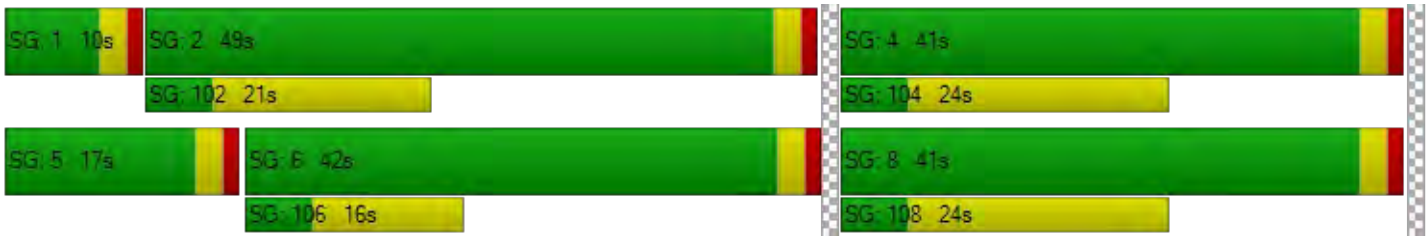
d_M, Delay for Movement [s/veh]	83.99	2.61	2.61	51.50	2.05	2.05	43.76	43.76	43.76	48.71	48.71	48.71
Movement LOS	F	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.74			3.69			43.76			48.71		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.17											
Intersection LOS	A											
Intersection V/C	0.271											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.627	2.612	1.732	1.784
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	920	780	760	760
d_b, Bicycle Delay [s]	14.58	18.61	19.22	19.22
l_b,int, Bicycle LOS Score for Intersection	2.062	2.258	1.578	1.706
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Tippecanoe Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	193	161	351	227	191	488
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	70	19	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	193	161	421	246	191	505
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	42	111	65	50	133
Total Analysis Volume [veh/h]	203	169	443	259	201	532
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	2.0	0.0	2.0	0.0	2.0	2.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	23	0	40	0	37	77
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	0.0	1.0	1.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	14	14	64	64	14	80
g / C, Green / Cycle	0.14	0.14	0.64	0.64	0.14	0.80
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.18	0.21	0.12	0.15
s, saturation flow rate [veh/h]	1810	1615	1900	1681	1714	3618
c, Capacity [veh/h]	245	219	1208	1069	238	2911
d1, Uniform Delay [s]	42.11	41.75	8.14	8.38	42.00	2.24
k, delay calibration	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.06	5.75	0.61	0.82	7.93	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.77	0.29	0.33	0.84	0.18
d, Delay for Lane Group [s/veh]	49.17	47.51	8.75	9.21	49.93	2.37
Lane Group LOS	D	D	A	A	D	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.31	4.34	3.31	3.45	5.32	0.85
50th-Percentile Queue Length [ft/ln]	132.84	108.47	82.83	86.18	132.91	21.18
95th-Percentile Queue Length [veh/ln]	9.09	7.76	5.96	6.21	9.10	1.53
95th-Percentile Queue Length [ft/ln]	227.35	193.88	149.10	155.13	227.44	38.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.17	47.51	8.84	9.21	49.93	2.37
Movement LOS	D	D	A	A	D	A
d_A, Approach Delay [s/veh]	48.41		8.98		15.41	
Approach LOS	D		A		B	
d_I, Intersection Delay [s/veh]	19.71					
Intersection LOS	B					
Intersection V/C	0.438					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.341	2.488	2.569
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.712	4.737
Bicycle LOS	D	E	E

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 12: Del Rosa Dr / Baseline St

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.506

Intersection Setup

Name				Del Rosa Dr								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Del Rosa Dr								
Base Volume Input [veh/h]	50	233	77	39	406	146	55	232	155	106	378	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	11	0	0	50	0	0	0	70	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	244	77	39	456	146	55	232	225	106	378	39
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	64	20	10	120	38	14	61	59	28	99	10
Total Analysis Volume [veh/h]	71	257	81	41	480	154	58	244	237	112	398	41
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	20	36	0	33	42	0	12	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	58	58	5	57	57	6	17	17	8	20	20
g / C, Green / Cycle	0.06	0.58	0.58	0.05	0.57	0.57	0.06	0.17	0.17	0.08	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.09	0.02	0.25	0.10	0.03	0.13	0.15	0.07	0.12	0.12
s, saturation flow rate [veh/h]	1714	1900	1748	1714	1900	1615	1714	1900	1615	1714	1900	1839
c, Capacity [veh/h]	103	1095	1008	83	1073	912	99	331	281	138	374	362
d1, Uniform Delay [s]	46.06	9.87	9.90	46.37	12.67	10.47	45.93	39.12	39.96	45.21	36.52	36.55
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.80	0.31	0.35	4.45	1.35	0.40	5.35	3.20	6.74	10.66	1.51	1.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.16	0.16	0.49	0.45	0.17	0.58	0.74	0.84	0.81	0.59	0.60
d, Delay for Lane Group [s/veh]	53.86	10.18	10.24	50.82	14.02	10.87	51.27	42.32	46.69	55.87	38.03	38.13
Lane Group LOS	D	B	B	D	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.94	1.79	1.70	1.09	6.31	1.67	1.55	5.91	6.10	3.12	5.05	4.92
50th-Percentile Queue Length [ft/ln]	48.60	44.70	42.58	27.31	157.73	41.68	38.67	147.77	152.46	78.10	126.13	123.06
95th-Percentile Queue Length [veh/ln]	3.50	3.22	3.07	1.97	10.43	3.00	2.78	9.90	10.15	5.62	8.73	8.56
95th-Percentile Queue Length [ft/ln]	87.47	80.46	76.64	49.16	260.72	75.02	69.61	247.45	253.71	140.58	218.23	214.02

Movement, Approach, & Intersection Results

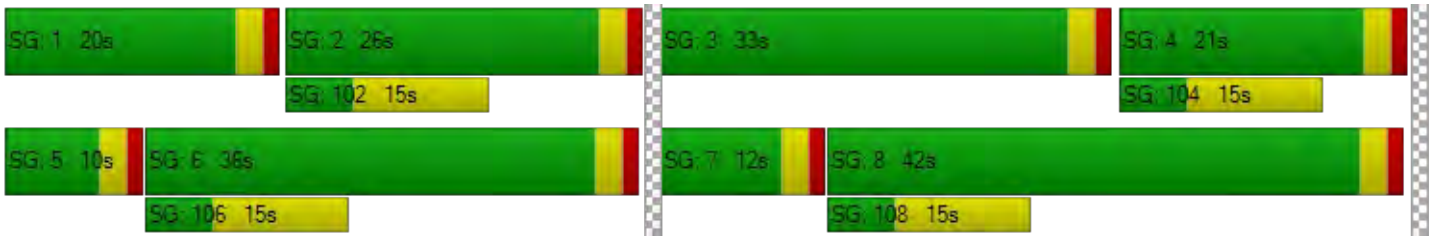
d_M, Delay for Movement [s/veh]	53.86	10.20	10.24	50.82	14.02	10.87	51.27	42.32	46.69	55.87	38.07	38.13
Movement LOS	D	B	B	D	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	17.79			15.54			45.21			41.69		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	29.95											
Intersection LOS	C											
Intersection V/C	0.506											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.548	2.508	2.533	2.485
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	660	780	360
d_b, Bicycle Delay [s]	29.65	22.45	18.61	33.62
l_b,int, Bicycle LOS Score for Intersection	1.897	2.673	2.004	2.014
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Sterling Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.391

Intersection Setup

Name				Sterling Ave								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Sterling Ave								
Base Volume Input [veh/h]	30	256	35	163	479	84	71	225	48	44	338	195
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	14	0	0	76	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	270	35	163	555	84	71	225	48	44	338	195
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	71	9	43	146	22	19	59	13	12	89	51
Total Analysis Volume [veh/h]	32	284	37	172	584	88	75	237	51	46	356	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	29	0	20	39	0	10	41	0	10	41	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	66	51	51	12	59	59	6	20	20	5	19	19
g / C, Green / Cycle	0.66	0.51	0.51	0.12	0.59	0.59	0.06	0.20	0.20	0.05	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.04	0.09	0.09	0.10	0.18	0.18	0.04	0.08	0.08	0.03	0.16	0.16
s, saturation flow rate [veh/h]	851	1900	1825	1714	1900	1814	1714	1900	1786	1714	1900	1672
c, Capacity [veh/h]	589	973	934	204	1120	1069	105	376	354	87	356	313
d1, Uniform Delay [s]	6.40	13.03	13.05	43.11	10.29	10.29	46.06	34.85	34.92	46.29	39.10	39.23
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.37	0.39	8.97	0.71	0.74	8.58	0.66	0.73	4.89	5.04	6.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.17	0.17	0.84	0.31	0.31	0.71	0.39	0.40	0.53	0.83	0.85
d, Delay for Lane Group [s/veh]	6.58	13.40	13.44	52.08	11.00	11.03	54.64	35.50	35.64	51.18	44.14	45.46
Lane Group LOS	A	B	B	D	B	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.24	1.99	1.95	4.64	3.79	3.63	2.07	3.15	3.05	1.23	7.41	6.75
50th-Percentile Queue Length [ft/ln]	6.03	49.81	48.80	115.91	94.64	90.70	51.74	78.86	76.20	30.71	185.18	168.65
95th-Percentile Queue Length [veh/ln]	0.43	3.59	3.51	8.17	6.81	6.53	3.73	5.68	5.49	2.21	11.87	11.01
95th-Percentile Queue Length [ft/ln]	10.85	89.65	87.83	204.19	170.35	163.26	93.13	141.94	137.17	55.28	296.76	275.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.58	13.42	13.44	52.08	11.01	11.03	54.64	35.56	35.64	51.18	44.37	45.46
Movement LOS	A	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.80			19.38			39.51			45.25		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.93											
Intersection LOS	C											
Intersection V/C	0.391											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.508	2.688	2.498	2.512
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	720	760	760
d_b, Bicycle Delay [s]	27.38	20.48	19.22	19.22
l_b,int, Bicycle LOS Score for Intersection	1.851	2.256	1.859	2.060
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 14: Victoria Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.393

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	48	320	22	134	422	125	105	211	30	41	245	121
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	8	0	0	29	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	0	85	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	352	22	134	536	125	105	211	30	41	245	121
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	93	6	35	141	33	28	56	8	11	64	32
Total Analysis Volume [veh/h]	51	371	23	141	564	132	111	222	32	43	258	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	31	0	22	43	0	11	37	0	10	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	22	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	56	56	10	61	61	8	17	17	5	13	13
g / C, Green / Cycle	0.05	0.56	0.56	0.10	0.61	0.61	0.08	0.17	0.17	0.05	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.11	0.08	0.19	0.19	0.06	0.07	0.07	0.03	0.11	0.11
s, saturation flow rate [veh/h]	1714	1900	1861	1714	1900	1777	1714	1900	1818	1714	1900	1695
c, Capacity [veh/h]	91	1072	1050	173	1162	1087	137	316	302	84	257	229
d1, Uniform Delay [s]	46.20	10.60	10.61	44.06	9.29	9.29	45.26	37.30	37.35	46.39	41.80	41.98
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.28	0.38	0.39	9.04	0.69	0.74	10.80	0.85	0.91	4.76	5.09	6.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.19	0.19	0.82	0.31	0.31	0.81	0.41	0.41	0.51	0.78	0.81
d, Delay for Lane Group [s/veh]	51.48	10.98	11.00	53.10	9.98	10.04	56.06	38.15	38.26	51.15	46.90	48.57
Lane Group LOS	D	B	B	D	A	B	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.36	2.15	2.13	3.83	3.72	3.50	3.10	2.88	2.81	1.15	5.10	4.81
50th-Percentile Queue Length [ft/ln]	34.12	53.82	53.14	95.73	92.99	87.47	77.54	71.89	70.15	28.73	127.40	120.17
95th-Percentile Queue Length [veh/ln]	2.46	3.88	3.83	6.89	6.69	6.30	5.58	5.18	5.05	2.07	8.80	8.40
95th-Percentile Queue Length [ft/ln]	61.41	96.88	95.66	172.31	167.37	157.44	139.58	129.40	126.28	51.71	219.95	210.06

Movement, Approach, & Intersection Results

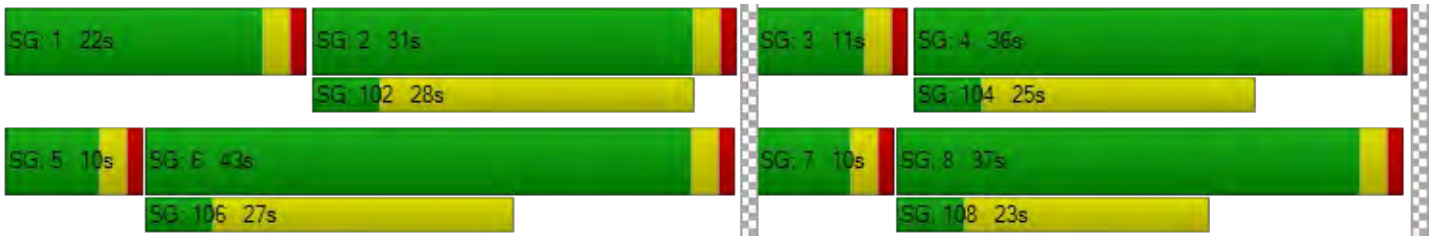
d_M, Delay for Movement [s/veh]	51.48	10.99	11.00	53.10	10.00	10.04	56.06	38.19	38.26	51.15	47.27	48.57
Movement LOS	D	B	B	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.63			17.27			43.63			48.05		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.90											
Intersection LOS	C											
Intersection V/C	0.393											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.518	2.588	2.464	2.465
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	800	680	660
d_b, Bicycle Delay [s]	25.92	18.00	21.78	22.45
l_b,int, Bicycle LOS Score for Intersection	1.927	2.250	1.861	1.913
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Tippecanoe Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

Intersection Setup

Name	Tippacanoe Avenue											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippacanoe Avenue											
Base Volume Input [veh/h]	122	257	76	24	378	23	42	429	184	110	327	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	1	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	19	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	257	76	24	397	23	42	430	184	110	327	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	68	20	6	104	6	11	113	48	29	86	6
Total Analysis Volume [veh/h]	128	271	80	25	418	24	44	453	194	116	344	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	35	0	11	34	0	11	43	0	11	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	56	56	4	50	50	5	21	21	8	24	24
g / C, Green / Cycle	0.09	0.56	0.56	0.04	0.50	0.50	0.05	0.21	0.21	0.08	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.07	0.10	0.10	0.01	0.12	0.12	0.03	0.18	0.18	0.07	0.10	0.10
s, saturation flow rate [veh/h]	1714	1900	1755	1714	1900	1864	1714	1900	1710	1714	1900	1859
c, Capacity [veh/h]	154	1054	973	61	950	932	85	399	359	137	456	446
d1, Uniform Delay [s]	44.75	10.97	10.99	47.18	14.15	14.16	46.33	38.01	38.08	45.39	32.00	32.02
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.76	0.35	0.39	4.30	0.58	0.59	4.73	5.17	6.00	13.09	0.58	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.17	0.18	0.41	0.23	0.24	0.51	0.85	0.86	0.85	0.41	0.41
d, Delay for Lane Group [s/veh]	55.51	11.32	11.38	51.48	14.72	14.75	51.05	43.18	44.08	58.48	32.58	32.62
Lane Group LOS	E	B	B	D	B	B	D	D	D	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.56	2.00	1.89	0.68	2.92	2.89	1.17	8.45	7.76	3.32	3.81	3.75
50th-Percentile Queue Length [ft/ln]	88.97	49.88	47.29	17.00	73.05	72.16	29.35	211.24	193.99	82.98	95.28	93.82
95th-Percentile Queue Length [veh/ln]	6.41	3.59	3.40	1.22	5.26	5.20	2.11	13.22	12.33	5.97	6.86	6.76
95th-Percentile Queue Length [ft/ln]	160.15	89.78	85.12	30.59	131.49	129.89	52.84	330.42	308.20	149.37	171.50	168.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.51	11.34	11.38	51.48	14.74	14.75	51.05	43.41	44.08	58.48	32.60	32.62
Movement LOS	E	B	B	D	B	B	D	D	D	E	C	C
d_A, Approach Delay [s/veh]	23.15			16.70			44.08			38.82		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	32.12											
Intersection LOS	C											
Intersection V/C	0.440											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.542	2.463	2.538	2.509
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	620	800	800
d_b, Bicycle Delay [s]	23.12	23.81	18.00	18.00
l_b,int, Bicycle LOS Score for Intersection	1.955	1.945	2.130	1.958
Bicycle LOS	A	A	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 16: Del Rosa Dr / 9th St

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.479

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	95	131	137	163	290	108	57	452	153	33	264	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	1	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	0	120	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	95	159	137	163	410	108	57	453	153	33	264	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	42	36	43	108	28	15	119	40	9	69	12
Total Analysis Volume [veh/h]	100	167	144	172	432	114	60	477	161	35	278	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	18	0	16	18	0	10	56	0	10	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	44	44	12	48	48	6	28	28	4	26	26
g / C, Green / Cycle	0.07	0.44	0.44	0.12	0.48	0.48	0.06	0.28	0.28	0.04	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.09	0.10	0.15	0.15	0.04	0.25	0.10	0.02	0.15	0.03
s, saturation flow rate [veh/h]	1714	1900	1620	1714	1900	1765	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	127	836	713	202	919	854	98	529	449	75	504	428
d1, Uniform Delay [s]	45.54	17.17	17.25	43.24	15.64	15.65	46.08	34.78	28.93	46.66	31.62	27.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.38	0.52	0.66	9.61	0.87	0.94	6.12	5.98	0.48	4.40	0.95	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.20	0.21	0.85	0.31	0.31	0.61	0.90	0.36	0.46	0.55	0.11
d, Delay for Lane Group [s/veh]	55.92	17.69	17.91	52.85	16.51	16.59	52.20	40.75	29.41	51.06	32.57	27.92
Lane Group LOS	E	B	B	D	B	B	D	D	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.79	2.39	2.18	4.67	4.01	3.76	1.62	11.81	3.13	0.94	5.84	0.86
50th-Percentile Queue Length [ft/ln]	69.80	59.85	54.43	116.82	100.30	94.12	40.39	295.33	78.27	23.45	146.07	21.55
95th-Percentile Queue Length [veh/ln]	5.03	4.31	3.92	8.22	7.22	6.78	2.91	17.45	5.64	1.69	9.81	1.55
95th-Percentile Queue Length [ft/ln]	125.63	107.72	97.97	205.45	180.54	169.42	72.71	436.25	140.88	42.22	245.17	38.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.92	17.70	17.91	52.85	16.54	16.59	52.20	40.75	29.41	51.06	32.57	27.92
Movement LOS	E	B	B	D	B	B	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	27.07			25.24			39.12			33.76		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	31.42											
Intersection LOS	C											
Intersection V/C	0.479											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.509	2.500	2.539	2.419
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1060	1060
d_b, Bicycle Delay [s]	36.13	36.13	11.05	11.05
l_b,int, Bicycle LOS Score for Intersection	1.899	2.152	2.711	2.154
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 17: Sterling Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.400

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	44	207	59	55	452	83	80	192	63	122	287	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	1	0	0	0	0
Site-Generated Trips [veh/h]	0	10	0	31	45	0	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	217	59	86	497	83	80	193	63	122	287	89
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	57	16	23	131	22	21	51	17	32	76	23
Total Analysis Volume [veh/h]	46	228	62	91	523	87	84	203	66	128	302	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	11	27	0	10	32	0	31	53	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	19	0	0	22	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	57	57	7	58	58	6	15	15	9	18	18
g / C, Green / Cycle	0.05	0.57	0.57	0.07	0.58	0.58	0.06	0.15	0.15	0.09	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.08	0.05	0.16	0.16	0.05	0.11	0.04	0.07	0.16	0.06
s, saturation flow rate [veh/h]	1714	1900	1764	1714	1900	1807	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	87	1075	998	114	1106	1052	108	292	248	160	350	297
d1, Uniform Delay [s]	46.31	10.22	10.25	45.99	10.45	10.46	46.13	40.09	37.33	44.39	39.57	35.34
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.93	0.27	0.30	11.74	0.64	0.68	11.10	2.97	0.57	8.72	6.37	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.14	0.14	0.80	0.28	0.28	0.77	0.69	0.27	0.80	0.86	0.32
d, Delay for Lane Group [s/veh]	51.24	10.49	10.54	57.73	11.09	11.14	57.24	43.06	37.90	53.11	45.94	35.94
Lane Group LOS	D	B	B	E	B	B	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.23	1.55	1.50	2.59	3.45	3.31	2.38	4.93	1.46	3.47	7.72	2.02
50th-Percentile Queue Length [ft/ln]	30.73	38.79	37.41	64.68	86.26	82.66	59.45	123.19	36.45	86.85	193.10	50.62
95th-Percentile Queue Length [veh/ln]	2.21	2.79	2.69	4.66	6.21	5.95	4.28	8.57	2.62	6.25	12.28	3.64
95th-Percentile Queue Length [ft/ln]	55.32	69.83	67.34	116.43	155.27	148.78	107.02	214.20	65.61	156.33	307.05	91.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.24	10.51	10.54	57.73	11.11	11.14	57.24	43.06	37.90	53.11	45.94	35.94
Movement LOS	D	B	B	E	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.09			17.17			45.47			45.90		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	30.06											
Intersection LOS	C											
Intersection V/C	0.400											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.631	2.522	2.330	2.352
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	480	580	1000
d_b, Bicycle Delay [s]	29.65	28.88	25.21	12.50
l_b,int, Bicycle LOS Score for Intersection	1.837	2.138	2.142	2.424
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 18: Victoria Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.303

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	60	161	17	44	333	84	59	115	67	47	141	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	8	0	0	29	0	0	0	4	0	0	0
Site-Generated Trips [veh/h]	0	24	0	0	85	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	61	193	17	44	447	84	59	115	71	47	141	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	51	4	12	118	22	16	30	19	12	37	14
Total Analysis Volume [veh/h]	64	203	18	46	471	88	62	121	75	49	148	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	35	0	10	30	0	10	44	0	11	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	67	67	5	66	66	6	11	11	5	10	10
g / C, Green / Cycle	0.06	0.67	0.67	0.05	0.66	0.66	0.06	0.11	0.11	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.04	0.06	0.06	0.03	0.15	0.15	0.04	0.06	0.05	0.03	0.08	0.04
s, saturation flow rate [veh/h]	1714	1900	1847	1714	1900	1798	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	100	1275	1239	87	1260	1192	99	202	172	89	192	163
d1, Uniform Delay [s]	46.05	5.75	5.75	46.31	6.68	6.69	46.08	42.66	41.88	46.24	43.84	41.93
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.61	0.13	0.14	4.96	0.42	0.45	6.42	2.84	1.75	5.14	6.47	1.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.09	0.09	0.53	0.23	0.23	0.63	0.60	0.44	0.55	0.77	0.36
d, Delay for Lane Group [s/veh]	52.66	5.88	5.89	51.27	7.10	7.13	52.50	45.49	43.63	51.38	50.31	43.24
Lane Group LOS	D	A	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.73	0.79	0.78	1.23	2.32	2.23	1.67	3.00	1.81	1.31	3.89	1.39
50th-Percentile Queue Length [ft/ln]	43.28	19.65	19.42	30.74	58.06	55.64	41.86	74.90	45.24	32.76	97.30	34.73
95th-Percentile Queue Length [veh/ln]	3.12	1.41	1.40	2.21	4.18	4.01	3.01	5.39	3.26	2.36	7.01	2.50
95th-Percentile Queue Length [ft/ln]	77.90	35.36	34.95	55.33	104.52	100.16	75.36	134.81	81.44	58.97	175.13	62.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.66	5.89	5.89	51.27	7.11	7.13	52.50	45.49	43.63	51.38	50.31	43.24
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.39			10.47			46.64			48.91		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	25.31											
Intersection LOS	C											
Intersection V/C	0.303											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.602	2.487	2.274	2.245
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	640	540	820	840
d_b, Bicycle Delay [s]	23.12	26.65	17.41	16.82
l_b,int, Bicycle LOS Score for Intersection	1.795	2.059	1.985	1.980
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 19: Del Rosa Dr / 6th St

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.439

Intersection Setup

Name							6th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							6th Street					
Base Volume Input [veh/h]	71	232	40	54	404	95	155	144	56	97	144	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	21	4	25	92	3	1	11	4	0	10	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	253	44	79	496	98	156	155	60	97	154	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	67	12	21	131	26	41	41	16	26	41	13
Total Analysis Volume [veh/h]	96	266	46	83	522	103	164	163	63	102	162	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	29	50	0	22	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	56	56	6	55	55	12	18	8	14
g / C, Green / Cycle	0.07	0.56	0.56	0.06	0.55	0.55	0.12	0.18	0.08	0.14
(v / s)_i Volume / Saturation Flow Rate	0.06	0.08	0.08	0.05	0.17	0.17	0.10	0.12	0.06	0.12
s, saturation flow rate [veh/h]	1714	1900	1804	1714	1900	1793	1714	1811	1714	1821
c, Capacity [veh/h]	120	1065	1012	108	1052	993	198	327	130	256
d1, Uniform Delay [s]	45.82	10.53	10.55	46.12	11.98	11.99	43.23	38.36	45.42	41.88
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.54	0.30	0.32	10.77	0.75	0.80	8.43	2.61	9.98	7.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.15	0.15	0.77	0.30	0.31	0.83	0.69	0.79	0.84
d, Delay for Lane Group [s/veh]	57.35	10.83	10.86	56.90	12.73	12.79	51.66	40.97	55.40	49.15
Lane Group LOS	E	B	B	E	B	B	D	D	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.72	1.70	1.65	2.34	3.88	3.70	4.40	5.37	2.83	5.64
50th-Percentile Queue Length [ft/ln]	67.96	42.44	41.18	58.55	97.09	92.39	109.93	134.33	70.81	140.92
95th-Percentile Queue Length [veh/ln]	4.89	3.06	2.96	4.22	6.99	6.65	7.84	9.17	5.10	9.53
95th-Percentile Queue Length [ft/ln]	122.32	76.39	74.12	105.39	174.75	166.30	195.91	229.37	127.46	238.27

Movement, Approach, & Intersection Results

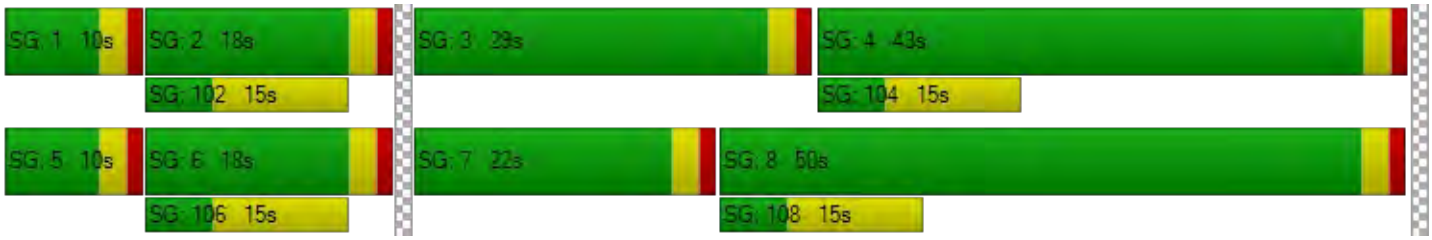
d_M, Delay for Movement [s/veh]	57.35	10.84	10.86	56.90	12.75	12.79	51.66	40.97	40.97	55.40	49.15	49.15
Movement LOS	E	B	B	E	B	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	21.79			17.93			45.47			51.16		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	30.46											
Intersection LOS	C											
Intersection V/C	0.439											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.520	2.539	2.191	2.145
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	940	800
d_b, Bicycle Delay [s]	36.13	36.13	14.05	18.00
l_b,int, Bicycle LOS Score for Intersection	1.896	2.144	2.203	2.083
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Sterling Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	587.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.136

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	259	13	28	677	43	44	102	14	9	116	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	7	21	6	34	5	1	27	0	45	18	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	266	34	34	711	48	45	129	14	54	134	17
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	70	9	9	187	13	12	34	4	14	35	4
Total Analysis Volume [veh/h]	35	280	36	36	748	51	47	136	15	57	141	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.03	0.01	0.00	1.14	0.80	0.02	0.75	0.87	0.02
d_M, Delay for Movement [s/veh]	9.51	0.00	0.00	7.95	0.00	0.00	587.42	521.54	506.10	397.64	372.44	354.45
Movement LOS	A	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.13	0.07	0.00	0.09	0.04	0.00	16.60	16.60	16.60	15.68	15.68	15.68
95th-Percentile Queue Length [ft/ln]	3.29	1.64	0.00	2.21	1.11	0.00	414.89	414.89	414.89	392.01	392.01	392.01
d_A, Approach Delay [s/veh]	0.95			0.34			536.01			377.59		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	117.69											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 21: Victoria Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	85.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.400

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	120	7	39	423	23	23	57	41	62	46	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	9	0	0	33	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	28	19	21	25	38	22	2	44	3	4	51	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	148	28	64	494	45	25	101	44	66	97	41
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	39	7	17	130	12	7	27	12	17	26	11
Total Analysis Volume [veh/h]	62	156	29	67	520	47	26	106	46	69	102	43
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.05	0.01	0.00	0.20	0.47	0.06	0.40	0.46	0.04
d_M, Delay for Movement [s/veh]	8.78	0.00	0.00	7.70	0.00	0.00	63.30	51.74	40.76	85.52	80.87	68.37
Movement LOS	A	A	A	A	A	A	F	F	E	F	F	F
95th-Percentile Queue Length [veh/ln]	0.19	0.10	0.00	0.15	0.08	0.00	4.98	4.98	4.98	7.63	7.63	7.63
95th-Percentile Queue Length [ft/ln]	4.87	2.44	0.00	3.76	1.88	0.00	124.39	124.39	124.39	190.83	190.83	190.83
d_A, Approach Delay [s/veh]	2.20			0.81			50.59			79.86		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	21.33											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 22: Central Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.084

Intersection Setup

Name	Central Avenue					
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Central Avenue					
Base Volume Input [veh/h]	10	82	111	38	45	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	4	4	54	6	56
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	86	115	92	51	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	23	30	24	13	22
Total Analysis Volume [veh/h]	38	91	121	97	54	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.08	0.10
d_M, Delay for Movement [s/veh]	7.72	0.00	0.00	0.00	11.11	9.54
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.27	0.33
95th-Percentile Queue Length [ft/ln]	2.15	2.15	0.00	0.00	6.84	8.20
d_A, Approach Delay [s/veh]	2.27		0.00		10.14	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.53					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 23: I-215 SB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	25.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

Intersection Setup

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	532	7	241	0	442	350	458	700	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	50	0	38	15	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	532	7	241	0	492	350	496	719	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9580	0.9580	0.9580	1.0000	0.9580	0.9580	0.9580	0.9580	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	139	2	63	0	128	91	129	188	0
Total Analysis Volume [veh/h]	0	0	0	555	7	252	0	514	365	518	751	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	23	0	0	54	0	23	77	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	C	L	C
C, Cycle Length [s]		100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		18	18	18	54	54	19	76
g / C, Green / Cycle		0.18	0.18	0.18	0.54	0.54	0.19	0.76
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.16	0.10	0.23	0.16	0.21
s, saturation flow rate [veh/h]		1810	1812	1615	5176	1615	3144	3618
c, Capacity [veh/h]		326	326	291	2809	877	588	2749
d1, Uniform Delay [s]		39.79	39.78	39.83	11.61	13.51	39.55	3.64
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.76	6.72	7.85	0.14	1.46	4.49	0.25
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.86	0.86	0.87	0.18	0.42	0.88	0.27
d, Delay for Lane Group [s/veh]		46.55	46.50	47.68	11.75	14.96	44.04	3.88
Lane Group LOS		D	D	D	B	B	D	A
Critical Lane Group		No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		7.23	7.23	6.58	1.90	4.98	6.47	1.88
50th-Percentile Queue Length [ft/ln]		180.74	180.76	164.43	47.57	124.48	161.85	47.06
95th-Percentile Queue Length [veh/ln]		11.64	11.64	10.78	3.42	8.64	10.65	3.39
95th-Percentile Queue Length [ft/ln]		290.98	291.01	269.57	85.62	215.96	266.17	84.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.52	46.50	47.68	0.00	11.75	14.96	44.04	3.88	0.00
Movement LOS				D	D	D		B	B	D	A	
d_A, Approach Delay [s/veh]	0.00			46.88			13.08			20.27		
Approach LOS	A			D			B			C		
d_I, Intersection Delay [s/veh]	25.45											
Intersection LOS	C											
Intersection V/C	0.547											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.155	2.211	2.765	3.017
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	400	1020	1480
d_b, Bicycle Delay [s]	50.00	32.00	12.01	3.38
l_b,int, Bicycle LOS Score for Intersection	4.132	2.903	1.922	2.607
Bicycle LOS	D	C	A	B

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 24: I-215 NB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	312	0	542	0	0	0	150	840	0	0	825	148
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	194	0	0	0	0	50	0	0	53	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	312	0	736	0	0	0	150	890	0	0	882	148
Peak Hour Factor	0.9940	0.9940	0.9940	0.9940	1.0000	0.9940	0.9940	0.9940	1.0000	1.0000	0.9940	0.9940
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	0	185	0	0	0	38	224	0	0	222	37
Total Analysis Volume [veh/h]	314	0	740	0	0	0	151	895	0	0	887	149
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	44	0	0	0	0	11	56	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	67	67	67		7	27	18	18
g / C, Green / Cycle	0.67	0.67	0.67		0.07	0.27	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.17	0.23	0.23		0.05	0.25	0.13	0.09
s, saturation flow rate [veh/h]	1810	1615	1615		3144	3618	6901	1615
c, Capacity [veh/h]	1202	1073	1073		217	998	1219	285
d1, Uniform Delay [s]	6.82	7.32	7.32		45.51	34.84	38.89	37.33
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	0.88	0.88		3.96	3.17	0.84	1.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.34	0.34		0.69	0.90	0.73	0.52
d, Delay for Lane Group [s/veh]	7.35	8.20	8.20		49.47	38.01	39.73	38.81
Lane Group LOS	A	A	A		D	D	D	D
Critical Lane Group	No	Yes	No		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.62	3.34	3.34		1.94	10.70	5.16	3.40
50th-Percentile Queue Length [ft/ln]	65.38	83.58	83.58		48.54	267.53	129.07	85.04
95th-Percentile Queue Length [veh/ln]	4.71	6.02	6.02		3.50	16.07	8.89	6.12
95th-Percentile Queue Length [ft/ln]	117.68	150.44	150.44		87.38	401.65	222.23	153.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.35	8.20	8.20	0.00	0.00	0.00	49.47	38.01	0.00	0.00	39.73	38.81
Movement LOS	A	A	A				D	D			D	D
d_A, Approach Delay [s/veh]	7.94			0.00			39.67			39.60		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	28.98											
Intersection LOS	C											
Intersection V/C	0.477											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.289	1.868	3.006	2.973
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	820	0	1060	840
d_b, Bicycle Delay [s]	17.41	50.00	11.05	16.82
l_b,int, Bicycle LOS Score for Intersection	3.299	4.132	2.423	1.987
Bicycle LOS	C	D	B	A

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 25: E St / 5th St

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.451

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	27	109	26	11	143	17	75	994	40	14	421	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	244	0	0	53	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	109	26	11	143	17	75	1238	40	14	478	12
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	28	7	3	37	4	19	317	10	4	123	3
Total Analysis Volume [veh/h]	28	112	27	11	147	17	77	1270	41	14	490	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	9	9	0	9	9	0	0	9	0	0	9	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	2.0	0.0	1.0	2.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	43	0	13	43	0	0	34	0	0	34	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	21	0	0	20	0	0	19	0	0	22	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	4.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	2.00	4.00	3.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	5	10	2	10	60	60	60	63	63	63
g / C, Green / Cycle	0.05	0.11	0.02	0.11	0.67	0.67	0.67	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.02	0.08	0.01	0.09	0.08	0.35	0.35	0.04	0.13	0.13
s, saturation flow rate [veh/h]	1714	1837	1714	1866	911	1900	1879	315	1900	1884
c, Capacity [veh/h]	87	209	42	212	616	1271	1257	278	1320	1309
d1, Uniform Delay [s]	41.22	38.23	43.09	38.75	8.31	7.55	7.56	5.96	4.83	4.83
k, delay calibration	0.11	0.15	0.11	0.15	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.11	5.09	3.21	8.20	0.42	1.51	1.54	0.34	0.32	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.32	0.66	0.26	0.77	0.12	0.52	0.52	0.05	0.19	0.19
d, Delay for Lane Group [s/veh]	43.33	43.32	46.30	46.95	8.73	9.07	9.10	6.30	5.15	5.15
Lane Group LOS	D	D	D	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.64	3.20	0.28	3.95	0.69	5.95	5.91	0.09	1.49	1.48
50th-Percentile Queue Length [ft/ln]	16.11	79.90	6.89	98.79	17.29	148.73	147.71	2.33	37.19	36.99
95th-Percentile Queue Length [veh/ln]	1.16	5.75	0.50	7.11	1.25	9.95	9.89	0.17	2.68	2.66
95th-Percentile Queue Length [ft/ln]	29.00	143.82	12.41	177.82	31.13	248.74	247.37	4.19	66.95	66.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.33	43.32	43.32	46.30	46.95	46.95	8.73	9.08	9.10	6.30	5.15	5.15
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	43.32			46.91			9.06			5.18		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13.67											
Intersection LOS	B											
Intersection V/C	0.451											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.073	2.171	2.959	2.655
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	822	644	644
d_b, Bicycle Delay [s]	15.61	15.61	20.67	20.67
l_b,int, Bicycle LOS Score for Intersection	1.835	1.848	2.705	1.985
Bicycle LOS	A	A	B	A

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 26: Arrowhead Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.413

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	46	98	38	40	227	38	46	806	144	39	433	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	244	0	0	53	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	98	38	40	227	38	46	1050	144	39	490	12
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	26	10	10	60	10	12	275	38	10	129	3
Total Analysis Volume [veh/h]	48	103	40	42	238	40	48	1102	151	41	514	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	4	0	1	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	18	0	0	18	0	0	17	0	0	17	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	61	0	0	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	18	18	18	18	18	18	62	62	62	62	62	62
g / C, Green / Cycle	0.20	0.20	0.20	0.20	0.20	0.20	0.69	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.04	0.03	0.07	0.08	0.05	0.34	0.34	0.09	0.14	0.14
s, saturation flow rate [veh/h]	1119	1900	1727	1265	1900	1807	890	1900	1821	450	1900	1884
c, Capacity [veh/h]	215	384	349	272	384	365	620	1305	1251	303	1305	1294
d1, Uniform Delay [s]	36.37	29.80	29.87	33.49	30.95	31.01	7.35	6.64	6.66	12.63	5.13	5.13
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	0.24	0.28	0.26	0.59	0.64	0.24	1.31	1.38	0.93	0.35	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.19	0.20	0.15	0.37	0.38	0.08	0.49	0.49	0.14	0.20	0.20
d, Delay for Lane Group [s/veh]	36.89	30.03	30.15	33.75	31.54	31.65	7.59	7.96	8.04	13.56	5.48	5.48
Lane Group LOS	D	C	C	C	C	C	A	A	A	B	A	A
Critical Lane Group	No	No	No	No	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.99	1.32	1.28	0.82	2.66	2.60	0.39	5.20	5.04	0.52	1.64	1.63
50th-Percentile Queue Length [ft/ln]	24.76	32.95	31.97	20.42	66.61	64.99	9.82	130.08	126.09	12.91	40.94	40.69
95th-Percentile Queue Length [veh/ln]	1.78	2.37	2.30	1.47	4.80	4.68	0.71	8.94	8.73	0.93	2.95	2.93
95th-Percentile Queue Length [ft/ln]	44.57	59.32	57.55	36.76	119.90	116.98	17.67	223.61	218.17	23.24	73.70	73.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.89	30.07	30.15	33.75	31.58	31.65	7.59	7.99	8.04	13.56	5.48	5.48
Movement LOS	D	C	C	C	C	C	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	31.80			31.87			7.98			6.06		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	12.65											
Intersection LOS	B											
Intersection V/C	0.413											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.481	2.464	2.739	2.701
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	533	1244	1244
d_b, Bicycle Delay [s]	24.20	24.20	6.42	6.42
l_b,int, Bicycle LOS Score for Intersection	1.717	1.824	2.633	2.028
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 27: Waterman Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	28.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	128	413	104	18	656	110	70	283	248	152	310	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	0	25	0	0	3	0	244	0	4	50	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	413	129	18	656	113	70	527	248	156	364	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	109	34	5	173	30	18	139	65	41	96	4
Total Analysis Volume [veh/h]	135	435	136	19	691	119	74	555	261	164	383	17
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	36.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	5.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	35	0	9	31	0	9	36	0	10	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	4.00	2.00	4.00	4.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	9	40	40	2	33	33	33	23	23	33	25	25
g / C, Green / Cycle	0.10	0.44	0.44	0.02	0.37	0.37	0.37	0.26	0.26	0.37	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.08	0.12	0.08	0.01	0.15	0.15	0.06	0.23	0.23	0.18	0.11	0.01
s, saturation flow rate [veh/h]	1714	3618	1615	1714	3618	1762	1146	1900	1697	928	3618	1615
c, Capacity [veh/h]	165	1592	711	38	1324	645	462	494	442	321	1012	452
d1, Uniform Delay [s]	39.90	16.04	15.41	43.52	21.29	21.34	18.90	31.85	31.86	22.25	26.11	23.59
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.19	0.19	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.54	0.42	0.60	9.91	0.94	1.97	0.16	8.09	9.00	1.26	0.23	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.27	0.19	0.50	0.41	0.42	0.16	0.87	0.87	0.51	0.38	0.04
d, Delay for Lane Group [s/veh]	49.44	16.47	16.01	53.43	22.23	23.31	19.06	39.95	40.87	23.51	26.34	23.63
Lane Group LOS	D	B	B	D	C	C	B	D	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.33	2.84	1.77	0.52	4.31	4.44	1.01	9.82	8.89	2.44	3.27	0.26
50th-Percentile Queue Length [ft/ln]	83.14	70.92	44.14	12.97	107.65	111.09	25.34	245.39	222.16	61.03	81.82	6.60
95th-Percentile Queue Length [veh/ln]	5.99	5.11	3.18	0.93	7.71	7.90	1.82	14.95	13.78	4.39	5.89	0.48
95th-Percentile Queue Length [ft/ln]	149.65	127.65	79.46	23.34	192.74	197.52	45.62	373.84	344.38	109.86	147.28	11.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.44	16.47	16.01	53.43	22.46	23.31	19.06	40.15	40.87	23.51	26.34	23.63
Movement LOS	D	B	B	D	C	C	B	D	D	C	C	C
d_A, Approach Delay [s/veh]	22.69			23.29			38.61			25.44		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	28.11											
Intersection LOS	C											
Intersection V/C	0.526											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.913	2.704	2.597	2.659
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	644	556	689	711
d_b, Bicycle Delay [s]	20.67	23.47	19.34	18.69
l_b,int, Bicycle LOS Score for Intersection	2.142	2.016	2.294	2.025
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 28: Tippecanoe Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	30.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

Intersection Setup

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	36	176	23	41	494	41	32	218	72	50	344	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	10	5	67	14	1	0	22	196	51	13	44	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	181	90	55	495	41	54	414	123	63	392	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	48	24	14	130	11	14	109	32	17	103	11
Total Analysis Volume [veh/h]	48	191	95	58	521	43	57	436	129	66	413	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	18	0	15	22	0	11	56	0	11	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	51	51	6	51	51	6	26	26	6	26	26
g / C, Green / Cycle	0.05	0.51	0.51	0.06	0.51	0.51	0.06	0.26	0.26	0.06	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.08	0.03	0.15	0.15	0.03	0.23	0.08	0.04	0.22	0.03
s, saturation flow rate [veh/h]	1714	1900	1694	1714	1900	1850	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	89	965	861	98	974	949	96	486	413	101	492	419
d1, Uniform Delay [s]	46.23	13.13	13.19	46.02	13.96	13.97	46.09	35.92	30.08	46.03	35.07	28.23
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.97	0.34	0.40	5.63	0.76	0.79	5.74	6.11	0.43	6.86	3.90	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.15	0.16	0.59	0.29	0.29	0.59	0.90	0.31	0.65	0.84	0.11
d, Delay for Lane Group [s/veh]	51.20	13.47	13.59	51.65	14.72	14.76	51.83	42.03	30.50	52.89	38.97	28.34
Lane Group LOS	D	B	B	D	B	B	D	D	C	D	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.28	1.81	1.72	1.55	3.77	3.69	1.53	10.89	2.54	1.79	9.88	0.83
50th-Percentile Queue Length [ft/ln]	32.04	45.36	42.88	38.83	94.36	92.37	38.23	272.33	63.58	44.74	246.90	20.81
95th-Percentile Queue Length [veh/ln]	2.31	3.27	3.09	2.80	6.79	6.65	2.75	16.31	4.58	3.22	15.03	1.50
95th-Percentile Queue Length [ft/ln]	57.66	81.64	77.18	69.89	169.84	166.27	68.82	407.65	114.45	80.52	375.74	37.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.20	13.50	13.59	51.65	14.74	14.76	51.83	42.03	30.50	52.89	38.97	28.34
Movement LOS	D	B	B	D	B	B	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	18.94			18.18			40.54			39.81		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	30.31											
Intersection LOS	C											
Intersection V/C	0.465											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.511	2.485	2.526	2.524
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	380	1060	1060
d_b, Bicycle Delay [s]	36.13	32.81	11.05	11.05
l_b,int, Bicycle LOS Score for Intersection	1.835	2.073	2.586	2.424
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 29: Del Rosa Dr / 5th St

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	14	192	7	32	316	380	224	74	16	27	284	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	4	0
Site-Generated Trips [veh/h]	0	9	8	59	24	13	3	220	0	2	138	33
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	201	15	91	340	393	227	294	16	29	426	80
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	53	4	24	89	103	60	77	4	8	112	21
Total Analysis Volume [veh/h]	15	212	16	96	358	414	239	309	17	31	448	84
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	44	0	0	44	0	0	56	0	0	56	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	51	51	51	51	43	43	43	43
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.43	0.43	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.27	0.28	0.38	0.19	0.16	0.16
s, saturation flow rate [veh/h]	1360	1692	1699	1470	623	1713	1809	1638
c, Capacity [veh/h]	737	867	914	753	339	733	814	701
d1, Uniform Delay [s]	13.10	12.90	15.94	16.57	33.44	20.21	19.39	19.55
k, delay calibration	0.50	0.50	0.50	0.50	0.27	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	0.37	1.93	2.88	6.61	0.42	0.27	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.15	0.50	0.55	0.71	0.44	0.36	0.38
d, Delay for Lane Group [s/veh]	13.54	13.26	17.87	19.45	40.05	20.64	19.66	19.89
Lane Group LOS	B	B	B	B	D	C	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.36	1.60	7.02	6.75	6.03	5.33	4.63	4.22
50th-Percentile Queue Length [ft/ln]	34.08	39.96	175.42	168.71	150.83	133.14	115.64	105.41
95th-Percentile Queue Length [veh/ln]	2.45	2.88	11.36	11.01	10.06	9.11	8.15	7.58
95th-Percentile Queue Length [ft/ln]	61.34	71.92	284.03	275.22	251.54	227.76	203.82	189.60

Movement, Approach, & Intersection Results

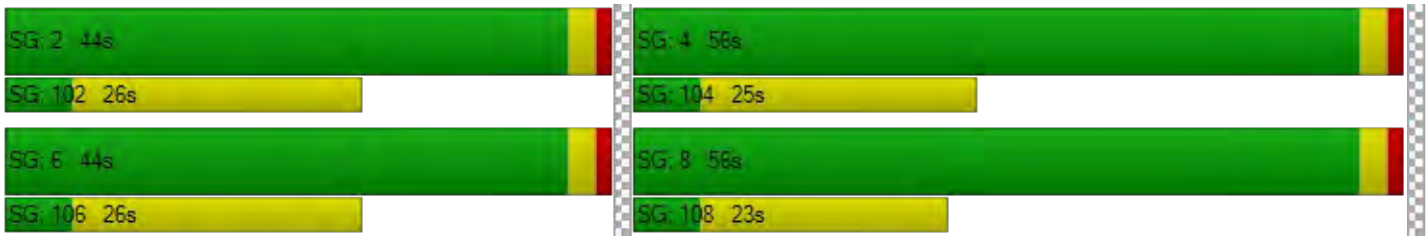
d_M, Delay for Movement [s/veh]	13.54	13.39	13.26	17.87	17.87	19.45	40.05	20.64	20.64	19.66	19.76	19.89
Movement LOS	B	B	B	B	B	B	D	C	C	B	B	B
d_A, Approach Delay [s/veh]	13.39			18.62			28.85			19.77		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	20.92											
Intersection LOS	C											
Intersection V/C	0.665											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.340	2.820	2.511	2.635
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	820	820	1060	1060
d_b, Bicycle Delay [s]	17.41	17.41	11.05	11.05
l_b,int, Bicycle LOS Score for Intersection	1.760	2.276	2.026	2.024
Bicycle LOS	A	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Sterling Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	149	17	80	519	55	22	90	11	237	269	102
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	4	2	0	0	7	0	0	0	18	0	0	0
Site-Generated Trips [veh/h]	21	15	84	13	18	48	13	220	14	24	149	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	166	101	93	544	103	35	310	43	261	418	120
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	44	27	24	143	27	9	82	11	69	110	32
Total Analysis Volume [veh/h]	35	175	106	98	573	108	37	326	45	275	440	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	79	0	0	79	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	6	0	0	6	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	53	53	53	53	53	53	41	41	41	41	41	41
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.41	0.41	0.41	0.41	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.05	0.08	0.08	0.09	0.18	0.18	0.15	0.13	0.03	0.36	0.25	0.08
s, saturation flow rate [veh/h]	771	1900	1669	1116	1900	1797	909	1729	1615	773	1729	1615
c, Capacity [veh/h]	387	1008	886	598	1008	953	418	708	661	388	708	661
d1, Uniform Delay [s]	18.37	11.93	11.99	15.29	13.50	13.51	20.41	20.13	17.94	33.39	23.40	18.92
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.30	0.37	0.59	0.94	1.00	0.43	0.27	0.04	2.39	0.90	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.14	0.15	0.16	0.35	0.35	0.32	0.33	0.07	0.71	0.62	0.19
d, Delay for Lane Group [s/veh]	18.84	12.23	12.35	15.88	14.44	14.51	20.84	20.39	17.98	35.78	24.29	19.06
Lane Group LOS	B	B	B	B	B	B	C	C	B	D	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.55	1.69	1.59	1.37	4.62	4.40	1.97	3.65	0.63	6.43	8.15	1.87
50th-Percentile Queue Length [ft/ln]	13.69	42.18	39.71	34.14	115.52	109.89	49.32	91.18	15.83	160.69	203.76	46.79
95th-Percentile Queue Length [veh/ln]	0.99	3.04	2.86	2.46	8.15	7.83	3.55	6.56	1.14	10.59	12.83	3.37
95th-Percentile Queue Length [ft/ln]	24.64	75.92	71.47	61.45	203.65	195.85	88.77	164.12	28.50	264.63	320.80	84.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.84	12.25	12.35	15.88	14.47	14.51	20.84	20.52	17.98	35.78	24.29	19.06
Movement LOS	B	B	B	B	B	B	C	C	B	D	C	B
d_A, Approach Delay [s/veh]	13.02			14.65			20.27			27.26		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.94											
Intersection LOS	B											
Intersection V/C	0.540											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.047	2.577	2.550	2.713
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	360	1520	1520
d_b, Bicycle Delay [s]	33.62	33.62	2.88	2.88
l_b,int, Bicycle LOS Score for Intersection	1.820	2.202	1.896	2.253
Bicycle LOS	A	B	A	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 31: Victoria Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name										5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name										5th Street		
Base Volume Input [veh/h]	19	130	17	76	421	77	21	109	55	284	413	78
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	9	3	0	33	0	0	0	6	13	0	0
Site-Generated Trips [veh/h]	2	9	0	15	17	13	25	196	0	0	262	34
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	148	20	91	471	90	46	305	61	297	675	112
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	39	5	24	124	24	12	80	16	78	178	29
Total Analysis Volume [veh/h]	23	156	21	96	496	95	48	321	64	313	711	118
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.8	0.0	0.0	4.8	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	28	0	0	28	0
Vehicle Extension [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.8	0.0	0.0	3.8	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		Yes			Yes			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.80	5.80	5.80	5.80	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.80	3.80	3.80	3.80	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	15	15	15	15	28	28	28	28
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.51	0.51	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.21	0.20	0.07	0.21	0.31	0.45
s, saturation flow rate [veh/h]	1155	1674	1654	1646	672	1846	1014	1853
c, Capacity [veh/h]	396	453	531	446	168	950	455	954
d1, Uniform Delay [s]	15.53	15.68	18.53	18.34	26.32	8.18	18.43	11.72
k, delay calibration	0.15	0.15	0.15	0.15	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.40	2.05	3.58	4.23	1.28	8.25	10.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.25	0.67	0.75	0.29	0.41	0.69	0.87
d, Delay for Lane Group [s/veh]	15.93	16.08	20.58	21.92	30.55	9.47	26.67	22.33
Lane Group LOS	B	B	C	C	C	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.80	1.05	4.02	3.90	0.79	2.54	4.44	9.60
50th-Percentile Queue Length [ft/ln]	19.98	26.23	100.39	97.46	19.80	63.52	111.05	239.99
95th-Percentile Queue Length [veh/ln]	1.44	1.89	7.23	7.02	1.43	4.57	7.90	14.68
95th-Percentile Queue Length [ft/ln]	35.97	47.22	180.71	175.43	35.65	114.34	197.46	367.03

Movement, Approach, & Intersection Results

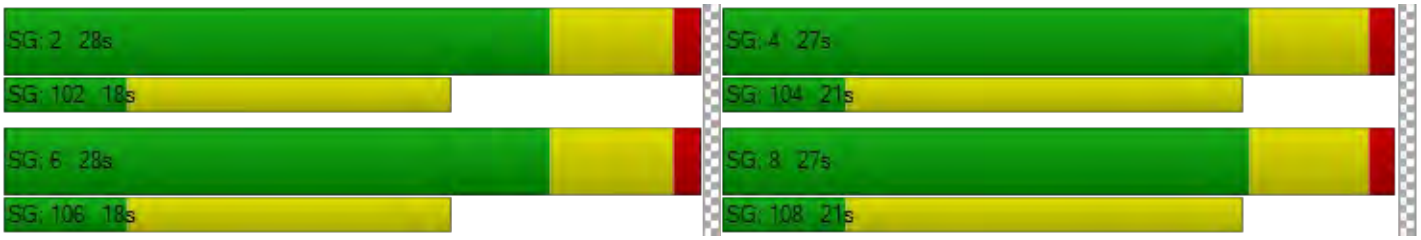
d_M, Delay for Movement [s/veh]	15.93	16.02	16.08	20.58	21.22	21.92	30.55	9.47	9.47	26.67	22.33	22.33
Movement LOS	B	B	B	C	C	C	C	A	A	C	C	C
d_A, Approach Delay [s/veh]		16.02			21.23			11.81			23.52	
Approach LOS		B			C			B			C	
d_I, Intersection Delay [s/veh]						20.21						
Intersection LOS						C						
Intersection V/C						0.661						

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersection	2.814	2.541	2.359	2.629
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	771	771	800	800
d_b, Bicycle Delay [s]	10.39	10.39	9.90	9.90
l_b,int, Bicycle LOS Score for Intersection	1.725	2.126	2.274	3.444
Bicycle LOS	A	B	B	C

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Central Avenue / 5th Street

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.445

Intersection Setup

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	6	19	5	44	56	33	15	235	17	40	798	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	3	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	56	0	4	4	161	0	0	320	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	19	5	100	56	37	19	399	17	40	1118	71
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	5	1	26	15	10	5	105	4	10	293	19
Total Analysis Volume [veh/h]	6	20	5	105	59	39	20	419	18	42	1173	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	47	63	0	10	17	0	10	17	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	15	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	1	4	8	10	3	72	72	5	74	74
g / C, Green / Cycle	0.01	0.04	0.08	0.10	0.03	0.72	0.72	0.05	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.06	0.06	0.01	0.12	0.12	0.02	0.32	0.05
s, saturation flow rate [veh/h]	1619	1642	1810	1775	1714	1900	1873	1714	3618	1615
c, Capacity [veh/h]	18	59	137	179	51	1368	1348	83	2671	1192
d1, Uniform Delay [s]	49.09	47.20	45.33	42.80	47.60	4.43	4.43	46.43	5.07	3.59
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.76	4.80	8.54	2.61	4.73	0.25	0.26	4.74	0.53	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.43	0.77	0.55	0.39	0.16	0.16	0.51	0.44	0.06
d, Delay for Lane Group [s/veh]	59.85	52.01	53.88	45.41	52.33	4.68	4.69	51.16	5.59	3.69
Lane Group LOS	E	D	D	D	D	A	A	D	A	A
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.20	0.69	2.87	2.42	0.55	1.30	1.29	1.12	3.98	0.38
50th-Percentile Queue Length [ft/ln]	5.03	17.14	71.68	60.59	13.86	32.60	32.32	28.08	99.43	9.41
95th-Percentile Queue Length [veh/ln]	0.36	1.23	5.16	4.36	1.00	2.35	2.33	2.02	7.16	0.68
95th-Percentile Queue Length [ft/ln]	9.06	30.84	129.02	109.07	24.95	58.69	58.17	50.54	178.97	16.93

Movement, Approach, & Intersection Results

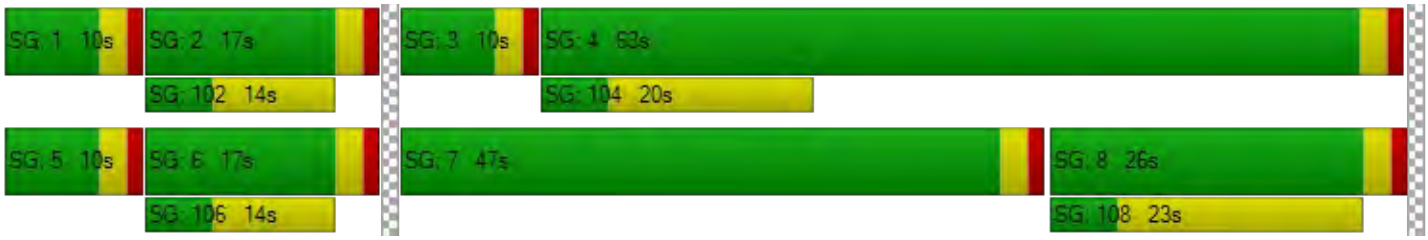
d_M, Delay for Movement [s/veh]	59.85	52.01	52.01	53.88	45.41	45.41	52.33	4.69	4.69	51.16	5.59	3.69
Movement LOS	E	D	D	D	D	D	D	A	A	D	A	A
d_A, Approach Delay [s/veh]	53.52			49.79			6.77			6.96		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	12.04											
Intersection LOS	B											
Intersection V/C	0.445											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	1.996	2.050	2.633	2.755
Crosswalk LOS	A	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	1200	280	280
d_b, Bicycle Delay [s]	29.65	8.00	36.98	36.98
l_b,int, Bicycle LOS Score for Intersection	1.611	1.895	1.937	2.624
Bicycle LOS	A	A	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Palm Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	77.1
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	35	157	258	145	664	98	14	224	68	360	671	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	5	9	0	21	0	0	0	3	33	0	0
Site-Generated Trips [veh/h]	10	2	3	6	6	10	0	148	5	101	382	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	164	270	151	691	108	14	372	76	494	1053	107
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	43	71	40	182	28	4	98	20	130	277	28
Total Analysis Volume [veh/h]	48	173	284	159	727	114	15	392	80	520	1108	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	0	12	35	0	19	34	0	21	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	0	0	27	0	0	26	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	42	42	9	46	46	2	19	19	18	35	35
g / C, Green / Cycle	0.05	0.42	0.42	0.09	0.46	0.46	0.02	0.19	0.19	0.18	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.03	0.05	0.18	0.09	0.20	0.07	0.01	0.11	0.05	0.30	0.31	0.07
s, saturation flow rate [veh/h]	1714	3618	1615	1714	3618	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	89	1515	676	154	1653	738	43	692	309	309	1253	559
d1, Uniform Delay [s]	46.26	17.75	20.50	45.50	18.45	15.86	47.96	36.67	34.40	41.00	30.79	22.97
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.48	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.06	0.15	1.91	41.75	0.85	0.45	4.85	0.73	0.44	321.62	2.27	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.11	0.42	1.03	0.44	0.15	0.35	0.57	0.26	1.69	0.88	0.20
d, Delay for Lane Group [s/veh]	51.32	17.90	22.42	87.25	19.30	16.31	52.81	37.40	34.84	362.62	33.06	23.14
Lane Group LOS	D	B	C	F	B	B	D	D	C	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.28	1.24	4.93	5.59	5.74	1.59	0.42	4.38	1.69	35.05	12.59	1.88
50th-Percentile Queue Length [ft/ln]	32.08	30.90	123.15	139.65	143.48	39.65	10.60	109.42	42.17	876.35	314.69	47.06
95th-Percentile Queue Length [veh/ln]	2.31	2.23	8.57	9.56	9.67	2.85	0.76	7.81	3.04	54.80	18.41	3.39
95th-Percentile Queue Length [ft/ln]	57.74	55.63	214.15	239.08	241.71	71.37	19.08	195.19	75.90	1369.91	460.16	84.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.32	17.90	22.42	87.25	19.30	16.31	52.81	37.40	34.84	362.62	33.06	23.14
Movement LOS	D	B	C	F	B	B	D	D	C	F	C	C
d_A, Approach Delay [s/veh]	23.62			29.77			37.46			130.85		
Approach LOS	C			C			D			F		
d_I, Intersection Delay [s/veh]	77.08											
Intersection LOS	E											
Intersection V/C	0.680											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.856	2.671	2.946	2.878
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	640	620	660
d_b, Bicycle Delay [s]	24.50	23.12	23.81	22.45
l_b,int, Bicycle LOS Score for Intersection	1.976	2.385	1.961	2.996
Bicycle LOS	A	B	A	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 34: New Intersection

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.773

Intersection Setup

Name	Church Ave		5th Street		5th Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Church Ave		5th Street		5th Street	
Base Volume Input [veh/h]	308	84	25	564	1142	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	16	3	32	4	99	40
Site-Generated Trips [veh/h]	0	0	0	99	521	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	324	87	57	667	1762	169
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	85	23	15	176	464	44
Total Analysis Volume [veh/h]	341	92	60	702	1855	178
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	25	0	10	75	65	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	21	21	6	73	65	65
g / C, Green / Cycle	0.21	0.21	0.06	0.73	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.19	0.06	0.03	0.19	0.54	0.55
s, saturation flow rate [veh/h]	1810	1615	1810	3618	1900	1843
c, Capacity [veh/h]	374	334	104	2652	1227	1190
d1, Uniform Delay [s]	38.76	33.36	45.93	4.42	13.51	14.00
k, delay calibration	0.19	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.07	0.44	4.93	0.24	6.54	7.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.28	0.58	0.26	0.83	0.85
d, Delay for Lane Group [s/veh]	52.83	33.80	50.86	4.66	20.05	21.92
Lane Group LOS	D	C	D	A	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.51	1.91	1.59	2.06	17.41	18.35
50th-Percentile Queue Length [ft/ln]	237.77	47.74	39.73	51.47	435.19	458.84
95th-Percentile Queue Length [veh/ln]	14.57	3.44	2.86	3.71	24.25	25.38
95th-Percentile Queue Length [ft/ln]	364.22	85.94	71.51	92.65	606.25	634.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.83	33.80	50.86	4.66	20.89	21.92
Movement LOS	D	C	D	A	C	C
d_A, Approach Delay [s/veh]	48.79		8.30		20.98	
Approach LOS	D		A		C	
d_I, Intersection Delay [s/veh]	21.72					
Intersection LOS	C					
Intersection V/C	0.773					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.165	2.835	2.887
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.761	5.810
Bicycle LOS	D	E	F

Sequence

Ring 1	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 35: SR-210 EB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	50.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.989

Intersection Setup

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	211	11	207	0	417	458	958	1337	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	58	0	10	10	0	81	0
Site-Generated Trips [veh/h]	0	0	0	0	0	240	0	80	53	0	281	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	211	11	505	0	507	521	958	1699	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	56	3	133	0	133	137	252	447	0
Total Analysis Volume [veh/h]	0	0	0	222	12	532	0	534	548	1008	1788	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	28	0	0	35	0	37	72	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		25	25	32	32	34	69
g / C, Green / Cycle		0.25	0.25	0.32	0.32	0.34	0.69
(v / s)_i Volume / Saturation Flow Rate		0.13	0.33	0.15	0.34	0.32	0.49
s, saturation flow rate [veh/h]		1814	1615	3618	1615	3144	3618
c, Capacity [veh/h]		456	406	1166	520	1058	2491
d1, Uniform Delay [s]		32.18	37.43	26.95	33.89	32.40	9.58
k, delay calibration		0.50	0.50	0.11	0.50	0.11	0.34
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		4.09	156.52	0.28	54.19	5.82	1.24
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.51	1.31	0.46	1.05	0.95	0.72
d, Delay for Lane Group [s/veh]		36.26	193.95	27.23	88.08	38.22	10.82
Lane Group LOS		D	F	C	F	D	B
Critical Lane Group		No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		5.33	27.37	5.03	20.06	12.39	10.59
50th-Percentile Queue Length [ft/ln]		133.35	684.17	125.85	501.43	309.76	264.77
95th-Percentile Queue Length [veh/ln]		9.12	41.37	8.71	28.34	18.16	15.93
95th-Percentile Queue Length [ft/ln]		228.04	1034.18	217.84	708.59	454.08	398.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	36.26	36.26	193.95	0.00	27.23	88.08	38.22	10.82	0.00
Movement LOS				D	D	F		C	F	D	B	
d_A, Approach Delay [s/veh]	0.00			145.78			58.05			20.70		
Approach LOS	A			F			E			C		
d_I, Intersection Delay [s/veh]	50.03											
Intersection LOS	D											
Intersection V/C	0.989											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.970	3.095
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	500	640	1380
d_b, Bicycle Delay [s]	50.00	28.13	23.12	4.81
l_b,int, Bicycle LOS Score for Intersection	4.132	2.824	2.452	3.866
Bicycle LOS	D	C	B	D

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 36: SR-210 WB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	487	0	401	0	0	0	94	538	0	0	1812	393
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	76	0	0	0	0	0	9	1	0	0	5	0
Site-Generated Trips [veh/h]	242	0	0	0	0	0	74	6	0	0	39	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	805	0	401	0	0	0	177	545	0	0	1856	393
Peak Hour Factor	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	212	0	106	0	0	0	47	143	0	0	488	103
Total Analysis Volume [veh/h]	847	0	422	0	0	0	186	574	0	0	1954	414
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	0	0	14	79	0	0	65	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	24	0	0	15	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	25	25	25		11	69	55	55
g / C, Green / Cycle	0.25	0.25	0.25		0.11	0.69	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.23	0.23	0.15		0.11	0.16	0.38	0.26
s, saturation flow rate [veh/h]	1810	1810	2859		1714	3618	5176	1615
c, Capacity [veh/h]	459	459	725		189	2483	2827	882
d1, Uniform Delay [s]	36.35	36.35	32.67		44.43	5.85	16.54	13.84
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	26.47	26.47	3.39		27.34	0.05	0.31	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.92	0.58		0.99	0.23	0.69	0.47
d, Delay for Lane Group [s/veh]	62.82	62.82	36.06		71.77	5.90	16.85	14.23
Lane Group LOS	E	E	D		E	A	B	B
Critical Lane Group	Yes	No	No		Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.23	13.23	4.75		5.99	2.01	10.28	5.52
50th-Percentile Queue Length [ft/ln]	330.71	330.71	118.81		149.71	50.36	256.97	138.03
95th-Percentile Queue Length [veh/ln]	19.19	19.19	8.33		10.00	3.63	15.54	9.37
95th-Percentile Queue Length [ft/ln]	479.83	479.83	208.19		250.04	90.65	388.42	234.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.82	62.82	36.06	0.00	0.00	0.00	71.77	5.90	0.00	0.00	16.85	14.23
Movement LOS	E	E	D				E	A			B	B
d_A, Approach Delay [s/veh]	53.92			0.00			22.02			16.39		
Approach LOS	D			A			C			B		
d_I, Intersection Delay [s/veh]	28.19											
Intersection LOS	C											
Intersection V/C	0.720											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	3.097	3.006
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	360	0	1520	1240
d_b, Bicycle Delay [s]	33.62	50.00	2.88	7.22
l_b,int, Bicycle LOS Score for Intersection	3.653	4.132	2.187	2.862
Bicycle LOS	D	D	B	C

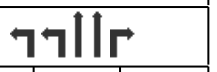
Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 37: Tippecanoe Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	30.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

Intersection Setup

Name				Tippecanoe Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Tippecanoe Avenue								
Base Volume Input [veh/h]	91	272	215	52	664	58	33	220	54	302	716	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	23	0	0	0	0	6	0	6	2	0
Site-Generated Trips [veh/h]	0	72	139	51	14	0	0	42	0	28	3	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	344	377	103	678	58	33	268	54	336	721	35
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	91	99	27	178	15	9	71	14	88	190	9
Total Analysis Volume [veh/h]	96	362	397	108	714	61	35	282	57	354	759	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	37	37	10	36	0	10	23	0	30	43	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	52	52	7	52	52	4	15	15	13	24	24
g / C, Green / Cycle	0.07	0.52	0.52	0.07	0.52	0.52	0.04	0.15	0.15	0.13	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.25	0.06	0.21	0.21	0.02	0.09	0.09	0.11	0.21	0.02
s, saturation flow rate [veh/h]	1714	3618	1615	1714	1900	1848	1714	1900	1792	3329	3618	1615
c, Capacity [veh/h]	120	1896	846	120	995	968	75	290	274	443	875	391
d1, Uniform Delay [s]	45.80	12.58	15.02	46.15	14.28	14.29	46.66	39.48	39.56	42.04	36.36	29.40
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.39	0.22	1.86	20.15	1.17	1.21	4.40	1.94	2.17	3.36	2.77	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.19	0.47	0.90	0.39	0.39	0.46	0.59	0.61	0.80	0.87	0.09
d, Delay for Lane Group [s/veh]	57.19	12.81	16.88	66.30	15.46	15.49	51.06	41.42	41.74	45.40	39.12	29.51
Lane Group LOS	E	B	B	E	B	B	D	D	D	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.71	2.14	5.87	3.32	5.44	5.30	0.94	4.08	3.95	4.41	9.07	0.70
50th-Percentile Queue Length [ft/ln]	67.85	53.38	146.82	82.92	135.95	132.49	23.45	101.92	98.80	110.19	226.67	17.49
95th-Percentile Queue Length [veh/ln]	4.89	3.84	9.85	5.97	9.26	9.07	1.69	7.34	7.11	7.85	14.01	1.26
95th-Percentile Queue Length [ft/ln]	122.13	96.09	246.17	149.25	231.56	226.87	42.22	183.46	177.84	196.27	350.13	31.48

Movement, Approach, & Intersection Results

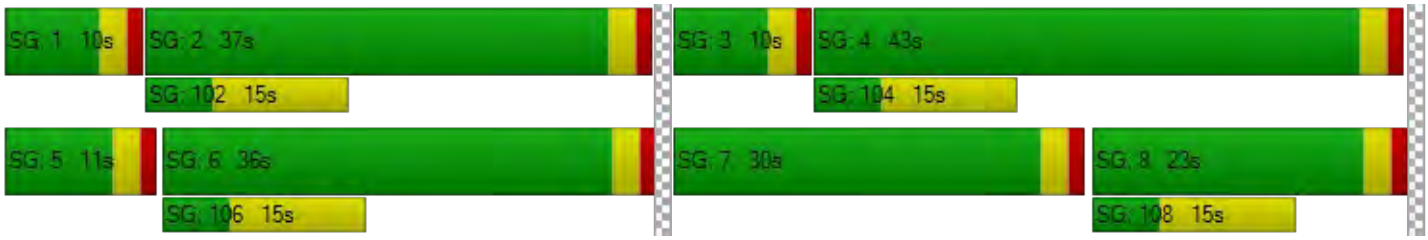
d_M, Delay for Movement [s/veh]	57.19	12.81	16.88	66.30	15.47	15.49	51.06	41.54	41.74	45.40	39.12	29.51
Movement LOS	E	B	B	E	B	B	D	D	D	D	D	C
d_A, Approach Delay [s/veh]	19.68			21.69			42.46			40.75		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	30.26											
Intersection LOS	C											
Intersection V/C	0.539											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.781	2.563	2.558	2.968
Crosswalk LOS	C	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	660	400	800
d_b, Bicycle Delay [s]	21.78	22.45	32.00	18.00
l_b,int, Bicycle LOS Score for Intersection	2.265	2.288	1.868	2.508
Bicycle LOS	B	B	A	B

Sequence

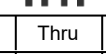
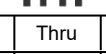
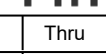
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 38: Del Rosa Dr / 3rd St

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	89	318	26	228	86	73	351	34	716	1075	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	29	0	0	8	0
Site-Generated Trips [veh/h]	0	0	0	9	0	17	15	191	0	0	60	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	89	318	35	228	103	88	571	34	716	1143	15
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	23	84	9	60	27	23	150	9	188	301	4
Total Analysis Volume [veh/h]	14	94	335	37	240	108	93	601	36	754	1203	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	18	10	18	0	10	19	0	53	62	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	36	67	5	38	38	7	19	19	28	41	41
g / C, Green / Cycle	0.02	0.36	0.67	0.05	0.38	0.38	0.07	0.19	0.19	0.28	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.21	0.02	0.09	0.10	0.05	0.17	0.02	0.24	0.32	0.32
s, saturation flow rate [veh/h]	1714	3618	1615	1714	1900	1706	1714	3618	1615	3144	1900	1891
c, Capacity [veh/h]	41	1295	1083	78	721	648	117	701	313	889	776	772
d1, Uniform Delay [s]	48.02	21.17	6.85	46.54	21.26	21.35	45.93	38.97	33.24	33.85	25.76	25.82
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.13	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.78	0.11	0.74	4.35	0.83	0.97	11.69	3.18	0.16	2.37	2.22	2.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.07	0.31	0.47	0.25	0.26	0.80	0.86	0.12	0.85	0.79	0.79
d, Delay for Lane Group [s/veh]	52.80	21.28	7.59	50.89	22.09	22.32	57.62	42.15	33.40	36.21	27.98	28.13
Lane Group LOS	D	C	A	D	C	C	E	D	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.40	0.74	2.88	0.99	3.02	2.84	2.64	7.33	0.73	8.75	12.63	12.68
50th-Percentile Queue Length [ft/ln]	9.92	18.52	71.93	24.71	75.41	71.11	66.02	183.32	18.29	218.84	315.84	316.93
95th-Percentile Queue Length [veh/ln]	0.71	1.33	5.18	1.78	5.43	5.12	4.75	11.77	1.32	13.61	18.46	18.52
95th-Percentile Queue Length [ft/ln]	17.86	33.33	129.48	44.48	135.74	128.00	118.84	294.35	32.93	340.14	461.57	462.92

Movement, Approach, & Intersection Results

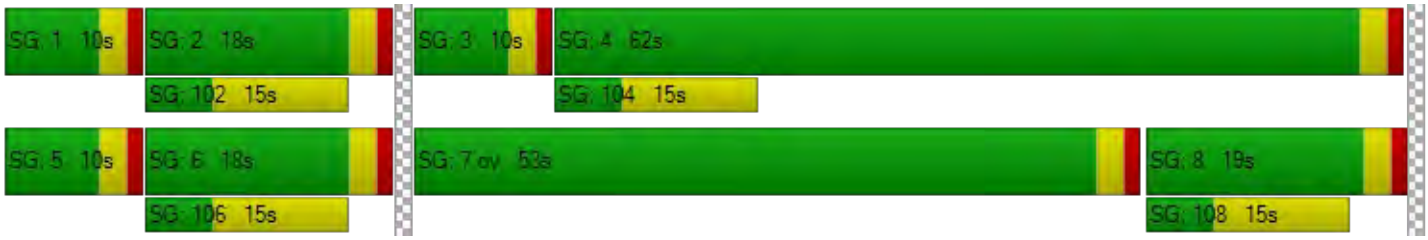
d_M, Delay for Movement [s/veh]	52.80	21.28	7.59	50.89	22.15	22.32	57.62	42.15	33.40	36.21	28.05	28.13
Movement LOS	D	C	A	D	C	C	E	D	C	D	C	C
d_A, Approach Delay [s/veh]	11.92			24.96			43.69			31.17		
Approach LOS	B			C			D			C		
d_I, Intersection Delay [s/veh]	30.67											
Intersection LOS	C											
Intersection V/C	0.572											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.699	2.421	2.793	3.011
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	320	1180
d_b, Bicycle Delay [s]	36.13	36.13	35.28	8.41
l_b,int, Bicycle LOS Score for Intersection	1.925	1.877	2.162	3.187
Bicycle LOS	A	A	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 39: Sterling Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	37.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.828

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	39	781	175	385	1190	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	25	0	0	29	8	5
Site-Generated Trips [veh/h]	23	33	95	79	40	25
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	814	270	493	1238	53
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	214	71	130	326	14
Total Analysis Volume [veh/h]	92	857	284	519	1303	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	49	0	14	51	37	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	33	33	18	61	39	39
g / C, Green / Cycle	0.33	0.33	0.18	0.61	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.05	0.30	0.17	0.14	0.36	0.36
s, saturation flow rate [veh/h]	1810	2859	1714	3618	1900	1873
c, Capacity [veh/h]	606	958	315	2189	743	732
d1, Uniform Delay [s]	23.30	31.58	39.90	9.11	28.87	29.11
k, delay calibration	0.11	0.11	0.14	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	3.24	11.14	0.26	17.76	19.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.89	0.90	0.24	0.91	0.93
d, Delay for Lane Group [s/veh]	23.41	34.82	51.04	9.36	46.63	48.81
Lane Group LOS	C	C	D	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.53	9.97	7.70	2.53	18.53	18.99
50th-Percentile Queue Length [ft/ln]	38.26	249.26	192.59	63.20	463.18	474.77
95th-Percentile Queue Length [veh/ln]	2.75	15.15	12.26	4.55	25.59	26.14
95th-Percentile Queue Length [ft/ln]	68.86	378.72	306.39	113.76	639.66	653.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.41	34.82	51.04	9.36	47.67	48.81
Movement LOS	C	C	D	A	D	D
d_A, Approach Delay [s/veh]	33.71		24.10		47.72	
Approach LOS	C		C		D	
d_I, Intersection Delay [s/veh]	37.35					
Intersection LOS	D					
Intersection V/C	0.828					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.558	2.884	2.618
Crosswalk LOS	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.795	5.254
Bicycle LOS	D	E	F

Sequence

Ring 1	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 40: Victoria Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	39.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.726

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	12	26	156	30	603	134	262	24	33	628	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	11	4	2	0	51	2	8	10	0	22	27	0
Site-Generated Trips [veh/h]	0	0	0	11	0	6	2	73	0	0	86	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	16	28	167	81	611	144	345	24	55	741	61
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	4	7	44	21	161	38	91	6	14	195	16
Total Analysis Volume [veh/h]	24	17	29	176	85	643	152	363	25	58	780	64
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	42	0	15	47	0	10	33	0	10	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	24	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	3	33	33	12	42	42	11	37	37	6	32	32
g / C, Green / Cycle	0.03	0.33	0.33	0.12	0.42	0.42	0.11	0.37	0.37	0.06	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.01	0.01	0.02	0.10	0.04	0.40	0.09	0.10	0.10	0.03	0.23	0.23
s, saturation flow rate [veh/h]	1714	1900	1615	1714	1900	1615	1714	1900	1857	1714	1900	1850
c, Capacity [veh/h]	59	635	539	205	796	677	179	703	687	96	612	595
d1, Uniform Delay [s]	47.26	22.38	22.59	43.17	17.66	28.03	44.01	22.13	22.14	46.09	29.67	29.67
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.36	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.38	0.02	0.04	9.84	0.06	19.47	10.61	0.99	1.01	5.90	6.53	6.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.03	0.05	0.86	0.11	0.95	0.85	0.28	0.28	0.60	0.70	0.70
d, Delay for Lane Group [s/veh]	51.64	22.40	22.63	53.01	17.72	47.50	54.61	23.11	23.15	51.99	36.20	36.37
Lane Group LOS	D	C	C	D	B	D	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.65	0.27	0.47	4.79	1.19	17.82	4.19	3.38	3.33	1.56	9.92	9.69
50th-Percentile Queue Length [ft/ln]	16.37	6.77	11.69	119.78	29.80	445.40	104.79	84.51	83.14	38.97	248.05	242.25
95th-Percentile Queue Length [veh/ln]	1.18	0.49	0.84	8.38	2.15	24.74	7.54	6.08	5.99	2.81	15.09	14.80
95th-Percentile Queue Length [ft/ln]	29.47	12.19	21.04	209.53	53.63	618.45	188.62	152.12	149.65	70.14	377.20	369.88

Movement, Approach, & Intersection Results

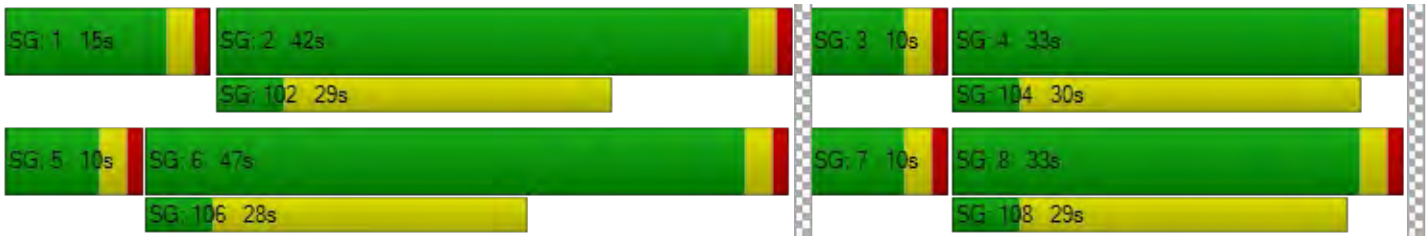
d_M, Delay for Movement [s/veh]	51.64	22.40	22.63	53.01	17.72	47.50	54.61	23.13	23.15	51.99	36.28	36.37
Movement LOS	D	C	C	D	B	D	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	32.52			45.77			31.99			37.30		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	39.14											
Intersection LOS	D											
Intersection V/C	0.726											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.353	2.528	2.694	2.593
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	780	880	600	600
d_b, Bicycle Delay [s]	18.61	15.68	24.50	24.50
l_b,int, Bicycle LOS Score for Intersection	1.617	2.305	2.005	2.304
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 41: Central Ave / 3rd St

Control Type:	Two-way stop	Delay (sec / veh):	31.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.157

Intersection Setup

Name				Central Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Central Avenue								
Base Volume Input [veh/h]	0	0	0	24	0	80	23	411	0	0	623	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	3	1	11	0	0	46	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	67	0	0	102	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	24	0	83	24	489	0	0	771	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	6	0	22	6	129	0	0	203	1
Total Analysis Volume [veh/h]	0	0	0	25	0	87	25	515	0	0	812	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.16	0.00	0.15	0.03	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	25.52	30.53	9.82	31.72	0.00	15.17	9.53	0.00	0.00	0.00	0.00	0.00
Movement LOS	D	D	A	D		C	A	A			A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	1.25	0.00	1.25	0.09	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	31.27	0.00	31.27	2.35	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	21.95			18.86			0.44			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	1.60											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 42: Palm Ave_Alabama St / 3rd St

Control Type:	Signalized	Delay (sec / veh):	46.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.756

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	385	364	33	78	831	159	106	18	0	122	104	235
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	8	0	0	27	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	13	0	9	5	98	2	39	1	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	412	385	33	87	863	257	108	57	1	122	105	235
Peak Hour Factor	0.9090	0.9500	0.9500	0.9500	0.9500	0.9090	0.9090	0.9090	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	113	101	9	23	227	71	30	16	0	31	26	59
Total Analysis Volume [veh/h]	453	405	35	92	908	283	119	63	1	122	105	235
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	26	0	32	31	0	10	31	0	11	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	24	52	52	7	35	35	7	21	8	22
g / C, Green / Cycle	0.24	0.52	0.52	0.07	0.35	0.35	0.07	0.21	0.08	0.22
(v / s)_i Volume / Saturation Flow Rate	0.26	0.12	0.12	0.06	0.25	0.18	0.04	0.03	0.07	0.20
s, saturation flow rate [veh/h]	1714	1900	1847	1619	3618	1615	2959	1900	1714	1693
c, Capacity [veh/h]	411	985	958	118	1270	567	200	397	137	375
d1, Uniform Delay [s]	38.00	13.14	13.14	45.59	28.11	25.53	45.30	32.37	45.56	37.92
k, delay calibration	0.38	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	69.46	0.53	0.55	10.67	3.46	3.12	2.83	0.18	17.02	15.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.10	0.23	0.23	0.78	0.71	0.50	0.60	0.16	0.89	0.91
d, Delay for Lane Group [s/veh]	107.46	13.67	13.69	56.26	31.57	28.65	48.14	32.55	62.58	53.22
Lane Group LOS	F	B	B	E	C	C	D	C	E	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	17.81	2.79	2.72	2.58	9.79	5.69	1.51	1.26	3.63	9.57
50th-Percentile Queue Length [ft/ln]	445.13	69.84	68.02	64.55	244.67	142.15	37.64	31.61	90.65	239.19
95th-Percentile Queue Length [veh/ln]	26.10	5.03	4.90	4.65	14.92	9.60	2.71	2.28	6.53	14.64
95th-Percentile Queue Length [ft/ln]	652.49	125.71	122.43	116.18	372.93	239.91	67.75	56.90	163.18	366.01

Movement, Approach, & Intersection Results

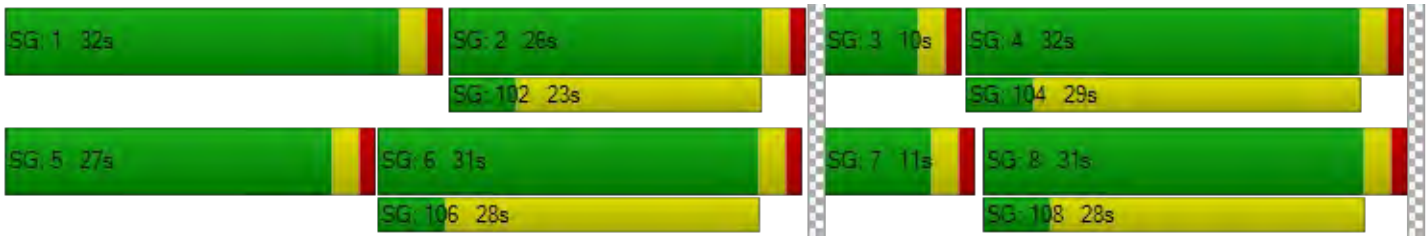
d_M, Delay for Movement [s/veh]	107.46	13.68	13.69	56.26	31.57	28.65	48.14	32.55	0.00	62.58	53.22	53.22
Movement LOS	F	B	B	E	C	C	D	C		E	D	D
d_A, Approach Delay [s/veh]	61.25			32.69			42.74			55.69		
Approach LOS	E			C			D			E		
d_I, Intersection Delay [s/veh]	46.15											
Intersection LOS	D											
Intersection V/C	0.756											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.681	2.885	2.506	2.159
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	560	560	580
d_b, Bicycle Delay [s]	29.65	25.92	25.92	25.21
l_b,int, Bicycle LOS Score for Intersection	2.296	2.618	1.860	2.322
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 43: Tippecanoe Ave / Rialto Ave

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.406

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	90	528	0	0	841	101	87	0	110	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	23	0	0	6	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	2	4	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	758	0	0	887	103	91	0	110	0	0	0
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	199	0	0	233	27	24	0	29	0	0	0
Total Analysis Volume [veh/h]	95	798	0	0	934	108	96	0	116	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	0	8	0	0	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	0	7	0	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	30	0	0	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Split [s]	11	19	0	10	18	0	71	0	71	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No		No		No			
Maximum Recall	No	No		No	No		No		No			
Pedestrian Recall	No	No		No	No		No		No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	7	82	0	75	75	9	9	
g / C, Green / Cycle	0.07	0.82	0.00	0.75	0.75	0.09	0.09	
(v / s)_i Volume / Saturation Flow Rate	0.06	0.22	0.00	0.28	0.28	0.05	0.07	
s, saturation flow rate [veh/h]	1714	3618	1714	1900	1832	1810	1615	
c, Capacity [veh/h]	119	2962	0	1424	1373	165	147	
d1, Uniform Delay [s]	45.84	2.11	0.00	4.35	4.35	43.62	44.50	
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	11.52	0.22	0.00	0.75	0.78	3.24	9.01	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.80	0.27	0.00	0.37	0.37	0.58	0.79	
d, Delay for Lane Group [s/veh]	57.37	2.33	0.00	5.10	5.13	46.86	53.51	
Lane Group LOS	E	A	A	A	A	D	D	
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	
50th-Percentile Queue Length [veh/ln]	2.69	1.18	0.00	3.28	3.17	2.42	3.17	
50th-Percentile Queue Length [ft/ln]	67.26	29.57	0.00	81.97	79.32	60.43	79.14	
95th-Percentile Queue Length [veh/ln]	4.84	2.13	0.00	5.90	5.71	4.35	5.70	
95th-Percentile Queue Length [ft/ln]	121.07	53.22	0.00	147.55	142.77	108.78	142.44	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.37	2.33	0.00	0.00	5.11	5.13	46.86	0.00	53.51	0.00	0.00	0.00
Movement LOS	E	A		A	A	A	D		D			
d_A, Approach Delay [s/veh]	8.19			5.11			50.50			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	10.87											
Intersection LOS	B											
Intersection V/C	0.406											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.775	0.000	2.082	1.430
Crosswalk LOS	C	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	320	300	0	0
d_b, Bicycle Delay [s]	35.28	36.13	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	2.296	2.419	4.132	4.132
Bicycle LOS	B	B	D	D

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 44: Tippecanoe Ave / Mill St

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.712

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	143	1077	142	167	1162	95	244	64	53	120	211	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	11	0	2	2	12	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	1295	142	169	1204	107	244	64	53	120	211	165
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	341	37	44	317	28	64	17	14	32	56	43
Total Analysis Volume [veh/h]	151	1363	149	178	1267	113	257	67	56	126	222	174
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	7	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	34	28	0	38	32	32	15	18	0	16	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	Yes	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	11	47	47	13	49	49	31	31	15	31	16	16
g / C, Green / Cycle	0.11	0.47	0.47	0.13	0.49	0.49	0.31	0.31	0.15	0.31	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.09	0.28	0.28	0.10	0.35	0.07	0.07	0.29	0.03	0.10	0.06	0.11
s, saturation flow rate [veh/h]	1714	3618	1806	1714	3618	1615	1402	806	1615	1288	3618	1615
c, Capacity [veh/h]	187	1715	856	216	1775	793	476	327	242	144	579	258
d1, Uniform Delay [s]	43.50	19.18	19.18	42.62	19.96	13.94	25.32	34.61	37.42	39.71	37.59	39.54
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.93	1.49	2.96	7.69	2.48	0.38	0.20	12.29	0.48	14.94	0.42	3.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.59	0.59	0.82	0.71	0.14	0.19	0.71	0.23	0.88	0.38	0.67
d, Delay for Lane Group [s/veh]	51.43	20.66	22.15	50.32	22.43	14.32	25.52	46.90	37.90	54.65	38.00	42.58
Lane Group LOS	D	C	C	D	C	B	C	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.04	8.53	8.88	4.72	11.56	1.45	1.61	4.57	1.23	1.73	2.45	4.21
50th-Percentile Queue Length [ft/ln]	100.91	213.28	221.96	117.91	289.12	36.20	40.18	114.30	30.87	43.35	61.30	105.15
95th-Percentile Queue Length [veh/ln]	7.27	13.32	13.76	8.28	17.14	2.61	2.89	8.08	2.22	3.12	4.41	7.57
95th-Percentile Queue Length [ft/ln]	181.63	333.03	344.12	206.95	428.55	65.16	72.32	201.97	55.57	78.04	110.33	189.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.43	21.05	22.15	50.32	22.43	14.32	38.28	46.90	37.90	54.65	38.00	42.58
Movement LOS	D	C	C	D	C	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	23.91			25.03			40.40			43.55		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	28.34											
Intersection LOS	C											
Intersection V/C	0.712											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.213	3.421	2.475	2.485
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	580	620	320
d_b, Bicycle Delay [s]	28.13	25.21	23.81	35.28
l_b,int, Bicycle LOS Score for Intersection	2.474	2.845	2.187	1.990
Bicycle LOS	B	C	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Intersection Level Of Service Report
Intersection 45: Tippecanoe Ave / Central Ave

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.520

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	1	2	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	87	1029	170	238	1169	131	101	204	86	37	95	195
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	1236	170	238	1211	131	101	204	86	37	95	195
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	325	45	63	319	34	27	54	23	10	25	51
Total Analysis Volume [veh/h]	92	1301	179	251	1275	138	106	215	91	39	100	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	5	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2			6			8			4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	10	18	18	13	21	21	10	59	59	10	59	59
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	10	10	0	10	10	0	10	10	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	56	56	10	59	59	7	17	17	5	15	15
g / C, Green / Cycle	0.06	0.56	0.56	0.10	0.59	0.59	0.07	0.17	0.17	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.03	0.25	0.11	0.08	0.25	0.09	0.06	0.06	0.06	0.02	0.03	0.13
s, saturation flow rate [veh/h]	3144	5176	1615	3144	5176	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	203	2897	904	309	3071	958	120	635	283	80	550	245
d1, Uniform Delay [s]	45.07	12.95	10.90	44.18	10.97	9.04	46.10	36.14	36.02	46.52	36.98	41.19
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.57	0.51	0.49	5.13	0.42	0.32	18.22	0.31	0.65	4.58	0.16	7.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.45	0.20	0.81	0.42	0.14	0.88	0.34	0.32	0.49	0.18	0.84
d, Delay for Lane Group [s/veh]	46.64	13.45	11.39	49.31	11.38	9.35	64.31	36.45	36.67	51.10	37.14	48.50
Lane Group LOS	D	B	B	D	B	A	E	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.14	5.54	2.00	3.24	4.85	1.35	3.20	2.32	1.98	1.04	1.08	5.36
50th-Percentile Queue Length [ft/ln]	28.48	138.48	50.03	81.08	121.27	33.76	80.00	57.93	49.57	26.09	26.90	133.91
95th-Percentile Queue Length [veh/ln]	2.05	9.40	3.60	5.84	8.46	2.43	5.76	4.17	3.57	1.88	1.94	9.15
95th-Percentile Queue Length [ft/ln]	51.26	234.98	90.05	145.94	211.57	60.77	144.01	104.28	89.23	46.96	48.41	228.80

Movement, Approach, & Intersection Results

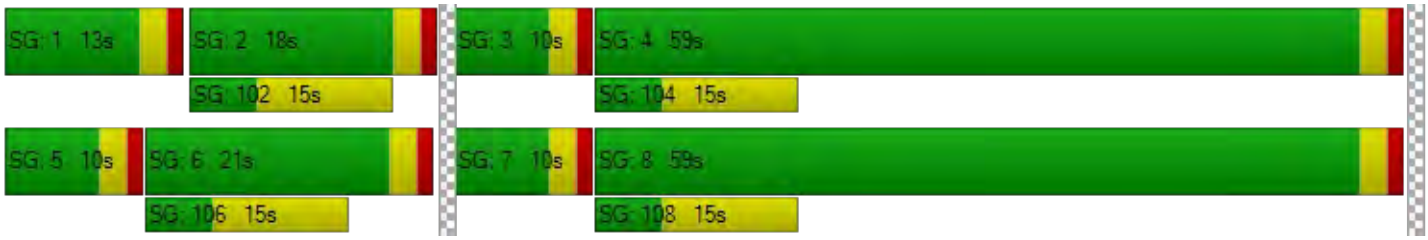
d_M, Delay for Movement [s/veh]	46.64	13.45	11.39	49.31	11.38	9.35	64.31	36.45	36.67	51.10	37.14	48.50
Movement LOS	D	B	B	D	B	A	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.16			16.94			43.67			45.49		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	21.46											
Intersection LOS	C											
Intersection V/C	0.520											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.178	3.211	2.580	2.620
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	360	1120	1120
d_b, Bicycle Delay [s]	36.13	33.62	9.68	9.68
l_b,int, Bicycle LOS Score for Intersection	2.424	2.475	1.900	1.843
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 46: Tippecanoe Ave / Orange Show Rd_San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	75	918	94	330	945	76	122	161	128	121	263	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	1125	94	330	987	76	122	161	128	121	263	276
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	296	25	87	260	20	32	42	34	32	69	73
Total Analysis Volume [veh/h]	79	1184	99	347	1039	80	128	169	135	127	277	291
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	22	0	17	29	0	11	51	0	10	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	6	47	47	13	53	53	31	21	21	31	21	21
g / C, Green / Cycle	0.06	0.47	0.47	0.13	0.53	0.53	0.31	0.21	0.21	0.31	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.05	0.34	0.34	0.11	0.30	0.30	0.12	0.08	0.09	0.10	0.15	0.18
s, saturation flow rate [veh/h]	1714	1900	1849	3144	1900	1853	1082	1900	1630	1250	1900	1615
c, Capacity [veh/h]	107	885	862	407	1013	988	309	408	350	427	403	342
d1, Uniform Delay [s]	46.09	21.66	21.71	42.59	15.51	15.55	26.90	33.68	33.82	25.62	36.36	37.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.55	5.34	5.57	5.11	2.21	2.30	0.89	0.62	0.77	0.39	2.10	5.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.73	0.74	0.85	0.56	0.56	0.41	0.39	0.41	0.30	0.69	0.85
d, Delay for Lane Group [s/veh]	55.64	27.00	27.27	47.70	17.72	17.85	27.79	34.29	34.59	26.01	38.46	43.83
Lane Group LOS	E	C	C	D	B	B	C	C	C	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.20	13.08	12.86	4.44	8.72	8.60	2.31	3.38	3.06	2.26	6.40	7.32
50th-Percentile Queue Length [ft/ln]	55.05	327.02	321.47	111.06	217.99	214.99	57.80	84.60	76.54	56.57	160.10	182.95
95th-Percentile Queue Length [veh/ln]	3.96	19.01	18.74	7.90	13.56	13.41	4.16	6.09	5.51	4.07	10.55	11.75
95th-Percentile Queue Length [ft/ln]	99.08	475.30	468.49	197.48	339.06	335.22	104.04	152.28	137.77	101.82	263.86	293.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.64	27.12	27.27	47.70	17.78	17.85	27.79	34.31	34.59	26.01	38.46	43.83
Movement LOS	E	C	C	D	B	B	C	C	C	C	D	D
d_A, Approach Delay [s/veh]	28.79			24.87			32.47			38.43		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	29.43											
Intersection LOS	C											
Intersection V/C	0.691											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.935	3.070	2.476	2.562
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	520	960	940
d_b, Bicycle Delay [s]	32.81	27.38	13.52	14.05
l_b,int, Bicycle LOS Score for Intersection	2.683	2.769	1.916	2.133
Bicycle LOS	B	C	A	B

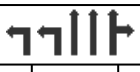
Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 47: Tippecanoe Ave / Hospitality Ln_Coulston St

Control Type:	Signalized	Delay (sec / veh):	23.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	458	1008	104	101	587	43	64	46	77	180	107	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	458	1215	104	101	629	43	64	46	77	180	107	82
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	315	27	26	163	11	17	12	20	47	28	21
Total Analysis Volume [veh/h]	476	1262	108	105	653	45	66	48	80	187	111	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	8	7	4	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	30	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	54	62	0	10	18	0	0	18	18	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No			No	No	No	No	
Maximum Recall	No	No		No	No			No	No	No	No	
Pedestrian Recall	No	No		No	No			No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
g_i, Effective Green Time [s]	18	59	59	7	48	48	15	15	15	25	25
g / C, Green / Cycle	0.18	0.59	0.59	0.07	0.48	0.48	0.15	0.15	0.15	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.15	0.25	0.25	0.06	0.13	0.13	0.03	0.11	0.05	0.13	0.11
s, saturation flow rate [veh/h]	3144	3618	1824	1714	3618	1838	1206	744	1615	1486	1765
c, Capacity [veh/h]	573	2135	1077	120	1729	879	116	162	242	306	441
d1, Uniform Delay [s]	39.41	11.22	11.24	46.07	15.62	15.64	47.76	39.81	38.02	33.88	31.65
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.21	0.62	1.24	17.34	0.38	0.75	1.37	2.34	0.79	1.98	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.43	0.43	0.88	0.27	0.27	0.29	0.50	0.33	0.61	0.44
d, Delay for Lane Group [s/veh]	42.62	11.85	12.48	63.41	16.00	16.39	49.14	42.15	38.81	35.86	32.35
Lane Group LOS	D	B	B	E	B	B	D	D	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.83	5.35	5.60	3.14	3.16	3.33	0.87	2.04	1.80	3.94	4.04
50th-Percentile Queue Length [ft/ln]	145.63	133.84	140.10	78.62	78.98	83.14	21.82	51.07	44.95	98.39	101.10
95th-Percentile Queue Length [veh/ln]	9.78	9.15	9.49	5.66	5.69	5.99	1.57	3.68	3.24	7.08	7.28
95th-Percentile Queue Length [ft/ln]	244.58	228.71	237.16	141.52	142.17	149.64	39.28	91.93	80.90	177.10	181.98

Movement, Approach, & Intersection Results

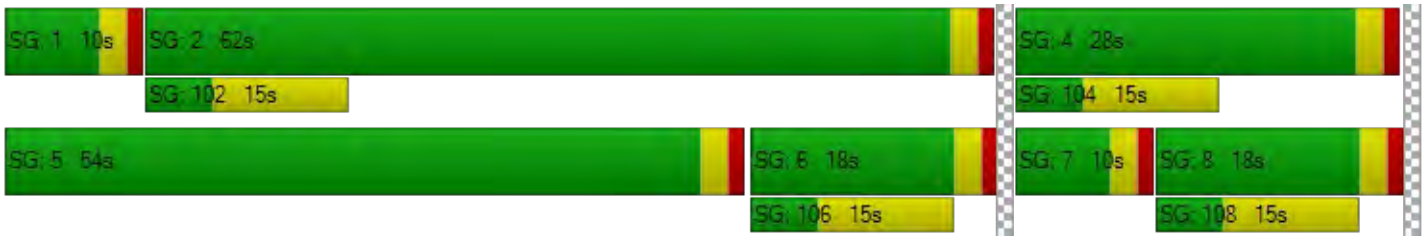
d_M, Delay for Movement [s/veh]	42.62	12.02	12.48	63.41	16.11	16.39	47.23	42.15	38.81	35.86	32.35	32.35
Movement LOS	D	B	B	E	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	19.94			22.31			41.98			34.06		
Approach LOS	B			C			D			C		
d_I, Intersection Delay [s/veh]	23.53											
Intersection LOS	C											
Intersection V/C	0.512											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.201	3.036	2.468	2.156
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1180	300	300	500
d_b, Bicycle Delay [s]	8.41	36.13	36.13	28.13
l_b,int, Bicycle LOS Score for Intersection	2.575	2.001	1.880	2.192
Bicycle LOS	B	B	A	B

Sequence

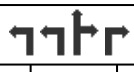
Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 48: Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	28.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	0	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	125	817	770	0	742	92	77	0	231	528	177	512
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	0	0	40	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	1024	770	0	784	92	77	0	231	528	177	512
Peak Hour Factor	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	269	203	0	206	24	20	0	61	139	47	135
Total Analysis Volume [veh/h]	132	1078	811	0	825	97	81	0	243	556	186	539
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	5	2	0	0	6	0	3	0	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	0	7	7	7	0
Maximum Green [s]	30	30	0	0	30	0	30	0	30	30	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	10	59	0	0	49	0	18	0	14	27	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No			No		No		No	No	No	
Maximum Recall	No	No			No		No		No	No	No	
Pedestrian Recall	No	No			No		No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	60	50	50	6	21	20	25	25
g / C, Green / Cycle	0.07	0.60	0.50	0.50	0.06	0.21	0.20	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.04	0.25	0.13	0.13	0.05	0.09	0.18	0.21	0.22
s, saturation flow rate [veh/h]	3144	4358	5176	1769	1714	2859	3144	1750	1615
c, Capacity [veh/h]	220	2612	2584	883	110	601	630	432	399
d1, Uniform Delay [s]	45.14	10.67	14.47	14.42	45.98	34.08	38.83	35.78	36.58
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	0.11	0.24	0.28
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.61	0.48	0.25	0.72	9.28	0.44	4.27	9.28	17.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.41	0.27	0.26	0.74	0.40	0.88	0.84	0.91
d, Delay for Lane Group [s/veh]	47.75	11.15	14.73	15.14	55.26	34.52	43.09	45.06	54.47
Lane Group LOS	D	B	B	B	E	C	D	D	D
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.66	4.06	3.00	3.10	2.25	2.57	6.90	9.35	10.40
50th-Percentile Queue Length [ft/ln]	41.52	101.45	74.90	77.51	56.24	64.13	172.52	233.71	260.01
95th-Percentile Queue Length [veh/ln]	2.99	7.30	5.39	5.58	4.05	4.62	11.21	14.36	15.69
95th-Percentile Queue Length [ft/ln]	74.74	182.61	134.82	139.52	101.23	115.44	280.23	359.07	392.24

Movement, Approach, & Intersection Results

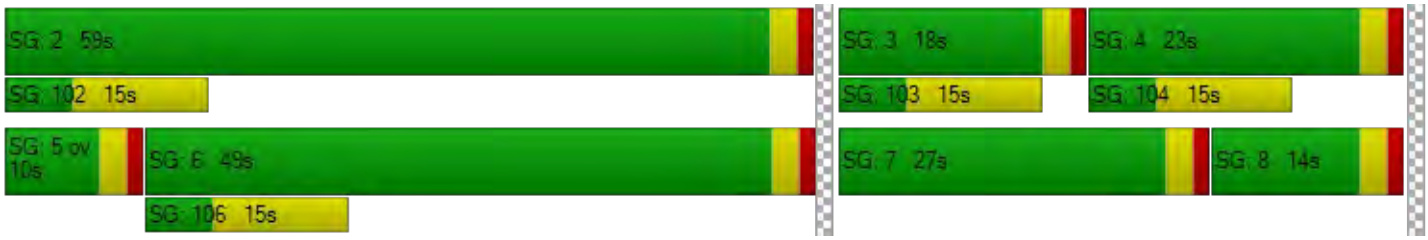
d_M, Delay for Movement [s/veh]	47.75	11.15	0.00	0.00	14.79	15.14	55.26	0.00	34.52	43.09	45.06	51.39
Movement LOS	D	B			B	B	E		C	D	D	D
d_A, Approach Delay [s/veh]	15.15			14.83			39.70			46.87		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	28.07											
Intersection LOS	C											
Intersection V/C	0.519											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.163	2.965	2.451	2.556
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1120	920	0	400
d_b, Bicycle Delay [s]	9.68	14.58	50.00	32.00
l_b,int, Bicycle LOS Score for Intersection	2.225	1.940	4.132	3.673
Bicycle LOS	B	A	D	D

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 49: Anderson St / SR-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No			No				
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	641	308	161	850	0	989	6	976	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	2	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	40	0	0	6	0	167	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	681	308	161	858	0	1156	6	976	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	179	81	42	226	0	304	2	257	0	0	0
Total Analysis Volume [veh/h]	0	717	324	169	903	0	1217	6	1027	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	30	0	10	40	0	0	50	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	43	43	7	53	41	41	41	
g / C, Green / Cycle	0.43	0.43	0.07	0.53	0.41	0.41	0.41	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.20	0.05	0.25	0.34	0.34	0.36	
s, saturation flow rate [veh/h]	3618	1615	3144	3618	1810	1810	2859	
c, Capacity [veh/h]	1536	686	220	1898	749	749	1183	
d1, Uniform Delay [s]	20.64	20.70	45.70	15.05	25.96	25.95	26.82	
k, delay calibration	0.50	0.50	0.11	0.50	0.27	0.27	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.02	2.33	5.55	0.86	5.39	5.37	2.09	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.47	0.47	0.77	0.48	0.82	0.82	0.87	
d, Delay for Lane Group [s/veh]	21.66	23.03	51.25	15.91	31.35	31.32	28.92	
Lane Group LOS	C	C	D	B	C	C	C	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.06	5.74	2.22	6.42	13.50	13.49	11.08	
50th-Percentile Queue Length [ft/ln]	151.58	143.56	55.48	160.53	337.49	337.32	277.12	
95th-Percentile Queue Length [veh/ln]	10.10	9.67	3.99	10.58	19.53	19.52	16.54	
95th-Percentile Queue Length [ft/ln]	252.54	241.81	99.86	264.42	488.13	487.93	413.62	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.66	23.03	51.25	15.91	0.00	31.34	31.32	28.92	0.00	0.00	0.00
Movement LOS		C	C	D	B		C	C	C			
d_A, Approach Delay [s/veh]	22.09			21.48			30.23			0.00		
Approach LOS	C			C			C			A		
d_I, Intersection Delay [s/veh]	26.14											
Intersection LOS	C											
Intersection V/C	0.614											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.886	2.948	2.686	1.965
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	540	740	940	0
d_b, Bicycle Delay [s]	26.65	19.85	14.05	50.00
l_b,int, Bicycle LOS Score for Intersection	2.418	2.444	5.272	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 308: Arden Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.453

Intersection Setup

Name	Arden Ave			Arden Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Arden Ave			Arden Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	230	1	144	1	0	6	2	917	0	0	933	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	29	17	0	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	1	144	1	0	6	2	946	17	0	951	6
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	0	40	0	0	2	1	263	5	0	264	2
Total Analysis Volume [veh/h]	256	1	160	1	0	7	2	1051	19	0	1057	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	28	0	11	18	0	10	51	0	10	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	18	55	55	0	37	37	0	33	33	0	33	33
g / C, Green / Cycle	0.18	0.55	0.55	0.00	0.37	0.37	0.00	0.33	0.33	0.00	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.16	0.00	0.10	0.00	0.00	0.00	0.00	0.29	0.01	0.00	0.19	0.19
s, saturation flow rate [veh/h]	1619	1900	1615	1619	1900	1615	2959	3618	1615	1619	3618	1894
c, Capacity [veh/h]	284	1040	884	4	712	605	13	1193	532	1	1179	617
d1, Uniform Delay [s]	40.41	10.25	11.38	49.78	0.00	19.64	49.60	31.67	22.74	0.00	28.16	28.16
k, delay calibration	0.12	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.93	0.00	0.45	28.36	0.00	0.03	5.62	2.32	0.03	0.00	0.48	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.00	0.18	0.24	0.00	0.01	0.16	0.88	0.04	0.00	0.59	0.59
d, Delay for Lane Group [s/veh]	51.34	10.26	11.82	78.14	0.00	19.67	55.22	33.99	22.76	0.00	28.63	29.07
Lane Group LOS	D	B	B	E	A	B	E	C	C	A	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	6.95	0.01	1.83	0.06	0.00	0.11	0.03	12.04	0.31	0.00	6.93	7.33
50th-Percentile Queue Length [ft/ln]	173.79	0.25	45.72	1.43	0.00	2.69	0.87	301.01	7.66	0.00	173.33	183.37
95th-Percentile Queue Length [veh/ln]	11.28	0.02	3.29	0.10	0.00	0.19	0.06	17.73	0.55	0.00	11.25	11.78
95th-Percentile Queue Length [ft/ln]	281.88	0.46	82.29	2.57	0.00	4.84	1.56	443.27	13.79	0.00	281.28	294.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.34	10.26	11.82	78.14	9.84	19.67	55.22	33.99	22.76	0.00	28.78	29.07
Movement LOS	D	B	B	E	A	B	E	C	C	A	C	C
d_A, Approach Delay [s/veh]	36.08			26.98			33.83			28.78		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	32.08											
Intersection LOS	C											
Intersection V/C	0.453											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.530	2.310	3.024	2.918
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	300	960	960
d_b, Bicycle Delay [s]	28.13	36.13	13.52	13.52
l_b,int, Bicycle LOS Score for Intersection	1.904	1.566	2.444	2.145
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Del Rosa Ave / SR-210 WB Ramps	Signalized	HCM 6th Edition	NB Left	0.878	42.3	D
2	Del Rosa Ave / SR-210 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.831	37.1	D
3	Del Rosa Ave / Date St_Date Pl	Signalized	HCM 6th Edition	EB Left	0.515	21.0	C
4	Del Rosa Ave / Highland Ave	Signalized	HCM 6th Edition	WB Left	0.556	37.1	D
5	Highland Ave / SR-210 EB Off Ramp	Signalized	HCM 6th Edition	SB Left	0.529	20.2	C
6	Highland Ave / SR-210 WB Off Ramp	Signalized	HCM 6th Edition	EB Left	0.598	14.0	B
7	Victoria Ave / Highland Ave	Signalized	HCM 6th Edition	SB Left	0.945	56.3	E
8	Del Rosa Dr / Pacific St	Signalized	HCM 6th Edition	SB Left	0.524	26.8	C
9	Victoria Ave / Pacific St	Signalized	HCM 6th Edition	NB Left	0.537	32.3	C
10	Victoria Ave / 14th St	Signalized	HCM 6th Edition	NB Left	0.263	10.3	B
11	Tippecanoe Ave / Baseline St	Signalized	HCM 6th Edition	WB Left	0.503	23.2	C
12	Del Rosa Dr / Baseline St	Signalized	HCM 6th Edition	NB Left	0.496	37.5	D
13	Sterling Ave / Base Line	Signalized	HCM 6th Edition	EB Left	0.572	32.7	C
14	Victoria Ave / Base Line	Signalized	HCM 6th Edition	EB Left	0.485	31.0	C
15	Tippecanoe Ave / 9th St	Signalized	HCM 6th Edition	EB Left	0.382	30.3	C
16	Del Rosa Dr / 9th St	Signalized	HCM 6th Edition	NB Left	0.472	30.5	C
17	Sterling Ave / 9th St	Signalized	HCM 6th Edition	SB Left	0.481	29.4	C
			HCM 6th				

18	Victoria Ave / 9th St	Signalized	HCM 6th Edition	NB Left	0.354	27.1	C
19	Del Rosa Dr / 6th St	Signalized	HCM 6th Edition	NB Left	0.364	20.5	C
20	Sterling Ave / 6th St	Two-way stop	HCM 6th Edition	WB Thru	0.758	10,000.0	F
21	Victoria Ave / 6th St	Two-way stop	HCM 6th Edition	WB Thru	0.615	10,000.0	F
22	Central Ave / 6th St	Two-way stop	HCM 6th Edition	EB Left	0.145	12.1	B
23	I-215 SB Ramps / 5th St	Signalized	HCM 6th Edition	SB Right	0.586	22.1	C
24	I-215 NB Ramps / 5th St	Signalized	HCM 6th Edition	EB Left	0.661	22.4	C
25	E St / 5th St	Signalized	HCM 6th Edition	NB Left	0.554	17.9	B
26	Arrowhead Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.437	15.6	B
27	Waterman Ave / 5th St	Signalized	HCM 6th Edition	NB Left	0.559	31.4	C
28	Tippecanoe Ave / 5th St	Signalized	HCM 6th Edition	WB Left	0.787	38.1	D
29	Del Rosa Dr / 5th St	Signalized	HCM 6th Edition	EB Left	0.768	22.0	C
30	Sterling Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.666	24.1	C
31	Victoria Ave / 5th St	Signalized	HCM 6th Edition	EB Thru	0.752	34.8	C
32	Central Avenue / 5th Street	Signalized	HCM 6th Edition	NB Left	0.579	20.2	C
33	Palm Ave / 5th St	Signalized	HCM 6th Edition	WB Left	1.017	74.5	E
34	Church Ave / 5th St	Signalized	HCM 6th Edition	SB Left	0.816	16.1	B
35	SR-210 EB Ramps / 5th Street	Signalized	HCM 6th Edition	SB Left	1.084	70.9	E
36	SR-210 WB Ramps / 5th Street	Signalized	HCM 6th Edition	EB Left	0.845	33.0	C
37	Tippecanoe Ave / 3rd St	Signalized	HCM 6th Edition	WB Left	0.831	44.1	D
38	Del Rosa Dr / 3rd St	Signalized	HCM 6th Edition	NB Right	0.762	59.6	E
			HCM 6th				

39	Sterling Ave / 3rd St	Signalized	HCM 6th Edition	SB Right	0.817	30.7	C
40	Victoria Ave / 3rd St	Signalized	HCM 6th Edition	EB Left	0.672	31.0	C
41	Central Ave / 3rd St	Two-way stop	HCM 6th Edition	NB Left	0.046	203.3	F
42	Palm Ave_Alabama St / 3rd St	Signalized	HCM 6th Edition	NB Left	0.754	76.8	E
43	Tippecanoe Ave / Rialto Ave	Signalized	HCM 6th Edition	NB Left	0.475	11.3	B
44	Tippecanoe Ave / Mill St	Signalized	HCM 6th Edition	SB Left	0.818	35.9	D
45	Tippecanoe Ave / Central Ave	Signalized	HCM 6th Edition	EB Left	0.652	25.8	C
46	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave	Signalized	HCM 6th Edition	NB Right	0.936	72.7	E
47	Tippecanoe Ave / Hospitality Ln_Coulston St	Signalized	HCM 6th Edition	SB Left	0.695	32.9	C
48	Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps	Signalized	HCM 6th Edition	EB Left	0.775	36.9	D
49	Anderson St / SR-10 EB Ramps	Signalized	HCM 6th Edition	SB Left	0.764	32.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Del Rosa Ave / SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.878

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No						No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Base Volume Input [veh/h]	640	802	0	0	399	373	0	0	0	186	0	305
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	68	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	708	802	0	0	399	373	0	0	0	186	0	305
Peak Hour Factor	0.9560	0.9560	1.0000	1.0000	0.9560	0.9560	1.0000	1.0000	1.0000	0.9560	0.9560	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	185	210	0	0	104	98	0	0	0	49	0	80
Total Analysis Volume [veh/h]	741	839	0	0	417	390	0	0	0	195	0	319
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	45	75	0	0	30	0	0	0	0	0	25	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C		C	R
C, Cycle Length [s]	100	100	100	100		100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00		3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00		1.00	1.00
g_i, Effective Green Time [s]	42	73	28	28		21	21
g / C, Green / Cycle	0.42	0.73	0.28	0.28		0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.43	0.23	0.21	0.25		0.11	0.20
s, saturation flow rate [veh/h]	1714	3618	1900	1623		1810	1615
c, Capacity [veh/h]	720	2621	522	446		390	348
d1, Uniform Delay [s]	29.00	4.94	33.41	35.02		34.49	38.35
k, delay calibration	0.50	0.50	0.50	0.50		0.11	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	41.22	0.32	10.67	24.55		0.99	16.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.03	0.32	0.77	0.91		0.50	0.92
d, Delay for Lane Group [s/veh]	70.22	5.26	44.08	59.57		35.48	55.26
Lane Group LOS	F	A	D	E		D	E
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	24.66	2.71	10.39	12.30		4.24	9.16
50th-Percentile Queue Length [ft/ln]	616.57	67.84	259.63	307.58		106.08	228.92
95th-Percentile Queue Length [veh/ln]	33.52	4.88	15.67	18.06		7.62	14.12
95th-Percentile Queue Length [ft/ln]	837.91	122.12	391.76	451.39		190.54	352.99

Movement, Approach, & Intersection Results

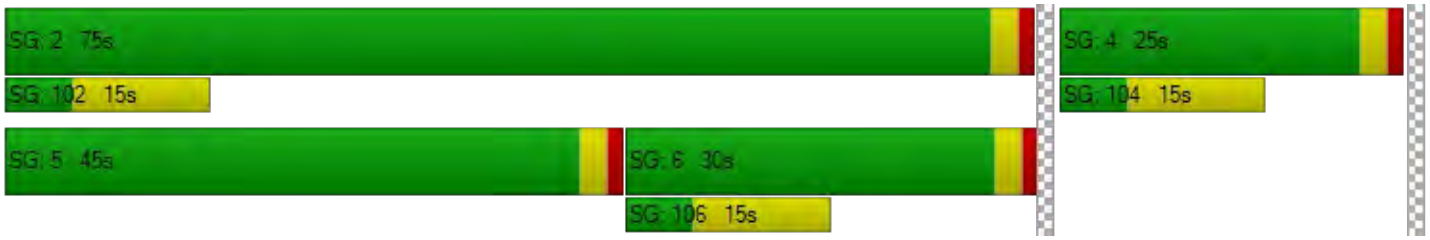
d_M, Delay for Movement [s/veh]	70.22	5.26	0.00	0.00	44.58	59.57	0.00	0.00	0.00	35.48	35.48	55.26
Movement LOS	F	A			D	E				D	D	E
d_A, Approach Delay [s/veh]	35.73			51.83			0.00			47.76		
Approach LOS	D			D			A			D		
d_I, Intersection Delay [s/veh]	42.34											
Intersection LOS	D											
Intersection V/C	0.878											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.816	2.617	2.533	1.972
Crosswalk LOS	C	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1440	540	0	440
d_b, Bicycle Delay [s]	3.92	26.65	50.00	30.42
l_b,int, Bicycle LOS Score for Intersection	2.863	2.225	4.132	2.408
Bicycle LOS	C	B	D	B

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Del Rosa Ave / SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	37.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.831

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			SR-210 EB Ramps			SR-210 EB Ramps		
Base Volume Input [veh/h]	0	1032	148	161	425	0	406	1	751	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	68	0	0	0	0	0	0	18	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1100	148	161	425	0	406	1	769	0	0	0
Peak Hour Factor	1.0000	0.9660	0.9660	0.9660	0.9660	1.0000	0.9660	0.9660	0.9660	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	285	38	42	110	0	105	0	199	0	0	0
Total Analysis Volume [veh/h]	0	1139	153	167	440	0	420	1	796	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	28	0	14	42	0	0	58	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	
C, Cycle Length [s]	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	29	29	11	43	51	51	
g / C, Green / Cycle	0.29	0.29	0.11	0.43	0.51	0.51	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.24	0.10	0.12	0.23	0.49	
s, saturation flow rate [veh/h]	3618	1788	1714	3618	1810	1615	
c, Capacity [veh/h]	1031	509	189	1537	932	832	
d1, Uniform Delay [s]	33.55	33.68	43.88	18.82	15.32	23.19	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.41	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	8.01	15.75	12.79	0.47	0.34	19.48	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.84	0.85	0.89	0.29	0.45	0.96	
d, Delay for Lane Group [s/veh]	41.56	49.43	56.67	19.29	15.67	42.66	
Lane Group LOS	D	D	E	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.74	11.85	4.71	3.38	5.90	21.14	
50th-Percentile Queue Length [ft/ln]	268.40	296.34	117.76	84.38	147.61	528.46	
95th-Percentile Queue Length [veh/ln]	16.11	17.50	8.27	6.08	9.89	28.68	
95th-Percentile Queue Length [ft/ln]	402.74	437.49	206.75	151.88	247.23	716.96	

Movement, Approach, & Intersection Results

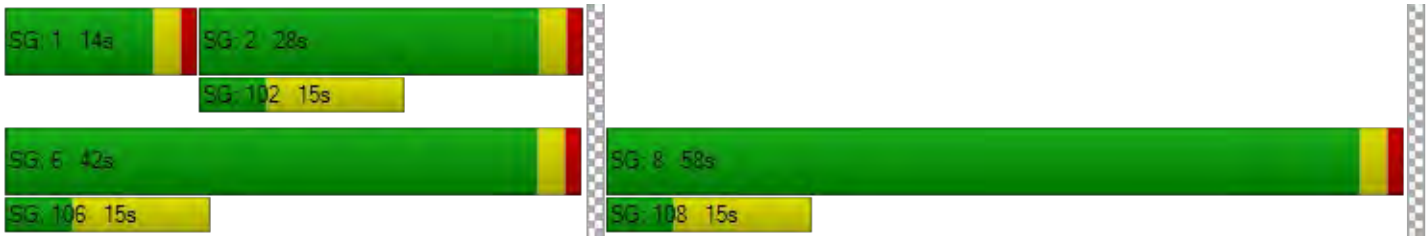
d_M, Delay for Movement [s/veh]	0.00	43.48	49.43	56.67	19.29	0.00	15.67	15.67	42.66	0.00	0.00	0.00
Movement LOS		D	D	E	B		B	B	D			
d_A, Approach Delay [s/veh]	44.18			29.58			33.32			0.00		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	37.10											
Intersection LOS	D											
Intersection V/C	0.831											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.870	2.811	2.315	1.743
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	780	1100	0
d_b, Bicycle Delay [s]	28.13	18.61	10.13	50.00
l_b,int, Bicycle LOS Score for Intersection	2.270	2.060	3.568	4.132
Bicycle LOS	B	B	D	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Del Rosa Ave / Date St_Date Pl

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Date St			Date Pl		
Base Volume Input [veh/h]	63	826	48	244	805	130	142	57	54	46	71	209
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	6	12	0	0	0	0	0	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	880	48	250	817	130	142	57	54	46	71	223
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	229	13	65	213	34	37	15	14	12	19	58
Total Analysis Volume [veh/h]	66	918	50	261	852	136	148	59	56	48	74	233
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	39	0	24	53	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	61	49	49	61	52	52	33	33	33	33
g / C, Green / Cycle	0.61	0.49	0.49	0.61	0.52	0.52	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.26	0.26	0.33	0.27	0.27	0.14	0.07	0.04	0.18
s, saturation flow rate [veh/h]	707	1900	1866	782	1900	1810	1089	1750	1298	1676
c, Capacity [veh/h]	440	924	907	480	991	944	240	576	407	552
d1, Uniform Delay [s]	9.49	17.75	17.76	11.73	15.58	15.60	41.40	24.07	28.56	27.53
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.72	2.16	2.20	4.39	1.87	1.98	2.57	0.17	0.13	1.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.53	0.53	0.54	0.51	0.51	0.62	0.20	0.12	0.56
d, Delay for Lane Group [s/veh]	10.21	19.92	19.96	16.12	17.45	17.58	43.97	24.24	28.68	28.56
Lane Group LOS	B	B	B	B	B	B	D	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.63	8.04	7.90	3.02	7.66	7.37	3.70	1.97	0.90	6.08
50th-Percentile Queue Length [ft/ln]	15.80	200.93	197.57	75.61	191.61	184.13	92.56	49.14	22.44	151.94
95th-Percentile Queue Length [veh/ln]	1.14	12.69	12.51	5.44	12.20	11.82	6.66	3.54	1.62	10.12
95th-Percentile Queue Length [ft/ln]	28.44	317.17	312.83	136.10	305.12	295.40	166.61	88.45	40.40	253.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.21	19.94	19.96	16.12	17.50	17.58	43.97	24.24	24.24	28.68	28.56	28.56
Movement LOS	B	B	B	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.32			17.22			35.34			28.58		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	21.00											
Intersection LOS	C											
Intersection V/C	0.515											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.946	3.084	2.173	2.370
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	720	1000	680	680
d_b, Bicycle Delay [s]	20.48	12.50	21.78	21.78
l_b,int, Bicycle LOS Score for Intersection	2.413	2.590	1.994	2.145
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Del Rosa Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	37.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

Intersection Setup

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Ave			Del Rosa Ave			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	205	563	75	174	438	122	174	649	169	88	516	183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	2	0
Site-Generated Trips [veh/h]	0	54	0	0	12	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	205	617	75	174	450	122	174	649	169	88	518	183
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	161	20	45	117	32	45	169	44	23	135	48
Total Analysis Volume [veh/h]	214	644	78	182	470	127	182	677	176	92	541	191
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	5	2	0	1	6	6	3	8	0	7	4	4
Auxiliary Signal Groups						6						4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	7
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	22	32	0	21	31	31	22	36	0	11	25	25
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	19	29	29	18	28	28	19	33	33	8	22	22
g / C, Green / Cycle	0.19	0.29	0.29	0.18	0.28	0.28	0.19	0.33	0.33	0.08	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.12	0.19	0.19	0.11	0.13	0.08	0.11	0.19	0.11	0.05	0.15	0.12
s, saturation flow rate [veh/h]	1714	1900	1829	1714	3618	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	326	551	530	309	1013	452	326	1194	533	137	796	355
d1, Uniform Delay [s]	37.48	31.26	31.26	37.61	29.79	28.13	36.70	27.61	25.19	44.72	35.77	34.50
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.95	6.30	6.53	8.04	1.53	1.55	6.77	1.96	1.66	23.14	4.65	5.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.67	0.67	0.59	0.46	0.28	0.56	0.57	0.33	0.67	0.68	0.54
d, Delay for Lane Group [s/veh]	47.43	37.55	37.79	45.65	31.32	29.68	43.47	29.57	26.85	67.86	40.42	40.23
Lane Group LOS	D	D	D	D	C	C	D	C	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.70	8.65	8.36	4.74	4.84	2.55	4.61	6.87	3.35	3.09	6.49	4.63
50th-Percentile Queue Length [ft/ln]	142.41	216.13	208.93	118.49	120.95	63.84	115.16	171.84	83.79	77.13	162.20	115.86
95th-Percentile Queue Length [veh/ln]	9.61	13.47	13.10	8.31	8.45	4.60	8.13	11.17	6.03	5.55	10.67	8.16
95th-Percentile Queue Length [ft/ln]	240.26	336.69	327.45	207.75	211.13	114.91	203.16	279.33	150.82	138.84	266.64	204.12

Movement, Approach, & Intersection Results

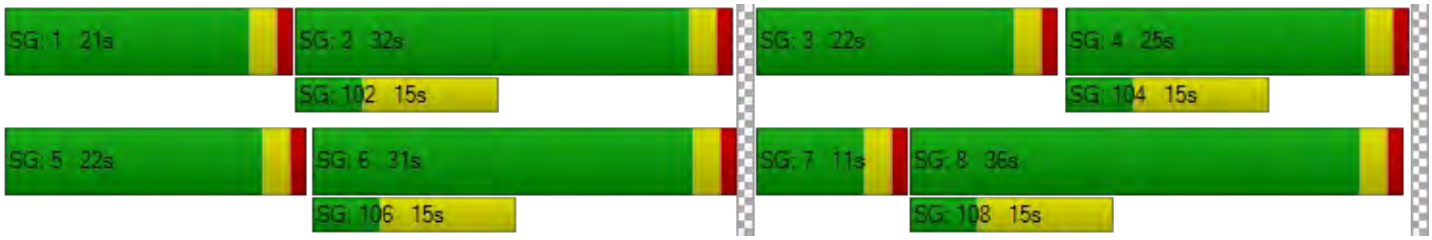
d_M, Delay for Movement [s/veh]	47.43	37.66	37.79	45.65	31.32	29.68	43.47	29.57	26.85	67.86	40.42	40.23
Movement LOS	D	D	D	D	C	C	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	39.90			34.40			31.55			43.44		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	37.10											
Intersection LOS	D											
Intersection V/C	0.556											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.633	2.851	2.771	2.846
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	560	660	440
d_b, Bicycle Delay [s]	25.21	25.92	22.45	30.42
l_b,int, Bicycle LOS Score for Intersection	2.332	2.202	2.413	2.239
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Highland Ave / SR-210 EB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

Intersection Setup

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	SR-210 EB Off Ramp		Highland Ave		Highland Ave	
Base Volume Input [veh/h]	1025	190	0	765	728	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	7	0	0	1	2	0
Site-Generated Trips [veh/h]	19	0	0	0	20	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1051	190	0	766	750	0
Peak Hour Factor	0.9650	0.9650	1.0000	0.9650	0.9650	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	272	49	0	198	194	0
Total Analysis Volume [veh/h]	1089	197	0	794	777	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	2.0	0.0	0.0	2.0	2.0	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	68	0	0	32	32	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	0.0	1.0	1.0	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C
C, Cycle Length [s]	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	36	36	58	58
g / C, Green / Cycle	0.36	0.36	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.31	0.12	0.22	0.21
s, saturation flow rate [veh/h]	3514	1615	3618	3618
c, Capacity [veh/h]	1250	575	2113	2113
d1, Uniform Delay [s]	30.07	23.63	11.07	11.01
k, delay calibration	0.11	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.03	0.35	0.51	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.34	0.38	0.37
d, Delay for Lane Group [s/veh]	32.10	23.99	11.59	11.50
Lane Group LOS	C	C	B	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	12.20	3.43	4.55	4.43
50th-Percentile Queue Length [ft/ln]	305.10	85.66	113.82	110.69
95th-Percentile Queue Length [veh/ln]	17.93	6.17	8.05	7.88
95th-Percentile Queue Length [ft/ln]	448.33	154.19	201.30	196.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.10	23.99	0.00	11.59	11.50	0.00
Movement LOS	C	C		B	B	
d_A, Approach Delay [s/veh]	30.86		11.59		11.50	
Approach LOS	C		B		B	
d_I, Intersection Delay [s/veh]	20.24					
Intersection LOS	C					
Intersection V/C	0.529					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.365	2.651	2.786
Crosswalk LOS	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.787	4.773
Bicycle LOS	D	E	E

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: Highland Ave / SR-210 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	SR-210 WB Off Ramp			Denny's Dwy			Highland Ave			Highland Ave		
Base Volume Input [veh/h]	364	1	175	3	0	9	14	1405	0	0	1696	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	8	0	0	14	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	14	0	0	89	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	364	1	175	3	0	9	14	1427	0	0	1799	8
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	0	44	1	0	2	4	357	0	0	450	2
Total Analysis Volume [veh/h]	364	1	175	3	0	9	14	1427	0	0	1799	8
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Permiss	Split	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	0	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	7	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	30	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	29	0	0	10	41	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	21	0	0	0	9	0	0	9	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No		No			No	No			No	
Maximum Recall		No		No			No	No			No	
Pedestrian Recall		No		No			No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	13	13	2	2	2	66	61	61
g / C, Green / Cycle	0.14	0.14	0.02	0.02	0.02	0.74	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.00	0.01	0.01	0.39	0.48	0.48
s, saturation flow rate [veh/h]	3514	1616	1810	1615	1810	3618	1900	1897
c, Capacity [veh/h]	506	233	38	34	42	2658	1289	1287
d1, Uniform Delay [s]	36.77	36.99	43.18	43.35	43.27	5.23	8.89	8.90
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.93	4.94	0.86	4.00	4.57	0.78	3.20	3.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.76	0.08	0.26	0.33	0.54	0.70	0.70
d, Delay for Lane Group [s/veh]	38.71	41.93	44.04	47.35	47.85	6.01	12.09	12.12
Lane Group LOS	D	D	D	D	D	A	B	B
Critical Lane Group	No	Yes	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.89	3.98	0.07	0.23	0.36	4.69	10.01	10.03
50th-Percentile Queue Length [ft/ln]	97.37	99.40	1.85	5.84	8.93	117.25	250.25	250.70
95th-Percentile Queue Length [veh/ln]	7.01	7.16	0.13	0.42	0.64	8.24	15.20	15.22
95th-Percentile Queue Length [ft/ln]	175.27	178.93	3.33	10.51	16.07	206.03	379.96	380.54

Movement, Approach, & Intersection Results

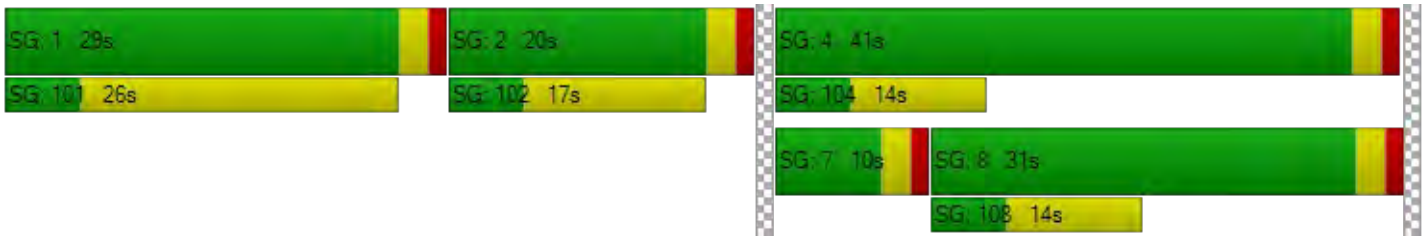
d_M, Delay for Movement [s/veh]	38.71	41.93	41.93	44.04	0.00	47.35	47.85	6.01	0.00	0.00	12.11	12.12
Movement LOS	D	D	D	D		D	D	A			B	B
d_A, Approach Delay [s/veh]	39.76			46.52			6.42			12.11		
Approach LOS	D			D			A			B		
d_I, Intersection Delay [s/veh]	13.99											
Intersection LOS	B											
Intersection V/C	0.598											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.117	1.953	3.099	2.964
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	0	844	622
d_b, Bicycle Delay [s]	29.61	45.00	15.02	21.36
l_b,int, Bicycle LOS Score for Intersection	2.451	4.132	2.748	3.050
Bicycle LOS	B	D	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Victoria Ave / Highland Ave

Control Type:	Signalized	Delay (sec / veh):	56.3
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.945

Intersection Setup

Name												
							Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	2	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							Highland Ave			Highland Ave		
Base Volume Input [veh/h]	293	594	120	395	489	746	806	507	207	153	567	298
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	14	2	0	0	1	0	0	0	8	0	0	0
Site-Generated Trips [veh/h]	89	51	0	0	16	0	0	0	14	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	396	647	120	395	506	746	806	507	229	153	567	298
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	102	167	31	102	131	193	208	131	59	40	147	77
Total Analysis Volume [veh/h]	410	669	124	408	523	771	834	524	237	158	586	308
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	28	0	15	30	30	29	43	0	14	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	40	25	25	40	27	56	26	40	40	11	25	25
g / C, Green / Cycle	0.40	0.25	0.25	0.40	0.27	0.56	0.26	0.40	0.40	0.11	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.37	0.24	0.24	0.40	0.14	0.48	0.27	0.21	0.22	0.09	0.25	0.25
s, saturation flow rate [veh/h]	1119	1700	1609	1026	3618	1615	3144	1900	1706	1714	1900	1682
c, Capacity [veh/h]	444	425	402	357	977	904	817	761	684	187	475	421
d1, Uniform Delay [s]	31.28	36.97	37.01	38.54	31.15	18.52	37.00	22.64	22.90	43.70	37.47	37.48
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.13	0.11	0.35	0.35
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.43	34.16	35.91	92.15	2.10	10.00	20.01	0.56	0.78	9.82	33.89	36.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.96	0.96	1.14	0.54	0.85	1.02	0.52	0.54	0.84	1.00	1.00
d, Delay for Lane Group [s/veh]	58.71	71.14	72.91	130.68	33.25	28.52	57.01	23.19	23.68	53.52	71.36	73.74
Lane Group LOS	E	E	E	F	C	C	F	C	C	D	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.81	13.63	13.13	15.36	5.60	16.29	12.03	6.93	6.61	4.32	15.81	14.28
50th-Percentile Queue Length [ft/ln]	270.19	340.82	328.31	384.02	140.06	407.20	300.81	173.31	165.19	107.89	395.19	357.06
95th-Percentile Queue Length [veh/ln]	16.20	19.69	19.08	23.69	9.48	22.91	17.93	11.25	10.82	7.72	22.33	20.48
95th-Percentile Queue Length [ft/ln]	404.97	492.20	476.89	592.20	237.10	572.67	448.19	281.26	270.59	193.07	558.20	512.00

Movement, Approach, & Intersection Results

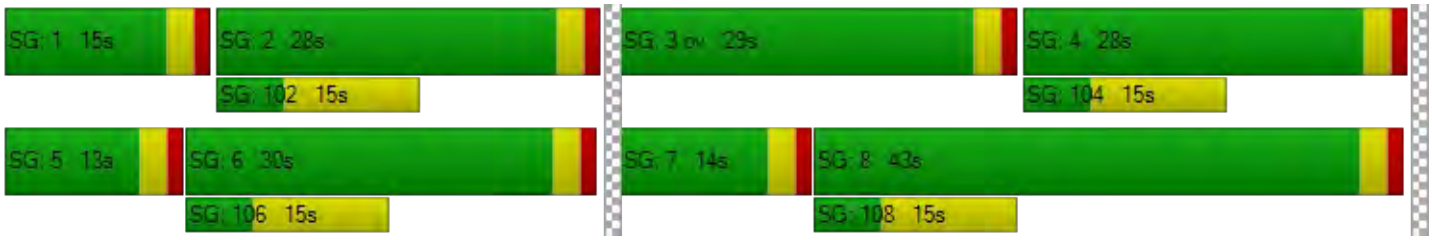
d_M, Delay for Movement [s/veh]	58.71	71.83	72.91	130.68	33.25	28.52	57.01	23.32	23.68	53.52	71.82	73.74
Movement LOS	E	E	E	F	C	C	F	C	C	D	E	E
d_A, Approach Delay [s/veh]	67.47			54.46			40.99			69.63		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	56.28											
Intersection LOS	E											
Intersection V/C	0.945											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.720	3.030	3.272	2.932
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	540	800	500
d_b, Bicycle Delay [s]	28.13	26.65	18.00	28.13
l_b,int, Bicycle LOS Score for Intersection	2.552	2.964	2.875	2.428
Bicycle LOS	B	C	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Del Rosa Dr / Pacific St

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Del Rosa Dr			Del Rosa Dr			Pacific St			Pacific St		
Base Volume Input [veh/h]	27	521	99	66	366	146	147	369	31	41	228	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	0	12	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	575	99	66	378	146	147	369	31	41	228	40
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	151	26	17	99	38	38	97	8	11	60	10
Total Analysis Volume [veh/h]	28	602	104	69	396	153	154	386	32	43	239	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	46	0	10	46	0	26	34	0	10	18	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	4	61	61	6	63	63	11	16	16	5	10	10
g / C, Green / Cycle	0.04	0.61	0.61	0.06	0.63	0.63	0.11	0.16	0.16	0.05	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.02	0.32	0.06	0.04	0.15	0.15	0.09	0.11	0.11	0.03	0.08	0.08
s, saturation flow rate [veh/h]	1714	1900	1615	1714	1900	1723	1714	1900	1849	1714	1900	1803
c, Capacity [veh/h]	65	1160	986	102	1201	1089	187	306	297	84	191	181
d1, Uniform Delay [s]	47.03	11.11	8.11	46.05	7.97	7.99	43.58	39.62	39.64	46.39	43.74	43.82
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.40	1.66	0.22	7.44	0.47	0.52	8.65	2.80	2.91	4.76	5.71	6.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.52	0.11	0.67	0.24	0.24	0.82	0.69	0.69	0.51	0.75	0.76
d, Delay for Lane Group [s/veh]	51.43	12.77	8.33	53.50	8.44	8.51	52.23	42.41	42.55	51.15	49.45	50.35
Lane Group LOS	D	B	A	D	A	A	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.76	7.52	0.94	1.88	2.62	2.43	4.15	5.10	4.99	1.15	3.71	3.64
50th-Percentile Queue Length [ft/ln]	18.96	188.01	23.50	47.06	65.58	60.73	103.74	127.41	124.87	28.73	92.74	91.09
95th-Percentile Queue Length [veh/ln]	1.36	12.02	1.69	3.39	4.72	4.37	7.47	8.80	8.66	2.07	6.68	6.56
95th-Percentile Queue Length [ft/ln]	34.12	300.45	42.30	84.70	118.05	109.31	186.74	219.97	216.50	51.71	166.94	163.97

Movement, Approach, & Intersection Results

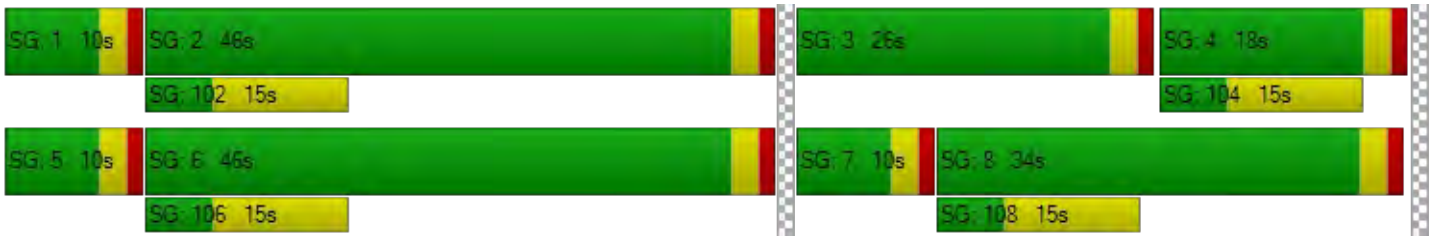
d_M, Delay for Movement [s/veh]	51.43	12.77	8.33	53.50	8.46	8.51	52.23	42.48	42.55	51.15	49.81	50.35
Movement LOS	D	B	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.62			13.50			45.11			50.06		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	26.85											
Intersection LOS	C											
Intersection V/C	0.524											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.541	2.690	2.500	2.479
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	860	860	620	300
d_b, Bicycle Delay [s]	16.25	16.25	23.81	36.13
l_b,int, Bicycle LOS Score for Intersection	2.771	2.069	2.032	1.827
Bicycle LOS	C	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: Victoria Ave / Pacific St

Control Type:	Signalized	Delay (sec / veh):	32.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	145	554	55	152	473	191	170	429	190	42	284	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	1	16	1	0	9	0	0	0	1	1	0	0
Site-Generated Trips [veh/h]	0	140	0	0	30	0	0	0	5	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	146	710	56	152	512	191	170	429	196	43	284	134
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	187	15	40	135	50	45	113	52	11	75	35
Total Analysis Volume [veh/h]	154	747	59	160	539	201	179	452	206	45	299	141
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	31	0	17	33	0	24	42	0	10	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	49	49	11	50	50	12	22	22	5	15	15
g / C, Green / Cycle	0.11	0.49	0.49	0.11	0.50	0.50	0.12	0.22	0.22	0.05	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.21	0.21	0.09	0.20	0.20	0.10	0.18	0.18	0.03	0.12	0.12
s, saturation flow rate [veh/h]	1714	1900	1852	1714	1900	1726	1714	1900	1701	1714	1900	1699
c, Capacity [veh/h]	184	938	914	191	946	859	213	427	383	86	286	256
d1, Uniform Delay [s]	43.80	16.33	16.33	43.55	15.85	15.85	42.80	36.75	36.76	46.32	41.01	41.16
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.71	1.47	1.51	9.38	1.32	1.45	8.53	3.76	4.22	4.83	5.15	6.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.44	0.44	0.84	0.41	0.41	0.84	0.81	0.81	0.52	0.80	0.82
d, Delay for Lane Group [s/veh]	53.51	17.81	17.84	52.93	17.16	17.30	51.34	40.50	40.98	51.14	46.16	47.66
Lane Group LOS	D	B	B	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.20	6.19	6.04	4.35	5.73	5.24	4.79	8.36	7.56	1.20	5.81	5.44
50th-Percentile Queue Length [ft/ln]	105.11	154.64	150.94	108.63	143.13	130.91	119.81	209.08	188.88	30.04	145.30	136.11
95th-Percentile Queue Length [veh/ln]	7.57	10.26	10.07	7.76	9.65	8.99	8.38	13.11	12.06	2.16	9.77	9.27
95th-Percentile Queue Length [ft/ln]	189.17	256.61	251.69	194.09	241.23	224.73	209.56	327.65	301.58	54.07	244.15	231.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.51	17.82	17.84	52.93	17.20	17.30	51.34	40.61	40.98	51.14	46.51	47.66
Movement LOS	D	B	B	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	23.55			23.57			43.00			47.28		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.29											
Intersection LOS	C											
Intersection V/C	0.537											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.648	2.690	2.597	2.532
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	600	780	500
d_b, Bicycle Delay [s]	25.92	24.50	18.61	28.13
l_b,int, Bicycle LOS Score for Intersection	2.352	2.302	2.250	1.960
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 10: Victoria Ave / 14th St

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.263

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	39	121	82	31	611	12	29	10	3	27	4	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	2	18	0	0	10	0	0	0	1	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	279	82	31	656	12	29	10	4	27	4	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	73	22	8	173	3	8	3	1	7	1	14
Total Analysis Volume [veh/h]	43	294	86	33	691	13	31	11	4	28	4	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	32	0	31	53	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	11	0	0	19	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	80	80	4	80	80	7	7
g / C, Green / Cycle	0.05	0.80	0.80	0.04	0.80	0.80	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.11	0.02	0.19	0.19	0.03	0.05
s, saturation flow rate [veh/h]	1714	1900	1756	1714	1900	1888	1544	1744
c, Capacity [veh/h]	84	1524	1408	72	1511	1501	162	162
d1, Uniform Delay [s]	46.40	2.19	2.19	46.77	2.57	2.57	44.83	45.92
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.81	0.17	0.19	4.42	0.36	0.37	0.95	2.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.13	0.13	0.46	0.23	0.23	0.28	0.56
d, Delay for Lane Group [s/veh]	51.21	2.36	2.39	51.18	2.94	2.94	45.78	48.87
Lane Group LOS	D	A	A	D	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.15	0.64	0.61	0.89	1.36	1.35	1.13	2.32
50th-Percentile Queue Length [ft/ln]	28.75	15.98	15.33	22.18	34.03	33.85	28.37	57.94
95th-Percentile Queue Length [veh/ln]	2.07	1.15	1.10	1.60	2.45	2.44	2.04	4.17
95th-Percentile Queue Length [ft/ln]	51.74	28.77	27.59	39.92	61.25	60.93	51.07	104.29

Movement, Approach, & Intersection Results

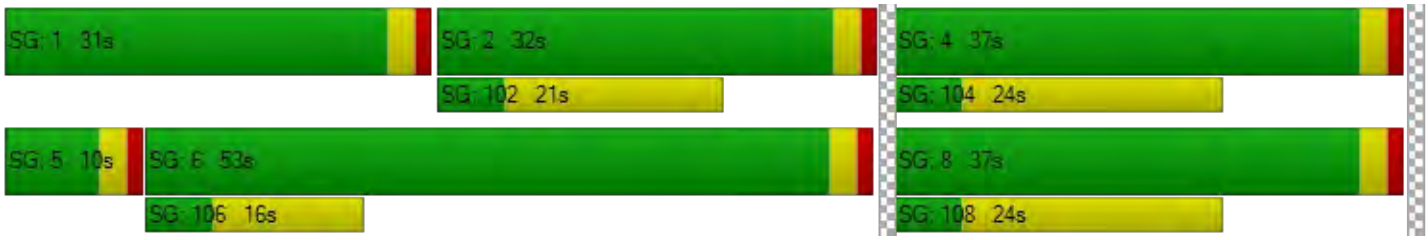
d_M, Delay for Movement [s/veh]	51.21	2.37	2.39	51.18	2.94	2.94	45.78	45.78	45.78	48.87	48.87	48.87
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.34			5.10			45.78			48.87		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.31											
Intersection LOS	B											
Intersection V/C	0.263											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.570	2.569	1.773	1.829
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	1000	680	680
d_b, Bicycle Delay [s]	25.21	12.50	21.78	21.78
l_b,int, Bicycle LOS Score for Intersection	1.909	2.168	1.636	1.708
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Tippecanoe Ave / Baseline St

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	283	249	651	167	165	499
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	36	4	0	86
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	283	249	687	171	165	585
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	63	175	44	42	149
Total Analysis Volume [veh/h]	288	254	700	174	168	596
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Protected	Permissive
Signal Group	5	0	8	0	7	4
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	7	0	7	0	7	7
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	2.0	0.0	2.0	0.0	2.0	2.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	33	0	47	0	20	67
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	0.0	1.0	1.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	C	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	30	30	44	44	17	64
g / C, Green / Cycle	0.30	0.30	0.44	0.44	0.17	0.64
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.23	0.25	0.10	0.16
s, saturation flow rate [veh/h]	1810	1615	1900	1775	1714	3618
c, Capacity [veh/h]	543	485	836	781	291	2315
d1, Uniform Delay [s]	29.14	29.07	20.36	20.80	38.19	7.76
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.68	4.02	2.33	2.88	8.07	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.52	0.52	0.56	0.58	0.26
d, Delay for Lane Group [s/veh]	32.82	33.09	22.70	23.68	46.25	8.03
Lane Group LOS	C	C	C	C	D	A
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.23	5.53	7.73	7.97	4.41	2.63
50th-Percentile Queue Length [ft/ln]	155.69	138.30	193.33	199.29	110.25	65.63
95th-Percentile Queue Length [veh/ln]	10.32	9.39	12.29	12.60	7.85	4.73
95th-Percentile Queue Length [ft/ln]	258.00	234.74	307.34	315.04	196.35	118.14

Movement, Approach, & Intersection Results

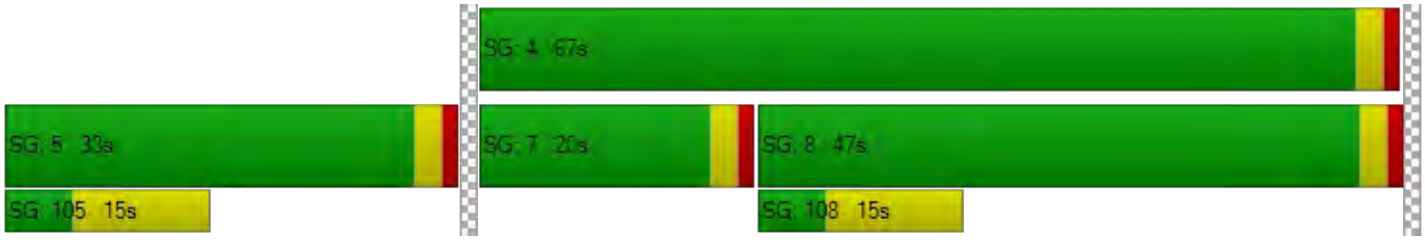
d_M, Delay for Movement [s/veh]	32.82	33.09	23.07	23.68	46.25	8.03
Movement LOS	C	C	C	C	D	A
d_A, Approach Delay [s/veh]	32.95		23.19		16.43	
Approach LOS	C		C		B	
d_I, Intersection Delay [s/veh]	23.25					
Intersection LOS	C					
Intersection V/C	0.503					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.353	2.566	2.641
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	4.853	4.763
Bicycle LOS	D	E	E

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 12: Del Rosa Dr / Baseline St

Control Type:	Signalized	Delay (sec / veh):	37.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

Intersection Setup

Name				Del Rosa Dr								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Del Rosa Dr								
Base Volume Input [veh/h]	57	445	64	85	253	128	187	693	43	26	472	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	76	54	0	0	12	0	0	0	36	0	10	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	133	499	64	85	265	128	187	693	79	26	482	56
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	131	17	22	70	34	49	182	21	7	127	15
Total Analysis Volume [veh/h]	140	525	67	89	279	135	197	729	83	27	507	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	23	0	10	23	0	28	57	0	10	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	50	50	7	49	49	14	28	28	4	18	18
g / C, Green / Cycle	0.07	0.50	0.50	0.07	0.49	0.49	0.14	0.28	0.28	0.04	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.08	0.16	0.16	0.05	0.15	0.08	0.11	0.22	0.22	0.02	0.15	0.15
s, saturation flow rate [veh/h]	1714	1900	1826	1714	1900	1615	1714	1900	1833	1714	1900	1832
c, Capacity [veh/h]	120	946	909	112	937	797	233	531	512	64	344	331
d1, Uniform Delay [s]	46.50	14.98	14.98	46.08	15.05	14.01	42.19	33.19	33.19	47.07	39.52	39.56
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	93.25	0.89	0.93	11.99	0.81	0.46	8.22	2.52	2.61	4.32	5.37	5.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.17	0.32	0.32	0.80	0.30	0.17	0.85	0.78	0.78	0.42	0.84	0.84
d, Delay for Lane Group [s/veh]	139.75	15.86	15.91	58.07	15.86	14.47	50.41	35.71	35.80	51.39	44.89	45.29
Lane Group LOS	F	B	B	E	B	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.07	4.19	4.04	2.54	3.86	1.75	5.24	9.43	9.11	0.73	7.25	7.06
50th-Percentile Queue Length [ft/ln]	151.74	104.69	101.12	63.48	96.57	43.67	130.89	235.81	227.79	18.29	181.14	176.49
95th-Percentile Queue Length [veh/ln]	10.59	7.54	7.28	4.57	6.95	3.14	8.99	14.47	14.06	1.32	11.66	11.42
95th-Percentile Queue Length [ft/ln]	264.83	188.45	182.01	114.27	173.83	78.60	224.70	361.73	351.55	32.93	291.51	285.43

Movement, Approach, & Intersection Results

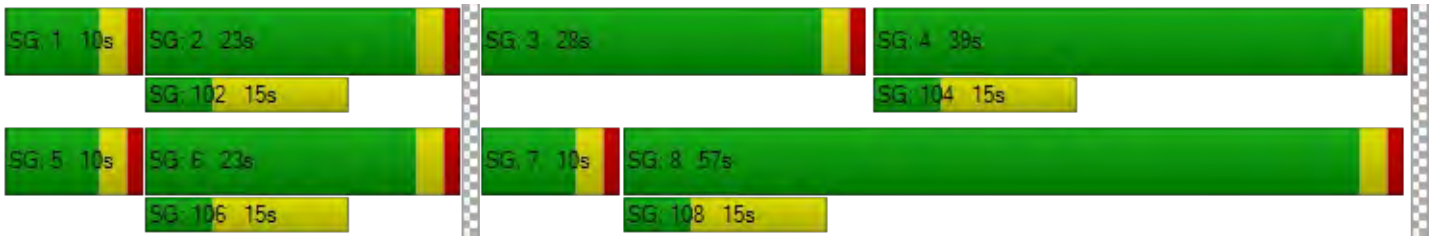
d_M, Delay for Movement [s/veh]	139.75	15.88	15.91	58.07	15.86	14.47	50.41	35.75	35.80	51.39	45.06	45.29
Movement LOS	F	B	B	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	39.58			22.96			38.62			45.38		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	37.50											
Intersection LOS	D											
Intersection V/C	0.496											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.525	2.557	2.656	2.595
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1080	720
d_b, Bicycle Delay [s]	32.00	32.00	10.58	20.48
l_b,int, Bicycle LOS Score for Intersection	2.164	2.390	2.392	2.049
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Sterling Ave / Base Line

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

Intersection Setup

Name				Sterling Ave								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Sterling Ave								
Base Volume Input [veh/h]	85	529	76	202	317	100	147	551	51	60	354	216
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	58	0	0	30	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	95	587	76	202	347	100	147	551	51	60	354	216
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	154	20	53	91	26	39	145	13	16	93	57
Total Analysis Volume [veh/h]	100	618	80	213	365	105	155	580	54	63	373	227
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	32	0	21	42	0	16	37	0	10	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	61	43	43	14	51	51	11	25	25	6	20	20
g / C, Green / Cycle	0.61	0.43	0.43	0.14	0.51	0.51	0.11	0.25	0.25	0.06	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.10	0.19	0.19	0.12	0.13	0.13	0.09	0.17	0.17	0.04	0.17	0.17
s, saturation flow rate [veh/h]	1035	1900	1825	1714	1900	1756	1714	1900	1844	1714	1900	1664
c, Capacity [veh/h]	659	821	788	245	967	894	185	469	455	99	374	328
d1, Uniform Delay [s]	8.63	19.86	19.86	41.92	13.82	13.83	43.73	34.13	34.14	46.06	38.73	38.83
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.14	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.49	1.67	1.74	9.04	0.62	0.68	9.54	1.78	1.84	6.50	6.78	8.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.43	0.43	0.87	0.25	0.25	0.84	0.69	0.69	0.63	0.85	0.86
d, Delay for Lane Group [s/veh]	9.11	21.53	21.61	50.95	14.44	14.51	53.27	35.91	35.98	52.56	45.50	47.33
Lane Group LOS	A	C	C	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.95	6.02	5.81	5.70	3.17	2.96	4.22	7.22	7.02	1.70	8.12	7.37
50th-Percentile Queue Length [ft/ln]	23.68	150.55	145.19	142.61	79.16	74.07	105.54	180.39	175.46	42.56	203.11	184.29
95th-Percentile Queue Length [veh/ln]	1.71	10.05	9.76	9.62	5.70	5.33	7.59	11.62	11.36	3.06	12.80	11.82
95th-Percentile Queue Length [ft/ln]	42.63	251.16	244.00	240.53	142.49	133.32	189.79	290.53	284.08	76.61	319.97	295.60

Movement, Approach, & Intersection Results

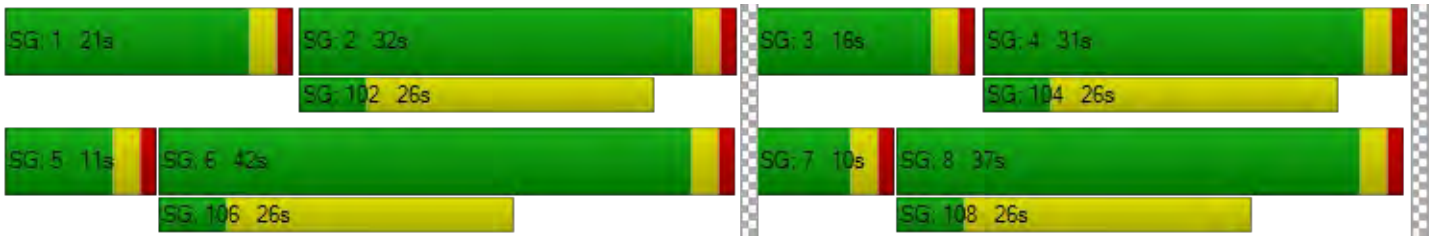
d_M, Delay for Movement [s/veh]	9.11	21.56	21.61	50.95	14.47	14.51	53.27	35.94	35.98	52.56	45.77	47.33
Movement LOS	A	C	C	D	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	20.01			25.85			39.35			46.95		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.66											
Intersection LOS	C											
Intersection V/C	0.572											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.556	2.733	2.648	2.606
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	780	680	560
d_b, Bicycle Delay [s]	25.21	18.61	21.78	25.92
l_b,int, Bicycle LOS Score for Intersection	2.218	2.123	2.211	2.107
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Victoria Ave / Base Line

Control Type:	Signalized	Delay (sec / veh):	31.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	62	434	92	150	349	123	116	494	59	45	327	145
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	20	0	0	11	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	594	92	150	395	123	116	494	59	45	327	145
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	153	24	39	101	32	30	127	15	12	84	37
Total Analysis Volume [veh/h]	64	610	95	154	406	126	119	508	61	46	336	149
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	31	0	16	35	0	13	43	0	10	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	22	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	52	52	11	57	57	9	20	20	5	16	16
g / C, Green / Cycle	0.06	0.52	0.52	0.11	0.57	0.57	0.09	0.20	0.20	0.05	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.04	0.19	0.19	0.09	0.15	0.15	0.07	0.15	0.15	0.03	0.13	0.14
s, saturation flow rate [veh/h]	1714	1900	1812	1714	1900	1748	1714	1900	1830	1714	1900	1707
c, Capacity [veh/h]	101	994	948	184	1086	1000	146	378	364	87	312	280
d1, Uniform Delay [s]	46.02	14.04	14.05	43.76	10.73	10.74	44.95	37.87	37.89	46.29	40.29	40.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.51	1.03	1.08	9.53	0.56	0.62	10.29	3.28	3.44	4.89	5.05	6.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.36	0.36	0.84	0.25	0.26	0.81	0.77	0.77	0.53	0.81	0.83
d, Delay for Lane Group [s/veh]	52.53	15.07	15.13	53.30	11.29	11.36	55.24	41.14	41.33	51.18	45.34	46.63
Lane Group LOS	D	B	B	D	B	B	E	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.73	4.89	4.68	4.20	3.07	2.86	3.30	6.96	6.75	1.23	6.38	5.95
50th-Percentile Queue Length [ft/ln]	43.22	122.13	117.09	104.88	76.82	71.60	82.47	174.09	168.66	30.71	159.39	148.72
95th-Percentile Queue Length [veh/ln]	3.11	8.51	8.23	7.55	5.53	5.16	5.94	11.29	11.01	2.21	10.52	9.95
95th-Percentile Queue Length [ft/ln]	77.80	212.75	205.82	188.79	138.27	128.88	148.45	282.29	275.15	55.28	262.91	248.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.53	15.09	15.13	53.30	11.31	11.36	55.24	41.23	41.33	51.18	45.66	46.63
Movement LOS	D	B	B	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.21			20.75			43.66			46.41		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	31.01											
Intersection LOS	C											
Intersection V/C	0.485											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.556	2.611	2.543	2.558
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	640	800	740
d_b, Bicycle Delay [s]	25.92	23.12	18.00	19.85
l_b,int, Bicycle LOS Score for Intersection	2.194	2.126	2.127	1.998
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 15: Tippecanoe Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	30.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.382

Intersection Setup

Name	Tippacanoe Avenue											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippacanoe Avenue											
Base Volume Input [veh/h]	183	613	57	12	265	48	89	428	103	49	350	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	3	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	4	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	613	57	12	269	48	89	431	103	49	350	24
Peak Hour Factor	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620	0.9620
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	159	15	3	70	12	23	112	27	13	91	6
Total Analysis Volume [veh/h]	190	637	59	12	280	50	93	448	107	51	364	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	45	0	10	34	0	15	35	0	10	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	13	63	63	2	52	52	7	18	18	5	16	16
g / C, Green / Cycle	0.13	0.63	0.63	0.02	0.52	0.52	0.07	0.18	0.18	0.05	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.11	0.19	0.19	0.01	0.09	0.09	0.05	0.15	0.15	0.03	0.10	0.10
s, saturation flow rate [veh/h]	1714	1900	1844	1714	1900	1802	1714	1900	1775	1714	1900	1858
c, Capacity [veh/h]	223	1190	1155	35	983	932	118	341	319	91	311	304
d1, Uniform Delay [s]	42.56	8.57	8.57	48.30	12.79	12.81	45.82	39.61	39.67	46.19	38.98	39.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.89	0.64	0.66	5.55	0.38	0.41	10.86	5.48	6.07	5.24	2.10	2.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.30	0.30	0.34	0.17	0.17	0.79	0.84	0.84	0.56	0.63	0.63
d, Delay for Lane Group [s/veh]	51.45	9.20	9.22	53.84	13.16	13.22	56.69	45.09	45.74	51.43	41.07	41.19
Lane Group LOS	D	A	A	D	B	B	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.10	3.45	3.35	0.35	2.03	1.98	2.62	7.22	6.86	1.36	4.63	4.57
50th-Percentile Queue Length [ft/ln]	127.49	86.22	83.86	8.71	50.85	49.54	65.43	180.54	171.38	34.10	115.73	114.15
95th-Percentile Queue Length [veh/ln]	8.80	6.21	6.04	0.63	3.66	3.57	4.71	11.63	11.15	2.46	8.16	8.07
95th-Percentile Queue Length [ft/ln]	220.07	155.20	150.95	15.68	91.52	89.18	117.77	290.71	278.73	61.38	203.95	201.76

Movement, Approach, & Intersection Results

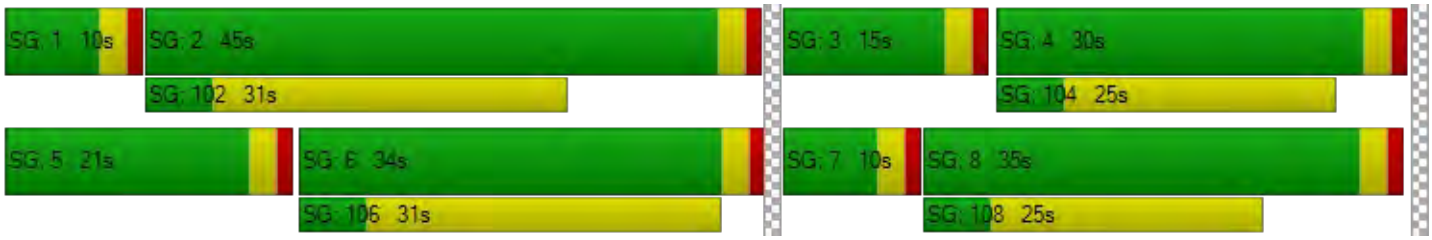
d_M, Delay for Movement [s/veh]	51.45	9.21	9.22	53.84	13.19	13.22	56.69	45.33	45.74	51.43	41.13	41.19
Movement LOS	D	A	A	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.27			14.62			47.02			42.33		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	30.35											
Intersection LOS	C											
Intersection V/C	0.382											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.565	2.520	2.551	2.493
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	840	620	640	540
d_b, Bicycle Delay [s]	16.82	23.81	23.12	26.65
l_b,int, Bicycle LOS Score for Intersection	2.291	1.842	2.094	1.923
Bicycle LOS	B	A	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Del Rosa Dr / 9th St

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	123	513	84	57	287	64	53	258	77	40	359	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	3	0	0	0	0
Site-Generated Trips [veh/h]	0	130	0	0	48	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	643	84	57	335	64	53	261	77	40	359	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	169	22	15	88	17	14	69	20	11	94	13
Total Analysis Volume [veh/h]	129	677	88	60	353	67	56	275	81	42	378	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	0	10	62	0	10	62	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	54	54	6	53	53	6	23	23	5	22	22
g / C, Green / Cycle	0.07	0.54	0.54	0.06	0.53	0.53	0.06	0.23	0.23	0.05	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.08	0.21	0.21	0.04	0.11	0.11	0.03	0.14	0.05	0.02	0.20	0.03
s, saturation flow rate [veh/h]	1714	1900	1824	1714	1900	1797	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	120	1033	992	98	1008	953	95	439	373	83	426	362
d1, Uniform Delay [s]	46.50	13.11	13.11	46.08	12.43	12.45	46.11	34.57	31.13	46.40	37.58	31.10
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	59.92	1.05	1.10	6.12	0.48	0.52	5.69	1.47	0.29	4.66	6.42	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.08	0.38	0.38	0.61	0.21	0.22	0.59	0.63	0.22	0.50	0.89	0.14
d, Delay for Lane Group [s/veh]	106.42	14.17	14.21	52.20	12.91	12.97	51.80	36.05	31.42	51.07	44.00	31.28
Lane Group LOS	F	B	B	D	B	B	D	D	C	D	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.96	5.10	4.91	1.62	2.58	2.49	1.50	6.13	1.61	1.12	9.58	1.02
50th-Percentile Queue Length [ft/ln]	123.96	127.54	122.81	40.39	64.62	62.27	37.56	153.15	40.18	28.04	239.42	25.55
95th-Percentile Queue Length [veh/ln]	8.80	8.81	8.55	2.91	4.65	4.48	2.70	10.19	2.89	2.02	14.65	1.84
95th-Percentile Queue Length [ft/ln]	220.11	220.15	213.68	72.71	116.31	112.09	67.61	254.63	72.32	50.48	366.30	46.00

Movement, Approach, & Intersection Results

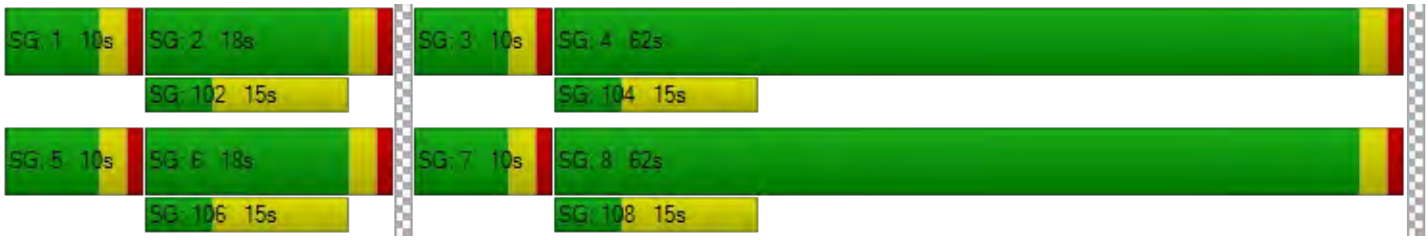
d_M, Delay for Movement [s/veh]	106.42	14.19	14.21	52.20	12.93	12.97	51.80	36.05	31.42	51.07	44.00	31.28
Movement LOS	F	B	B	D	B	B	D	D	C	D	D	C
d_A, Approach Delay [s/veh]	27.50			17.84			37.28			43.22		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	30.52											
Intersection LOS	C											
Intersection V/C	0.472											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.574	2.553	2.499	2.356
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1180	1180
d_b, Bicycle Delay [s]	36.13	36.13	8.41	8.41
l_b,int, Bicycle LOS Score for Intersection	2.297	1.956	2.239	2.338
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Sterling Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	78	461	195	71	248	75	97	302	77	92	207	73
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	3	0	0	0	0
Site-Generated Trips [veh/h]	0	54	0	9	21	0	0	0	0	0	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	515	195	80	269	75	97	305	77	92	207	87
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	136	51	21	71	20	26	80	20	24	54	23
Total Analysis Volume [veh/h]	82	542	205	84	283	79	102	321	81	97	218	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	31	0	14	32	0	13	41	0	14	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	19	0	0	22	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	55	55	6	55	55	7	19	19	7	19	19
g / C, Green / Cycle	0.06	0.55	0.55	0.06	0.55	0.55	0.07	0.19	0.19	0.07	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.05	0.21	0.21	0.05	0.10	0.10	0.06	0.17	0.05	0.06	0.11	0.06
s, saturation flow rate [veh/h]	1714	1900	1725	1714	1900	1761	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	108	1048	952	109	1049	972	128	368	312	122	362	307
d1, Uniform Delay [s]	46.09	12.65	12.66	46.10	11.11	11.14	45.55	39.14	34.25	45.72	37.03	34.76
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.28	1.02	1.13	10.85	0.37	0.41	10.87	6.55	0.44	10.99	1.62	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.37	0.37	0.77	0.18	0.18	0.80	0.87	0.26	0.79	0.60	0.30
d, Delay for Lane Group [s/veh]	56.37	13.67	13.78	56.96	11.48	11.55	56.42	45.69	34.68	56.70	38.65	35.30
Lane Group LOS	E	B	B	E	B	B	E	D	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.30	5.00	4.58	2.37	2.07	1.98	2.86	8.21	1.70	2.73	4.99	1.96
50th-Percentile Queue Length [ft/ln]	57.55	125.08	114.51	59.30	51.86	49.43	71.53	205.26	42.57	68.23	124.82	48.99
95th-Percentile Queue Length [veh/ln]	4.14	8.67	8.09	4.27	3.73	3.56	5.15	12.91	3.07	4.91	8.66	3.53
95th-Percentile Queue Length [ft/ln]	103.60	216.79	202.26	106.73	93.34	88.98	128.75	322.74	76.63	122.81	216.43	88.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.37	13.70	13.78	56.96	11.51	11.55	56.42	45.69	34.68	56.70	38.65	35.30
Movement LOS	E	B	B	E	B	B	E	D	C	E	D	D
d_A, Approach Delay [s/veh]	17.94			20.07			46.09			42.20		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	29.38											
Intersection LOS	C											
Intersection V/C	0.481											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.669	2.537	2.353	2.386
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	580	760	780
d_b, Bicycle Delay [s]	25.92	25.21	19.22	18.61
l_b,int, Bicycle LOS Score for Intersection	2.244	1.928	2.391	2.231
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 18: Victoria Ave / 9th St

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.354

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	79	400	39	59	227	66	100	236	68	24	161	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	3	20	0	0	11	0	0	0	2	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	35	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	560	39	59	273	66	100	236	70	24	161	57
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	147	10	16	72	17	26	62	18	6	42	15
Total Analysis Volume [veh/h]	86	589	41	62	287	69	105	248	74	25	169	60
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	27	0	11	28	0	19	52	0	10	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	19	0	0	20	0	0	20	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	6	63	63	6	63	63	8	15	15	4	11	11
g / C, Green / Cycle	0.06	0.63	0.63	0.06	0.63	0.63	0.08	0.15	0.15	0.04	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17	0.17	0.04	0.10	0.10	0.06	0.13	0.05	0.01	0.09	0.04
s, saturation flow rate [veh/h]	1714	1900	1857	1714	1900	1776	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	109	1200	1173	99	1189	1111	133	295	251	61	215	183
d1, Uniform Delay [s]	46.15	8.15	8.15	46.07	7.75	7.76	45.35	41.03	37.39	47.22	43.15	40.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.82	0.54	0.55	6.37	0.27	0.30	10.10	6.37	0.65	4.44	6.19	1.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.27	0.27	0.63	0.15	0.16	0.79	0.84	0.30	0.41	0.78	0.33
d, Delay for Lane Group [s/veh]	57.97	8.69	8.70	52.44	8.02	8.06	55.45	47.40	38.03	51.66	49.34	41.86
Lane Group LOS	E	A	A	D	A	A	E	D	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.45	2.98	2.92	1.67	1.60	1.54	2.92	6.40	1.64	0.68	4.41	1.41
50th-Percentile Queue Length [ft/ln]	61.30	74.54	73.09	41.84	39.98	38.42	72.92	159.92	41.06	17.04	110.17	35.21
95th-Percentile Queue Length [veh/ln]	4.41	5.37	5.26	3.01	2.88	2.77	5.25	10.54	2.96	1.23	7.85	2.54
95th-Percentile Queue Length [ft/ln]	110.34	134.16	131.56	75.31	71.97	69.16	131.25	263.61	73.90	30.67	196.23	63.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.97	8.70	8.70	52.44	8.04	8.06	55.45	47.40	38.03	51.66	49.34	41.86
Movement LOS	E	A	A	D	A	A	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	14.62			14.63			47.76			47.80		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	27.06											
Intersection LOS	C											
Intersection V/C	0.354											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.639	2.535	2.321	2.285
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	480	500	980	800
d_b, Bicycle Delay [s]	28.88	28.13	13.01	18.00
l_b,int, Bicycle LOS Score for Intersection	2.150	1.904	2.264	1.979
Bicycle LOS	B	A	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 19: Del Rosa Dr / 6th St

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

Intersection Setup

Name							6th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							6th Street					
Base Volume Input [veh/h]	10	523	132	19	261	30	55	124	14	40	86	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	98	1	8	39	1	3	11	26	5	13	29
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	621	133	27	300	31	58	135	40	45	99	65
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	163	35	7	79	8	15	36	11	12	26	17
Total Analysis Volume [veh/h]	15	654	140	28	316	33	61	142	42	47	104	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	38	0	10	38	0	18	42	0	10	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	67	67	4	68	68	6	12	5	12
g / C, Green / Cycle	0.02	0.67	0.67	0.04	0.68	0.68	0.06	0.12	0.05	0.12
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.22	0.02	0.09	0.09	0.04	0.10	0.03	0.10
s, saturation flow rate [veh/h]	1714	1900	1785	1714	1900	1838	1714	1826	1714	1776
c, Capacity [veh/h]	42	1265	1189	65	1292	1249	99	228	88	210
d1, Uniform Delay [s]	48.03	7.11	7.12	47.03	5.65	5.66	46.02	42.59	46.28	43.05
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.21	0.68	0.72	4.40	0.22	0.23	6.05	6.63	5.00	7.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.32	0.32	0.43	0.14	0.14	0.61	0.81	0.54	0.82
d, Delay for Lane Group [s/veh]	53.24	7.79	7.84	51.43	5.87	5.89	52.07	49.21	51.28	50.75
Lane Group LOS	D	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	3.56	3.37	0.76	1.24	1.22	1.64	4.81	1.26	4.57
50th-Percentile Queue Length [ft/ln]	10.67	88.99	84.17	18.96	31.06	30.52	41.00	120.19	31.40	114.16
95th-Percentile Queue Length [veh/ln]	0.77	6.41	6.06	1.36	2.24	2.20	2.95	8.40	2.26	8.07
95th-Percentile Queue Length [ft/ln]	19.20	160.18	151.50	34.12	55.90	54.94	73.81	210.08	56.53	201.77

Movement, Approach, & Intersection Results

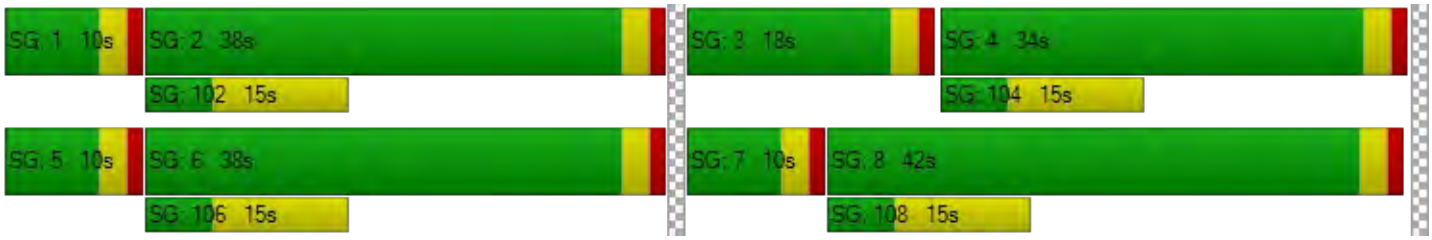
d_M, Delay for Movement [s/veh]	53.24	7.81	7.84	51.43	5.88	5.89	52.07	49.21	49.21	51.28	50.75	50.75
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	8.66			9.26			49.92			50.86		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	20.52											
Intersection LOS	C											
Intersection V/C	0.364											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.543	2.533	2.076	2.119
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	700	780	620
d_b, Bicycle Delay [s]	21.13	21.13	18.61	23.81
l_b,int, Bicycle LOS Score for Intersection	2.227	1.871	1.964	1.921
Bicycle LOS	B	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Sterling Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	725	41	28	372	29	55	104	11	10	76	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	40	5	2	17	2	6	35	0	78	21	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	765	46	30	389	31	61	139	11	88	97	26
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	201	12	8	102	8	16	37	3	23	26	7
Total Analysis Volume [veh/h]	24	805	48	32	409	33	64	146	12	93	102	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.04	0.00	0.00	0.89	1.07	0.01	0.00	0.76	0.05
d_M, Delay for Movement [s/veh]	8.26	0.00	0.00	9.72	0.00	0.00	552.74	529.03	507.05	10000.0	10000.0	10000.0
Movement LOS	A	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.07	0.03	0.00	0.13	0.06	0.00	18.28	18.28	18.28	30.48	30.48	30.48
95th-Percentile Queue Length [ft/ln]	1.63	0.81	0.00	3.14	1.57	0.00	456.93	456.93	456.93	762.03	762.03	762.03
d_A, Approach Delay [s/veh]	0.23			0.66			534.68			10000.00		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	1303.18											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 21: Victoria Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	46	484	74	62	227	24	26	65	25	30	52	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	22	0	0	13	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	119	5	7	24	4	10	104	1	2	39	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	625	79	69	264	28	36	169	26	32	91	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	164	21	18	69	7	9	44	7	8	24	11
Total Analysis Volume [veh/h]	55	658	83	73	278	29	38	178	27	34	96	45
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.00	0.08	0.00	0.00	0.38	1.23	0.03	0.00	0.61	0.07
d_M, Delay for Movement [s/veh]	7.97	0.00	0.00	9.49	0.00	0.00	380.31	369.18	348.41	10000.0	10000.0	10000.0
Movement LOS	A	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.14	0.07	0.00	0.27	0.14	0.00	17.14	17.14	17.14	24.55	24.55	24.55
95th-Percentile Queue Length [ft/ln]	3.41	1.70	0.00	6.81	3.40	0.00	428.46	428.46	428.46	613.71	613.71	613.71
d_A, Approach Delay [s/veh]	0.55			1.82			368.62			10000.00		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	1154.77											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 22: Central Ave / 6th St

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.145

Intersection Setup

Name	Central Avenue					
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Central Avenue					
Base Volume Input [veh/h]	22	185	81	31	56	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	40	0	12	26	114
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	225	81	43	82	142
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	59	21	11	22	37
Total Analysis Volume [veh/h]	29	237	85	45	86	149
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.14	0.16
d_M, Delay for Movement [s/veh]	7.50	0.00	0.00	0.00	12.09	9.48
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.50	0.55
95th-Percentile Queue Length [ft/ln]	1.51	1.51	0.00	0.00	12.60	13.84
d_A, Approach Delay [s/veh]	0.82		0.00		10.44	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	4.23					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 23: I-215 SB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	22.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

Intersection Setup

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			Yes			No			No	

Volumes

Name	I-215 SB Ramp			I-215 SB Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	311	6	186	0	858	393	498	805	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	24	0	221	64	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	311	6	186	0	882	393	719	880	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9700	0.9700	0.9700	1.0000	0.9700	0.9700	0.9700	0.9700	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	80	2	48	0	227	101	185	227	0
Total Analysis Volume [veh/h]	0	0	0	321	6	192	0	909	405	741	907	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	20	0	0	49	0	31	80	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	C	L	C
C, Cycle Length [s]		100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		12	12	12	52	52	26	82
g / C, Green / Cycle		0.12	0.12	0.12	0.52	0.52	0.26	0.82
(v / s)_i Volume / Saturation Flow Rate		0.10	0.10	0.10	0.18	0.25	0.24	0.25
s, saturation flow rate [veh/h]		1810	1775	1615	5176	1615	3144	3618
c, Capacity [veh/h]		226	222	202	2701	843	827	2948
d1, Uniform Delay [s]		42.51	42.51	42.52	13.87	15.26	35.52	2.29
k, delay calibration		0.11	0.11	0.11	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.33	6.45	7.06	0.34	1.96	3.74	0.27
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.80	0.80	0.80	0.34	0.48	0.90	0.31
d, Delay for Lane Group [s/veh]		48.85	48.96	49.57	14.21	17.22	39.26	2.56
Lane Group LOS		D	D	D	B	B	D	A
Critical Lane Group		No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		4.70	4.62	4.23	3.90	6.08	8.95	1.47
50th-Percentile Queue Length [ft/ln]		117.43	115.40	105.87	97.59	151.89	223.81	36.74
95th-Percentile Queue Length [veh/ln]		8.25	8.14	7.61	7.03	10.12	13.86	2.65
95th-Percentile Queue Length [ft/ln]		206.29	203.48	190.25	175.66	252.95	346.48	66.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	48.90	48.96	49.51	0.00	14.21	17.22	39.26	2.56	0.00
Movement LOS				D	D	D		B	B	D	A	
d_A, Approach Delay [s/veh]	0.00			49.11			15.14			19.06		
Approach LOS	A			D			B			B		
d_I, Intersection Delay [s/veh]	22.06											
Intersection LOS	C											
Intersection V/C	0.586											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	41.41	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.115	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	340	920	1540
d_b, Bicycle Delay [s]	50.00	34.45	14.58	2.65
l_b,int, Bicycle LOS Score for Intersection	4.132	2.416	2.102	2.919
Bicycle LOS	D	B	B	C

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 24: I-215 NB Ramps / 5th St

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	380	3	480	0	0	0	225	951	0	0	925	644
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	54	0	0	0	0	24	0	0	285	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	380	3	534	0	0	0	225	975	0	0	1221	644
Peak Hour Factor	0.9960	0.9960	0.9960	0.9960	1.0000	0.9960	0.9960	0.9960	1.0000	1.0000	0.9960	0.9960
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	1	134	0	0	0	56	245	0	0	306	162
Total Analysis Volume [veh/h]	382	3	536	0	0	0	226	979	0	0	1226	647
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	18	0	0	0	0	12	82	0	0	70	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	36	36	36		9	58	46	46
g / C, Green / Cycle	0.36	0.36	0.36		0.09	0.58	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.17	0.18	0.19		0.07	0.27	0.18	0.40
s, saturation flow rate [veh/h]	1810	1659	1615		3144	3618	6901	1615
c, Capacity [veh/h]	648	594	578		283	2105	3187	746
d1, Uniform Delay [s]	24.89	25.26	25.38		44.61	11.98	17.61	24.15
k, delay calibration	0.50	0.50	0.50		0.11	0.11	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.54	3.17	3.39		5.16	0.16	0.08	5.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.51	0.53		0.80	0.47	0.38	0.87
d, Delay for Lane Group [s/veh]	27.43	28.42	28.77		49.77	12.14	17.68	29.32
Lane Group LOS	C	C	C		D	B	B	C
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.08	6.12	6.14		2.93	5.91	4.51	14.10
50th-Percentile Queue Length [ft/ln]	152.00	153.03	153.40		73.23	147.73	112.87	352.44
95th-Percentile Queue Length [veh/ln]	10.12	10.18	10.20		5.27	9.90	8.00	20.26
95th-Percentile Queue Length [ft/ln]	253.10	254.47	254.96		131.81	247.40	199.99	506.38

Movement, Approach, & Intersection Results

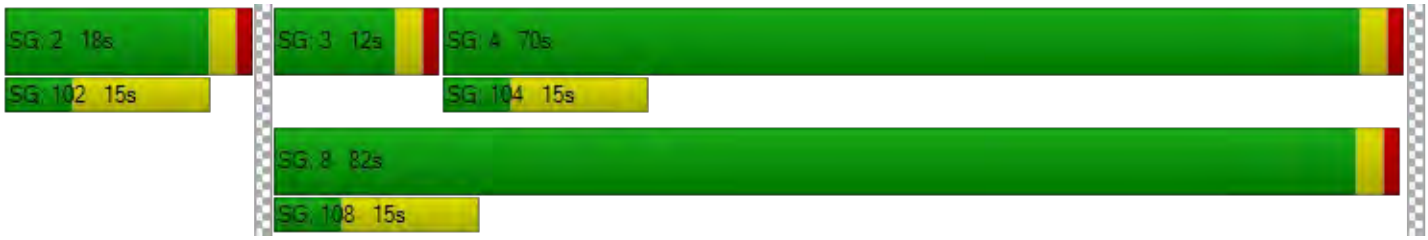
d_M, Delay for Movement [s/veh]	27.62	28.42	28.62	0.00	0.00	0.00	49.77	12.14	0.00	0.00	17.68	29.32
Movement LOS	C	C	C				D	B			B	C
d_A, Approach Delay [s/veh]	28.20			0.00			19.20			21.70		
Approach LOS	C			A			B			C		
d_I, Intersection Delay [s/veh]	22.45											
Intersection LOS	C											
Intersection V/C	0.661											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.246	2.149	3.075	3.072
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	0	1580	1340
d_b, Bicycle Delay [s]	36.13	50.00	2.21	5.45
l_b,int, Bicycle LOS Score for Intersection	3.079	4.132	2.554	2.332
Bicycle LOS	C	D	B	B

Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: E St / 5th St

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.554

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	94	309	45	28	163	60	26	611	42	44	893	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	78	0	0	285	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	309	45	28	163	60	26	689	42	44	1189	24
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	81	12	7	43	16	7	181	11	12	313	6
Total Analysis Volume [veh/h]	99	325	47	29	172	63	27	725	44	46	1252	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	28.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	38	0	10	33	0	0	42	0	0	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	6	0	0	6	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	20	4	17	57	57	57	57	57	57
g / C, Green / Cycle	0.07	0.23	0.04	0.19	0.63	0.63	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.02	0.13	0.06	0.20	0.20	0.06	0.34	0.34
s, saturation flow rate [veh/h]	1714	1859	1714	1814	440	1900	1862	711	1900	1887
c, Capacity [veh/h]	126	419	70	349	261	1204	1180	440	1204	1196
d1, Uniform Delay [s]	40.97	33.74	42.12	33.70	16.65	7.59	7.59	11.71	9.11	9.11
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.07	6.46	3.91	2.25	0.80	0.71	0.73	0.48	1.69	1.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.89	0.42	0.67	0.10	0.32	0.32	0.10	0.53	0.53
d, Delay for Lane Group [s/veh]	51.05	40.20	46.03	35.95	17.45	8.30	8.32	12.19	10.80	10.81
Lane Group LOS	D	D	D	D	B	A	A	B	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.48	8.42	0.70	4.89	0.40	3.29	3.23	0.52	6.61	6.58
50th-Percentile Queue Length [ft/ln]	62.11	210.45	17.46	122.27	9.95	82.30	80.84	13.06	165.28	164.47
95th-Percentile Queue Length [veh/ln]	4.47	13.18	1.26	8.52	0.72	5.93	5.82	0.94	10.83	10.79
95th-Percentile Queue Length [ft/ln]	111.81	329.41	31.42	212.94	17.91	148.15	145.52	23.51	270.70	269.63

Movement, Approach, & Intersection Results

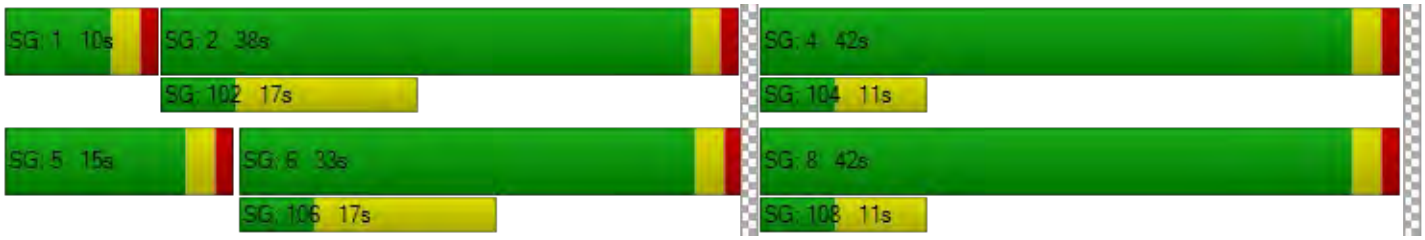
d_M, Delay for Movement [s/veh]	51.05	40.20	40.20	46.03	35.95	35.95	17.45	8.31	8.32	12.19	10.80	10.81
Movement LOS	D	D	D	D	D	D	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	42.48			37.06			8.62			10.85		
Approach LOS	D			D			A			B		
d_I, Intersection Delay [s/veh]	17.87											
Intersection LOS	B											
Intersection V/C	0.554											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.245	2.188	2.996	2.716
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	778	667	867	867
d_b, Bicycle Delay [s]	16.81	20.00	14.45	14.45
l_b,int, Bicycle LOS Score for Intersection	2.337	1.995	2.216	2.651
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Arrowhead Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.437

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	107	411	77	28	146	51	60	575	35	52	741	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	78	0	0	285	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	411	77	28	146	51	60	653	35	52	1037	30
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	108	20	7	38	13	16	172	9	14	273	8
Total Analysis Volume [veh/h]	113	433	81	29	154	54	63	687	37	55	1092	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	4	0	1	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	20	0	0	20	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	60	0	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	19	19	19	19	19	19	61	61	61	61	61	61
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.21	0.21	0.68	0.68	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.09	0.14	0.14	0.03	0.06	0.06	0.12	0.19	0.19	0.07	0.30	0.30
s, saturation flow rate [veh/h]	1192	1900	1798	901	1900	1738	509	1900	1866	741	1900	1881
c, Capacity [veh/h]	243	402	380	132	402	367	347	1287	1264	512	1287	1274
d1, Uniform Delay [s]	37.06	32.49	32.52	41.32	29.64	29.73	11.62	5.79	5.80	8.45	6.66	6.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.38	1.82	1.96	0.83	0.35	0.41	1.15	0.55	0.56	0.42	1.09	1.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.66	0.66	0.22	0.26	0.28	0.18	0.28	0.28	0.11	0.44	0.44
d, Delay for Lane Group [s/veh]	38.44	34.31	34.48	42.15	29.99	30.14	12.77	6.35	6.36	8.88	7.75	7.76
Lane Group LOS	D	C	C	D	C	C	B	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.43	5.35	5.11	0.65	1.93	1.87	0.76	2.53	2.49	0.51	4.54	4.50
50th-Percentile Queue Length [ft/ln]	60.73	133.74	127.87	16.26	48.25	46.64	18.93	63.33	62.34	12.69	113.53	112.56
95th-Percentile Queue Length [veh/ln]	4.37	9.14	8.82	1.17	3.47	3.36	1.36	4.56	4.49	0.91	8.04	7.98
95th-Percentile Queue Length [ft/ln]	109.31	228.57	220.60	29.27	86.86	83.96	34.08	114.00	112.21	22.84	200.90	199.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.44	34.37	34.48	42.15	30.03	30.14	12.77	6.35	6.36	8.88	7.75	7.76
Movement LOS	D	C	C	D	C	C	B	A	A	A	A	A
d_A, Approach Delay [s/veh]	35.12			31.54			6.87			7.81		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	15.58											
Intersection LOS	B											
Intersection V/C	0.437											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.548	2.538	2.859	2.726
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	556	1222	1222
d_b, Bicycle Delay [s]	23.47	23.47	6.81	6.81
l_b,int, Bicycle LOS Score for Intersection	2.077	1.755	2.209	2.532
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 27: Waterman Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.559

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	1	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	254	898	207	59	597	132	137	514	159	94	291	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	0	4	0	8	17	0	78	0	19	268	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	898	211	59	605	149	137	592	159	113	570	42
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	230	54	15	155	38	35	152	41	29	146	11
Total Analysis Volume [veh/h]	261	922	217	61	621	153	141	608	163	116	585	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	5.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0	3.0	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	37	0	11	31	0	9	33	0	9	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	21	0	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	4.00	4.00	2.00	4.00	4.00	0.00	3.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	13	40	40	4	31	31	31	22	22	31	22	22
g / C, Green / Cycle	0.14	0.45	0.45	0.05	0.35	0.35	0.34	0.24	0.24	0.34	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.15	0.25	0.13	0.04	0.14	0.15	0.14	0.21	0.21	0.12	0.16	0.03
s, saturation flow rate [veh/h]	1714	3618	1615	1714	3618	1716	1041	1900	1763	937	3618	1615
c, Capacity [veh/h]	248	1607	718	79	1251	593	357	462	429	301	879	393
d1, Uniform Delay [s]	38.50	18.65	16.05	42.47	22.51	22.57	22.22	32.65	32.66	22.87	30.76	26.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.17	0.17	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	42.04	1.49	1.08	14.80	1.03	2.22	0.71	7.43	7.96	0.81	0.87	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.05	0.57	0.30	0.77	0.42	0.42	0.40	0.87	0.87	0.38	0.67	0.11
d, Delay for Lane Group [s/veh]	80.54	20.14	17.14	57.27	23.53	24.79	22.93	40.08	40.62	23.68	31.63	26.61
Lane Group LOS	F	C	B	E	C	C	C	D	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.25	7.13	2.97	1.65	4.28	4.34	2.15	9.08	8.49	1.75	5.71	0.72
50th-Percentile Queue Length [ft/ln]	206.18	178.30	74.26	41.27	107.09	108.59	53.79	226.98	212.31	43.82	142.65	18.05
95th-Percentile Queue Length [veh/ln]	13.26	11.51	5.35	2.97	7.68	7.76	3.87	14.02	13.27	3.16	9.62	1.30
95th-Percentile Queue Length [ft/ln]	331.46	287.79	133.68	74.28	191.95	194.04	96.83	350.51	331.79	78.88	240.59	32.50

Movement, Approach, & Intersection Results

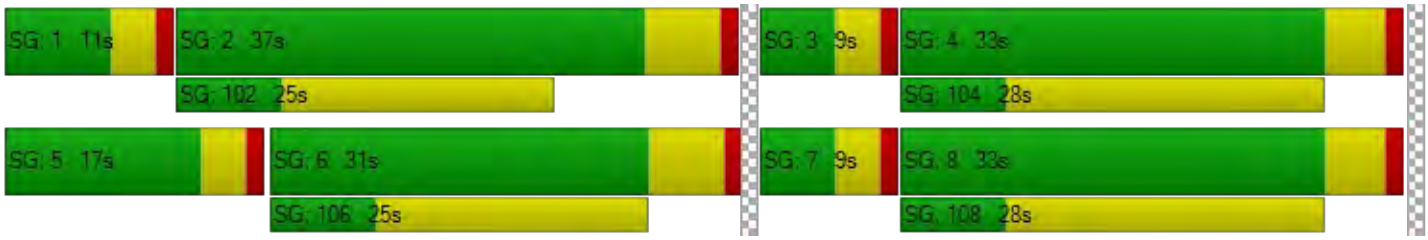
d_M, Delay for Movement [s/veh]	80.54	20.14	17.14	57.27	23.73	24.79	22.93	40.26	40.62	23.68	31.63	26.61
Movement LOS	F	C	B	E	C	C	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	30.94			26.38			37.65			30.10		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	31.37											
Intersection LOS	C											
Intersection V/C	0.559											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersection	2.957	2.821	2.672	2.717
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	556	622	622
d_b, Bicycle Delay [s]	19.34	23.47	21.36	21.36
l_b,int, Bicycle LOS Score for Intersection	2.715	2.019	2.312	2.173
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Tippecanoe Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	38.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.787

Intersection Setup

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Tippecanoe Avenue			Tippecanoe Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	72	582	77	60	320	24	59	734	54	62	257	58
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	52	1	14	3	5	0	4	68	10	70	243	16
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	124	583	91	63	325	24	63	802	64	132	511	74
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	153	24	17	86	6	17	211	17	35	134	19
Total Analysis Volume [veh/h]	131	614	96	66	342	25	66	844	67	139	538	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	24	0	10	18	0	35	54	0	12	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	27	27	6	23	23	6	46	46	9	50	50
g / C, Green / Cycle	0.09	0.27	0.27	0.06	0.23	0.23	0.06	0.46	0.46	0.09	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.08	0.19	0.19	0.04	0.10	0.10	0.04	0.44	0.04	0.08	0.28	0.05
s, saturation flow rate [veh/h]	1714	1900	1811	1714	1900	1855	1714	1900	1615	1714	1900	1615
c, Capacity [veh/h]	160	507	483	101	441	431	103	882	750	154	940	799
d1, Uniform Delay [s]	44.50	33.24	33.24	46.06	32.65	32.67	45.97	25.81	14.97	45.06	17.82	13.42
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.39	0.11	0.11	0.12	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.80	8.43	8.84	6.98	2.91	3.02	6.58	18.03	0.05	16.68	0.62	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.72	0.72	0.65	0.42	0.42	0.64	0.96	0.09	0.90	0.57	0.10
d, Delay for Lane Group [s/veh]	54.30	41.67	42.08	53.04	35.56	35.69	52.54	43.84	15.02	61.74	18.44	13.48
Lane Group LOS	D	D	D	D	D	D	D	D	B	E	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.60	9.04	8.68	1.79	4.14	4.08	1.78	22.63	0.85	4.10	8.52	0.92
50th-Percentile Queue Length [ft/ln]	89.97	226.00	217.05	44.80	103.42	102.05	44.57	565.86	21.23	102.56	213.07	23.12
95th-Percentile Queue Length [veh/ln]	6.48	13.97	13.51	3.23	7.45	7.35	3.21	30.44	1.53	7.38	13.31	1.66
95th-Percentile Queue Length [ft/ln]	161.94	349.28	337.86	80.65	186.16	183.69	80.23	760.92	38.21	184.60	332.77	41.62

Movement, Approach, & Intersection Results

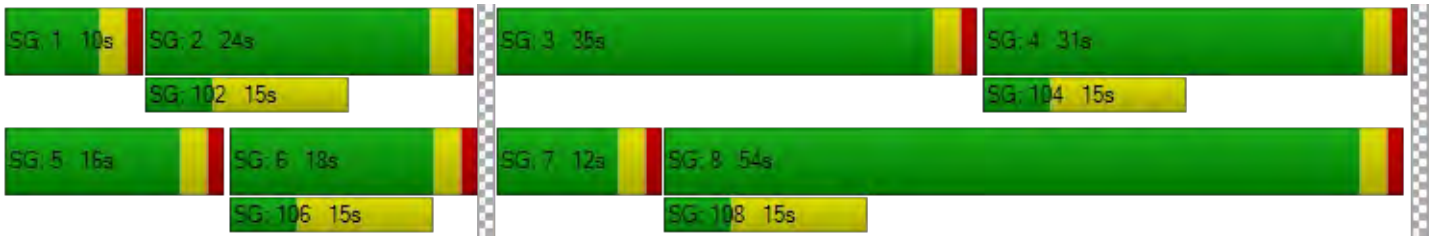
d_M, Delay for Movement [s/veh]	54.30	41.84	42.08	53.04	35.62	35.69	52.54	43.84	15.02	61.74	18.44	13.48
Movement LOS	D	D	D	D	D	D	D	D	B	E	B	B
d_A, Approach Delay [s/veh]	43.80			38.28			42.46			25.90		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	38.07											
Intersection LOS	D											
Intersection V/C	0.787											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.577	2.539	2.632	2.650
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	420	300	1020	560
d_b, Bicycle Delay [s]	31.21	36.13	12.01	25.92
l_b,int, Bicycle LOS Score for Intersection	2.253	1.917	3.172	2.805
Bicycle LOS	B	A	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Del Rosa Dr / 5th St

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	39	343	24	48	215	268	526	398	21	16	119	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	11	0
Site-Generated Trips [veh/h]	0	25	2	57	10	3	14	174	0	9	265	64
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	368	26	105	225	271	540	572	21	25	395	100
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	97	7	28	59	71	142	150	6	7	104	26
Total Analysis Volume [veh/h]	41	386	27	110	236	284	567	600	22	26	414	105
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	71	0	0	71	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	18	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	40	40	40	40	54	54	54	54
g / C, Green / Cycle	0.40	0.40	0.40	0.40	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.11	0.18	0.15	0.26	0.51	0.36	0.16	0.16
s, saturation flow rate [veh/h]	1256	1703	1576	1536	1116	1718	1748	1614
c, Capacity [veh/h]	553	687	689	620	671	922	977	866
d1, Uniform Delay [s]	20.10	21.77	20.86	24.05	21.82	16.82	12.62	12.80
k, delay calibration	0.50	0.50	0.50	0.50	0.29	0.13	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.14	2.14	1.31	5.10	7.73	1.02	0.16	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.45	0.34	0.64	0.85	0.67	0.29	0.30
d, Delay for Lane Group [s/veh]	21.24	23.91	22.17	29.15	29.55	17.85	12.78	13.00
Lane Group LOS	C	C	C	C	C	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.40	5.60	3.95	8.26	12.95	10.00	3.38	3.16
50th-Percentile Queue Length [ft/ln]	59.92	140.07	98.87	206.48	323.75	249.93	84.43	78.92
95th-Percentile Queue Length [veh/ln]	4.31	9.48	7.12	12.97	18.85	15.18	6.08	5.68
95th-Percentile Queue Length [ft/ln]	107.86	237.12	177.96	324.31	471.29	379.57	151.97	142.06

Movement, Approach, & Intersection Results

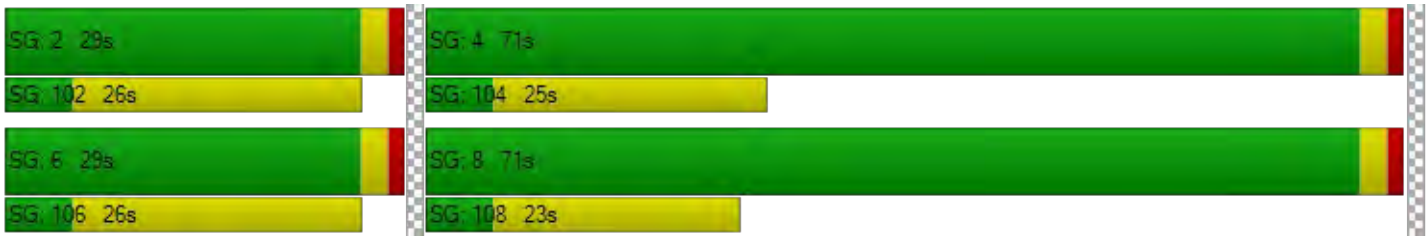
d_M, Delay for Movement [s/veh]	21.24	23.20	23.91	22.17	25.57	29.15	29.55	17.85	17.85	12.78	12.86	13.00
Movement LOS	C	C	C	C	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	23.06			26.59			23.43			12.89		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.04											
Intersection LOS	C											
Intersection V/C	0.768											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.355	3.356	2.666	2.713
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	520	1360	1360
d_b, Bicycle Delay [s]	27.38	27.38	5.12	5.12
l_b,int, Bicycle LOS Score for Intersection	1.934	2.079	2.541	2.009
Bicycle LOS	A	B	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 30: Sterling Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.666

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	6	518	162	170	223	42	83	367	29	106	124	166
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	11	5	0	0	3	0	0	0	6	0	0	0
Site-Generated Trips [veh/h]	41	23	18	3	47	45	16	220	47	76	206	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	546	180	173	273	87	99	587	82	182	330	176
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	144	47	46	72	23	26	154	22	48	87	46
Total Analysis Volume [veh/h]	61	575	189	182	287	92	104	618	86	192	347	185
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0	0.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	47	0	0	47	0	0	53	0	0	53	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	6	0	0	6	0	0	6	0	0	6	0
Pedestrian Clearance [s]	0	13	0	0	13	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C	R	C	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	43	43	43	43	43	43	46	46	46	46	46	46
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.46	0.46	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.06	0.21	0.21	0.25	0.10	0.10	0.26	0.25	0.05	0.41	0.20	0.11
s, saturation flow rate [veh/h]	1020	1900	1741	714	1900	1745	1133	1729	1615	467	1729	1615
c, Capacity [veh/h]	423	823	755	257	823	756	566	789	737	285	789	737
d1, Uniform Delay [s]	22.88	20.31	20.32	36.83	17.90	17.93	23.68	19.65	15.60	35.73	18.47	16.68
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.35	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.72	2.03	2.22	15.23	0.68	0.76	0.76	0.59	0.07	8.57	0.39	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.48	0.48	0.71	0.24	0.24	0.52	0.54	0.12	0.67	0.44	0.25
d, Delay for Lane Group [s/veh]	23.59	22.34	22.54	52.06	18.58	18.69	24.44	20.23	15.66	44.30	18.86	16.85
Lane Group LOS	C	C	C	D	B	B	C	C	B	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.08	6.93	6.40	5.40	2.96	2.78	5.66	7.12	1.13	5.11	5.40	2.59
50th-Percentile Queue Length [ft/ln]	26.93	173.23	160.12	135.08	74.06	69.48	141.44	178.05	28.14	127.87	134.91	64.82
95th-Percentile Queue Length [veh/ln]	1.94	11.25	10.56	9.22	5.33	5.00	9.56	11.50	2.03	8.82	9.21	4.67
95th-Percentile Queue Length [ft/ln]	48.48	281.16	263.88	230.38	133.31	125.07	238.96	287.47	50.66	220.60	230.16	116.67

Movement, Approach, & Intersection Results

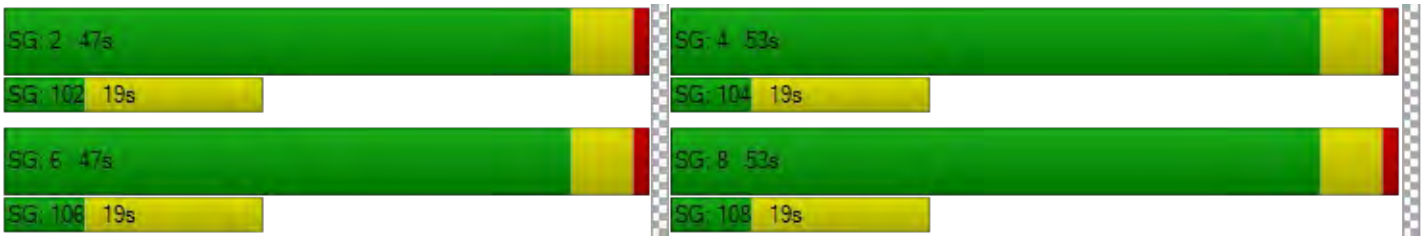
d_M, Delay for Movement [s/veh]	23.59	22.40	22.54	52.06	18.61	18.69	24.44	21.52	15.66	44.30	18.86	16.85
Movement LOS	C	C	C	D	B	B	C	C	B	D	B	B
d_A, Approach Delay [s/veh]	22.52			29.48			21.27			25.09		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.15											
Intersection LOS	C											
Intersection V/C	0.666											

Other Modes

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	40.50	40.50	40.50	40.50
l_p,int, Pedestrian LOS Score for Intersection	2.958	2.731	2.647	2.899
Crosswalk LOS	C	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	830	950	950
d_b, Bicycle Delay [s]	17.11	17.11	13.78	13.78
l_b,int, Bicycle LOS Score for Intersection	2.240	2.022	2.226	2.157
Bicycle LOS	B	B	B	B

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Victoria Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

Intersection Setup

Name										5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name										5th Street		
Base Volume Input [veh/h]	42	501	149	75	217	39	101	482	137	30	238	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	4	22	8	0	13	0	0	0	2	5	0	0
Site-Generated Trips [veh/h]	1	37	0	3	20	4	36	285	0	0	219	57
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	560	157	78	250	43	137	767	139	35	457	166
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	147	41	21	66	11	36	202	37	9	120	44
Total Analysis Volume [veh/h]	49	589	165	82	263	45	144	807	146	37	481	175
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	55
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	18.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	4	0	0	8	0	3	2	0	7	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.8	0.0	0.0	4.8	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	26	0	0	26	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.8	0.0	0.0	3.8	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		Yes			No			Yes			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	55	55	55	55	55	55	55	55
L, Total Lost Time per Cycle [s]	5.80	5.80	5.80	5.80	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.80	3.80	3.80	3.80	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	17	17	17	17	26	26	26	26
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.24	0.23	0.24	0.15	0.18	0.52	0.06	0.36
s, saturation flow rate [veh/h]	1806	1604	560	1677	790	1850	598	1815
c, Capacity [veh/h]	623	489	277	511	203	890	138	873
d1, Uniform Delay [s]	17.25	17.35	18.39	15.72	26.23	14.28	27.43	11.61
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.36	2.56	1.27	0.78	18.75	51.15	4.68	5.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.77	0.48	0.51	0.71	1.07	0.27	0.75
d, Delay for Lane Group [s/veh]	18.61	19.92	19.65	16.50	44.98	65.42	32.11	17.54
Lane Group LOS	B	B	B	B	D	F	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.52	4.12	1.57	2.47	2.84	21.33	0.64	6.65
50th-Percentile Queue Length [ft/ln]	113.11	103.08	39.13	61.71	71.11	533.17	15.96	166.18
95th-Percentile Queue Length [veh/ln]	8.01	7.42	2.82	4.44	5.12	30.40	1.15	10.88
95th-Percentile Queue Length [ft/ln]	200.33	185.55	70.43	111.08	128.00	760.06	28.73	271.89

Movement, Approach, & Intersection Results

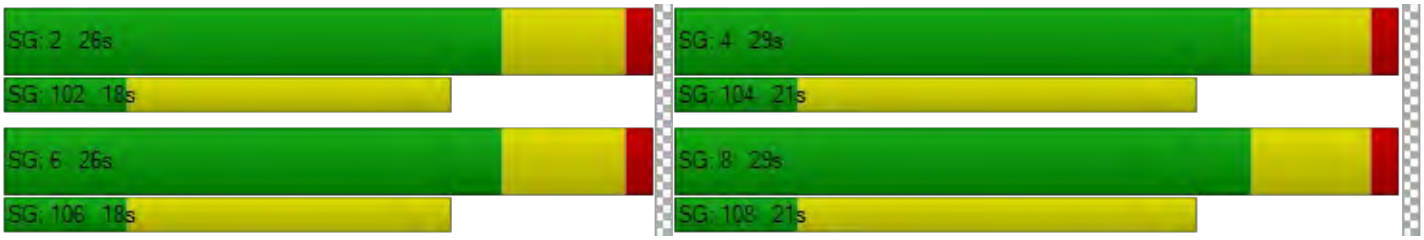
d_M, Delay for Movement [s/veh]	18.61	19.08	19.92	19.65	17.09	16.50	44.98	65.42	65.42	32.11	17.54	17.54
Movement LOS	B	B	B	B	B	B	D	E	E	C	B	B
d_A, Approach Delay [s/veh]	19.22			17.56			62.74			18.32		
Approach LOS	B			B			E			B		
d_I, Intersection Delay [s/veh]	34.80											
Intersection LOS	C											
Intersection V/C	0.752											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	19.24	19.24	19.24	19.24
l_p,int, Pedestrian LOS Score for Intersection	2.464	2.734	2.529	2.649
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	844	844	727	727
d_b, Bicycle Delay [s]	9.19	9.19	11.14	11.14
l_b,int, Bicycle LOS Score for Intersection	2.222	1.881	3.370	2.703
Bicycle LOS	B	A	C	B

Sequence

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 32: Central Avenue / 5th Street

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.579

Intersection Setup

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Central Avenue			Central Avenue			5th Street			5th Street		
Base Volume Input [veh/h]	2	88	124	51	33	16	24	723	7	7	345	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	8	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	114	0	0	40	279	0	0	225	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	88	124	165	33	16	64	1010	7	7	570	81
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	23	33	43	9	4	17	266	2	2	150	21
Total Analysis Volume [veh/h]	2	93	131	174	35	17	67	1063	7	7	600	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	33	0	14	31	0	10	33	0	10	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	15	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	0	15	10	25	6	51	51	1	47	47
g / C, Green / Cycle	0.00	0.17	0.12	0.28	0.06	0.57	0.57	0.01	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.00	0.15	0.10	0.03	0.04	0.28	0.28	0.00	0.17	0.05
s, saturation flow rate [veh/h]	1619	1541	1810	1796	1714	1900	1896	1714	3618	1615
c, Capacity [veh/h]	10	261	208	500	109	1081	1078	23	1877	838
d1, Uniform Delay [s]	44.52	36.35	38.98	24.13	41.08	11.65	11.65	43.97	12.49	10.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.13	8.08	8.48	0.09	5.56	1.62	1.63	7.12	0.45	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.86	0.84	0.10	0.62	0.50	0.50	0.30	0.32	0.10
d, Delay for Lane Group [s/veh]	54.65	44.42	47.46	24.23	46.64	13.27	13.28	51.09	12.94	11.24
Lane Group LOS	D	D	D	C	D	B	B	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	5.28	4.19	0.82	1.60	6.36	6.34	0.20	3.40	0.88
50th-Percentile Queue Length [ft/ln]	1.78	131.90	104.86	20.59	39.99	158.92	158.59	4.97	84.99	21.88
95th-Percentile Queue Length [veh/ln]	0.13	9.04	7.55	1.48	2.88	10.49	10.47	0.36	6.12	1.58
95th-Percentile Queue Length [ft/ln]	3.21	226.08	188.75	37.06	71.98	262.29	261.86	8.95	152.99	39.39

Movement, Approach, & Intersection Results

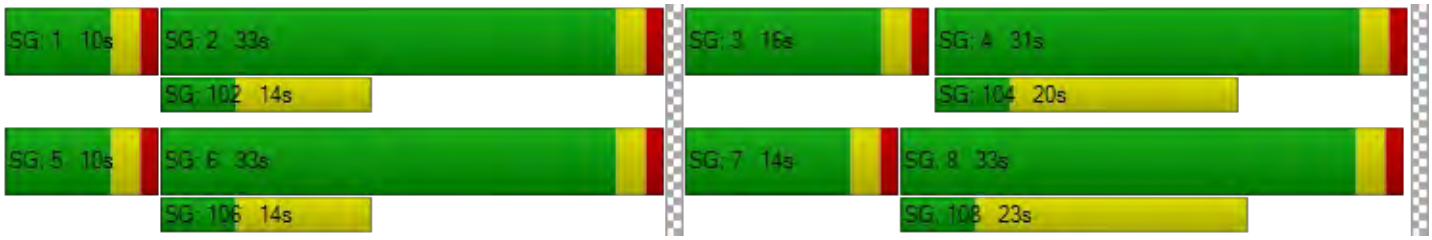
d_M, Delay for Movement [s/veh]	54.65	44.42	44.42	47.46	24.23	24.23	46.64	13.28	13.28	51.09	12.94	11.24
Movement LOS	D	D	D	D	C	C	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	44.51			42.12			15.24			13.11		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	20.16											
Intersection LOS	C											
Intersection V/C	0.579											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.031	2.095	2.644	2.789
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	622	667	667
d_b, Bicycle Delay [s]	20.00	21.36	20.00	20.00
l_b,int, Bicycle LOS Score for Intersection	1.933	1.933	2.498	2.131
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Palm Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	74.5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.017

Intersection Setup

Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name							5th Street					
Base Volume Input [veh/h]	95	638	534	201	280	40	95	794	67	190	267	146
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	4	17	30	0	8	0	0	0	2	14	0	0
Site-Generated Trips [veh/h]	2	16	1	2	16	2	10	402	38	83	157	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	101	671	565	203	304	42	105	1196	107	287	424	156
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	177	149	53	80	11	28	315	28	76	112	41
Total Analysis Volume [veh/h]	106	706	595	214	320	44	111	1259	113	302	446	164
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	36	0	14	35	0	16	35	0	15	34	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	0	0	27	0	0	26	0	0	26	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	8	33	33	11	36	36	8	32	32	12	36	36
g / C, Green / Cycle	0.08	0.33	0.33	0.11	0.36	0.36	0.08	0.32	0.32	0.12	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.37	0.12	0.09	0.03	0.06	0.35	0.07	0.18	0.12	0.10
s, saturation flow rate [veh/h]	1714	3618	1615	1714	3618	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	134	1194	533	189	1309	584	140	1158	517	206	1296	579
d1, Uniform Delay [s]	45.29	27.89	33.50	44.50	22.34	20.93	45.09	34.00	24.86	44.00	23.48	22.91
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.13	0.11	0.16	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.97	2.16	75.01	74.77	0.44	0.25	9.65	43.89	0.21	219.15	0.16	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.59	1.12	1.13	0.24	0.08	0.79	1.09	0.22	1.47	0.34	0.28
d, Delay for Lane Group [s/veh]	55.26	30.04	108.51	119.27	22.78	21.18	54.74	77.89	25.07	263.15	23.64	23.18
Lane Group LOS	E	C	F	F	C	C	D	F	C	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.94	7.26	23.61	8.54	2.68	0.71	3.06	20.68	1.97	17.56	3.82	2.77
50th-Percentile Queue Length [ft/ln]	73.50	181.38	590.37	213.59	67.08	17.78	76.56	517.01	49.37	439.07	95.60	69.17
95th-Percentile Queue Length [veh/ln]	5.29	11.67	33.88	14.00	4.83	1.28	5.51	29.68	3.55	28.02	6.88	4.98
95th-Percentile Queue Length [ft/ln]	132.29	291.82	847.08	349.89	120.75	32.01	137.81	741.99	88.87	700.46	172.08	124.50

Movement, Approach, & Intersection Results

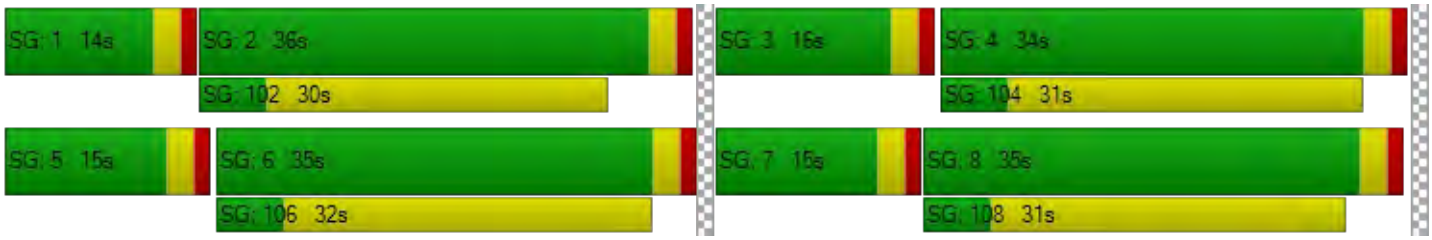
d_M, Delay for Movement [s/veh]	55.26	30.04	108.51	119.27	22.78	21.18	54.74	77.89	25.07	263.15	23.64	23.18
Movement LOS	E	C	F	F	C	C	D	F	C	F	C	C
d_A, Approach Delay [s/veh]	65.13			58.38			72.13			102.87		
Approach LOS	E			E			E			F		
d_I, Intersection Delay [s/veh]	74.47											
Intersection LOS	E											
Intersection V/C	1.017											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.899	2.713	2.985	2.944
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	660	640	640	620
d_b, Bicycle Delay [s]	22.45	23.12	23.12	23.81
l_b,int, Bicycle LOS Score for Intersection	2.720	2.036	2.783	2.312
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 34: Church Ave / 5th St

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.816

Intersection Setup

Name	Church Ave		5th Street		5th Street	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Church Ave		5th Street		5th Street	
Base Volume Input [veh/h]	198	30	58	1704	544	253
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	129	1	7	10	18	6
Site-Generated Trips [veh/h]	0	0	0	436	167	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	327	31	65	2150	729	259
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	8	17	566	192	68
Total Analysis Volume [veh/h]	344	33	68	2263	767	273
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	23	0	35	67	32	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	19	19	6	65	56	56
g / C, Green / Cycle	0.21	0.21	0.06	0.72	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.19	0.02	0.04	0.63	0.27	0.30
s, saturation flow rate [veh/h]	1810	1615	1810	3618	1900	1739
c, Capacity [veh/h]	379	338	117	2619	1189	1088
d1, Uniform Delay [s]	34.72	28.71	40.90	9.16	8.67	8.99
k, delay calibration	0.15	0.11	0.11	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.97	0.12	4.49	4.10	1.17	1.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.10	0.58	0.86	0.44	0.48
d, Delay for Lane Group [s/veh]	45.70	28.83	45.40	13.26	9.85	10.49
Lane Group LOS	D	C	D	B	A	B
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.32	0.58	1.60	13.64	5.01	5.24
50th-Percentile Queue Length [ft/ln]	208.12	14.51	39.89	340.89	125.22	131.10
95th-Percentile Queue Length [veh/ln]	13.06	1.04	2.87	19.69	8.68	9.00
95th-Percentile Queue Length [ft/ln]	326.41	26.11	71.80	492.29	216.98	224.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.70	28.83	45.40	13.26	10.05	10.49
Movement LOS	D	C	D	B	B	B
d_A, Approach Delay [s/veh]	44.22		14.20		10.17	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	16.10					
Intersection LOS	B					
Intersection V/C	0.816					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.175	2.912	3.022
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	45.00	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	4.132	6.055	4.990
Bicycle LOS	D	F	E

Sequence

Ring 1	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 35: SR-210 EB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	70.9
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.084

Intersection Setup

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Base Volume Input [veh/h]	0	0	0	559	9	170	0	1338	595	389	631	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	13	0	68	79	0	12	0
Site-Generated Trips [veh/h]	0	0	0	0	0	76	0	329	284	0	91	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	559	9	259	0	1735	958	389	734	0
Peak Hour Factor	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	147	2	68	0	457	252	102	193	0
Total Analysis Volume [veh/h]	0	0	0	588	9	273	0	1826	1008	409	773	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	0	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	31	0	0	55	0	14	69	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		C	R	C	R	L	C
C, Cycle Length [s]		100	100	100	100	100	100
L, Total Lost Time per Cycle [s]		3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]		28	28	52	52	11	66
g / C, Green / Cycle		0.28	0.28	0.52	0.52	0.11	0.66
(v / s)_i Volume / Saturation Flow Rate		0.33	0.17	0.50	0.62	0.13	0.21
s, saturation flow rate [veh/h]		1811	1615	3618	1615	3144	3618
c, Capacity [veh/h]		507	452	1881	840	346	2388
d1, Uniform Delay [s]		36.00	31.19	23.26	24.00	44.50	7.35
k, delay calibration		0.50	0.14	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		98.87	1.72	14.89	101.53	88.88	0.36
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		1.18	0.60	0.97	1.20	1.18	0.32
d, Delay for Lane Group [s/veh]		134.87	32.92	38.15	125.53	133.38	7.71
Lane Group LOS		F	C	D	F	F	A
Critical Lane Group		Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]		25.98	5.84	23.15	41.97	8.51	3.34
50th-Percentile Queue Length [ft/ln]		649.47	145.99	578.81	1049.16	212.82	83.60
95th-Percentile Queue Length [veh/ln]		37.78	9.80	31.04	60.13	14.15	6.02
95th-Percentile Queue Length [ft/ln]		944.57	245.07	776.09	1503.32	353.67	150.48

Movement, Approach, & Intersection Results

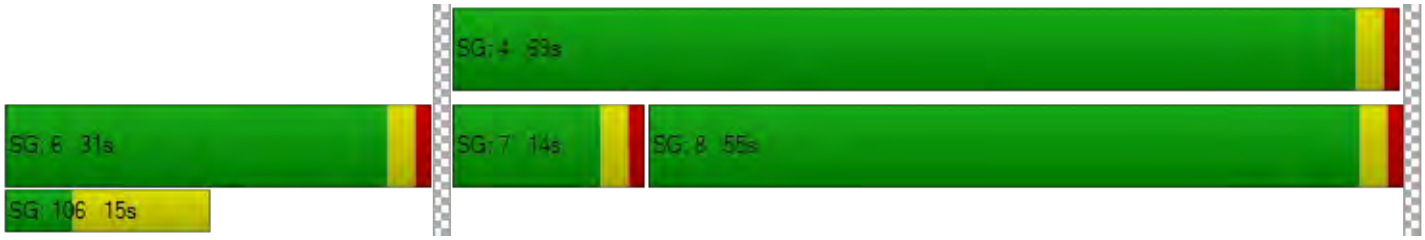
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	134.87	134.87	32.92	0.00	38.15	125.53	133.38	7.71	0.00
Movement LOS				F	F	C		D	F	F	A	
d_A, Approach Delay [s/veh]	0.00			102.88			69.23			51.20		
Approach LOS	A			F			E			D		
d_I, Intersection Delay [s/veh]	70.86											
Intersection LOS	E											
Intersection V/C	1.084											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	3.063	3.101
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	560	1040	1320
d_b, Bicycle Delay [s]	50.00	25.92	11.52	5.78
l_b,int, Bicycle LOS Score for Intersection	4.132	2.995	3.898	2.535
Bicycle LOS	D	C	D	B

Sequence

Ring 1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: SR-210 WB Ramps / 5th Street

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.845

Intersection Setup

Name							5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No						No			No	
Crosswalk		No			No			Yes			Yes	

Volumes

Name							5th Street			5th Street		
Base Volume Input [veh/h]	240	0	610	0	0	0	251	1628	0	0	802	398
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	11	0	0	0	0	0	63	5	0	0	1	0
Site-Generated Trips [veh/h]	75	0	0	0	0	0	278	51	0	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	326	0	610	0	0	0	592	1684	0	0	819	398
Peak Hour Factor	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000	0.9530	0.9530	1.0000	1.0000	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	0	160	0	0	0	155	442	0	0	215	104
Total Analysis Volume [veh/h]	342	0	640	0	0	0	621	1767	0	0	859	418
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	0	0	30	30	0	0	30	0
Amber [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	0	0	39	71	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	24	0	0	15	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Minimum Recall		No					No	No			No	
Maximum Recall		No					No	No			No	
Pedestrian Recall		No					No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		L	C	C	R
C, Cycle Length [s]	100	100	100		100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00		3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00		1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	27	27	27		36	67	28	28
g / C, Green / Cycle	0.27	0.27	0.27		0.36	0.67	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.22		0.36	0.49	0.17	0.26
s, saturation flow rate [veh/h]	1810	1810	2859		1714	3618	5176	1615
c, Capacity [veh/h]	485	485	766		617	2432	1461	456
d1, Uniform Delay [s]	29.60	29.60	34.54		32.00	10.50	30.89	34.76
k, delay calibration	0.50	0.50	0.50		0.48	0.33	0.11	0.37
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.01	2.01	10.50		37.17	1.30	0.38	20.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.35	0.84		1.01	0.73	0.59	0.92
d, Delay for Lane Group [s/veh]	31.62	31.62	45.04		69.17	11.80	31.27	55.56
Lane Group LOS	C	C	D		F	B	C	E
Critical Lane Group	No	No	Yes		Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.56	3.56	8.30		20.73	11.23	5.91	12.27
50th-Percentile Queue Length [ft/ln]	89.06	89.06	207.57		518.36	280.66	147.87	306.63
95th-Percentile Queue Length [veh/ln]	6.41	6.41	13.03		28.33	16.72	9.90	18.01
95th-Percentile Queue Length [ft/ln]	160.31	160.31	325.71		708.16	418.03	247.59	450.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.62	31.62	45.04	0.00	0.00	0.00	69.17	11.80	0.00	0.00	31.27	55.56
Movement LOS	C	C	D				F	B			C	E
d_A, Approach Delay [s/veh]	40.36			0.00			26.72			39.22		
Approach LOS	D			A			C			D		
d_I, Intersection Delay [s/veh]	33.04											
Intersection LOS	C											
Intersection V/C	0.845											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	3.100	3.058
Crosswalk LOS	F	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	520	0	1360	580
d_b, Bicycle Delay [s]	27.38	50.00	5.12	25.21
l_b,int, Bicycle LOS Score for Intersection	3.180	4.132	3.530	2.262
Bicycle LOS	C	D	D	B

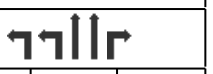
Sequence

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 37: Tippecanoe Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	44.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.831

Intersection Setup

Name				Tippecanoe Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Tippecanoe Avenue								
Base Volume Input [veh/h]	119	643	520	42	338	39	70	846	108	257	330	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	9	0	0	0	0	3	0	15	5	0
Site-Generated Trips [veh/h]	0	15	65	10	75	0	0	6	0	170	47	52
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	658	594	52	413	39	70	855	108	442	382	106
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	173	156	14	109	10	18	225	28	116	101	28
Total Analysis Volume [veh/h]	125	693	625	55	435	41	74	900	114	465	402	112
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	40	40	10	38	0	15	33	0	17	35	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	9	39	39	6	36	36	6	29	29	14	37	37
g / C, Green / Cycle	0.09	0.39	0.39	0.06	0.36	0.36	0.06	0.29	0.29	0.14	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.07	0.19	0.39	0.03	0.13	0.13	0.04	0.27	0.27	0.14	0.11	0.07
s, saturation flow rate [veh/h]	1714	3618	1615	1714	1900	1843	1714	1900	1826	3329	3618	1615
c, Capacity [veh/h]	152	1425	636	95	685	664	108	553	531	466	1331	594
d1, Uniform Delay [s]	44.78	22.72	29.97	46.10	23.43	23.45	45.89	34.54	34.55	42.98	22.47	21.46
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.40	0.40	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.36	1.19	31.68	5.51	1.42	1.48	7.50	21.77	22.48	18.84	0.13	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.49	0.98	0.58	0.35	0.35	0.69	0.94	0.94	1.00	0.30	0.19
d, Delay for Lane Group [s/veh]	55.13	23.91	61.65	51.62	24.85	24.93	53.39	56.31	57.03	61.82	22.59	21.61
Lane Group LOS	E	C	E	D	C	C	D	E	E	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.46	6.21	19.82	1.47	4.38	4.28	2.02	15.28	14.80	6.90	3.34	1.79
50th-Percentile Queue Length [ft/ln]	86.55	155.32	495.39	36.82	109.40	107.10	50.42	382.08	370.03	172.40	83.39	44.70
95th-Percentile Queue Length [veh/ln]	6.23	10.30	27.12	2.65	7.81	7.68	3.63	21.69	21.11	11.20	6.00	3.22
95th-Percentile Queue Length [ft/ln]	155.79	257.51	677.91	66.28	195.16	191.96	90.75	542.37	527.77	280.07	150.10	80.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.13	23.91	61.65	51.62	24.89	24.93	53.39	56.62	57.03	61.82	22.59	21.61
Movement LOS	E	C	E	D	C	C	D	E	E	E	C	C
d_A, Approach Delay [s/veh]	42.96			27.66			56.44			41.12		
Approach LOS	D			C			E			D		
d_I, Intersection Delay [s/veh]	44.13											
Intersection LOS	D											
Intersection V/C	0.831											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.859	2.581	2.629	3.044
Crosswalk LOS	C	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	740	700	600	640
d_b, Bicycle Delay [s]	19.85	21.13	24.50	23.12
l_b,int, Bicycle LOS Score for Intersection	2.750	1.998	2.457	2.367
Bicycle LOS	C	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 38: Del Rosa Dr / 3rd St

Control Type:	Signalized	Delay (sec / veh):	59.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.762

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	2	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	207	811	44	131	69	116	1394	7	351	569	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	11	0	0	20	0
Site-Generated Trips [veh/h]	0	0	0	2	0	17	18	98	0	0	225	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	207	811	46	131	86	134	1503	7	351	814	35
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	54	213	12	34	23	35	396	2	92	214	9
Total Analysis Volume [veh/h]	13	218	854	48	138	91	141	1582	7	369	857	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	25	25	13	28	0	20	47	0	15	42	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	2	27	42	5	30	30	10	44	44	12	46	46
g / C, Green / Cycle	0.02	0.27	0.42	0.05	0.30	0.30	0.10	0.44	0.44	0.12	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.01	0.06	0.53	0.03	0.06	0.07	0.08	0.44	0.00	0.12	0.24	0.24
s, saturation flow rate [veh/h]	1714	3618	1615	1714	1900	1659	1714	3618	1615	3144	1900	1872
c, Capacity [veh/h]	39	966	673	91	565	493	174	1592	711	377	871	859
d1, Uniform Delay [s]	48.12	28.59	29.15	46.13	26.33	26.46	43.98	27.87	15.75	43.87	19.21	19.22
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.91	0.54	132.26	4.67	0.84	1.05	8.68	9.17	0.01	16.92	0.50	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.23	1.27	0.53	0.21	0.22	0.81	0.99	0.01	0.98	0.52	0.52
d, Delay for Lane Group [s/veh]	53.03	29.13	161.41	50.80	27.18	27.51	52.66	37.03	15.75	60.78	19.71	19.73
Lane Group LOS	D	C	F	D	C	C	D	D	B	E	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.37	2.10	40.09	1.28	2.23	2.11	3.81	19.84	0.09	5.39	7.28	7.19
50th-Percentile Queue Length [ft/ln]	9.28	52.44	1002.19	31.89	55.77	52.81	95.35	495.98	2.25	134.83	181.92	179.65
95th-Percentile Queue Length [veh/ln]	0.67	3.78	58.90	2.30	4.02	3.80	6.87	27.14	0.16	9.20	11.70	11.58
95th-Percentile Queue Length [ft/ln]	16.71	94.40	1472.56	57.40	100.38	95.07	171.63	678.60	4.06	230.05	292.52	289.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.03	29.13	161.41	50.80	27.22	27.51	52.66	37.03	15.75	60.78	19.72	19.73
Movement LOS	D	C	F	D	C	C	D	D	B	E	B	B
d_A, Approach Delay [s/veh]	133.54			31.40			38.22			31.72		
Approach LOS	F			C			D			C		
d_I, Intersection Delay [s/veh]	59.65											
Intersection LOS	E											
Intersection V/C	0.762											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.719	2.438	2.897	3.122
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	440	500	880	780
d_b, Bicycle Delay [s]	30.42	28.13	15.68	18.61
l_b,int, Bicycle LOS Score for Intersection	2.455	1.788	2.987	2.602
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Intersection Level Of Service Report
Intersection 39: Sterling Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	59	335	653	1542	585	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	9	0	0	11	20	16
Site-Generated Trips [veh/h]	58	112	21	89	97	61
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	126	447	674	1642	702	117
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	118	177	432	185	31
Total Analysis Volume [veh/h]	133	471	709	1728	739	123
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	1	0	3	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	7	0	7	7	7	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	18	0	64	82	18	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	15	15	44	79	32	32
g / C, Green / Cycle	0.15	0.15	0.44	0.79	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.07	0.16	0.41	0.48	0.23	0.24
s, saturation flow rate [veh/h]	1810	2859	1714	3618	1900	1809
c, Capacity [veh/h]	271	429	750	2858	613	584
d1, Uniform Delay [s]	38.99	42.50	26.99	4.22	29.67	30.12
k, delay calibration	0.11	0.11	0.24	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	52.80	13.02	0.96	6.63	8.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	1.10	0.95	0.60	0.70	0.74
d, Delay for Lane Group [s/veh]	40.36	95.30	40.01	5.18	36.30	38.26
Lane Group LOS	D	F	D	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.08	8.37	18.14	5.26	10.00	10.33
50th-Percentile Queue Length [ft/ln]	76.96	209.30	453.45	131.46	250.03	258.17
95th-Percentile Queue Length [veh/ln]	5.54	13.66	25.12	9.02	15.19	15.60
95th-Percentile Queue Length [ft/ln]	138.53	341.45	628.07	225.48	379.70	389.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.36	95.30	40.01	5.18	37.12	38.26
Movement LOS	D	F	D	A	D	D
d_A, Approach Delay [s/veh]	83.20		15.31		37.28	
Approach LOS	F		B		D	
d_I, Intersection Delay [s/veh]	30.67					
Intersection LOS	C					
Intersection V/C	0.817					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.586	3.018	2.801
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	0	0
d_b, Bicycle Delay [s]	50.00	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	4.132	6.143	4.844
Bicycle LOS	D	F	E

Sequence

Ring 1	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 40: Victoria Ave / 3rd St

Control Type:	Signalized	Delay (sec / veh):	31.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	39	42	166	21	187	509	1125	7	35	300	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	32	13	6	0	18	2	21	27	0	8	10	0
Site-Generated Trips [veh/h]	0	0	0	19	0	1	12	161	0	0	137	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	52	48	185	39	190	542	1313	7	43	447	182
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	14	13	49	10	50	143	346	2	11	118	48
Total Analysis Volume [veh/h]	53	55	51	195	41	200	571	1382	7	45	471	192
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	32	0	16	37	0	19	42	0	10	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	24	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	5	7	7	13	15	15	35	63	63	5	33	33
g / C, Green / Cycle	0.05	0.07	0.07	0.13	0.15	0.15	0.35	0.63	0.63	0.05	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.03	0.03	0.03	0.11	0.02	0.12	0.33	0.37	0.37	0.03	0.18	0.18
s, saturation flow rate [veh/h]	1714	1900	1618	1714	1900	1615	1714	1900	1897	1714	1900	1716
c, Capacity [veh/h]	92	134	114	223	278	236	600	1197	1194	86	626	565
d1, Uniform Delay [s]	46.18	44.49	44.64	42.70	37.24	41.59	31.65	10.80	10.81	46.35	27.51	27.55
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.39	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.49	1.98	2.81	10.32	0.24	8.11	22.31	2.06	2.07	4.92	3.52	3.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.41	0.45	0.88	0.15	0.85	0.95	0.58	0.58	0.53	0.55	0.56
d, Delay for Lane Group [s/veh]	51.67	46.48	47.46	53.02	37.48	49.70	53.96	12.86	12.88	51.27	31.03	31.50
Lane Group LOS	D	D	D	D	D	D	D	B	B	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.42	1.36	1.31	5.32	0.89	5.29	16.70	8.78	8.80	1.20	7.30	6.72
50th-Percentile Queue Length [ft/ln]	35.51	33.93	32.82	133.04	22.29	132.17	417.44	219.60	219.88	30.08	182.57	167.92
95th-Percentile Queue Length [veh/ln]	2.56	2.44	2.36	9.10	1.60	9.06	23.40	13.64	13.66	2.17	11.73	10.97
95th-Percentile Queue Length [ft/ln]	63.92	61.07	59.08	227.62	40.12	226.44	584.98	341.11	341.47	54.15	293.37	274.18

Movement, Approach, & Intersection Results

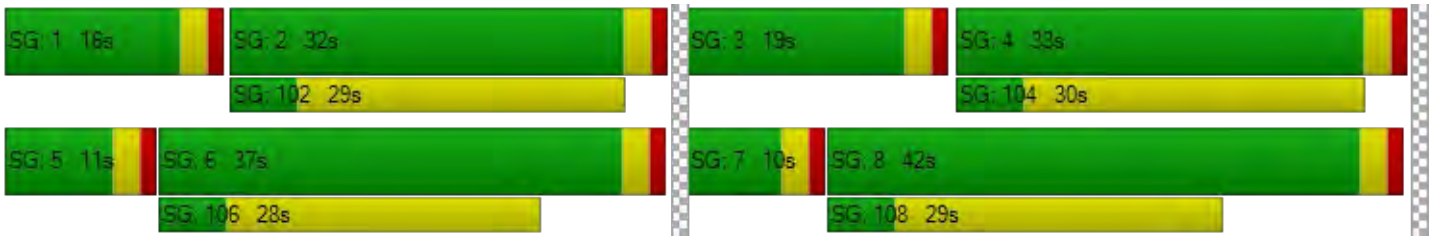
d_M, Delay for Movement [s/veh]	51.67	46.49	47.46	53.02	37.48	49.70	53.96	12.87	12.88	51.27	31.15	31.50
Movement LOS	D	D	D	D	D	D	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	48.53			50.04			24.84			32.53		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	31.03											
Intersection LOS	C											
Intersection V/C	0.672											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.356	2.551	2.830	2.762
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	680	780	600
d_b, Bicycle Delay [s]	25.21	21.78	18.61	24.50
l_b,int, Bicycle LOS Score for Intersection	1.691	1.919	3.177	2.144
Bicycle LOS	A	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 41: Central Ave / 3rd St

Control Type:	Two-way stop	Delay (sec / veh):	203.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name				Central Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name				Central Avenue								
Base Volume Input [veh/h]	1	3	0	22	0	30	191	1130	0	0	464	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	1	2	31	0	0	17	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	186	0	0	147	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	3	0	22	0	31	193	1347	0	0	628	26
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	6	0	8	51	354	0	0	165	7
Total Analysis Volume [veh/h]	1	3	0	23	0	33	203	1418	0	0	661	27
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.13	0.00	0.59	0.00	0.05	0.22	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	203.34	199.01	47.24	152.70	0.00	65.57	10.05	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	F	E	F		F	B	A			A	A
95th-Percentile Queue Length [veh/ln]	0.53	0.53	0.53	3.03	0.00	3.03	0.85	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.36	13.36	13.36	75.70	0.00	75.70	21.17	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	200.10			101.36			1.26			0.00		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	3.59											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 42: Palm Ave_Alabama St / 3rd St

Control Type:	Signalized	Delay (sec / veh):	76.8
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.754

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	434	829	95	80	391	84	419	362	0	77	27	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	32	0	0	13	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	3	0	2	43	92	16	168	8	0	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	447	864	95	82	447	176	435	530	8	77	34	100
Peak Hour Factor	0.9360	0.9500	0.9500	0.9500	0.9500	0.9360	0.9360	0.9360	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	227	25	22	118	47	116	142	2	20	9	26
Total Analysis Volume [veh/h]	478	909	100	86	471	188	465	566	8	81	34	105
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	38	0	16	31	0	16	36	0	10	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	20	43	43	7	30	30	13	32	6	25
g / C, Green / Cycle	0.20	0.43	0.43	0.07	0.30	0.30	0.13	0.32	0.06	0.25
(v / s)_i Volume / Saturation Flow Rate	0.28	0.27	0.27	0.05	0.13	0.12	0.16	0.30	0.05	0.08
s, saturation flow rate [veh/h]	1714	1900	1835	1619	3618	1615	2959	1900	1714	1677
c, Capacity [veh/h]	343	825	796	110	1092	488	385	599	108	416
d1, Uniform Delay [s]	40.00	21.91	21.98	45.88	28.02	27.58	43.50	33.39	46.09	30.82
k, delay calibration	0.42	0.50	0.50	0.11	0.50	0.50	0.11	0.39	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	191.84	3.48	3.69	11.43	1.24	2.30	99.46	21.48	10.03	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.39	0.62	0.63	0.78	0.43	0.39	1.21	0.94	0.75	0.33
d, Delay for Lane Group [s/veh]	231.84	25.39	25.68	57.32	29.26	29.88	142.96	54.87	56.12	31.29
Lane Group LOS	F	C	C	E	C	C	F	D	E	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	26.56	9.75	9.58	2.44	4.66	3.82	10.02	16.58	2.27	2.78
50th-Percentile Queue Length [ft/ln]	663.95	243.75	239.43	61.02	116.44	95.58	250.49	414.55	56.71	69.57
95th-Percentile Queue Length [veh/ln]	40.76	14.87	14.65	4.39	8.20	6.88	16.39	23.26	4.08	5.01
95th-Percentile Queue Length [ft/ln]	1019.09	371.77	366.31	109.83	204.92	172.04	409.73	581.51	102.08	125.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	231.84	25.52	25.68	57.32	29.26	29.88	142.96	54.87	0.00	56.12	31.29	31.29
Movement LOS	F	C	C	E	C	C	F	D		E	C	C
d_A, Approach Delay [s/veh]	91.85			32.66			94.60			40.43		
Approach LOS	F			C			F			D		
d_I, Intersection Delay [s/veh]	76.75											
Intersection LOS	E											
Intersection V/C	0.754											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.704	2.910	2.644	2.263
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	560	660	540
d_b, Bicycle Delay [s]	21.13	25.92	22.45	26.65
l_b,int, Bicycle LOS Score for Intersection	2.786	2.174	3.261	1.923
Bicycle LOS	C	B	C	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 43: Tippecanoe Ave / Rialto Ave

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	126	1184	0	0	773	64	140	0	78	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	9	0	0	15	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	14	14	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	126	1259	0	0	1019	78	154	0	78	0	0	0
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	331	0	0	268	21	41	0	21	0	0	0
Total Analysis Volume [veh/h]	133	1325	0	0	1073	82	162	0	82	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	0	8	0	0	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	7	0	7	0	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	30	0	0	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Split [s]	23	67	0	10	54	0	23	0	23	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0
Minimum Recall	No	No		No	No		No		No			
Maximum Recall	No	No		No	No		No		No			
Pedestrian Recall	No	No		No	No		No		No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	L	R	
C, Cycle Length [s]	100	100	100	100	100	100	100	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	10	80	0	71	71	11	11	
g / C, Green / Cycle	0.10	0.80	0.00	0.71	0.71	0.11	0.11	
(v / s)_i Volume / Saturation Flow Rate	0.08	0.37	0.00	0.31	0.31	0.09	0.05	
s, saturation flow rate [veh/h]	1714	3618	1714	1900	1853	1810	1615	
c, Capacity [veh/h]	165	2892	2	1338	1305	198	177	
d1, Uniform Delay [s]	44.26	3.17	0.00	6.32	6.32	43.56	41.78	
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	8.81	0.52	0.00	1.04	1.07	8.06	1.89	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.80	0.46	0.00	0.44	0.44	0.82	0.46	
d, Delay for Lane Group [s/veh]	53.07	3.70	0.00	7.36	7.39	51.62	43.67	
Lane Group LOS	D	A	A	A	A	D	D	
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	
50th-Percentile Queue Length [veh/ln]	3.61	2.99	0.00	4.87	4.76	4.33	1.98	
50th-Percentile Queue Length [ft/ln]	90.24	74.73	0.00	121.63	119.01	108.35	49.55	
95th-Percentile Queue Length [veh/ln]	6.50	5.38	0.00	8.48	8.34	7.75	3.57	
95th-Percentile Queue Length [ft/ln]	162.44	134.51	0.00	212.07	208.47	193.71	89.18	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.07	3.70	0.00	0.00	7.37	7.39	51.62	0.00	43.67	0.00	0.00	0.00
Movement LOS	D	A		A	A	A	D		D			
d_A, Approach Delay [s/veh]	8.20			7.37			48.95			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	11.35											
Intersection LOS	B											
Intersection V/C	0.475											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	0.00	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	2.884	0.000	2.096	1.430
Crosswalk LOS	C	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1280	1020	0	0
d_b, Bicycle Delay [s]	6.48	12.01	50.00	50.00
l_b,int, Bicycle LOS Score for Intersection	2.762	2.512	4.132	4.132
Bicycle LOS	C	B	D	D

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 44: Tippecanoe Ave / Mill St

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	245	1498	0	2	1213	291	504	8	453	25	33	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	4	0	0	7	7	4	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	245	1568	0	2	1451	298	508	8	453	25	33	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	413	0	1	382	78	134	2	119	7	9	1
Total Analysis Volume [veh/h]	258	1651	0	2	1527	314	535	8	477	26	35	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	7	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	45	55	0	10	20	20	11	25	0	10	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No	No	Yes	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	17	59	59	0	42	42	32	32	23	32	21	21
g / C, Green / Cycle	0.17	0.59	0.59	0.00	0.42	0.42	0.32	0.32	0.23	0.32	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.15	0.30	0.30	0.00	0.42	0.19	0.20	0.27	0.22	0.03	0.01	0.00
s, saturation flow rate [veh/h]	1714	3618	1900	1714	3618	1615	1485	1340	1615	925	3618	1615
c, Capacity [veh/h]	296	2123	1115	7	1514	676	568	523	375	156	755	337
d1, Uniform Delay [s]	40.27	12.17	12.17	49.63	29.08	20.99	28.58	30.59	37.98	32.13	31.61	31.36
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.50	0.28	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.80	0.88	1.67	18.59	25.30	2.29	3.46	7.30	26.91	0.50	0.03	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.51	0.51	0.27	1.01	0.46	0.53	0.69	0.96	0.17	0.05	0.01
d, Delay for Lane Group [s/veh]	48.07	13.05	13.84	68.22	54.37	23.28	32.04	37.88	64.89	32.63	31.64	31.37
Lane Group LOS	D	B	B	E	F	C	C	D	E	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.75	6.90	7.49	0.09	22.60	5.61	6.34	6.90	11.36	0.51	0.34	0.06
50th-Percentile Queue Length [ft/ln]	168.67	172.46	187.26	2.19	564.92	140.13	158.38	172.47	284.10	12.83	8.49	1.46
95th-Percentile Queue Length [veh/ln]	11.01	11.21	11.98	0.16	30.59	9.49	10.46	11.21	16.89	0.92	0.61	0.10
95th-Percentile Queue Length [ft/ln]	275.16	280.15	299.47	3.95	764.80	237.20	261.57	280.16	422.31	23.09	15.29	2.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.07	13.32	13.84	68.22	54.37	23.28	34.43	37.88	57.13	32.63	31.64	31.37
Movement LOS	D	B	B	E	F	C	C	D	E	C	C	C
d_A, Approach Delay [s/veh]	18.02			49.09			45.73			32.03		
Approach LOS	B			D			D			C		
d_I, Intersection Delay [s/veh]	35.89											
Intersection LOS	D											
Intersection V/C	0.818											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.186	3.832	2.624	2.321
Crosswalk LOS	C	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1040	340	640	420
d_b, Bicycle Delay [s]	11.52	34.45	23.12	31.21
l_b,int, Bicycle LOS Score for Intersection	2.610	3.080	3.243	1.612
Bicycle LOS	B	C	C	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Intersection Level Of Service Report
Intersection 45: Tippecanoe Ave / Central Ave

Control Type:	Signalized	Delay (sec / veh):	25.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	1	2	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	106	1504	100	237	1441	154	139	192	112	96	174	258
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	1570	100	237	1679	154	139	192	112	96	174	258
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	413	26	62	442	41	37	51	29	25	46	68
Total Analysis Volume [veh/h]	112	1653	105	249	1767	162	146	202	118	101	183	272
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	5	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2			6			8			4
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	10	23	23	12	25	25	12	44	44	21	53	53
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	10	10	0	10	10	0	10	10	0	10	10
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	7	51	51	9	53	53	9	21	21	7	19	19
g / C, Green / Cycle	0.07	0.51	0.51	0.09	0.53	0.53	0.09	0.21	0.21	0.07	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.04	0.32	0.07	0.08	0.34	0.10	0.09	0.06	0.07	0.06	0.05	0.17
s, saturation flow rate [veh/h]	3144	5176	1615	3144	5176	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	210	2611	815	283	2730	852	154	760	339	129	707	316
d1, Uniform Delay [s]	45.14	18.04	13.13	44.97	16.95	12.41	45.26	33.05	33.66	45.41	34.08	38.91
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.08	1.18	0.33	8.68	1.20	0.50	22.84	0.19	0.61	9.72	0.19	6.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.63	0.13	0.88	0.65	0.19	0.95	0.27	0.35	0.78	0.26	0.86
d, Delay for Lane Group [s/veh]	47.22	19.22	13.46	53.64	18.15	12.90	68.10	33.23	34.27	55.12	34.27	45.79
Lane Group LOS	D	B	B	D	B	B	E	C	C	E	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.40	9.08	1.29	3.37	9.44	1.96	4.55	2.06	2.48	2.80	1.90	6.98
50th-Percentile Queue Length [ft/ln]	34.96	226.95	32.34	84.22	236.07	48.93	113.81	51.47	62.10	69.94	47.41	174.41
95th-Percentile Queue Length [veh/ln]	2.52	14.02	2.33	6.06	14.48	3.52	8.05	3.71	4.47	5.04	3.41	11.31
95th-Percentile Queue Length [ft/ln]	62.93	350.48	58.21	151.60	362.06	88.08	201.29	92.64	111.79	125.90	85.34	282.70

Movement, Approach, & Intersection Results

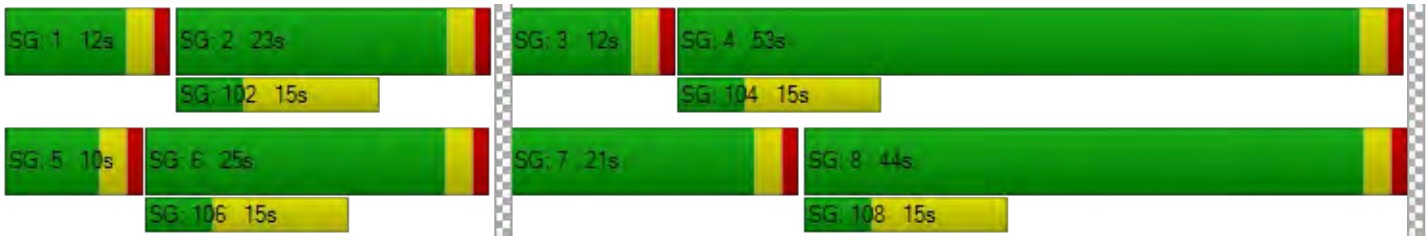
d_M, Delay for Movement [s/veh]	47.22	19.22	13.46	53.64	18.15	12.90	68.10	33.23	34.27	55.12	34.27	45.79
Movement LOS	D	B	B	D	B	B	E	C	C	E	C	D
d_A, Approach Delay [s/veh]	20.58			21.82			44.42			43.70		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	25.84											
Intersection LOS	C											
Intersection V/C	0.652											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.274	3.316	2.609	2.640
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	440	820	1000
d_b, Bicycle Delay [s]	32.00	30.42	17.41	12.50
l_b,int, Bicycle LOS Score for Intersection	2.588	2.758	1.944	2.018
Bicycle LOS	B	C	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 46: Tippecanoe Ave / Orange Show Rd_San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	72.7
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.936

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	2	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	129	1176	164	507	1110	63	219	699	145	237	535	362
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	1242	164	507	1348	63	219	699	145	237	535	362
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	327	43	133	355	17	58	184	38	62	141	95
Total Analysis Volume [veh/h]	136	1307	173	534	1419	66	231	736	153	249	563	381
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	38	0	19	45	0	15	29	0	14	28	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
g_i, Effective Green Time [s]	9	35	35	16	42	42	40	26	26	40	25	25
g / C, Green / Cycle	0.09	0.35	0.35	0.16	0.42	0.42	0.40	0.26	0.26	0.40	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.08	0.39	0.40	0.17	0.39	0.40	0.24	0.24	0.24	0.26	0.27	0.27
s, saturation flow rate [veh/h]	1714	1900	1824	3144	1900	1871	953	1900	1788	960	1900	1648
c, Capacity [veh/h]	154	669	642	503	802	789	336	490	462	342	480	417
d1, Uniform Delay [s]	44.97	32.41	32.41	42.00	27.43	27.71	24.58	36.25	36.27	24.77	37.36	37.36
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.33	0.33	0.33	0.37	0.39	0.39
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.70	72.58	80.69	37.51	18.22	20.50	7.38	20.02	21.12	9.66	49.64	54.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	1.12	1.14	1.06	0.93	0.94	0.69	0.93	0.93	0.73	1.05	1.06
d, Delay for Lane Group [s/veh]	59.67	104.99	113.10	79.51	45.66	48.21	31.95	56.27	57.39	34.43	87.00	92.04
Lane Group LOS	E	F	F	F	D	D	C	E	E	C	F	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.94	29.08	29.36	8.74	20.12	20.72	4.38	13.41	12.78	4.95	18.10	16.28
50th-Percentile Queue Length [ft/ln]	98.45	727.01	734.03	218.61	503.07	518.07	109.50	335.23	319.47	123.68	452.38	407.02
95th-Percentile Queue Length [veh/ln]	7.09	40.89	41.67	13.97	27.48	28.19	7.81	19.41	18.64	8.59	25.80	23.64
95th-Percentile Queue Length [ft/ln]	177.20	1022.21	1041.82	349.18	686.99	704.71	195.31	485.36	466.04	214.87	644.96	591.06

Movement, Approach, & Intersection Results

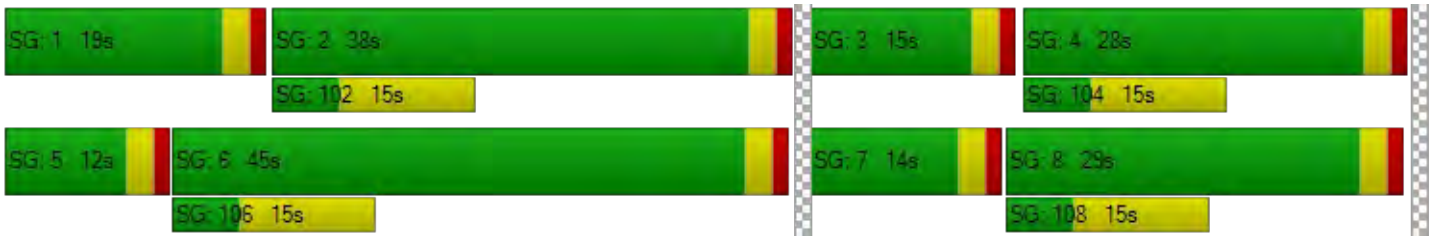
d_M, Delay for Movement [s/veh]	59.67	108.45	113.10	79.51	46.87	48.21	31.95	56.69	57.39	34.43	87.53	92.04
Movement LOS	E	F	F	F	D	D	C	E	E	C	F	F
d_A, Approach Delay [s/veh]	104.84			55.55			51.68			77.89		
Approach LOS	F			E			D			E		
d_I, Intersection Delay [s/veh]	72.70											
Intersection LOS	E											
Intersection V/C	0.936											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.117	3.239	2.674	2.820
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	840	520	500
d_b, Bicycle Delay [s]	21.13	16.82	27.38	28.13
l_b,int, Bicycle LOS Score for Intersection	2.893	3.225	2.484	2.544
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 47: Tippecanoe Ave / Hospitality Ln_Coulston St

Control Type:	Signalized	Delay (sec / veh):	32.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.695

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	487	782	260	130	946	114	262	238	332	154	105	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	487	848	260	130	1184	114	262	238	332	154	105	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	128	223	68	34	312	30	69	63	87	41	28	13
Total Analysis Volume [veh/h]	513	893	274	137	1246	120	276	251	349	162	111	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss
Signal Group	5	2	0	1	6	0	0	8	8	7	4	0
Auxiliary Signal Groups									8			
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	7	7	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	30	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	26	26	0	18	18	0	0	46	46	10	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	10	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No		No	No			No	No	No	No	
Maximum Recall	No	No		No	No			No	No	No	No	
Pedestrian Recall	No	No		No	No			No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
g_i, Effective Green Time [s]	19	42	42	10	33	33	29	29	29	39	39
g / C, Green / Cycle	0.19	0.42	0.42	0.10	0.33	0.33	0.29	0.29	0.29	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.16	0.22	0.22	0.08	0.25	0.25	0.17	0.19	0.22	0.13	0.09
s, saturation flow rate [veh/h]	3144	3618	1681	1714	3618	1816	1242	1666	1615	1262	1799
c, Capacity [veh/h]	587	1512	702	167	1189	597	331	534	476	396	710
d1, Uniform Delay [s]	39.52	21.73	21.74	44.28	30.11	30.11	37.88	30.64	31.72	22.16	20.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.28	1.32	2.83	9.54	4.72	9.06	2.16	1.01	2.20	0.68	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.53	0.53	0.82	0.77	0.77	0.65	0.58	0.73	0.41	0.23
d, Delay for Lane Group [s/veh]	43.80	23.04	24.57	53.82	34.84	39.17	40.04	31.65	33.93	22.84	20.30
Lane Group LOS	D	C	C	D	C	D	D	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	6.39	7.05	6.87	3.75	10.35	11.11	5.18	6.61	7.73	2.57	2.53
50th-Percentile Queue Length [ft/ln]	159.73	176.29	171.74	93.66	258.78	277.74	129.55	165.22	193.34	64.21	63.26
95th-Percentile Queue Length [veh/ln]	10.53	11.41	11.17	6.74	15.63	16.58	8.92	10.82	12.29	4.62	4.55
95th-Percentile Queue Length [ft/ln]	263.37	285.17	279.19	168.59	390.68	414.39	222.88	270.62	307.36	115.58	113.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.80	23.21	24.57	53.82	36.01	39.17	40.04	31.65	33.93	22.84	20.30	20.30
Movement LOS	D	C	C	D	D	D	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	29.72			37.88			34.62			21.57		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	32.89											
Intersection LOS	C											
Intersection V/C	0.695											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.301	3.459	2.622	2.268
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	460	300	860	1060
d_b, Bicycle Delay [s]	29.65	36.13	16.25	11.05
l_b,int, Bicycle LOS Score for Intersection	2.484	2.386	3.005	2.096
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 48: Tippecanoe Ave / Harriman Pl_SR-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	36.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	2	0	0	0	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	300	599	1166	0	1185	180	379	0	794	180	215	464
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	66	0	0	231	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	300	665	1166	0	1423	180	379	0	794	180	215	464
Peak Hour Factor	0.9740	0.9740	0.9740	1.0000	0.9740	0.9740	0.9740	1.0000	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	77	171	299	0	365	46	97	0	204	46	55	119
Total Analysis Volume [veh/h]	308	683	1197	0	1461	185	389	0	815	185	221	476
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	5	2	0	0	6	0	3	0	8	7	4	0
Auxiliary Signal Groups									5,8			
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	0	7	7	7	0
Maximum Green [s]	30	30	0	0	30	0	30	0	30	30	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	14	43	0	0	29	0	30	0	43	14	27	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	10	0	0	0	10	0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0
Minimum Recall	No	No			No		No		No	No	No	
Maximum Recall	No	No			No		No		No	No	No	
Pedestrian Recall	No	No			No		No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
g_i, Effective Green Time [s]	11	43	29	29	24	54	8	23	23
g / C, Green / Cycle	0.11	0.43	0.29	0.29	0.24	0.54	0.08	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.10	0.16	0.24	0.23	0.23	0.32	0.06	0.20	0.21
s, saturation flow rate [veh/h]	3144	4358	5176	1760	1714	2558	3144	1781	1615
c, Capacity [veh/h]	346	1876	1504	511	420	1380	252	417	378
d1, Uniform Delay [s]	43.91	19.23	33.05	32.85	36.84	15.57	44.95	36.61	37.21
k, delay calibration	0.11	0.50	0.50	0.50	0.29	0.12	0.11	0.22	0.25
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.89	0.55	5.16	12.67	19.45	0.45	4.13	9.43	16.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.36	0.82	0.80	0.93	0.59	0.73	0.85	0.90
d, Delay for Lane Group [s/veh]	51.79	19.78	38.22	45.52	56.29	16.02	49.08	46.04	53.67
Lane Group LOS	D	B	D	D	E	B	D	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.11	3.59	9.81	10.83	11.37	6.00	2.37	9.24	9.71
50th-Percentile Queue Length [ft/ln]	102.68	89.66	245.22	270.84	284.33	150.03	59.36	230.89	242.84
95th-Percentile Queue Length [veh/ln]	7.39	6.46	14.94	16.23	16.90	10.02	4.27	14.22	14.83
95th-Percentile Queue Length [ft/ln]	184.82	161.39	373.62	405.79	422.61	250.47	106.85	355.49	370.63

Movement, Approach, & Intersection Results

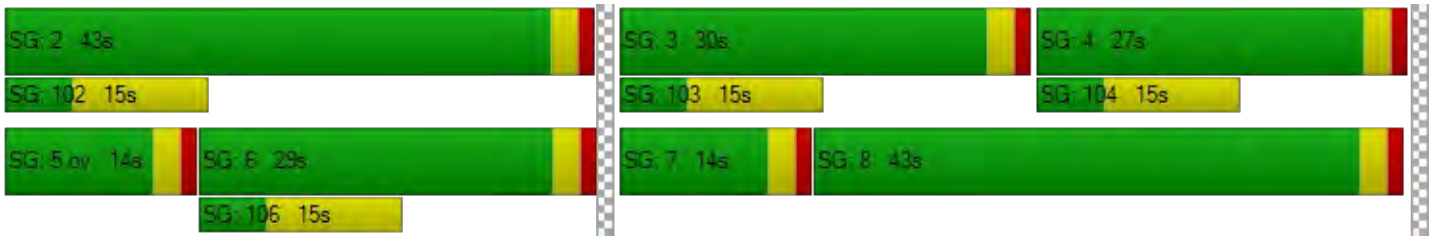
d_M, Delay for Movement [s/veh]	51.79	19.78	0.00	0.00	39.35	45.52	56.29	0.00	16.02	49.08	46.04	51.57
Movement LOS	D	B			D	D	E		B	D	D	D
d_A, Approach Delay [s/veh]	29.73			40.04			29.03			49.64		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	36.86											
Intersection LOS	D											
Intersection V/C	0.775											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersection	3.230	3.045	2.680	2.478
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	520	0	480
d_b, Bicycle Delay [s]	18.00	27.38	50.00	28.88
l_b,int, Bicycle LOS Score for Intersection	2.105	2.239	4.132	3.015
Bicycle LOS	B	B	D	C

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 49: Anderson St / SR-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No			No				
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	1031	343	692	754	0	781	3	551	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	7	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	16	0	0	51	0	50	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1047	343	692	812	0	831	3	551	0	0	0
Peak Hour Factor	1.0000	0.9690	0.9690	0.9690	0.9690	1.0000	0.9690	0.9690	0.9690	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	270	88	179	209	0	214	1	142	0	0	0
Total Analysis Volume [veh/h]	0	1080	354	714	838	0	858	3	569	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	1	6	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	35	0	26	61	0	0	29	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
g_i, Effective Green Time [s]	32	32	23	58	26	26	26	
g / C, Green / Cycle	0.36	0.36	0.26	0.64	0.29	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.22	0.23	0.23	0.24	0.24	0.20	
s, saturation flow rate [veh/h]	3618	1615	3144	3618	1810	1810	2859	
c, Capacity [veh/h]	1286	574	804	2331	523	523	826	
d1, Uniform Delay [s]	26.64	23.94	32.27	7.40	29.86	29.86	28.41	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	6.70	4.90	13.97	0.43	13.70	13.68	4.67	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.84	0.62	0.89	0.36	0.82	0.82	0.69	
d, Delay for Lane Group [s/veh]	33.35	28.84	46.24	7.84	43.56	43.54	33.08	
Lane Group LOS	C	C	D	A	D	D	C	
Critical Lane Group	Yes	No	Yes	No	Yes	No	No	
50th-Percentile Queue Length [veh/ln]	11.38	6.78	8.82	3.41	10.40	10.40	5.83	
50th-Percentile Queue Length [ft/ln]	284.50	169.46	220.59	85.36	260.08	259.99	145.66	
95th-Percentile Queue Length [veh/ln]	16.91	11.05	13.70	6.15	15.69	15.69	9.78	
95th-Percentile Queue Length [ft/ln]	422.81	276.20	342.38	153.66	392.32	392.21	244.62	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	33.35	28.84	46.24	7.84	0.00	43.55	43.54	33.08	0.00	0.00	0.00
Movement LOS		C	C	D	A		D	D	C			
d_A, Approach Delay [s/veh]	32.23			25.50			39.39			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	32.18											
Intersection LOS	C											
Intersection V/C	0.764											

Other Modes

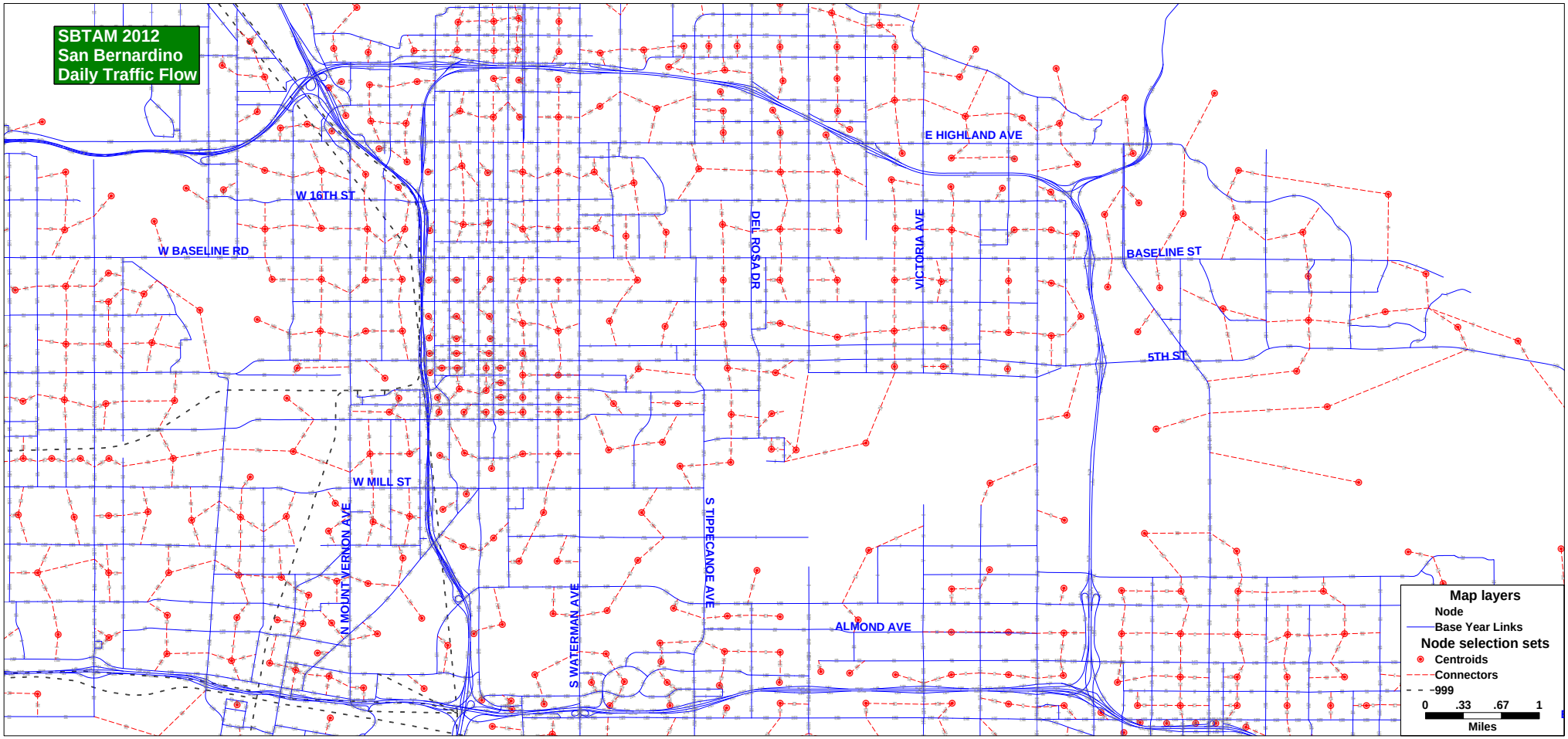
g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.855	3.021	2.481	2.238
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	1289	578	0
d_b, Bicycle Delay [s]	18.69	5.69	22.76	45.00
l_b,int, Bicycle LOS Score for Intersection	2.743	2.840	3.919	4.132
Bicycle LOS	B	C	D	D

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX D

SBTAM MODEL PLOTS
AND B-TURNS WORKSHEETS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San Bernardino
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VICTORIA AVE
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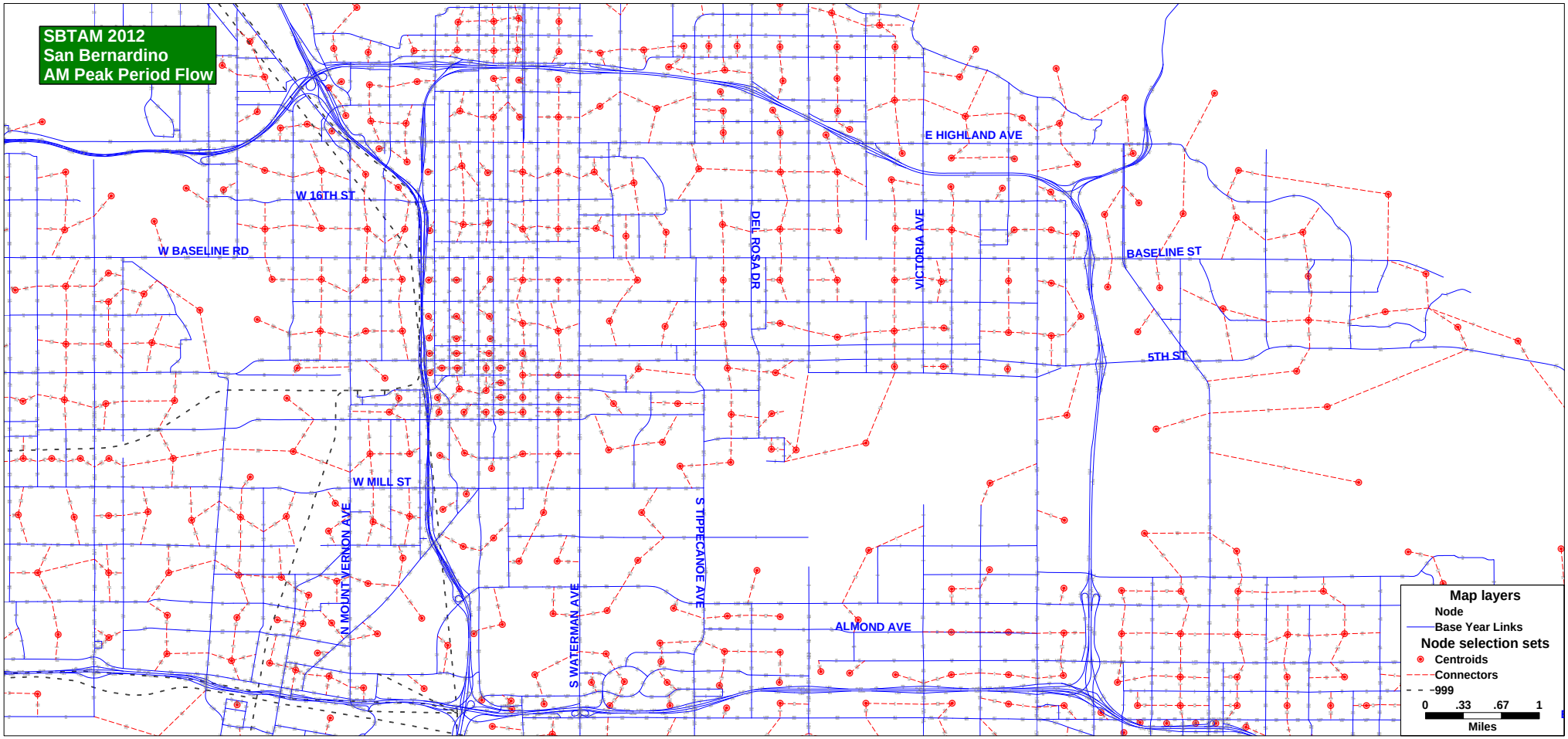
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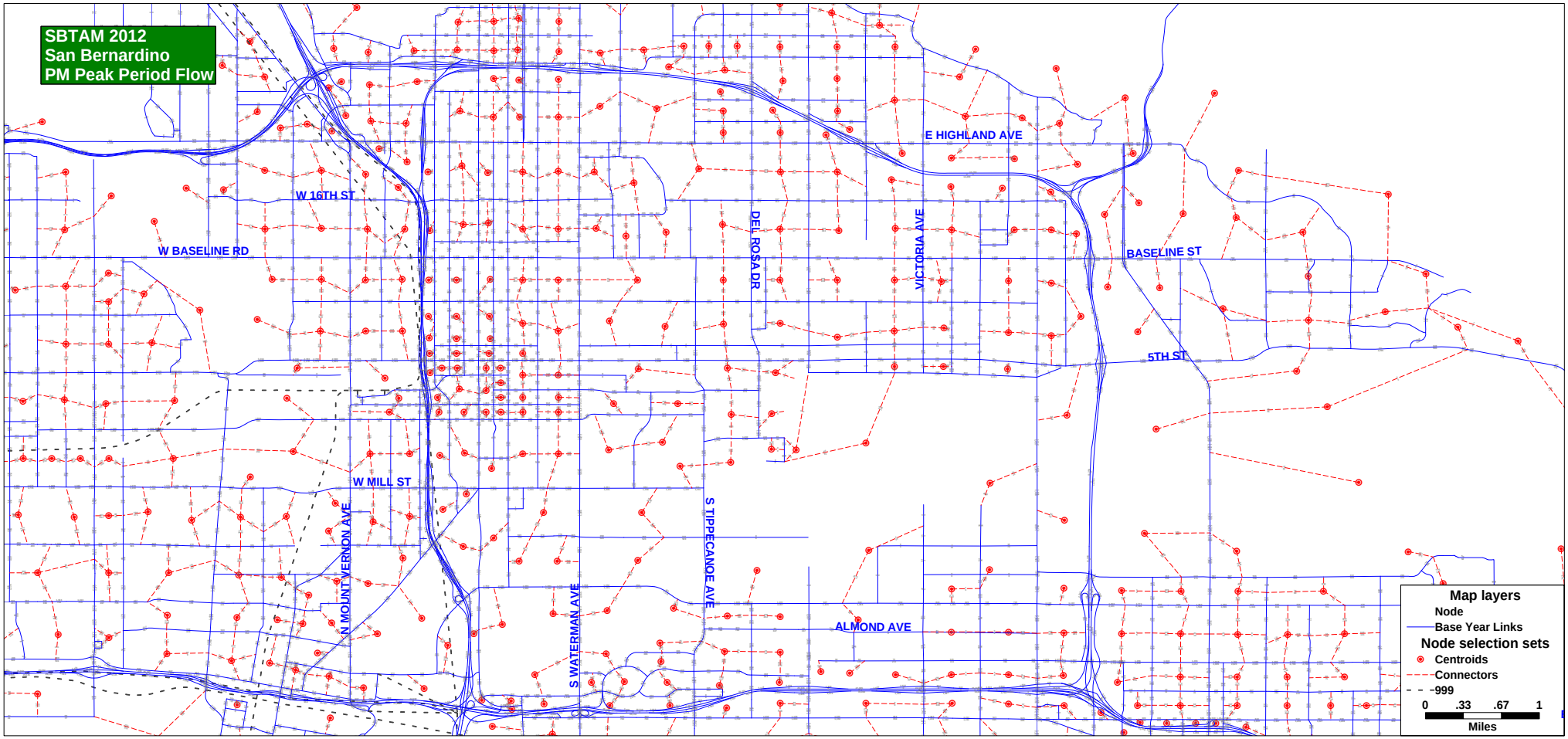
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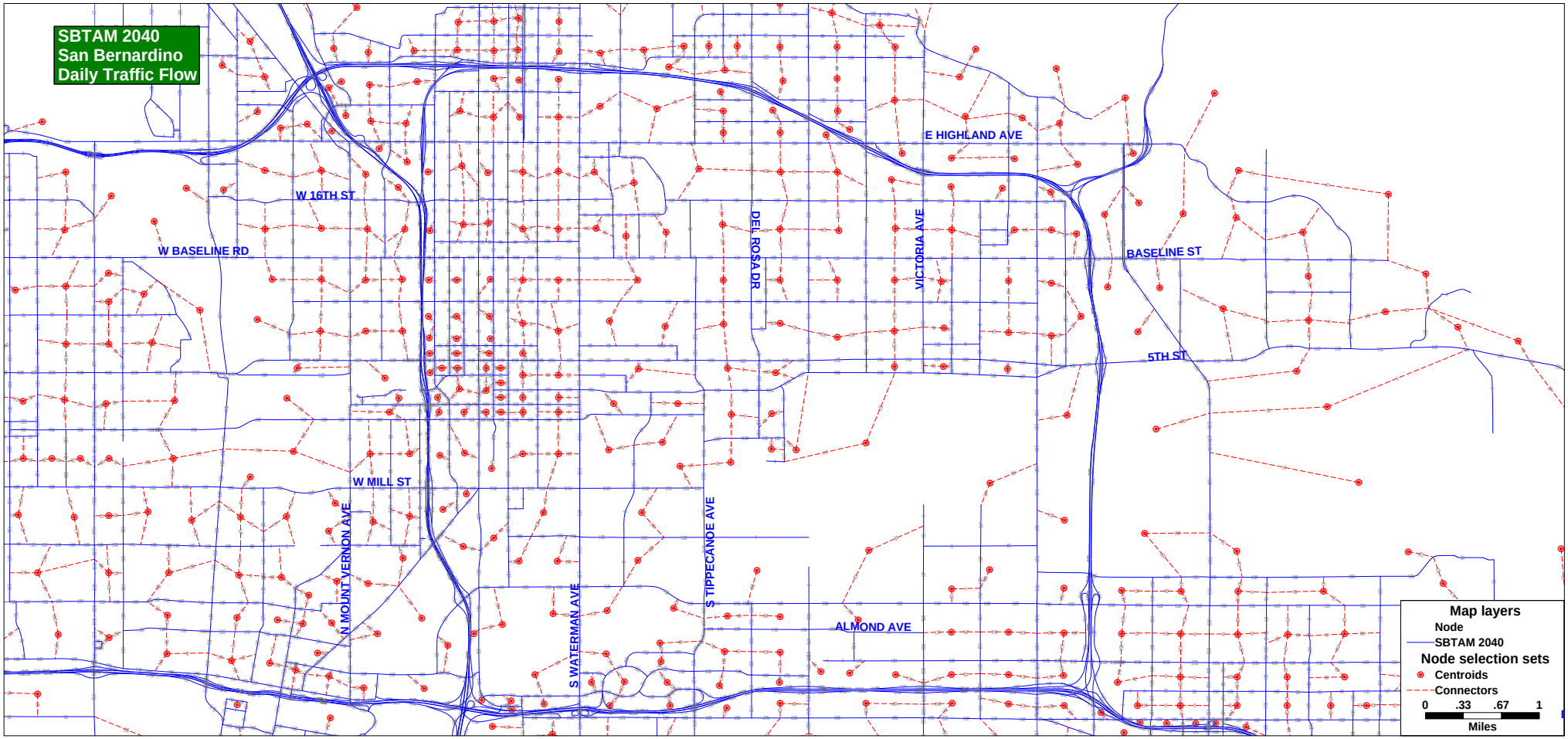
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Node selection sets
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Connectors
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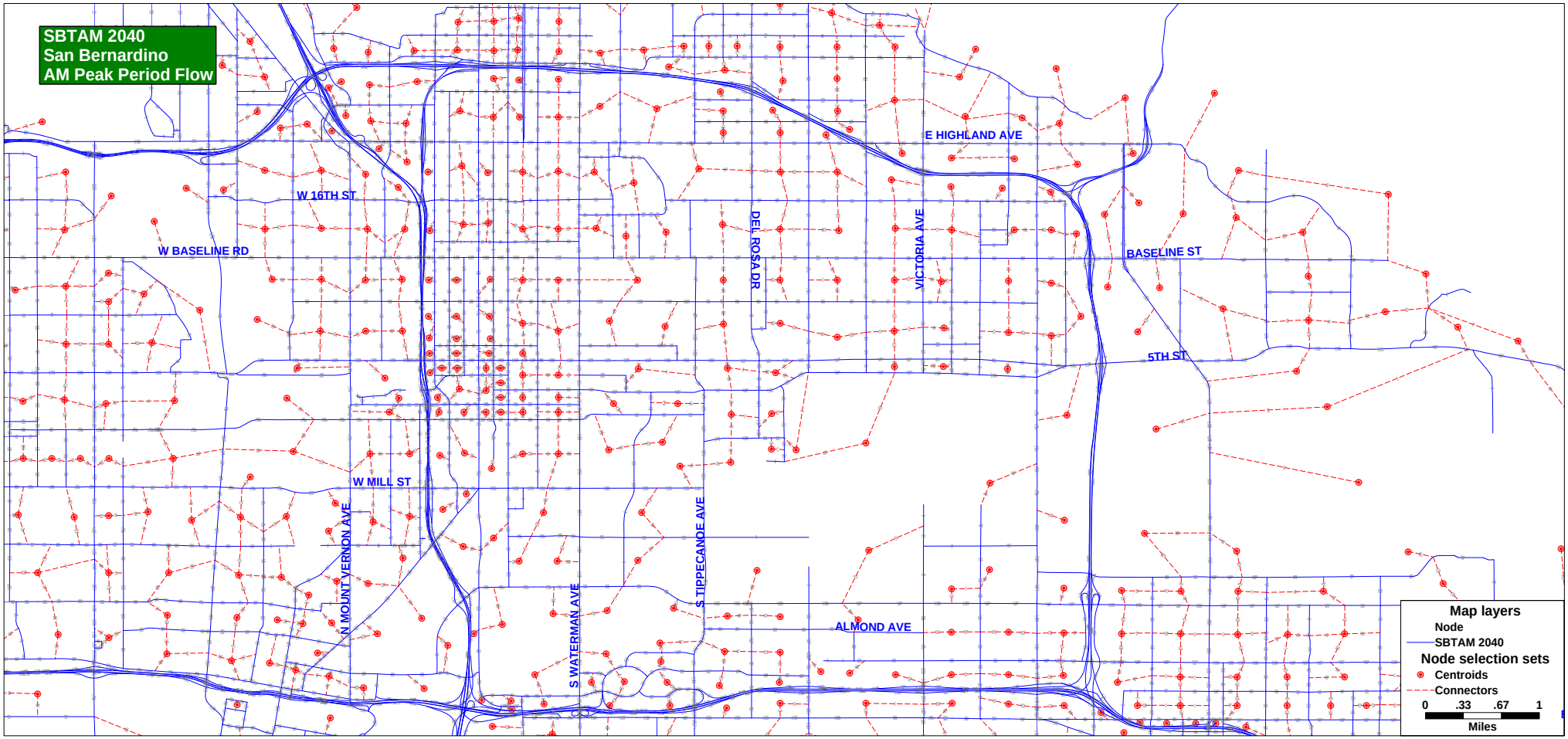
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AM Peak Period Flow
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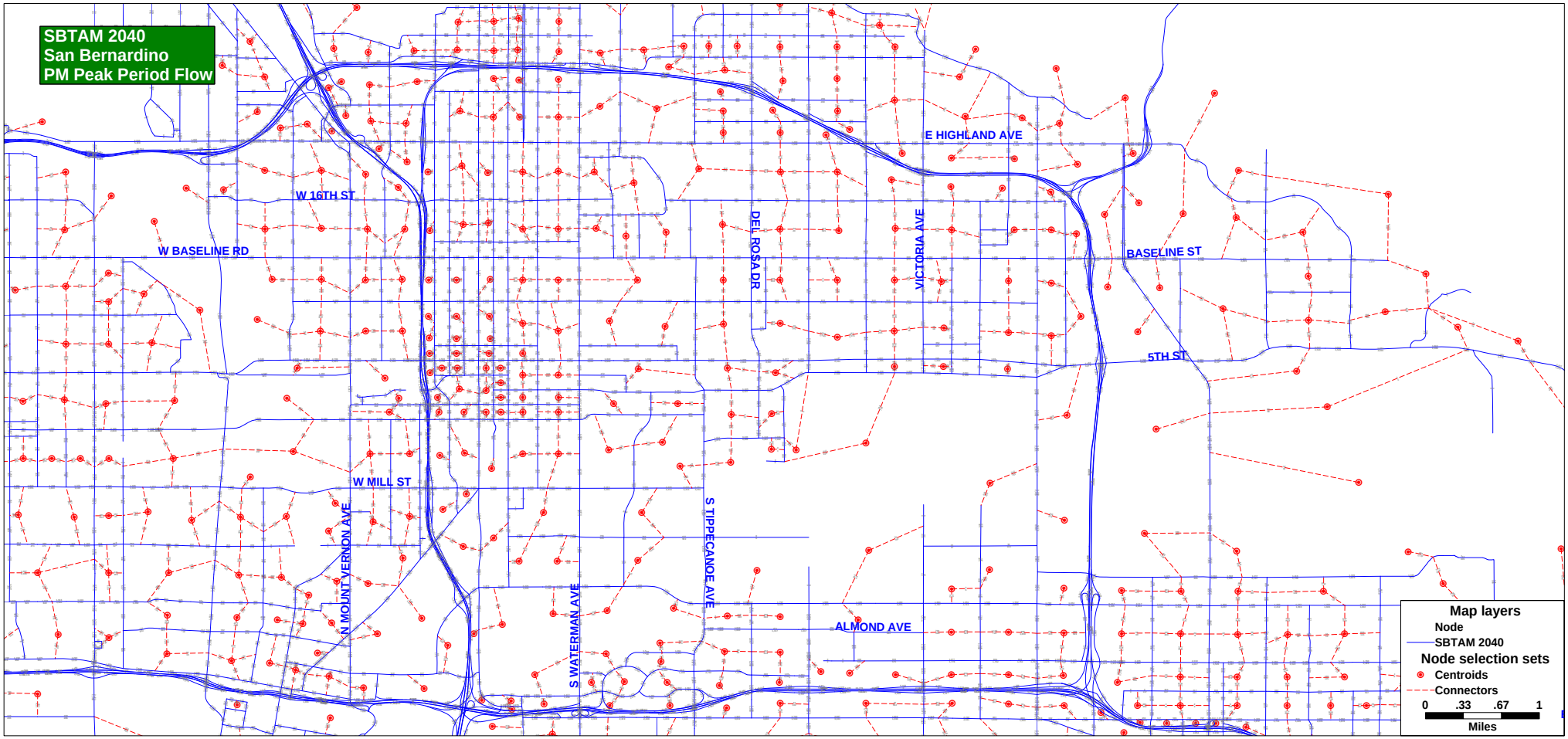
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San Bernardino
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Map layers
Node
SBTAM 2040
Node selection sets
Centroids
Connectors
0 .33 .67 1
Miles

Intersection: Del Rosa Ave SR-210 WB Ramps

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	587	SOUTH LEG	
	THRU	522	IN ...	1,063
	RIGHT	0	OUT ...	688
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	426	IN ...	1,304
	RIGHT	664	OUT ...	646
EAST BOUND	LEFT	0	WEST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	1,335
WEST BOUND	LEFT	125	EAST LEG	
	THRU	0	IN ...	301
	RIGHT	121	OUT ...	0
		2,445		5,337

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	587	561
	THRU	522	503
	RIGHT	0	0
SOUTH BOUND	LEFT	0	0
	THRU	426	530
	RIGHT	664	774
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	125	157
	THRU	0	0
	RIGHT	121	144
		2,445	2,669

Intersection: Del Rosa Ave SR-210 WB Ramps

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	627	SOUTH LEG	
	THRU	696	IN ...	1,425
	RIGHT	0	OUT ...	576
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	344	IN ...	746
	RIGHT	373	OUT ...	1,090
EAST BOUND	LEFT	0	WEST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	996
WEST BOUND	LEFT	128	EAST LEG	
	THRU	0	IN ...	491
	RIGHT	226	OUT ...	0
		2,394		5,324

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	627	640
	THRU	696	785
	RIGHT	0	0
SOUTH BOUND	LEFT	0	0
	THRU	344	390
	RIGHT	373	356
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	128	186
	THRU	0	0
	RIGHT	226	305
		2,394	2,662

Intersection: Del Rosa Ave SR-210 EB Ramps

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	786	IN ...	898
	RIGHT	84	OUT ...	1,175
SOUTH BOUND	LEFT	170	NORTH LEG	
	THRU	386	IN ...	693
	RIGHT	0	OUT ...	1,101
EAST BOUND	LEFT	360	WEST LEG	
	THRU	1	IN ...	1,030
	RIGHT	695	OUT ...	0
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	345
		2,482		5,241

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	786	785
	RIGHT	84	112
SOUTH BOUND	LEFT	170	232
	THRU	386	461
	RIGHT	0	0
EAST BOUND	LEFT	360	316
	THRU	1	1
	RIGHT	695	714
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		2,482	2,621

Intersection: Del Rosa Ave SR-210 EB Ramps

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	925	IN ...	1,155
	RIGHT	120	OUT ...	1,168
SOUTH BOUND	LEFT	121	NORTH LEG	
	THRU	352	IN ...	577
	RIGHT	0	OUT ...	1,414
EAST BOUND	LEFT	387	WEST LEG	
	THRU	1	IN ...	1,159
	RIGHT	715	OUT ...	0
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	310
		2,621		5,782

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	925	1,008
	RIGHT	120	147
SOUTH BOUND	LEFT	121	161
	THRU	352	416
	RIGHT	0	0
EAST BOUND	LEFT	387	406
	THRU	1	1
	RIGHT	715	751
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		2,621	2,891

Intersection: Del Rosa Ave Date St Date Pl

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	30	SOUTH LEG	
	THRU	605	IN ...	665
	RIGHT	21	OUT ...	952
SOUTH BOUND	LEFT	179	NORTH LEG	
	THRU	815	IN ...	1,157
	RIGHT	69	OUT ...	898
EAST BOUND	LEFT	112	WEST LEG	
	THRU	29	IN ...	200
	RIGHT	39	OUT ...	137
WEST BOUND	LEFT	15	EAST LEG	
	THRU	26	IN ...	194
	RIGHT	153	OUT ...	229
		2,093		4,431

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	30	31
	THRU	605	616
	RIGHT	21	19
SOUTH BOUND	LEFT	179	181
	THRU	815	894
	RIGHT	69	80
EAST BOUND	LEFT	112	128
	THRU	29	29
	RIGHT	39	43
WEST BOUND	LEFT	15	14
	THRU	26	26
	RIGHT	153	153
		2,093	2,216

Intersection: Del Rosa Ave Date St Date Pl

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	58	SOUTH LEG	
	THRU	717	IN ...	916
	RIGHT	48	OUT ...	884
SOUTH BOUND	LEFT	240	NORTH LEG	
	THRU	708	IN ...	1,162
	RIGHT	113	OUT ...	1,159
EAST BOUND	LEFT	126	WEST LEG	
	THRU	55	IN ...	250
	RIGHT	51	OUT ...	261
WEST BOUND	LEFT	46	EAST LEG	
	THRU	69	IN ...	321
	RIGHT	206	OUT ...	343
		2,437		5,296

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	58	63
	THRU	717	807
	RIGHT	48	46
SOUTH BOUND	LEFT	240	244
	THRU	708	786
	RIGHT	113	130
EAST BOUND	LEFT	126	142
	THRU	55	53
	RIGHT	51	54
WEST BOUND	LEFT	46	44
	THRU	69	68
	RIGHT	206	209
		2,437	2,648

Intersection: Del Rosa Ave Highland Ave

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	104	SOUTH LEG	
	THRU	396	IN ...	616
	RIGHT	36	OUT ...	818
SOUTH BOUND	LEFT	122	NORTH LEG	
	THRU	547	IN ...	852
	RIGHT	123	OUT ...	597
EAST BOUND	LEFT	51	WEST LEG	
	THRU	245	IN ...	483
	RIGHT	119	OUT ...	524
WEST BOUND	LEFT	47	EAST LEG	
	THRU	251	IN ...	421
	RIGHT	135	OUT ...	433
		2,176		4,744

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	104	139
	THRU	396	432
	RIGHT	36	44
SOUTH BOUND	LEFT	122	115
	THRU	547	610
	RIGHT	123	128
EAST BOUND	LEFT	51	52
	THRU	245	274
	RIGHT	119	157
WEST BOUND	LEFT	47	51
	THRU	251	257
	RIGHT	135	113
		2,176	2,372

Intersection: Del Rosa Ave Highland Ave

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	174	SOUTH LEG	
	THRU	498	IN ...	830
	RIGHT	65	OUT ...	685
SOUTH BOUND	LEFT	165	NORTH LEG	
	THRU	396	IN ...	724
	RIGHT	113	OUT ...	906
EAST BOUND	LEFT	174	WEST LEG	
	THRU	608	IN ...	970
	RIGHT	160	OUT ...	831
WEST BOUND	LEFT	72	EAST LEG	
	THRU	409	IN ...	774
	RIGHT	160	OUT ...	877
		2,994		6,598

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	174	206
	THRU	498	550
	RIGHT	65	75
SOUTH BOUND	LEFT	165	174
	THRU	396	428
	RIGHT	113	123
EAST BOUND	LEFT	174	173
	THRU	608	628
	RIGHT	160	169
WEST BOUND	LEFT	72	88
	THRU	409	503
	RIGHT	160	183
		2,994	3,299

Intersection: SR-210 EB Off R Highland Ave

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
SOUTH BOUND	LEFT	911	NORTH LEG	
	THRU	0	IN ...	1,101
	RIGHT	160	OUT ...	0
EAST BOUND	LEFT	0	WEST LEG	
	THRU	293	IN ...	355
	RIGHT	0	OUT ...	565
WEST BOUND	LEFT	0	EAST LEG	
	THRU	329	IN ...	389
	RIGHT	0	OUT ...	1,280
		1,693		3,691

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	911	926
	THRU	0	0
	RIGHT	160	175
EAST BOUND	LEFT	0	0
	THRU	293	354
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	329	390
	RIGHT	0	0
		1,693	1,845

Intersection: SR-210 EB Off R Highland Ave

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
SOUTH BOUND	LEFT	1,025	NORTH LEG	
	THRU	0	IN ...	1,155
	RIGHT	155	OUT ...	0
EAST BOUND	LEFT	0	WEST LEG	
	THRU	702	IN ...	769
	RIGHT	0	OUT ...	918
WEST BOUND	LEFT	0	EAST LEG	
	THRU	577	IN ...	722
	RIGHT	0	OUT ...	1,726
		2,459		5,289

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	1,025	961
	THRU	0	0
	RIGHT	155	190
EAST BOUND	LEFT	0	0
	THRU	702	765
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	577	728
	RIGHT	0	0
		2,459	2,645

Intersection: Arden Ave Highland Ave

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	279	SOUTH LEG	
	THRU	166	IN ...	608
	RIGHT	76	OUT ...	741
SOUTH BOUND	LEFT	59	NORTH LEG	
	THRU	338	IN ...	622
	RIGHT	305	OUT ...	253
EAST BOUND	LEFT	79	WEST LEG	
	THRU	996	IN ...	1,392
	RIGHT	238	OUT ...	1,425
WEST BOUND	LEFT	154	EAST LEG	
	THRU	868	IN ...	1,008
	RIGHT	139	OUT ...	1,210
		3,697		7,260

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	279	378
	THRU	166	130
	RIGHT	76	100
SOUTH BOUND	LEFT	59	49
	THRU	338	311
	RIGHT	305	262
EAST BOUND	LEFT	79	50
	THRU	996	1,061
	RIGHT	238	281
WEST BOUND	LEFT	154	149
	THRU	868	786
	RIGHT	139	73
		3,697	3,630

Intersection: Arden Ave Highland Ave

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	217	SOUTH LEG	
	THRU	93	IN ...	496
	RIGHT	42	OUT ...	658
SOUTH BOUND	LEFT	66	NORTH LEG	
	THRU	205	IN ...	363
	RIGHT	274	OUT ...	344
EAST BOUND	LEFT	127	WEST LEG	
	THRU	1,102	IN ...	1,590
	RIGHT	344	OUT ...	2,180
WEST BOUND	LEFT	151	EAST LEG	
	THRU	1,517	IN ...	1,991
	RIGHT	176	OUT ...	1,258
		4,314		8,879

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	217	326
	THRU	93	104
	RIGHT	42	66
SOUTH BOUND	LEFT	66	45
	THRU	205	138
	RIGHT	274	180
EAST BOUND	LEFT	127	94
	THRU	1,102	1,147
	RIGHT	344	350
WEST BOUND	LEFT	151	170
	THRU	1,517	1,674
	RIGHT	176	145
		4,314	4,439

Intersection: Victoria Ave Highland Ave

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	241	SOUTH LEG	
	THRU	243	IN ...	953
	RIGHT	42	OUT ...	677
SOUTH BOUND	LEFT	68	NORTH LEG	
	THRU	215	IN ...	928
	RIGHT	284	OUT ...	1,436
EAST BOUND	LEFT	448	WEST LEG	
	THRU	372	IN ...	1,054
	RIGHT	119	OUT ...	804
WEST BOUND	LEFT	45	EAST LEG	
	THRU	348	IN ...	611
	RIGHT	88	OUT ...	628
		2,513		7,090

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	241	217
	THRU	243	646
	RIGHT	42	89
SOUTH BOUND	LEFT	68	162
	THRU	215	479
	RIGHT	284	286
EAST BOUND	LEFT	448	566
	THRU	372	376
	RIGHT	119	112
WEST BOUND	LEFT	45	86
	THRU	348	301
	RIGHT	88	224
		2,513	3,545

Intersection: Victoria Ave Highland Ave

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	237	SOUTH LEG	
	THRU	191	IN ...	1,007
	RIGHT	57	OUT ...	849
SOUTH BOUND	LEFT	183	NORTH LEG	
	THRU	146	IN ...	1,629
	RIGHT	591	OUT ...	1,699
EAST BOUND	LEFT	672	WEST LEG	
	THRU	507	IN ...	1,426
	RIGHT	164	OUT ...	1,566
WEST BOUND	LEFT	62	EAST LEG	
	THRU	567	IN ...	978
	RIGHT	127	OUT ...	927
		3,504		10,080

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	237	293
	THRU	191	594
	RIGHT	57	120
SOUTH BOUND	LEFT	183	395
	THRU	146	489
	RIGHT	591	746
EAST BOUND	LEFT	672	806
	THRU	507	412
	RIGHT	164	207
WEST BOUND	LEFT	62	153
	THRU	567	527
	RIGHT	127	298
		3,504	5,040

Intersection: Del Rosa Dr Pacific St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	44	SOUTH LEG	
	THRU	214	IN ...	321
	RIGHT	28	OUT ...	559
SOUTH BOUND	LEFT	38	NORTH LEG	
	THRU	342	IN ...	667
	RIGHT	200	OUT ...	422
EAST BOUND	LEFT	154	WEST LEG	
	THRU	236	IN ...	438
	RIGHT	27	OUT ...	532
WEST BOUND	LEFT	69	EAST LEG	
	THRU	280	IN ...	429
	RIGHT	42	OUT ...	343
		1,674		3,711

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	44	48
	THRU	214	236
	RIGHT	28	37
SOUTH BOUND	LEFT	38	44
	THRU	342	432
	RIGHT	200	192
EAST BOUND	LEFT	154	143
	THRU	236	262
	RIGHT	27	33
WEST BOUND	LEFT	69	94
	THRU	280	291
	RIGHT	42	44
		1,674	1,856

Intersection: Del Rosa Dr Pacific St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	20	SOUTH LEG	
	THRU	402	IN ...	648
	RIGHT	69	OUT ...	438
SOUTH BOUND	LEFT	65	NORTH LEG	
	THRU	319	IN ...	573
	RIGHT	146	OUT ...	706
EAST BOUND	LEFT	147	WEST LEG	
	THRU	339	IN ...	545
	RIGHT	25	OUT ...	396
WEST BOUND	LEFT	29	EAST LEG	
	THRU	191	IN ...	308
	RIGHT	35	OUT ...	535
		1,787		4,149

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	20	27
	THRU	402	521
	RIGHT	69	99
SOUTH BOUND	LEFT	65	66
	THRU	319	366
	RIGHT	146	141
EAST BOUND	LEFT	147	145
	THRU	339	369
	RIGHT	25	31
WEST BOUND	LEFT	29	41
	THRU	191	228
	RIGHT	35	40
		1,787	2,074

Intersection: Victoria Ave Pacific St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	165	SOUTH LEG	
	THRU	321	IN ...	617
	RIGHT	30	OUT ...	656
SOUTH BOUND	LEFT	58	NORTH LEG	
	THRU	282	IN ...	752
	RIGHT	103	OUT ...	808
EAST BOUND	LEFT	113	WEST LEG	
	THRU	252	IN ...	656
	RIGHT	206	OUT ...	670
WEST BOUND	LEFT	50	EAST LEG	
	THRU	331	IN ...	547
	RIGHT	89	OUT ...	439
		2,000		5,145

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	165	135
	THRU	321	454
	RIGHT	30	28
SOUTH BOUND	LEFT	58	123
	THRU	282	439
	RIGHT	103	190
EAST BOUND	LEFT	113	194
	THRU	252	288
	RIGHT	206	174
WEST BOUND	LEFT	50	44
	THRU	331	344
	RIGHT	89	159
		2,000	2,573

Intersection: Victoria Ave Pacific St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	145	SOUTH LEG	
	THRU	379	IN ...	701
	RIGHT	55	OUT ...	638
SOUTH BOUND	LEFT	54	NORTH LEG	
	THRU	279	IN ...	818
	RIGHT	66	OUT ...	858
EAST BOUND	LEFT	71	WEST LEG	
	THRU	358	IN ...	737
	RIGHT	190	OUT ...	584
WEST BOUND	LEFT	42	EAST LEG	
	THRU	247	IN ...	445
	RIGHT	60	OUT ...	621
		1,946		5,403

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	145	110
	THRU	379	554
	RIGHT	55	40
SOUTH BOUND	LEFT	54	152
	THRU	279	473
	RIGHT	66	191
EAST BOUND	LEFT	71	170
	THRU	358	429
	RIGHT	190	137
WEST BOUND	LEFT	42	28
	THRU	247	284
	RIGHT	60	134
		1,946	2,701

Intersection: Victoria Ave 14th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	442	IN ...	548
	RIGHT	11	OUT ...	688
SOUTH BOUND	LEFT	27	NORTH LEG	
	THRU	523	IN ...	670
	RIGHT	2	OUT ...	597
EAST BOUND	LEFT	2	WEST LEG	
	THRU	0	IN ...	8
	RIGHT	0	OUT ...	10
WEST BOUND	LEFT	19	EAST LEG	
	THRU	3	IN ...	85
	RIGHT	52	OUT ...	16
		1,081		2,622

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	442	535
	RIGHT	11	5
SOUTH BOUND	LEFT	27	11
	THRU	523	663
	RIGHT	2	4
EAST BOUND	LEFT	2	8
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	19	25
	THRU	3	6
	RIGHT	52	54
		1,081	1,311

Intersection: Victoria Ave 14th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	27	SOUTH LEG	
	THRU	17	IN ...	241
	RIGHT	54	OUT ...	626
SOUTH BOUND	LEFT	31	NORTH LEG	
	THRU	471	IN ...	641
	RIGHT	12	OUT ...	204
EAST BOUND	LEFT	13	WEST LEG	
	THRU	10	IN ...	36
	RIGHT	3	OUT ...	47
WEST BOUND	LEFT	27	EAST LEG	
	THRU	4	IN ...	67
	RIGHT	52	OUT ...	108
		721		1,970

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	27	39
	THRU	17	121
	RIGHT	54	82
SOUTH BOUND	LEFT	31	21
	THRU	471	611
	RIGHT	12	8
EAST BOUND	LEFT	13	29
	THRU	10	5
	RIGHT	3	3
WEST BOUND	LEFT	27	12
	THRU	4	1
	RIGHT	52	55
		721	985

Intersection: Tippecanoe Ave Baseline St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	167	SOUTH LEG	
	THRU	0	IN ...	350
	RIGHT	161	OUT ...	404
SOUTH BOUND	LEFT	4	NORTH LEG	
	THRU	2	IN ...	8
	RIGHT	2	OUT ...	0
EAST BOUND	LEFT	0	WEST LEG	
	THRU	306	IN ...	578
	RIGHT	198	OUT ...	684
WEST BOUND	LEFT	191	EAST LEG	
	THRU	446	IN ...	664
	RIGHT	0	OUT ...	511
		1,477		3,198

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	167	193
	THRU	0	0
	RIGHT	161	157
SOUTH BOUND	LEFT	4	4
	THRU	2	2
	RIGHT	2	2
EAST BOUND	LEFT	0	0
	THRU	306	351
	RIGHT	198	227
WEST BOUND	LEFT	191	176
	THRU	446	488
	RIGHT	0	0
		1,477	1,599

Intersection: Tippecanoe Ave Baseline St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	283	SOUTH LEG	
	THRU	1	IN ...	251
	RIGHT	249	OUT ...	121
SOUTH BOUND	LEFT	4	NORTH LEG	
	THRU	0	IN ...	14
	RIGHT	10	OUT ...	6
EAST BOUND	LEFT	3	WEST LEG	
	THRU	651	IN ...	425
	RIGHT	167	OUT ...	490
WEST BOUND	LEFT	165	EAST LEG	
	THRU	499	IN ...	379
	RIGHT	2	OUT ...	453
		2,034		2,139

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	283	155
	THRU	1	1
	RIGHT	249	95
SOUTH BOUND	LEFT	4	3
	THRU	0	0
	RIGHT	10	11
EAST BOUND	LEFT	3	3
	THRU	651	354
	RIGHT	167	66
WEST BOUND	LEFT	165	54
	THRU	499	324
	RIGHT	2	2
		2,034	1,069

Intersection: Del Rosa Dr Baseline St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	50	SOUTH LEG	
	THRU	208	IN ...	357
	RIGHT	77	OUT ...	667
SOUTH BOUND	LEFT	31	NORTH LEG	
	THRU	279	IN ...	591
	RIGHT	125	OUT ...	327
EAST BOUND	LEFT	49	WEST LEG	
	THRU	232	IN ...	440
	RIGHT	134	OUT ...	542
WEST BOUND	LEFT	92	EAST LEG	
	THRU	378	IN ...	494
	RIGHT	35	OUT ...	347
		1,690		3,764

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	50	47
	THRU	208	233
	RIGHT	77	77
SOUTH BOUND	LEFT	31	39
	THRU	279	406
	RIGHT	125	146
EAST BOUND	LEFT	49	55
	THRU	232	231
	RIGHT	134	155
WEST BOUND	LEFT	92	106
	THRU	378	349
	RIGHT	35	39
		1,690	1,882

Intersection: Del Rosa Dr Baseline St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	44	SOUTH LEG	
	THRU	314	IN ...	563
	RIGHT	64	OUT ...	320
SOUTH BOUND	LEFT	81	NORTH LEG	
	THRU	204	IN ...	466
	RIGHT	90	OUT ...	688
EAST BOUND	LEFT	127	WEST LEG	
	THRU	693	IN ...	922
	RIGHT	37	OUT ...	657
WEST BOUND	LEFT	26	EAST LEG	
	THRU	461	IN ...	550
	RIGHT	50	OUT ...	836
		2,191		5,002

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	44	57
	THRU	314	445
	RIGHT	64	61
SOUTH BOUND	LEFT	81	85
	THRU	204	253
	RIGHT	90	128
EAST BOUND	LEFT	127	187
	THRU	693	689
	RIGHT	37	43
WEST BOUND	LEFT	26	23
	THRU	461	472
	RIGHT	50	56
		2,191	2,501

Intersection: Sterling Ave Baseline St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	28	SOUTH LEG	
	THRU	252	IN ...	315
	RIGHT	35	OUT ...	564
SOUTH BOUND	LEFT	163	NORTH LEG	
	THRU	398	IN ...	719
	RIGHT	66	OUT ...	496
EAST BOUND	LEFT	60	WEST LEG	
	THRU	225	IN ...	333
	RIGHT	40	OUT ...	423
WEST BOUND	LEFT	44	EAST LEG	
	THRU	338	IN ...	515
	RIGHT	195	OUT ...	398
		1,844		3,764

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	28	30
	THRU	252	256
	RIGHT	35	28
SOUTH BOUND	LEFT	163	156
	THRU	398	479
	RIGHT	66	84
EAST BOUND	LEFT	60	71
	THRU	225	214
	RIGHT	40	48
WEST BOUND	LEFT	44	38
	THRU	338	309
	RIGHT	195	168
		1,844	1,882

Intersection: Sterling Ave Baseline St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	69	SOUTH LEG	
	THRU	447	IN ...	689
	RIGHT	76	OUT ...	417
SOUTH BOUND	LEFT	202	NORTH LEG	
	THRU	309	IN ...	613
	RIGHT	83	OUT ...	874
EAST BOUND	LEFT	127	WEST LEG	
	THRU	551	IN ...	733
	RIGHT	49	OUT ...	525
WEST BOUND	LEFT	60	EAST LEG	
	THRU	354	IN ...	587
	RIGHT	216	OUT ...	805
		2,543		5,244

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	69	85
	THRU	447	529
	RIGHT	76	75
SOUTH BOUND	LEFT	202	195
	THRU	309	317
	RIGHT	83	100
EAST BOUND	LEFT	127	147
	THRU	551	535
	RIGHT	49	51
WEST BOUND	LEFT	60	49
	THRU	354	340
	RIGHT	216	198
		2,543	2,622

Intersection: Victoria Ave Baseline St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	48	SOUTH LEG	
	THRU	265	IN ...	376
	RIGHT	20	OUT ...	484
SOUTH BOUND	LEFT	85	NORTH LEG	
	THRU	329	IN ...	682
	RIGHT	122	OUT ...	539
EAST BOUND	LEFT	105	WEST LEG	
	THRU	211	IN ...	300
	RIGHT	30	OUT ...	402
WEST BOUND	LEFT	33	EAST LEG	
	THRU	245	IN ...	404
	RIGHT	74	OUT ...	338
		1,567		3,525

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	48	35
	THRU	265	320
	RIGHT	20	22
SOUTH BOUND	LEFT	85	134
	THRU	329	422
	RIGHT	122	125
EAST BOUND	LEFT	105	98
	THRU	211	182
	RIGHT	30	21
WEST BOUND	LEFT	33	41
	THRU	245	242
	RIGHT	74	121
		1,567	1,763

Intersection: Victoria Ave Baseline St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	62	SOUTH LEG	
	THRU	339	IN ...	576
	RIGHT	74	OUT ...	442
SOUTH BOUND	LEFT	99	NORTH LEG	
	THRU	276	IN ...	622
	RIGHT	122	OUT ...	695
EAST BOUND	LEFT	115	WEST LEG	
	THRU	494	IN ...	647
	RIGHT	59	OUT ...	484
WEST BOUND	LEFT	38	EAST LEG	
	THRU	327	IN ...	501
	RIGHT	98	OUT ...	724
		2,103		4,691

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	62	51
	THRU	339	434
	RIGHT	74	92
SOUTH BOUND	LEFT	99	150
	THRU	276	349
	RIGHT	122	123
EAST BOUND	LEFT	115	116
	THRU	494	483
	RIGHT	59	48
WEST BOUND	LEFT	38	45
	THRU	327	311
	RIGHT	98	145
		2,103	2,346

Intersection: Tippecanoe Ave 9th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	111	SOUTH LEG	
	THRU	251	IN ...	442
	RIGHT	76	OUT ...	672
SOUTH BOUND	LEFT	24	NORTH LEG	
	THRU	349	IN ...	409
	RIGHT	23	OUT ...	321
EAST BOUND	LEFT	27	WEST LEG	
	THRU	351	IN ...	655
	RIGHT	81	OUT ...	467
WEST BOUND	LEFT	72	EAST LEG	
	THRU	295	IN ...	458
	RIGHT	21	OUT ...	505
		1,681		3,927

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	111	122
	THRU	251	257
	RIGHT	76	62
SOUTH BOUND	LEFT	24	14
	THRU	349	378
	RIGHT	23	18
EAST BOUND	LEFT	27	42
	THRU	351	429
	RIGHT	81	184
WEST BOUND	LEFT	72	110
	THRU	295	327
	RIGHT	21	22
		1,681	1,964

Intersection: Tippecanoe Ave 9th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	116	SOUTH LEG	
	THRU	511	IN ...	849
	RIGHT	57	OUT ...	412
SOUTH BOUND	LEFT	12	NORTH LEG	
	THRU	265	IN ...	319
	RIGHT	35	OUT ...	726
EAST BOUND	LEFT	61	WEST LEG	
	THRU	370	IN ...	622
	RIGHT	75	OUT ...	580
WEST BOUND	LEFT	48	EAST LEG	
	THRU	246	IN ...	421
	RIGHT	22	OUT ...	493
		1,818		4,422

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	116	183
	THRU	511	613
	RIGHT	57	54
SOUTH BOUND	LEFT	12	10
	THRU	265	261
	RIGHT	35	48
EAST BOUND	LEFT	61	89
	THRU	370	428
	RIGHT	75	103
WEST BOUND	LEFT	48	49
	THRU	246	350
	RIGHT	22	24
		1,818	2,211

Intersection: Del Rosa Dr 9th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	78	SOUTH LEG	
	THRU	119	IN ...	364
	RIGHT	137	OUT ...	476
SOUTH BOUND	LEFT	130	NORTH LEG	
	THRU	199	IN ...	561
	RIGHT	70	OUT ...	233
EAST BOUND	LEFT	48	WEST LEG	
	THRU	421	IN ...	662
	RIGHT	123	OUT ...	467
WEST BOUND	LEFT	31	EAST LEG	
	THRU	233	IN ...	342
	RIGHT	44	OUT ...	752
		1,633		3,856

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	78	95
	THRU	119	131
	RIGHT	137	137
SOUTH BOUND	LEFT	130	163
	THRU	199	290
	RIGHT	70	108
EAST BOUND	LEFT	48	57
	THRU	421	452
	RIGHT	123	153
WEST BOUND	LEFT	31	33
	THRU	233	264
	RIGHT	44	45
		1,633	1,928

Intersection: Del Rosa Dr 9th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	80	SOUTH LEG	
	THRU	390	IN ...	719
	RIGHT	75	OUT ...	401
SOUTH BOUND	LEFT	52	NORTH LEG	
	THRU	261	IN ...	409
	RIGHT	43	OUT ...	615
EAST BOUND	LEFT	38	WEST LEG	
	THRU	219	IN ...	389
	RIGHT	65	OUT ...	547
WEST BOUND	LEFT	40	EAST LEG	
	THRU	287	IN ...	445
	RIGHT	46	OUT ...	399
		1,596		3,923

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	80	123
	THRU	390	513
	RIGHT	75	84
SOUTH BOUND	LEFT	52	57
	THRU	261	287
	RIGHT	43	64
EAST BOUND	LEFT	38	53
	THRU	219	258
	RIGHT	65	77
WEST BOUND	LEFT	40	37
	THRU	287	359
	RIGHT	46	49
		1,596	1,962

Intersection: Sterling Ave 9th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	22	SOUTH LEG	
	THRU	171	IN ...	313
	RIGHT	36	OUT ...	638
SOUTH BOUND	LEFT	55	NORTH LEG	
	THRU	362	IN ...	525
	RIGHT	83	OUT ...	331
EAST BOUND	LEFT	80	WEST LEG	
	THRU	172	IN ...	323
	RIGHT	22	OUT ...	380
WEST BOUND	LEFT	52	EAST LEG	
	THRU	256	IN ...	466
	RIGHT	85	OUT ...	277
		1,396		3,253

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	22	44
	THRU	171	207
	RIGHT	36	59
SOUTH BOUND	LEFT	55	27
	THRU	362	452
	RIGHT	83	49
EAST BOUND	LEFT	80	66
	THRU	172	192
	RIGHT	22	63
WEST BOUND	LEFT	52	122
	THRU	256	287
	RIGHT	85	57
		1,396	1,626

Intersection: Sterling Ave 9th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	33	SOUTH LEG	
	THRU	360	IN ...	736
	RIGHT	106	OUT ...	417
SOUTH BOUND	LEFT	71	NORTH LEG	
	THRU	234	IN ...	335
	RIGHT	75	OUT ...	583
EAST BOUND	LEFT	97	WEST LEG	
	THRU	270	IN ...	455
	RIGHT	34	OUT ...	337
WEST BOUND	LEFT	50	EAST LEG	
	THRU	176	IN ...	344
	RIGHT	73	OUT ...	534
		1,579		3,741

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	33	78
	THRU	360	461
	RIGHT	106	195
SOUTH BOUND	LEFT	71	37
	THRU	234	248
	RIGHT	75	51
EAST BOUND	LEFT	97	76
	THRU	270	302
	RIGHT	34	77
WEST BOUND	LEFT	50	92
	THRU	176	207
	RIGHT	73	46
		1,579	1,870

Intersection: Victoria Ave 9th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	45	SOUTH LEG	
	THRU	161	IN ...	223
	RIGHT	16	OUT ...	448
SOUTH BOUND	LEFT	44	NORTH LEG	
	THRU	249	IN ...	461
	RIGHT	65	OUT ...	257
EAST BOUND	LEFT	54	WEST LEG	
	THRU	91	IN ...	241
	RIGHT	40	OUT ...	285
WEST BOUND	LEFT	32	EAST LEG	
	THRU	99	IN ...	240
	RIGHT	55	OUT ...	176
		951		2,331

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	45	60
	THRU	161	146
	RIGHT	16	17
SOUTH BOUND	LEFT	44	44
	THRU	249	333
	RIGHT	65	84
EAST BOUND	LEFT	54	59
	THRU	91	115
	RIGHT	40	67
WEST BOUND	LEFT	32	47
	THRU	99	141
	RIGHT	55	53
		951	1,166

Intersection: Victoria Ave 9th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	46	SOUTH LEG	
	THRU	303	IN ...	519
	RIGHT	27	OUT ...	319
SOUTH BOUND	LEFT	59	NORTH LEG	
	THRU	216	IN ...	347
	RIGHT	60	OUT ...	558
EAST BOUND	LEFT	83	WEST LEG	
	THRU	178	IN ...	404
	RIGHT	45	OUT ...	306
WEST BOUND	LEFT	19	EAST LEG	
	THRU	120	IN ...	243
	RIGHT	56	OUT ...	330
		1,212		3,025

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	46	79
	THRU	303	400
	RIGHT	27	39
SOUTH BOUND	LEFT	59	54
	THRU	216	227
	RIGHT	60	66
EAST BOUND	LEFT	83	100
	THRU	178	236
	RIGHT	45	68
WEST BOUND	LEFT	19	24
	THRU	120	161
	RIGHT	56	57
		1,212	1,512

Intersection: Del Rosa Dr 6th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	71	SOUTH LEG	
	THRU	199	IN ...	327
	RIGHT	37	OUT ...	557
SOUTH BOUND	LEFT	43	NORTH LEG	
	THRU	274	IN ...	542
	RIGHT	95	OUT ...	426
EAST BOUND	LEFT	155	WEST LEG	
	THRU	144	IN ...	335
	RIGHT	53	OUT ...	234
WEST BOUND	LEFT	86	EAST LEG	
	THRU	144	IN ...	237
	RIGHT	43	OUT ...	224
		1,344		2,882

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	71	54
	THRU	199	232
	RIGHT	37	40
SOUTH BOUND	LEFT	43	54
	THRU	274	404
	RIGHT	95	84
EAST BOUND	LEFT	155	149
	THRU	144	129
	RIGHT	53	56
WEST BOUND	LEFT	86	97
	THRU	144	97
	RIGHT	43	44
		1,344	1,441

Intersection: Del Rosa Dr 6th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	10	SOUTH LEG	
	THRU	313	IN ...	651
	RIGHT	122	OUT ...	305
SOUTH BOUND	LEFT	14	NORTH LEG	
	THRU	230	IN ...	309
	RIGHT	30	OUT ...	592
EAST BOUND	LEFT	55	WEST LEG	
	THRU	124	IN ...	85
	RIGHT	14	OUT ...	80
WEST BOUND	LEFT	39	EAST LEG	
	THRU	86	IN ...	131
	RIGHT	19	OUT ...	199
		1,056		2,351

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	10	6
	THRU	313	523
	RIGHT	122	132
SOUTH BOUND	LEFT	14	19
	THRU	230	261
	RIGHT	30	21
EAST BOUND	LEFT	55	33
	THRU	124	48
	RIGHT	14	5
WEST BOUND	LEFT	39	40
	THRU	86	54
	RIGHT	19	36
		1,056	1,175

Intersection: Sterling Ave 6th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	12	SOUTH LEG	
	THRU	138	IN ...	286
	RIGHT	9	OUT ...	699
SOUTH BOUND	LEFT	24	NORTH LEG	
	THRU	469	IN ...	746
	RIGHT	43	OUT ...	318
EAST BOUND	LEFT	37	WEST LEG	
	THRU	102	IN ...	151
	RIGHT	12	OUT ...	135
WEST BOUND	LEFT	9	EAST LEG	
	THRU	116	IN ...	103
	RIGHT	14	OUT ...	134
		985		2,572

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	12	15
	THRU	138	259
	RIGHT	9	13
SOUTH BOUND	LEFT	24	28
	THRU	469	677
	RIGHT	43	42
EAST BOUND	LEFT	37	44
	THRU	102	93
	RIGHT	12	14
WEST BOUND	LEFT	9	9
	THRU	116	79
	RIGHT	14	15
		985	1,287

Intersection: Sterling Ave 6th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	15	SOUTH LEG	
	THRU	458	IN ...	784
	RIGHT	38	OUT ...	390
SOUTH BOUND	LEFT	26	NORTH LEG	
	THRU	237	IN ...	430
	RIGHT	23	OUT ...	785
EAST BOUND	LEFT	55	WEST LEG	
	THRU	104	IN ...	109
	RIGHT	11	OUT ...	101
WEST BOUND	LEFT	10	EAST LEG	
	THRU	76	IN ...	79
	RIGHT	18	OUT ...	126
		1,071		2,803

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	15	19
	THRU	458	725
	RIGHT	38	41
SOUTH BOUND	LEFT	26	28
	THRU	237	372
	RIGHT	23	29
EAST BOUND	LEFT	55	44
	THRU	104	56
	RIGHT	11	9
WEST BOUND	LEFT	10	9
	THRU	76	54
	RIGHT	18	16
		1,071	1,401

Intersection: Victoria Ave 6th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	31	SOUTH LEG	
	THRU	120	IN ...	153
	RIGHT	1	OUT ...	518
SOUTH BOUND	LEFT	13	NORTH LEG	
	THRU	299	IN ...	462
	RIGHT	23	OUT ...	162
EAST BOUND	LEFT	23	WEST LEG	
	THRU	33	IN ...	95
	RIGHT	41	OUT ...	75
WEST BOUND	LEFT	9	EAST LEG	
	THRU	32	IN ...	148
	RIGHT	18	OUT ...	103
		643		1,715

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	31	21
	THRU	120	119
	RIGHT	1	7
SOUTH BOUND	LEFT	13	39
	THRU	299	423
	RIGHT	23	7
EAST BOUND	LEFT	23	6
	THRU	33	57
	RIGHT	41	33
WEST BOUND	LEFT	9	62
	THRU	32	46
	RIGHT	18	38
		643	858

Intersection: Victoria Ave 6th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	46	SOUTH LEG	
	THRU	341	IN ...	607
	RIGHT	5	OUT ...	268
SOUTH BOUND	LEFT	16	NORTH LEG	
	THRU	203	IN ...	282
	RIGHT	24	OUT ...	520
EAST BOUND	LEFT	26	WEST LEG	
	THRU	44	IN ...	78
	RIGHT	25	OUT ...	93
WEST BOUND	LEFT	3	EAST LEG	
	THRU	29	IN ...	114
	RIGHT	10	OUT ...	201
		772		2,162

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	46	36
	THRU	341	484
	RIGHT	5	74
SOUTH BOUND	LEFT	16	62
	THRU	203	227
	RIGHT	24	5
EAST BOUND	LEFT	26	4
	THRU	44	65
	RIGHT	25	11
WEST BOUND	LEFT	3	30
	THRU	29	52
	RIGHT	10	32
		772	1,081

Intersection: Central Ave 6th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	9	SOUTH LEG	
	THRU	80	IN ...	92
	RIGHT	0	OUT ...	137
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	107	IN ...	149
	RIGHT	33	OUT ...	127
EAST BOUND	LEFT	44	WEST LEG	
	THRU	0	IN ...	71
	RIGHT	27	OUT ...	48
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
		300		625

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	9	10
	THRU	80	82
	RIGHT	0	0
SOUTH BOUND	LEFT	0	0
	THRU	107	111
	RIGHT	33	38
EAST BOUND	LEFT	44	45
	THRU	0	0
	RIGHT	27	26
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		300	312

Intersection: Central Ave 6th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	TOTAL
NORTH BOUND	LEFT	22	SOUTH LEG	
	THRU	173	IN ...	205
	RIGHT	0	OUT ...	109
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	75	IN ...	112
	RIGHT	30	OUT ...	241
EAST BOUND	LEFT	50	WEST LEG	
	THRU	0	IN ...	85
	RIGHT	27	OUT ...	52
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
		377		804

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	22	21
	THRU	173	185
	RIGHT	0	0
SOUTH BOUND	LEFT	0	0
	THRU	75	81
	RIGHT	30	31
EAST BOUND	LEFT	50	56
	THRU	0	0
	RIGHT	27	28
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		377	402

Intersection: I-215 SB Ramps 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	724
SOUTH BOUND	LEFT	532	NORTH LEG	
	THRU	5	IN ...	627
	RIGHT	193	OUT ...	0
EAST BOUND	LEFT	0	WEST LEG	
	THRU	442	IN ...	440
	RIGHT	350	OUT ...	940
WEST BOUND	LEFT	315	EAST LEG	
	THRU	504	IN ...	1,157
	RIGHT	0	OUT ...	560
		2,341		4,449

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	532	380
	THRU	5	7
	RIGHT	193	241
EAST BOUND	LEFT	0	0
	THRU	442	180
	RIGHT	350	260
WEST BOUND	LEFT	315	458
	THRU	504	700
	RIGHT	0	0
		2,341	2,224

Intersection: I-215 SB Ramps 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	801
SOUTH BOUND	LEFT	198	NORTH LEG	
	THRU	6	IN ...	473
	RIGHT	186	OUT ...	0
EAST BOUND	LEFT	0	WEST LEG	
	THRU	589	IN ...	1,235
	RIGHT	393	OUT ...	698
WEST BOUND	LEFT	498	EAST LEG	
	THRU	805	IN ...	960
	RIGHT	0	OUT ...	1,169
		2,675		5,336

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	198	311
	THRU	6	6
	RIGHT	186	156
EAST BOUND	LEFT	0	0
	THRU	589	858
	RIGHT	393	378
WEST BOUND	LEFT	498	416
	THRU	805	542
	RIGHT	0	0
		2,675	2,668

Intersection: I-215 NB Ramps 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	290	SOUTH LEG	
	THRU	0	IN ...	642
	RIGHT	542	OUT ...	0
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	112
EAST BOUND	LEFT	150	WEST LEG	
	THRU	840	IN ...	576
	RIGHT	0	OUT ...	1,137
WEST BOUND	LEFT	0	EAST LEG	
	THRU	509	IN ...	887
	RIGHT	148	OUT ...	856
		2,479		4,210

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	290	312
	THRU	0	0
	RIGHT	542	330
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	150	46
	THRU	840	527
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	509	825
	RIGHT	148	66
		2,479	2,105

Intersection: I-215 NB Ramps 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	380	SOUTH LEG	
	THRU	3	IN ...	754
	RIGHT	418	OUT ...	0
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	666
EAST BOUND	LEFT	225	WEST LEG	
	THRU	561	IN ...	1,168
	RIGHT	0	OUT ...	962
WEST BOUND	LEFT	0	EAST LEG	
	THRU	925	IN ...	1,136
	RIGHT	644	OUT ...	1,431
		3,156		6,116

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	380	272
	THRU	3	2
	RIGHT	418	480
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	225	220
	THRU	561	951
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	925	690
	RIGHT	644	444
		3,156	3,058

Intersection: E St 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	27	SOUTH LEG	
	THRU	102	IN ...	152
	RIGHT	20	OUT ...	197
SOUTH BOUND	LEFT	10	NORTH LEG	
	THRU	132	IN ...	162
	RIGHT	17	OUT ...	186
EAST BOUND	LEFT	75	WEST LEG	
	THRU	937	IN ...	1,079
	RIGHT	37	OUT ...	427
WEST BOUND	LEFT	7	EAST LEG	
	THRU	421	IN ...	448
	RIGHT	7	OUT ...	1,031
		1,792		3,681

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	27	17
	THRU	102	109
	RIGHT	20	26
SOUTH BOUND	LEFT	10	11
	THRU	132	143
	RIGHT	17	9
EAST BOUND	LEFT	75	65
	THRU	937	994
	RIGHT	37	40
WEST BOUND	LEFT	7	14
	THRU	421	401
	RIGHT	7	12
		1,792	1,841

Intersection: E St 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	94	SOUTH LEG	
	THRU	281	IN ...	447
	RIGHT	27	OUT ...	236
SOUTH BOUND	LEFT	21	NORTH LEG	
	THRU	163	IN ...	232
	RIGHT	60	OUT ...	352
EAST BOUND	LEFT	26	WEST LEG	
	THRU	543	IN ...	650
	RIGHT	42	OUT ...	1,032
WEST BOUND	LEFT	33	EAST LEG	
	THRU	838	IN ...	975
	RIGHT	20	OUT ...	684
		2,148		4,608

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	94	92
	THRU	281	309
	RIGHT	27	45
SOUTH BOUND	LEFT	21	28
	THRU	163	158
	RIGHT	60	47
EAST BOUND	LEFT	26	19
	THRU	543	611
	RIGHT	42	34
WEST BOUND	LEFT	33	44
	THRU	838	893
	RIGHT	20	24
		2,148	2,304

Intersection: D St 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	38	SOUTH LEG	
	THRU	98	IN ...	179
	RIGHT	32	OUT ...	406
SOUTH BOUND	LEFT	26	NORTH LEG	
	THRU	174	IN ...	304
	RIGHT	24	OUT ...	152
EAST BOUND	LEFT	43	WEST LEG	
	THRU	628	IN ...	996
	RIGHT	131	OUT ...	516
WEST BOUND	LEFT	39	EAST LEG	
	THRU	394	IN ...	478
	RIGHT	12	OUT ...	884
		1,639		3,915

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	38	46
	THRU	98	96
	RIGHT	32	38
SOUTH BOUND	LEFT	26	40
	THRU	174	227
	RIGHT	24	38
EAST BOUND	LEFT	43	46
	THRU	628	806
	RIGHT	131	144
WEST BOUND	LEFT	39	36
	THRU	394	433
	RIGHT	12	11
		1,639	1,958

Intersection: D St 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	95	SOUTH LEG	
	THRU	305	IN ...	595
	RIGHT	64	OUT ...	234
SOUTH BOUND	LEFT	27	NORTH LEG	
	THRU	142	IN ...	224
	RIGHT	51	OUT ...	501
EAST BOUND	LEFT	46	WEST LEG	
	THRU	490	IN ...	670
	RIGHT	30	OUT ...	897
WEST BOUND	LEFT	39	EAST LEG	
	THRU	588	IN ...	825
	RIGHT	20	OUT ...	680
		1,897		4,626

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	95	107
	THRU	305	411
	RIGHT	64	77
SOUTH BOUND	LEFT	27	28
	THRU	142	146
	RIGHT	51	49
EAST BOUND	LEFT	46	60
	THRU	490	575
	RIGHT	30	35
WEST BOUND	LEFT	39	52
	THRU	588	741
	RIGHT	20	30
		1,897	2,313

Intersection: Waterman Ave 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	117	SOUTH LEG	
	THRU	382	IN ...	648
	RIGHT	48	OUT ...	1,057
SOUTH BOUND	LEFT	14	NORTH LEG	
	THRU	519	IN ...	744
	RIGHT	110	OUT ...	488
EAST BOUND	LEFT	70	WEST LEG	
	THRU	169	IN ...	589
	RIGHT	153	OUT ...	510
WEST BOUND	LEFT	76	EAST LEG	
	THRU	297	IN ...	478
	RIGHT	16	OUT ...	405
		1,971		4,920

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	117	128
	THRU	382	413
	RIGHT	48	104
SOUTH BOUND	LEFT	14	18
	THRU	519	656
	RIGHT	110	72
EAST BOUND	LEFT	70	58
	THRU	169	283
	RIGHT	153	248
WEST BOUND	LEFT	76	152
	THRU	297	310
	RIGHT	16	16
		1,971	2,460

Intersection: Waterman Ave 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	143	SOUTH LEG	
	THRU	678	IN ...	1,361
	RIGHT	97	OUT ...	850
SOUTH BOUND	LEFT	52	NORTH LEG	
	THRU	574	IN ...	778
	RIGHT	132	OUT ...	1,042
EAST BOUND	LEFT	137	WEST LEG	
	THRU	395	IN ...	783
	RIGHT	132	OUT ...	668
WEST BOUND	LEFT	62	EAST LEG	
	THRU	212	IN ...	418
	RIGHT	33	OUT ...	779
		2,647		6,680

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	143	254
	THRU	678	898
	RIGHT	97	207
SOUTH BOUND	LEFT	52	59
	THRU	574	597
	RIGHT	132	124
EAST BOUND	LEFT	137	111
	THRU	395	514
	RIGHT	132	159
WEST BOUND	LEFT	62	94
	THRU	212	291
	RIGHT	33	34
		2,647	3,340

Intersection: Tippecanoe Ave 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	36	SOUTH LEG	
	THRU	176	IN ...	230
	RIGHT	11	OUT ...	616
SOUTH BOUND	LEFT	17	NORTH LEG	
	THRU	360	IN ...	573
	RIGHT	41	OUT ...	247
EAST BOUND	LEFT	17	WEST LEG	
	THRU	55	IN ...	321
	RIGHT	32	OUT ...	415
WEST BOUND	LEFT	20	EAST LEG	
	THRU	193	IN ...	436
	RIGHT	19	OUT ...	282
		977		3,120

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	36	31
	THRU	176	175
	RIGHT	11	23
SOUTH BOUND	LEFT	17	41
	THRU	360	494
	RIGHT	41	40
EAST BOUND	LEFT	17	32
	THRU	55	218
	RIGHT	32	72
WEST BOUND	LEFT	20	50
	THRU	193	344
	RIGHT	19	40
		977	1,560

Intersection: Tippecanoe Ave 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	57	SOUTH LEG	
	THRU	468	IN ...	735
	RIGHT	34	OUT ...	435
SOUTH BOUND	LEFT	35	NORTH LEG	
	THRU	297	IN ...	402
	RIGHT	24	OUT ...	698
EAST BOUND	LEFT	59	WEST LEG	
	THRU	414	IN ...	839
	RIGHT	48	OUT ...	353
WEST BOUND	LEFT	26	EAST LEG	
	THRU	122	IN ...	380
	RIGHT	28	OUT ...	870
		1,612		4,712

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	57	72
	THRU	468	582
	RIGHT	34	77
SOUTH BOUND	LEFT	35	60
	THRU	297	320
	RIGHT	24	23
EAST BOUND	LEFT	59	58
	THRU	414	734
	RIGHT	48	54
WEST BOUND	LEFT	26	62
	THRU	122	257
	RIGHT	28	58
		1,612	2,356

Intersection: Del Rosa Dr 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
--------	--------	-----	--------	-----
NORTH	LEFT	8	SOUTH LEG	
BOUND	THRU	192	IN ...	108
	RIGHT	7	OUT ...	159
SOUTH	LEFT	32	NORTH LEG	
BOUND	THRU	316	IN ...	541
	RIGHT	49	OUT ...	323
EAST	LEFT	64	WEST LEG	
BOUND	THRU	69	IN ...	316
	RIGHT	16	OUT ...	566
WEST	LEFT	27	EAST LEG	
BOUND	THRU	284	IN ...	179
	RIGHT	47	OUT ...	96
		1,111		2,286

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
--------	--------	-----	--------
NORTH	LEFT	8	14
BOUND	THRU	192	91
	RIGHT	7	1
SOUTH	LEFT	32	21
BOUND	THRU	316	146
	RIGHT	49	380
EAST	LEFT	64	224
BOUND	THRU	69	74
	RIGHT	16	12
WEST	LEFT	27	1
BOUND	THRU	284	172
	RIGHT	47	8
		1,111	1,143

Intersection: Del Rosa Dr 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	21	SOUTH LEG	
	THRU	343	IN ...	168
	RIGHT	24	OUT ...	79
SOUTH BOUND	LEFT	48	NORTH LEG	
	THRU	215	IN ...	317
	RIGHT	32	OUT ...	656
EAST BOUND	LEFT	71	WEST LEG	
	THRU	398	IN ...	902
	RIGHT	18	OUT ...	347
WEST BOUND	LEFT	16	EAST LEG	
	THRU	119	IN ...	40
	RIGHT	36	OUT ...	344
		1,341		2,853

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	21	39
	THRU	343	127
	RIGHT	24	1
SOUTH BOUND	LEFT	48	9
	THRU	215	58
	RIGHT	32	268
EAST BOUND	LEFT	71	526
	THRU	398	334
	RIGHT	18	21
WEST BOUND	LEFT	16	0
	THRU	119	40
	RIGHT	36	2
		1,341	1,426

Intersection: Sterling Ave 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	8	SOUTH LEG	
	THRU	97	IN ...	167
	RIGHT	2	OUT ...	759
SOUTH BOUND	LEFT	9	NORTH LEG	
	THRU	330	IN ...	603
	RIGHT	55	OUT ...	256
EAST BOUND	LEFT	22	WEST LEG	
	THRU	73	IN ...	95
	RIGHT	11	OUT ...	169
WEST BOUND	LEFT	24	EAST LEG	
	THRU	269	IN ...	504
	RIGHT	10	OUT ...	187
		910		2,741

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	8	1
	THRU	97	149
	RIGHT	2	17
SOUTH BOUND	LEFT	9	80
	THRU	330	519
	RIGHT	55	5
EAST BOUND	LEFT	22	5
	THRU	73	90
	RIGHT	11	2
WEST BOUND	LEFT	24	237
	THRU	269	163
	RIGHT	10	102
		910	1,371

Intersection: Sterling Ave 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	6	SOUTH LEG	
	THRU	310	IN ...	687
	RIGHT	14	OUT ...	336
SOUTH BOUND	LEFT	35	NORTH LEG	
	THRU	182	IN ...	391
	RIGHT	42	OUT ...	696
EAST BOUND	LEFT	83	WEST LEG	
	THRU	366	IN ...	382
	RIGHT	29	OUT ...	53
WEST BOUND	LEFT	11	EAST LEG	
	THRU	124	IN ...	324
	RIGHT	30	OUT ...	699
		1,232		3,566

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	6	1
	THRU	310	518
	RIGHT	14	162
SOUTH BOUND	LEFT	35	170
	THRU	182	223
	RIGHT	42	2
EAST BOUND	LEFT	83	12
	THRU	366	367
	RIGHT	29	7
WEST BOUND	LEFT	11	106
	THRU	124	50
	RIGHT	30	166
		1,232	1,783

Intersection: Victoria Ave 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	1	SOUTH LEG	
	THRU	74	IN ...	177
	RIGHT	13	OUT ...	760
SOUTH BOUND	LEFT	76	NORTH LEG	
	THRU	230	IN ...	505
	RIGHT	30	OUT ...	162
EAST BOUND	LEFT	9	WEST LEG	
	THRU	60	IN ...	191
	RIGHT	3	OUT ...	509
WEST BOUND	LEFT	257	EAST LEG	
	THRU	266	IN ...	696
	RIGHT	78	OUT ...	140
		1,097		3,140

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	1	19
	THRU	74	130
	RIGHT	13	17
SOUTH BOUND	LEFT	76	14
	THRU	230	421
	RIGHT	30	77
EAST BOUND	LEFT	9	21
	THRU	60	109
	RIGHT	3	55
WEST BOUND	LEFT	257	284
	THRU	266	413
	RIGHT	78	11
		1,097	1,570

Intersection: Victoria Ave 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	2	SOUTH LEG	
	THRU	248	IN ...	704
	RIGHT	116	OUT ...	383
SOUTH BOUND	LEFT	75	NORTH LEG	
	THRU	137	IN ...	263
	RIGHT	14	OUT ...	620
EAST BOUND	LEFT	48	WEST LEG	
	THRU	362	IN ...	728
	RIGHT	11	OUT ...	320
WEST BOUND	LEFT	30	EAST LEG	
	THRU	138	IN ...	272
	RIGHT	109	OUT ...	644
		1,290		3,933

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	2	42
	THRU	248	501
	RIGHT	116	149
SOUTH BOUND	LEFT	75	13
	THRU	137	217
	RIGHT	14	39
EAST BOUND	LEFT	48	101
	THRU	362	482
	RIGHT	11	137
WEST BOUND	LEFT	30	29
	THRU	138	238
	RIGHT	109	18
		1,290	1,967

Intersection: Central Ave 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	5	SOUTH LEG	
	THRU	18	IN ...	31
	RIGHT	4	OUT ...	113
SOUTH BOUND	LEFT	42	NORTH LEG	
	THRU	54	IN ...	132
	RIGHT	33	OUT ...	80
EAST BOUND	LEFT	15	WEST LEG	
	THRU	185	IN ...	266
	RIGHT	14	OUT ...	837
WEST BOUND	LEFT	33	EAST LEG	
	THRU	663	IN ...	884
	RIGHT	44	OUT ...	284
		1,110		2,627

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	5	6
	THRU	18	19
	RIGHT	4	5
SOUTH BOUND	LEFT	42	44
	THRU	54	55
	RIGHT	33	33
EAST BOUND	LEFT	15	15
	THRU	185	235
	RIGHT	14	17
WEST BOUND	LEFT	33	40
	THRU	663	798
	RIGHT	44	45
		1,110	1,314

Intersection: Central Ave 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	2	SOUTH LEG	
	THRU	82	IN ...	214
	RIGHT	110	OUT ...	47
SOUTH BOUND	LEFT	50	NORTH LEG	
	THRU	29	IN ...	100
	RIGHT	14	OUT ...	186
EAST BOUND	LEFT	21	WEST LEG	
	THRU	589	IN ...	755
	RIGHT	5	OUT ...	364
WEST BOUND	LEFT	6	EAST LEG	
	THRU	285	IN ...	427
	RIGHT	73	OUT ...	899
		1,266		2,991

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	2	2
	THRU	82	87
	RIGHT	110	124
SOUTH BOUND	LEFT	50	51
	THRU	29	33
	RIGHT	14	16
EAST BOUND	LEFT	21	24
	THRU	589	723
	RIGHT	5	7
WEST BOUND	LEFT	6	7
	THRU	285	345
	RIGHT	73	75
		1,266	1,495

Intersection: Palm Ave 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	33	SOUTH LEG	
	THRU	150	IN ...	432
	RIGHT	258	OUT ...	1,091
SOUTH BOUND	LEFT	125	NORTH LEG	
	THRU	584	IN ...	907
	RIGHT	73	OUT ...	278
EAST BOUND	LEFT	11	WEST LEG	
	THRU	203	IN ...	306
	RIGHT	63	OUT ...	803
WEST BOUND	LEFT	358	EAST LEG	
	THRU	568	IN ...	1,137
	RIGHT	92	OUT ...	609
		2,518		5,562

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	33	35
	THRU	150	157
	RIGHT	258	239
SOUTH BOUND	LEFT	125	145
	THRU	584	664
	RIGHT	73	98
EAST BOUND	LEFT	11	14
	THRU	203	224
	RIGHT	63	68
WEST BOUND	LEFT	358	360
	THRU	568	671
	RIGHT	92	107
		2,518	2,781

Intersection: Palm Ave 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	88	SOUTH LEG	
	THRU	569	IN ...	1,231
	RIGHT	534	OUT ...	520
SOUTH BOUND	LEFT	174	NORTH LEG	
	THRU	246	IN ...	521
	RIGHT	30	OUT ...	879
EAST BOUND	LEFT	70	WEST LEG	
	THRU	700	IN ...	957
	RIGHT	60	OUT ...	403
WEST BOUND	LEFT	190	EAST LEG	
	THRU	250	IN ...	586
	RIGHT	132	OUT ...	1,493
		3,043		6,590

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	88	95
	THRU	569	638
	RIGHT	534	498
SOUTH BOUND	LEFT	174	201
	THRU	246	280
	RIGHT	30	40
EAST BOUND	LEFT	70	95
	THRU	700	794
	RIGHT	60	67
WEST BOUND	LEFT	190	173
	THRU	250	267
	RIGHT	132	146
		3,043	3,295

Intersection: 0 0

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	91
	RIGHT	0	OUT ...	407
SOUTH BOUND	LEFT	154	NORTH LEG	
	THRU	0	IN ...	380
	RIGHT	84	OUT ...	140
EAST BOUND	LEFT	25	WEST LEG	
	THRU	564	IN ...	612
	RIGHT	0	OUT ...	1,186
WEST BOUND	LEFT	0	EAST LEG	
	THRU	983	IN ...	1,521
	RIGHT	70	OUT ...	871
		1,880		5,208

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	154	308
	THRU	0	0
	RIGHT	84	44
EAST BOUND	LEFT	25	10
	THRU	564	564
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	983	1,142
	RIGHT	70	129
		1,880	2,197

Intersection: 0 0

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	488
	RIGHT	0	OUT ...	170
SOUTH BOUND	LEFT	79	NORTH LEG	
	THRU	0	IN ...	177
	RIGHT	30	OUT ...	287
EAST BOUND	LEFT	58	WEST LEG	
	THRU	1,317	IN ...	1,460
	RIGHT	0	OUT ...	555
WEST BOUND	LEFT	0	EAST LEG	
	THRU	511	IN ...	789
	RIGHT	77	OUT ...	1,902
		2,072		5,829

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	79	198
	THRU	0	0
	RIGHT	30	11
EAST BOUND	LEFT	58	34
	THRU	1,317	1,704
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	511	544
	RIGHT	77	253
		2,072	2,745

Intersection: SR-210 SB Ramp 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	1,428
SOUTH BOUND	LEFT	122	NORTH LEG	
	THRU	7	IN ...	428
	RIGHT	121	OUT ...	0
EAST BOUND	LEFT	0	WEST LEG	
	THRU	326	IN ...	875
	RIGHT	396	OUT ...	1,544
WEST BOUND	LEFT	745	EAST LEG	
	THRU	951	IN ...	2,296
	RIGHT	0	OUT ...	627
		2,668		7,198

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	122	211
	THRU	7	11
	RIGHT	121	207
EAST BOUND	LEFT	0	0
	THRU	326	417
	RIGHT	396	458
WEST BOUND	LEFT	745	958
	THRU	951	1,337
	RIGHT	0	0
		2,668	3,599

Intersection: SR-210 SB Ramp 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	993
SOUTH BOUND	LEFT	310	NORTH LEG	
	THRU	6	IN ...	737
	RIGHT	118	OUT ...	0
EAST BOUND	LEFT	0	WEST LEG	
	THRU	933	IN ...	1,933
	RIGHT	489	OUT ...	801
WEST BOUND	LEFT	279	EAST LEG	
	THRU	482	IN ...	1,021
	RIGHT	0	OUT ...	1,897
		2,617		7,382

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	310	559
	THRU	6	9
	RIGHT	118	170
EAST BOUND	LEFT	0	0
	THRU	933	1,338
	RIGHT	489	595
WEST BOUND	LEFT	279	389
	THRU	482	631
	RIGHT	0	0
		2,617	3,691

Intersection: SR-210 NB Ramp 5th St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	363	SOUTH LEG	
	THRU	0	IN ...	888
	RIGHT	319	OUT ...	0
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	487
EAST BOUND	LEFT	82	WEST LEG	
	THRU	371	IN ...	632
	RIGHT	0	OUT ...	2,299
WEST BOUND	LEFT	0	EAST LEG	
	THRU	1336	IN ...	2,204
	RIGHT	392	OUT ...	940
		2,863		7,449

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	363	487
	THRU	0	0
	RIGHT	319	401
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	82	94
	THRU	371	538
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	1,336	1,812
	RIGHT	392	393
		2,863	3,725

Intersection: SR-210 NB Ramp 5th St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	207	SOUTH LEG	
	THRU	0	IN ...	849
	RIGHT	435	OUT ...	0
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	650
EAST BOUND	LEFT	182	WEST LEG	
	THRU	1,041	IN ...	1,877
	RIGHT	0	OUT ...	1,042
WEST BOUND	LEFT	0	EAST LEG	
	THRU	575	IN ...	1,203
	RIGHT	267	OUT ...	2,238
		2,707		7,859

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	207	240
	THRU	0	0
	RIGHT	435	610
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	182	251
	THRU	1,041	1,628
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	575	802
	RIGHT	267	398
		2,707	3,930

Intersection: Tippecanoe Ave 3rd St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	58	SOUTH LEG	
	THRU	265	IN ...	579
	RIGHT	176	OUT ...	1,009
SOUTH BOUND	LEFT	37	NORTH LEG	
	THRU	500	IN ...	773
	RIGHT	32	OUT ...	327
EAST BOUND	LEFT	30	WEST LEG	
	THRU	170	IN ...	308
	RIGHT	44	OUT ...	864
WEST BOUND	LEFT	302	EAST LEG	
	THRU	549	IN ...	1,026
	RIGHT	25	OUT ...	487
		2,188		5,372

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	58	91
	THRU	265	272
	RIGHT	176	215
SOUTH BOUND	LEFT	37	52
	THRU	500	664
	RIGHT	32	58
EAST BOUND	LEFT	30	33
	THRU	170	220
	RIGHT	44	54
WEST BOUND	LEFT	302	290
	THRU	549	716
	RIGHT	25	21
		2,188	2,686

Intersection: Tippecanoe Ave 3rd St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	60	SOUTH LEG	
	THRU	499	IN ...	1,284
	RIGHT	488	OUT ...	703
SOUTH BOUND	LEFT	42	NORTH LEG	
	THRU	299	IN ...	411
	RIGHT	25	OUT ...	767
EAST BOUND	LEFT	42	WEST LEG	
	THRU	616	IN ...	1,026
	RIGHT	59	OUT ...	488
WEST BOUND	LEFT	215	EAST LEG	
	THRU	198	IN ...	639
	RIGHT	50	OUT ...	1,401
		2,593		6,719

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	60	119
	THRU	499	643
	RIGHT	488	520
SOUTH BOUND	LEFT	42	36
	THRU	299	338
	RIGHT	25	39
EAST BOUND	LEFT	42	70
	THRU	616	846
	RIGHT	59	108
WEST BOUND	LEFT	215	257
	THRU	198	330
	RIGHT	50	54
		2,593	3,359

Intersection: Del Rosa Dr 3rd St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	13	SOUTH LEG	
	THRU	89	IN ...	391
	RIGHT	97	OUT ...	842
SOUTH BOUND	LEFT	26	NORTH LEG	
	THRU	228	IN ...	123
	RIGHT	86	OUT ...	119
EAST BOUND	LEFT	73	WEST LEG	
	THRU	210	IN ...	402
	RIGHT	28	OUT ...	1,103
WEST BOUND	LEFT	230	EAST LEG	
	THRU	815	IN ...	1,833
	RIGHT	12	OUT ...	684
		1,907		5,496

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	13	13
	THRU	89	75
	RIGHT	97	318
SOUTH BOUND	LEFT	26	15
	THRU	228	92
	RIGHT	86	15
EAST BOUND	LEFT	73	31
	THRU	210	351
	RIGHT	28	34
WEST BOUND	LEFT	230	716
	THRU	815	1,075
	RIGHT	12	13
		1,907	2,748

Intersection: Del Rosa Dr 3rd St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	12	SOUTH LEG	
	THRU	207	IN ...	861
	RIGHT	337	OUT ...	430
SOUTH BOUND	LEFT	44	NORTH LEG	
	THRU	131	IN ...	116
	RIGHT	69	OUT ...	117
EAST BOUND	LEFT	116	WEST LEG	
	THRU	975	IN ...	1,381
	RIGHT	6	OUT ...	587
WEST BOUND	LEFT	61	EAST LEG	
	THRU	351	IN ...	1,009
	RIGHT	26	OUT ...	2,233
		2,335		6,733

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	12	7
	THRU	207	69
	RIGHT	337	811
SOUTH BOUND	LEFT	44	28
	THRU	131	72
	RIGHT	69	11
EAST BOUND	LEFT	116	23
	THRU	975	1,394
	RIGHT	6	7
WEST BOUND	LEFT	61	351
	THRU	351	569
	RIGHT	26	24
		2,335	3,367

Intersection: Sterling Ave 3rd St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
SOUTH BOUND	LEFT	39	NORTH LEG	
	THRU	0	IN ...	766
	RIGHT	333	OUT ...	181
EAST BOUND	LEFT	98	WEST LEG	
	THRU	223	IN ...	642
	RIGHT	0	OUT ...	1,971
WEST BOUND	LEFT	0	EAST LEG	
	THRU	795	IN ...	1,146
	RIGHT	23	OUT ...	402
		1,511		5,108

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	39	17
	THRU	0	0
	RIGHT	333	781
EAST BOUND	LEFT	98	175
	THRU	223	385
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	795	1,190
	RIGHT	23	6
		1,511	2,554

Intersection: Sterling Ave 3rd St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
SOUTH BOUND	LEFT	59	NORTH LEG	
	THRU	0	IN ...	291
	RIGHT	118	OUT ...	665
EAST BOUND	LEFT	268	WEST LEG	
	THRU	1,128	IN ...	2,352
	RIGHT	0	OUT ...	920
WEST BOUND	LEFT	0	EAST LEG	
	THRU	262	IN ...	497
	RIGHT	40	OUT ...	1,554
		1,875		6,278

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	59	13
	THRU	0	0
	RIGHT	118	335
EAST BOUND	LEFT	268	653
	THRU	1,128	1,542
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	262	585
	RIGHT	40	12
		1,875	3,139

Intersection: Victoria Ave 3rd St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	12	SOUTH LEG	
	THRU	10	IN ...	44
	RIGHT	22	OUT ...	77
SOUTH BOUND	LEFT	55	NORTH LEG	
	THRU	30	IN ...	791
	RIGHT	452	OUT ...	197
EAST BOUND	LEFT	82	WEST LEG	
	THRU	156	IN ...	407
	RIGHT	24	OUT ...	1,237
WEST BOUND	LEFT	23	EAST LEG	
	THRU	328	IN ...	715
	RIGHT	13	OUT ...	444
		1,207		3,912

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	12	7
	THRU	10	12
	RIGHT	22	26
SOUTH BOUND	LEFT	55	156
	THRU	30	30
	RIGHT	452	603
EAST BOUND	LEFT	82	134
	THRU	156	262
	RIGHT	24	14
WEST BOUND	LEFT	23	33
	THRU	328	628
	RIGHT	13	52
		1,207	1,956

Intersection: Victoria Ave 3rd St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	18	SOUTH LEG	
	THRU	32	IN ...	91
	RIGHT	41	OUT ...	59
SOUTH BOUND	LEFT	48	NORTH LEG	
	THRU	20	IN ...	376
	RIGHT	105	OUT ...	704
EAST BOUND	LEFT	318	WEST LEG	
	THRU	830	IN ...	1,633
	RIGHT	7	OUT ...	497
WEST BOUND	LEFT	32	EAST LEG	
	THRU	167	IN ...	494
	RIGHT	38	OUT ...	1,334
		1,656		5,188

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	18	10
	THRU	32	39
	RIGHT	41	42
SOUTH BOUND	LEFT	48	166
	THRU	20	21
	RIGHT	105	187
EAST BOUND	LEFT	318	509
	THRU	830	1,125
	RIGHT	7	3
WEST BOUND	LEFT	32	35
	THRU	167	300
	RIGHT	38	156
		1,656	2,594

Intersection: Central Ave 3rd St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
SOUTH BOUND	LEFT	22	NORTH LEG	
	THRU	0	IN ...	104
	RIGHT	70	OUT ...	27
EAST BOUND	LEFT	20	WEST LEG	
	THRU	216	IN ...	437
	RIGHT	0	OUT ...	703
WEST BOUND	LEFT	0	EAST LEG	
	THRU	306	IN ...	624
	RIGHT	3	OUT ...	435
		637		2,330

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	22	24
	THRU	0	0
	RIGHT	70	80
EAST BOUND	LEFT	20	23
	THRU	216	411
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	306	623
	RIGHT	3	4
		637	1,165

Intersection: Central Ave 3rd St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	1	SOUTH LEG	
	THRU	3	IN ...	4
	RIGHT	0	OUT ...	0
SOUTH BOUND	LEFT	21	NORTH LEG	
	THRU	0	IN ...	52
	RIGHT	24	OUT ...	220
EAST BOUND	LEFT	177	WEST LEG	
	THRU	728	IN ...	1,328
	RIGHT	0	OUT ...	496
WEST BOUND	LEFT	0	EAST LEG	
	THRU	212	IN ...	483
	RIGHT	20	OUT ...	1,152
		1,186		3,735

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	1	1
	THRU	3	3
	RIGHT	0	0
SOUTH BOUND	LEFT	21	22
	THRU	0	0
	RIGHT	24	30
EAST BOUND	LEFT	177	191
	THRU	728	1,130
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	212	464
	RIGHT	20	26
		1,186	1,868

Intersection: Palm Ave 3rd St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	170	SOUTH LEG	
	THRU	364	IN ...	628
	RIGHT	6	OUT ...	1,359
SOUTH BOUND	LEFT	30	NORTH LEG	
	THRU	800	IN ...	1,065
	RIGHT	149	OUT ...	506
EAST BOUND	LEFT	106	WEST LEG	
	THRU	3	IN ...	487
	RIGHT	172	OUT ...	649
WEST BOUND	LEFT	6	EAST LEG	
	THRU	5	IN ...	463
	RIGHT	45	OUT ...	130
		1,856		5,286

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	170	385
	THRU	364	206
	RIGHT	6	33
SOUTH BOUND	LEFT	30	78
	THRU	800	831
	RIGHT	149	159
EAST BOUND	LEFT	106	64
	THRU	3	18
	RIGHT	172	406
WEST BOUND	LEFT	6	122
	THRU	5	104
	RIGHT	45	235
		1,856	2,643

Intersection: Palm Ave 3rd St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	192	SOUTH LEG	
	THRU	769	IN ...	1,360
	RIGHT	6	OUT ...	982
SOUTH BOUND	LEFT	12	NORTH LEG	
	THRU	391	IN ...	511
	RIGHT	84	OUT ...	1,251
EAST BOUND	LEFT	419	WEST LEG	
	THRU	32	IN ...	1,237
	RIGHT	364	OUT ...	542
WEST BOUND	LEFT	9	EAST LEG	
	THRU	3	IN ...	205
	RIGHT	23	OUT ...	538
		2,304		6,625

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	192	434
	THRU	769	829
	RIGHT	6	95
SOUTH BOUND	LEFT	12	80
	THRU	391	351
	RIGHT	84	80
EAST BOUND	LEFT	419	322
	THRU	32	362
	RIGHT	364	554
WEST BOUND	LEFT	9	77
	THRU	3	27
	RIGHT	23	100
		2,304	3,313

Intersection: Tippecanoe Ave Rialto Ave

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	66	SOUTH LEG	
	THRU	451	IN ...	620
	RIGHT	0	OUT ...	951
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	692	IN ...	940
	RIGHT	81	OUT ...	615
EAST BOUND	LEFT	85	WEST LEG	
	THRU	0	IN ...	198
	RIGHT	94	OUT ...	192
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
		1,469		3,516

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	66	90
	THRU	451	528
	RIGHT	0	0
SOUTH BOUND	LEFT	0	0
	THRU	692	841
	RIGHT	81	101
EAST BOUND	LEFT	85	87
	THRU	0	0
	RIGHT	94	110
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		1,469	1,758

Intersection: Tippecanoe Ave Rialto Ave

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	98	SOUTH LEG	
	THRU	975	IN ...	1,315
	RIGHT	0	OUT ...	851
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	647	IN ...	832
	RIGHT	59	OUT ...	1,324
EAST BOUND	LEFT	111	WEST LEG	
	THRU	0	IN ...	218
	RIGHT	53	OUT ...	190
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
		1,943		4,730

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	98	126
	THRU	975	1,184
	RIGHT	0	0
SOUTH BOUND	LEFT	0	0
	THRU	647	773
	RIGHT	59	64
EAST BOUND	LEFT	111	140
	THRU	0	0
	RIGHT	53	78
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		1,943	2,365

Intersection: Tippecanoe Ave Mill St

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	6	SOUTH LEG	
	THRU	722	IN ...	1,345
	RIGHT	142	OUT ...	1,270
SOUTH BOUND	LEFT	167	NORTH LEG	
	THRU	602	IN ...	1,390
	RIGHT	4	OUT ...	1,379
EAST BOUND	LEFT	30	WEST LEG	
	THRU	14	IN ...	363
	RIGHT	5	OUT ...	449
WEST BOUND	LEFT	120	EAST LEG	
	THRU	38	IN ...	323
	RIGHT	165	OUT ...	323
		2,015		6,842

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	6	143
	THRU	722	1,077
	RIGHT	142	120
SOUTH BOUND	LEFT	167	139
	THRU	602	1,162
	RIGHT	4	95
EAST BOUND	LEFT	30	244
	THRU	14	64
	RIGHT	5	53
WEST BOUND	LEFT	120	54
	THRU	38	211
	RIGHT	165	57
		2,015	3,421

Intersection: Tippecanoe Ave Mill St

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	109	SOUTH LEG	
	THRU	1,005	IN ...	1,743
	RIGHT	0	OUT ...	1,685
SOUTH BOUND	LEFT	2	NORTH LEG	
	THRU	776	IN ...	1,505
	RIGHT	121	OUT ...	2,005
EAST BOUND	LEFT	244	WEST LEG	
	THRU	8	IN ...	965
	RIGHT	224	OUT ...	569
WEST BOUND	LEFT	25	EAST LEG	
	THRU	27	IN ...	55
	RIGHT	3	OUT ...	10
		2,544		8,537

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	109	245
	THRU	1,005	1,498
	RIGHT	0	0
SOUTH BOUND	LEFT	2	2
	THRU	776	1,213
	RIGHT	121	291
EAST BOUND	LEFT	244	504
	THRU	8	8
	RIGHT	224	453
WEST BOUND	LEFT	25	20
	THRU	27	33
	RIGHT	3	2
		2,544	4,269

Intersection: Tippecanoe Ave Central Ave

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	45	SOUTH LEG	
	THRU	562	IN ...	1,293
	RIGHT	127	OUT ...	1,292
SOUTH BOUND	LEFT	238	NORTH LEG	
	THRU	626	IN ...	1,507
	RIGHT	100	OUT ...	1,314
EAST BOUND	LEFT	82	WEST LEG	
	THRU	204	IN ...	372
	RIGHT	46	OUT ...	312
WEST BOUND	LEFT	26	EAST LEG	
	THRU	95	IN ...	316
	RIGHT	195	OUT ...	569
		2,346		6,974

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	45	87
	THRU	562	1,029
	RIGHT	127	170
SOUTH BOUND	LEFT	238	215
	THRU	626	1,169
	RIGHT	100	131
EAST BOUND	LEFT	82	101
	THRU	204	184
	RIGHT	46	86
WEST BOUND	LEFT	26	37
	THRU	95	95
	RIGHT	195	184
		2,346	3,487

Intersection: Tippecanoe Ave Central Ave

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	61	SOUTH LEG	
	THRU	869	IN ...	1,726
	RIGHT	69	OUT ...	1,650
SOUTH BOUND	LEFT	237	NORTH LEG	
	THRU	752	IN ...	1,792
	RIGHT	143	OUT ...	1,878
EAST BOUND	LEFT	122	WEST LEG	
	THRU	192	IN ...	435
	RIGHT	55	OUT ...	419
WEST BOUND	LEFT	59	EAST LEG	
	THRU	174	IN ...	491
	RIGHT	258	OUT ...	498
		2,991		8,888

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	61	106
	THRU	869	1,504
	RIGHT	69	100
SOUTH BOUND	LEFT	237	213
	THRU	752	1,441
	RIGHT	143	154
EAST BOUND	LEFT	122	139
	THRU	192	184
	RIGHT	55	112
WEST BOUND	LEFT	59	96
	THRU	174	159
	RIGHT	258	235
		2,991	4,444

Intersection: Tippecanoe Ave Orange Show Rd

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	75	SOUTH LEG	
	THRU	512	IN ...	1,066
	RIGHT	48	OUT ...	1,136
SOUTH BOUND	LEFT	109	NORTH LEG	
	THRU	590	IN ...	1,357
	RIGHT	64	OUT ...	1,309
EAST BOUND	LEFT	122	WEST LEG	
	THRU	157	IN ...	344
	RIGHT	128	OUT ...	397
WEST BOUND	LEFT	88	EAST LEG	
	THRU	256	IN ...	659
	RIGHT	116	OUT ...	585
		2,265		6,852

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	75	58
	THRU	512	918
	RIGHT	48	94
SOUTH BOUND	LEFT	109	330
	THRU	590	945
	RIGHT	64	76
EAST BOUND	LEFT	122	114
	THRU	157	161
	RIGHT	128	69
WEST BOUND	LEFT	88	121
	THRU	256	263
	RIGHT	116	276
		2,265	3,426

Intersection: Tippecanoe Ave Orange Show Rd

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	129	SOUTH LEG	
	THRU	664	IN ...	1,458
	RIGHT	105	OUT ...	1,466
SOUTH BOUND	LEFT	224	NORTH LEG	
	THRU	627	IN ...	1,682
	RIGHT	47	OUT ...	1,757
EAST BOUND	LEFT	183	WEST LEG	
	THRU	664	IN ...	1,037
	RIGHT	145	OUT ...	718
WEST BOUND	LEFT	174	EAST LEG	
	THRU	516	IN ...	1,133
	RIGHT	183	OUT ...	1,369
		3,661		10,620

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	129	120
	THRU	664	1,176
	RIGHT	105	164
SOUTH BOUND	LEFT	224	507
	THRU	627	1,110
	RIGHT	47	63
EAST BOUND	LEFT	183	219
	THRU	664	699
	RIGHT	145	119
WEST BOUND	LEFT	174	237
	THRU	516	535
	RIGHT	183	362
		3,661	5,310

Intersection: Tippecanoe Ave Hospitality Ln

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	382	SOUTH LEG	
	THRU	808	IN ...	1,573
	RIGHT	40	OUT ...	845
SOUTH BOUND	LEFT	51	NORTH LEG	
	THRU	570	IN ...	726
	RIGHT	43	OUT ...	1,154
EAST BOUND	LEFT	56	WEST LEG	
	THRU	19	IN ...	187
	RIGHT	62	OUT ...	603
WEST BOUND	LEFT	79	EAST LEG	
	THRU	53	IN ...	368
	RIGHT	39	OUT ...	251
		2,202		5,707

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	382	458
	THRU	808	1,008
	RIGHT	40	104
SOUTH BOUND	LEFT	51	101
	THRU	570	587
	RIGHT	43	39
EAST BOUND	LEFT	56	64
	THRU	19	46
	RIGHT	62	77
WEST BOUND	LEFT	79	180
	THRU	53	107
	RIGHT	39	82
		2,202	2,854

Intersection: Tippecanoe Ave Hospitality Ln

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	425	SOUTH LEG	
	THRU	516	IN ...	1,528
	RIGHT	78	OUT ...	1,432
SOUTH BOUND	LEFT	45	NORTH LEG	
	THRU	816	IN ...	1,190
	RIGHT	114	OUT ...	1,093
EAST BOUND	LEFT	213	WEST LEG	
	THRU	88	IN ...	831
	RIGHT	306	OUT ...	705
WEST BOUND	LEFT	82	EAST LEG	
	THRU	65	IN ...	308
	RIGHT	23	OUT ...	627
		2,771		7,715

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	425	487
	THRU	516	782
	RIGHT	78	260
SOUTH BOUND	LEFT	45	130
	THRU	816	946
	RIGHT	114	113
EAST BOUND	LEFT	213	262
	THRU	88	238
	RIGHT	306	332
WEST BOUND	LEFT	82	154
	THRU	65	105
	RIGHT	23	49
		2,771	3,858

Intersection: Tippecanoe Ave SR-10 WB Ramps

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	125	SOUTH LEG	
	THRU	817	IN ...	1,620
	RIGHT	388	OUT ...	1,435
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	714	IN ...	842
	RIGHT	60	OUT ...	1,345
EAST BOUND	LEFT	38	WEST LEG	
	THRU	3	IN ...	323
	RIGHT	179	OUT ...	377
WEST BOUND	LEFT	528	EAST LEG	
	THRU	137	IN ...	1,155
	RIGHT	369	OUT ...	783
		3,358		7,880

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	125	108
	THRU	817	756
	RIGHT	388	770
SOUTH BOUND	LEFT	0	0
	THRU	714	742
	RIGHT	60	92
EAST BOUND	LEFT	38	77
	THRU	3	13
	RIGHT	179	231
WEST BOUND	LEFT	528	463
	THRU	137	177
	RIGHT	369	512
		3,358	3,940

Intersection: Tippecanoe Ave SR-10 WB Ramps

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	300	SOUTH LEG	
	THRU	599	IN ...	1,837
	RIGHT	503	OUT ...	2,133
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	1,174	IN ...	1,381
	RIGHT	180	OUT ...	1,420
EAST BOUND	LEFT	157	WEST LEG	
	THRU	0	IN ...	1,187
	RIGHT	670	OUT ...	476
WEST BOUND	LEFT	180	EAST LEG	
	THRU	215	IN ...	789
	RIGHT	267	OUT ...	1,166
		4,245		10,388

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	300	133
	THRU	599	577
	RIGHT	503	1,166
SOUTH BOUND	LEFT	0	0
	THRU	1,174	1,185
	RIGHT	180	170
EAST BOUND	LEFT	157	379
	THRU	0	0
	RIGHT	670	794
WEST BOUND	LEFT	180	154
	THRU	215	172
	RIGHT	267	464
		4,245	5,194

Intersection: Anderson St SR-10 EB Ramps

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	641	IN ...	941
	RIGHT	298	OUT ...	1,826
SOUTH BOUND	LEFT	161	NORTH LEG	
	THRU	830	IN ...	1,005
	RIGHT	0	OUT ...	1,622
EAST BOUND	LEFT	691	WEST LEG	
	THRU	4	IN ...	1,970
	RIGHT	611	OUT ...	0
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	469
		3,236		7,833

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	641	633
	RIGHT	298	308
SOUTH BOUND	LEFT	161	155
	THRU	830	850
	RIGHT	0	0
EAST BOUND	LEFT	691	989
	THRU	4	6
	RIGHT	611	976
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		3,236	3,917

Intersection: Anderson St SR-10 EB Ramps

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	952	IN ...	1,364
	RIGHT	343	OUT ...	1,305
SOUTH BOUND	LEFT	674	NORTH LEG	
	THRU	664	IN ...	1,447
	RIGHT	0	OUT ...	1,812
EAST BOUND	LEFT	425	WEST LEG	
	THRU	2	IN ...	1,335
	RIGHT	302	OUT ...	0
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	1,029
		3,362		8,292

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	952	1,031
	RIGHT	343	333
SOUTH BOUND	LEFT	674	692
	THRU	664	754
	RIGHT	0	0
EAST BOUND	LEFT	425	781
	THRU	2	3
	RIGHT	302	551
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		3,362	4,146

Intersection: 0 0

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
EAST BOUND	LEFT	0	WEST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
		0		0

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		0	0

Intersection: 0 0

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

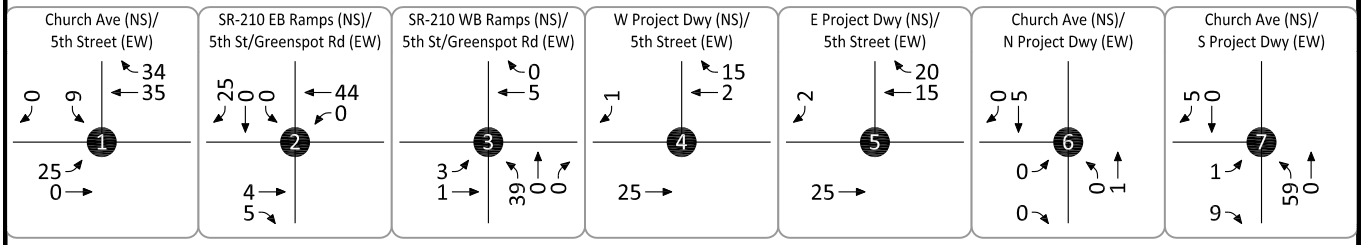
APPROACH	TURN MOVEMENT	BY COUNT	FY INTERSECTION LEG	TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
EAST BOUND	LEFT	0	WEST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
		0		0

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

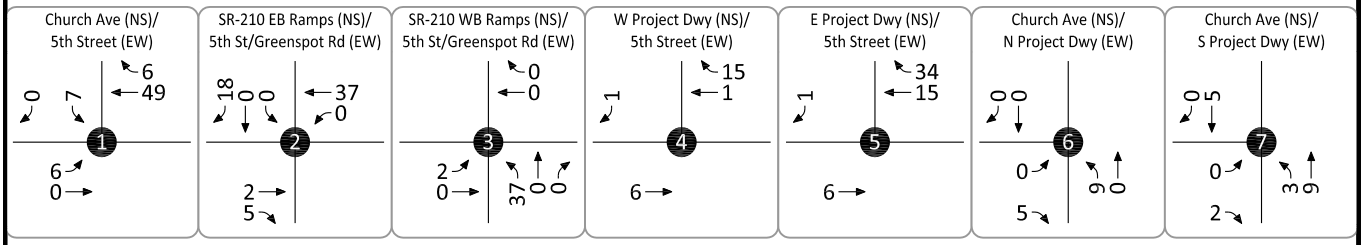
APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		0	0

Figure 16
Project Morning Peak Hour Intersection Turning Movement Volumes

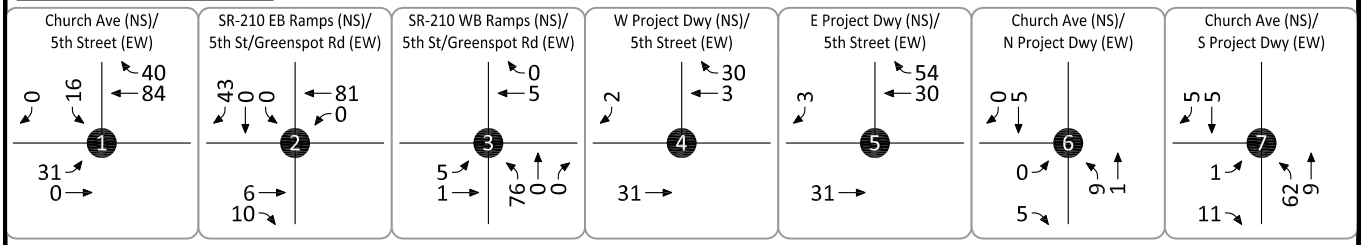
Cars Only



Trucks Only (in PCE)



Total Project Trips (in PCE)



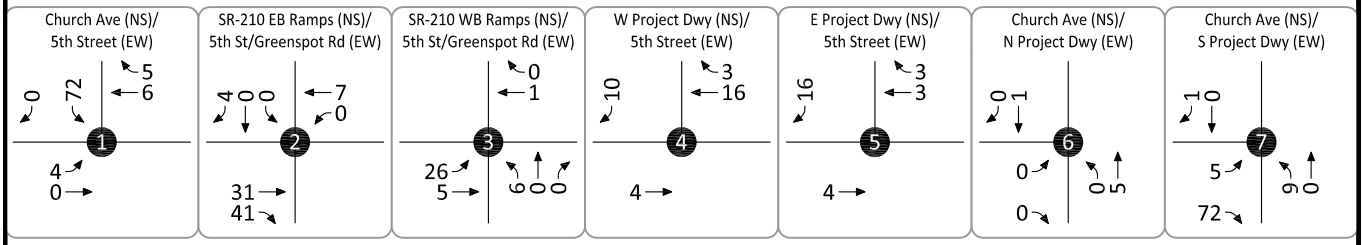
KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

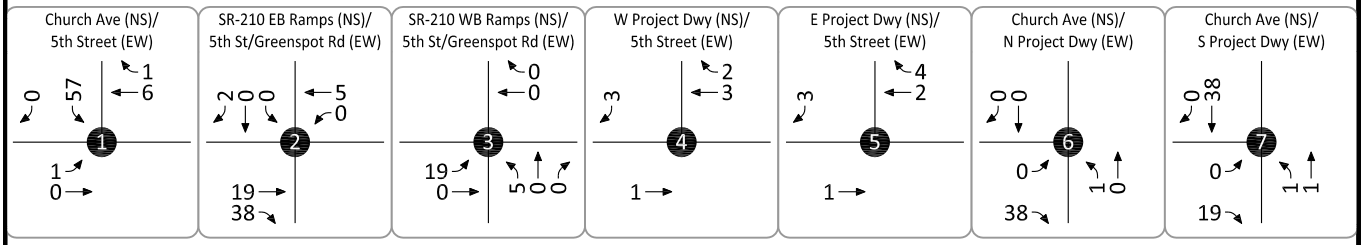
JN 6703

Figure 17
Project Evening Peak Hour Intersection Turning Movement Volumes

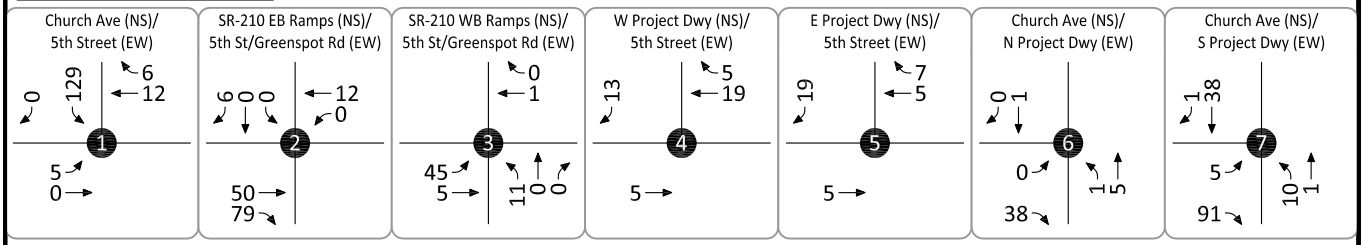
Cars Only



Trucks Only (in PCE)



Total Project Trips (in PCE)



KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

JN 6703

SCOPE FOR TRAFFIC STUDY

Project Name:	Duke Realty – Alabama St and Palmetto Ave High-Cube Transload and Short-Term Storage Warehouse

1. Traffic Distribution: Please insert or attach Figure(s) illustrating project trip distribution in percentages and volumes at the study intersections analyzed. See Attached Figure 1 – Figure 5.

2. Trip Credit: Exact amount of credit subject to approval by Traffic Division.

Transportation Demand Management (TDM)	No	
Existing Active Land Use	No	
Previous Land Use	No	
Internal Trip Reduction	No	
Pass-by Trip Reduction	No	

3. Related Projects: Consultant should check with Planning in the San Bernardino County Department of Land Use Services and planning departments of adjoining Cities. Documentation of the consultation from these agencies shall be included in the traffic study. Related projects list shall be submitted to Traffic Division for our review and approval before being incorporated in the study.

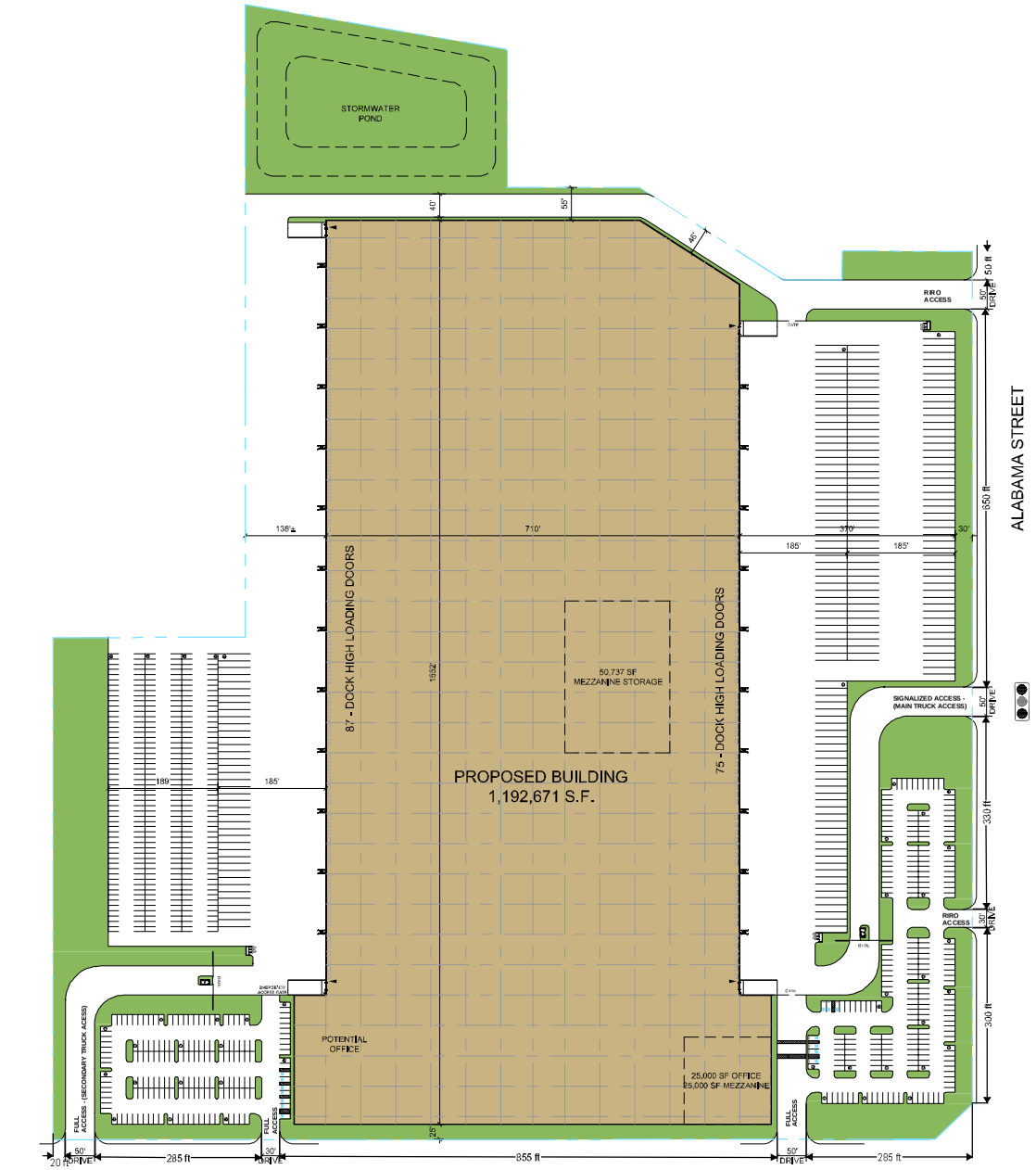
4. Freeway Analysis: The potential traffic impact on the following Freeway(s) must be considered.

_____

_____

_____

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) and can be obtained from http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tiguide.pdf. If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using HCM procedures. Appendix A of the SANBAG CMP outlines allowable modifications to these procedures. The SANBAG CMP can be viewed online at:
http://www.sanbag.ca.gov/planning/subr_congestion.html



A CONCEPTUAL SITE PLAN
SCALE: 1" = 80'

PROJECT INFORMATION - SCHEME 5			1/11/2018
GROSS SITE AREA	54.76 AC	2,386,382 SF	
TOTAL BUILDING AREA		1,192,671 SF	
FOOTPRINT		1,116,934 SF	
	WAREHOUSE	1,061,934	
	OFFICE	25,000	
MEZZANINE		75,737	
	OFFICE	25,000	
	STORAGE	50,737	
NET COVERAGE		50.00%	
LANDSCAPE PROVIDED		15.1%	360,887
LANDSCAPE REQUIRED		15.0%	357,801
PARKING REQUIRED			
	WAREHOUSE @ 1/1,000 <40K	40	
	WAREHOUSE @ 1/4,000 >40K	276	
	OFFICE @ 1/250	200	
TOTAL REQUIRED		516	
PARKING PROVIDED		725	
	STANDARD	711	
	ADA	14	
	TRAILER	215	

PROJECT
DUKE REALTY
CITY OF REDLANDS
SAN BERNARDINO COUNTY

SCHEME 5
SITE PLAN

HERDMAN
ARCHITECTURE + DESIGN
18201 Scientific Way
Irvine, CA 92618
www.Herdman-AD.com
714.389.2800
Info@Herdman-AD.com

A17-2112
01/11/2018

NORTH

CONCEPTUAL
SITE PLAN

SBIAA AIR FREIGHT/EASTGATE BUILDING 1 DEVELOPMENT

TRAFFIC IMPACT ANALYSIS

JULY 12, 2018

PREPARED FOR:

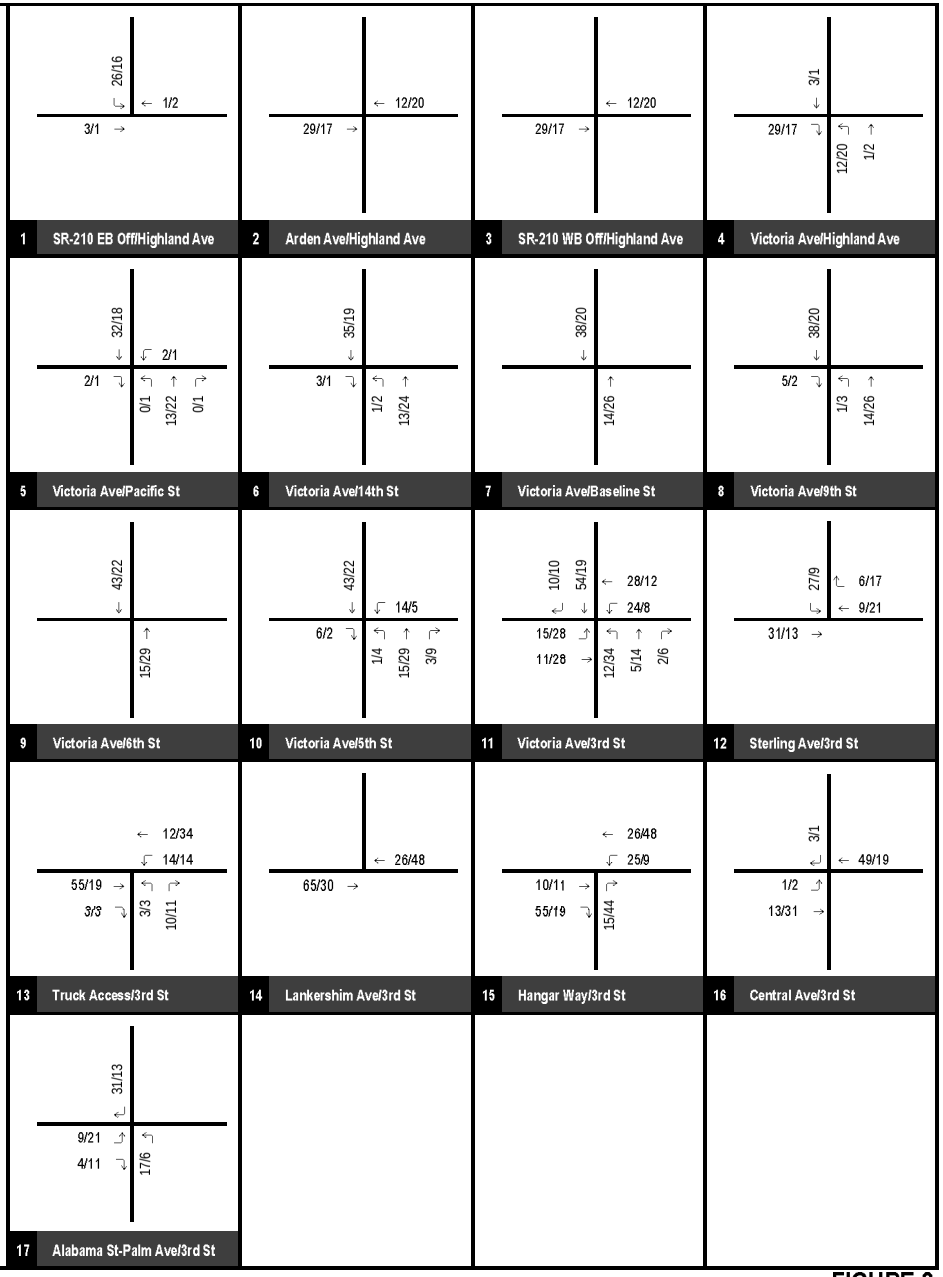
HILLWOOD
901 Via Piemonte, Suite 175
Ontario, California 91764

AND

Southstar Engineering
1945 Chicago Avenue, Unit C
Riverside, California 92507

PREPARED BY:

translutions, inc.
17632 Irvine Boulevard, Suite 200
Tustin, California 92780
(949) 656-3131



XX/YY AM/PM Peak Hour Trips

FIGURE 8

SBIAA Air Freight/Eastgate Building 1
Total Project Trip Assignment

translutions
the transportation solutions company...

APPENDIX E

TRAFFIC SIGNAL WARRANT WORKSHEETS

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **Sterling Ave** NB SB # OF APPROACH LANES: **2**

MINOR STREET: **6th St** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **San Bernardino, CA**

COMMENTS: Horizon Year
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **N**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**600**	**150**		**900**	**75**		**480**	**120**		**720**	**60**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	1,035	160	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	1,214	170	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	
05:00 PM	TO	06:00 PM	0	0														
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			2,249	330	2	2	**2**	2	2	**2**	2	2	**2**	2	2	**2**	**2**	**0**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**NOT SATISFIED**

06/25/19
Kimley-Horn and Associates

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **Victoria Avenue** NB SB # OF APPROACH LANES: **2**

MINOR STREET: **6th Street** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **Highland, CA**

COMMENTS: Horizon Year
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **Y**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**420**	**105**		**630**	**53**		**336**	**84**		**504**	**42**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	643	146	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	917	116	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	
05:00 PM	TO	06:00 PM	0	0														
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			1,560	262	2	2	**2**	2	2	**2**	2	2	**2**	2	2	**2**	**2**	**0**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**NOT SATISFIED**

06/25/19
Kimley-Horn and Associates

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **3rd Street** EB WB # OF APPROACH LANES: **2**

MINOR STREET: **Central Ave** NB SB # OF APPROACH LANES: **1**

CITY, STATE: **Highland, CA**

COMMENTS: Horizon Year
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **Y**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**420**	**105**		**630**	**53**		**336**	**84**		**504**	**42**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	1,061	104	Y			Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	1,811	52	Y			Y			Y			Y	Y	**Y**		
05:00 PM	TO	06:00 PM	0	0														
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			2,872	156	2	0	**0**	2	1	**1**	2	1	**1**	2	2	**2**	**1**	**1**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**SATISFIED**

06/25/19
Kimley-Horn and Associates

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **Sterling Ave** NB SB # OF APPROACH LANES: **2**

MINOR STREET: **6th St** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **San Bernardino, CA**

COMMENTS: Horizon Year With Project
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **N**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**600**	**150**		**900**	**75**		**480**	**120**		**720**	**60**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	1,121	205	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	1,254	211	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
05:00 PM	TO	06:00 PM	0	0														
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			2,375	416	2	2	**2**	2	2	**2**	2	2	**2**	2	2	**2**	**2**	**1**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**SATISFIED**

06/25/19
Kimley-Horn and Associates

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **Victoria Avenue** NB SB # OF APPROACH LANES: **2**

MINOR STREET: **6th Street** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **Highland, CA**

COMMENTS: Horizon Year With Project
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **Y**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**420**	**105**		**630**	**53**		**336**	**84**		**504**	**42**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	788	204	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	1,046	231	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
05:00 PM	TO	06:00 PM	0	0														
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			1,834	435	2	2	**2**	2	2	**2**	2	2	**2**	2	2	**2**	**2**	**2**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**SATISFIED**

06/25/19
Kimley-Horn and Associates

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **3rd Street** EB WB # OF APPROACH LANES: **2**

MINOR STREET: **Central Ave** NB SB # OF APPROACH LANES: **1**

CITY, STATE: **Highland, CA**

COMMENTS: Horizon Year With Project
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **Y**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**420**	**105**		**630**	**53**		**336**	**84**		**504**	**42**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	1,190	104	Y			Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	1,930	52	Y			Y			Y			Y	Y	**Y**		
05:00 PM	TO	06:00 PM	0	0														
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			3,120	156	2	0	**0**	2	1	**1**	2	1	**1**	2	2	**2**	**1**	**1**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**SATISFIED**

06/25/19
Kimley-Horn and Associates

APPENDIX F

POTENTIAL MITIGATION MEASURES

Option 1: Add 2nd NB left-turn lane

Number	1											
Intersection	Del Rosa Ave / SR-210 WB Ramps											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	587	543	0	0	548	774	0	0	0	157	0	144
Total Analysis Volume [veh/h]	634	572	0	0	577	815	0	0	0	165	0	152

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	31	82	0	0	51	0	0	0	0	0	18	0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.22	0.82	0.58	0.58		0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.19	0.17	0.30	0.50		0.09	0.09
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	3329	3427	1900	1615		1810	1615
c, Capacity [veh/h]	726	2825	1095	931		209	187
X, volume / capacity	0.87	0.20	0.53	0.88		0.79	0.81
d, Delay for Lane Group [s/veh]	41.27	2.01	14.70	29.43		49.51	51.44
Lane Group LOS	D	A	B	C		D	D
Critical Lane Group	Yes	No	No	Yes		No	Yes

50th-Percentile Queue Length [veh/ln]	7.73	0.74	7.90	17.51		4.31	4.07
50th-Percentile Queue Length [ft/ln]	193.33	18.62	197.40	437.67		107.87	101.73
95th-Percentile Queue Length [veh/ln]	12.29	1.34	12.50	24.37		7.72	7.32
95th-Percentile Queue Length [ft/ln]	307.35	33.52	312.61	609.22		193.04	183.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.27	2.01	0.00	0.00	14.70	29.43	0.00	0.00	0.00	49.51	49.51	51.44
Movement LOS	D	A			B	C				D	D	D
Critical Movement	No	No			No	No				No	No	Yes
d_A, Approach Delay [s/veh]	22.65			23.32			0.00			50.44		
Approach LOS	C			C			A			D		
d_I, Intersection Delay [s/veh]	25.99											
Intersection LOS	C											
Intersection V/C	0.789											

Option 1: Add 2nd NB left-turn lane

Number	1											
Intersection	Del Rosa Ave / SR-210 WB Ramps											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name	Del Rosa Ave			Del Rosa Ave			SR-210 WB Ramps			SR-210 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	640	802	0	0	399	373	0	0	0	186	0	305
Total Analysis Volume [veh/h]	741	839	0	0	417	390	0	0	0	195	0	319

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	5	2	0	0	6	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	7	0	0	0	0	0	7	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	40	58	0	0	18	0	0	0	0	0	42	0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.25	0.72	0.43	0.43		0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.22	0.24	0.21	0.25		0.11	0.20
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	3329	3427	1900	1623		1810	1615
c, Capacity [veh/h]	847	2453	819	700		406	362
X, volume / capacity	0.87	0.34	0.49	0.58		0.48	0.88
d, Delay for Lane Group [s/veh]	38.80	5.73	22.65	24.96		34.60	44.48
Lane Group LOS	D	A	C	C		C	D
Critical Lane Group	Yes	No	No	Yes		No	Yes

50th-Percentile Queue Length [veh/ln]	8.86	2.91	7.09	7.60		4.18	8.13
50th-Percentile Queue Length [ft/ln]	221.41	72.76	177.25	189.91		104.50	203.14
95th-Percentile Queue Length [veh/ln]	13.74	5.24	11.46	12.12		7.52	12.80
95th-Percentile Queue Length [ft/ln]	343.43	130.98	286.42	302.91		188.09	320.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.80	5.73	0.00	0.00	22.72	24.96	0.00	0.00	0.00	34.60	34.60	44.48
Movement LOS	D	A			C	C				C	C	D
Critical Movement	No	No			No	No				No	No	Yes
d_A, Approach Delay [s/veh]	21.24			23.80			0.00			40.73		
Approach LOS	C			C			A			D		
d_I, Intersection Delay [s/veh]	25.41											
Intersection LOS	C											
Intersection V/C	0.669											

Option 1: Add 2nd SB left-turn lane

Number	7											
Intersection	Victoria Ave / Highland Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name							Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	241	646	89	162	479	286	566	376	119	86	348	224
Total Analysis Volume [veh/h]	289	693	95	171	548	319	632	420	188	91	388	236

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	0	10	18	18	34	47	0	25	38	0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.47	0.37	0.37	0.47	0.37	0.63	0.24	0.37	0.37	0.07	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.28	0.24	0.24	0.10	0.16	0.21	0.20	0.17	0.17	0.05	0.17	0.18
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1016	1700	1629	1690	3427	1530	3144	1900	1704	1714	1900	1663
c, Capacity [veh/h]	469	628	602	654	1264	971	741	706	633	119	391	342
X, volume / capacity	0.62	0.64	0.64	0.26	0.43	0.33	0.85	0.45	0.46	0.76	0.85	0.86
d, Delay for Lane Group [s/veh]	27.10	31.00	31.22	17.47	24.79	8.85	39.49	24.18	24.28	55.40	43.40	44.46
Lane Group LOS	C	C	C	B	C	A	D	C	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes

50th-Percentile Queue Length [veh/ln]	4.90	8.57	8.25	1.09	4.96	3.04	7.56	5.68	5.15	2.53	8.26	7.40
50th-Percentile Queue Length [ft/ln]	122.40	214.19	206.29	27.19	124.09	75.94	188.99	141.92	128.73	63.24	206.62	185.04
95th-Percentile Queue Length [veh/ln]	8.53	13.37	12.96	1.96	8.62	5.47	12.07	9.58	8.87	4.55	12.98	11.86
95th-Percentile Queue Length [ft/ln]	213.13	334.21	324.06	48.95	215.43	136.69	301.72	239.61	221.77	113.83	324.49	296.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.10	31.09	31.22	17.47	24.79	8.85	39.49	24.21	24.28	55.40	43.56	44.46
Movement LOS	C	C	C	B	C	A	D	C	C	E	D	D
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	30.03			18.69			32.01			45.36		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	30.43											
Intersection LOS	C											
Intersection V/C	0.645											

Option 1: Add 2nd SB left-turn lane

Number	7											
Intersection	Victoria Ave / Highland Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name							Highland Ave			Highland Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	293	594	120	395	489	746	806	507	207	153	567	298
Total Analysis Volume [veh/h]	410	669	124	408	523	771	834	524	237	158	586	308

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	6	3	8	0	7	4	0
Auxiliary Signal Groups						3,6						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	7	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	28	0	13	25	25	30	45	0	14	29	0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	10	0	10	0	0	10	0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.38	0.25	0.25	0.38	0.22	0.52	0.27	0.42	0.42	0.11	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.34	0.24	0.24	0.21	0.15	0.50	0.27	0.21	0.22	0.09	0.25	0.25
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1196	1700	1609	1923	3427	1530	3144	1900	1706	1714	1900	1682
c, Capacity [veh/h]	436	425	402	559	754	796	849	799	718	187	494	437
X, volume / capacity	0.94	0.96	0.96	0.73	0.69	0.97	0.98	0.49	0.51	0.84	0.96	0.96
d, Delay for Lane Group [s/veh]	63.21	71.14	72.91	27.13	41.11	48.44	47.08	21.62	21.97	53.52	61.64	63.81
Lane Group LOS	E	E	E	C	D	D	D	C	C	D	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes

50th-Percentile Queue Length [veh/ln]	11.42	13.63	13.13	3.48	6.34	21.81	11.15	6.64	6.31	4.32	14.61	13.21
50th-Percentile Queue Length [ft/ln]	285.38	340.82	328.31	86.93	158.54	545.31	278.66	166.09	157.81	107.89	365.33	330.29
95th-Percentile Queue Length [veh/ln]	16.96	19.69	19.08	6.26	10.47	29.47	16.62	10.87	10.43	7.72	20.88	19.17
95th-Percentile Queue Length [ft/ln]	423.90	492.20	476.89	156.47	261.79	736.80	415.55	271.77	260.82	193.07	522.06	479.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.21	71.83	72.91	27.13	41.11	48.44	47.08	21.71	21.97	53.52	62.06	63.81
Movement LOS	E	E	E	C	D	D	D	C	C	D	E	E
Critical Movement	No	No	Yes	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	69.01			41.08			35.01			61.29		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	49.22											
Intersection LOS	D											
Intersection V/C	0.925											

Option 1: Signalization

Number	20											
Intersection	Sterling Ave / 6th St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	15	259	13	28	677	43	44	102	14	9	116	15
Total Analysis Volume [veh/h]	35	280	36	36	748	51	47	136	15	57	141	18

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	61	0	0	61	0	0	39	0	0	39	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.77	0.77	0.77	0.77	0.77	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.22	0.22	0.03	0.12	0.13
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3			3	3
s, saturation flow rate [veh/h]	1368	1672	1766	1729	1615	1689	1675
c, Capacity [veh/h]	1097	1287	1399	1331	1243	298	297
X, volume / capacity	0.15	0.14	0.28	0.29	0.04	0.66	0.73
d, Delay for Lane Group [s/veh]	3.34	3.22	3.88	3.97	2.80	43.24	44.68
Lane Group LOS	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	No	No	No	Yes

50th-Percentile Queue Length [veh/ln]	0.72	0.81	1.95	1.95	0.21	4.86	5.42
50th-Percentile Queue Length [ft/ln]	18.11	20.29	48.79	48.72	5.14	121.38	135.45
95th-Percentile Queue Length [veh/ln]	1.30	1.46	3.51	3.51	0.37	8.47	9.24
95th-Percentile Queue Length [ft/ln]	32.60	36.53	87.81	87.69	9.25	211.72	230.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.34	3.27	3.22	3.88	3.93	2.80	43.24	43.24	43.24	44.68	44.68	44.68
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
Critical Movement	No	No	No	No	No	No	No	No	No	No	Yes	No
d_A, Approach Delay [s/veh]	3.28			3.86			43.24			44.68		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	14.11											
Intersection LOS	B											
Intersection V/C	0.354											

Option 1: Signalization

Number	20											
Intersection	Sterling Ave / 6th St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	19	725	41	28	372	29	55	104	11	10	76	18
Total Analysis Volume [veh/h]	24	805	48	32	409	33	64	146	12	93	102	27

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	65	0	0	65	0	0	35	0	0	35	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.73	0.73	0.73	0.73	0.73	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.25	0.25	0.14	0.13	0.02	0.15	0.17
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3			3	3
s, saturation flow rate [veh/h]	1850	1695	1547	1729	1615	1513	1305
c, Capacity [veh/h]	1382	1231	1165	1256	1173	339	304
X, volume / capacity	0.33	0.34	0.18	0.18	0.03	0.65	0.73
d, Delay for Lane Group [s/veh]	5.58	5.73	4.57	4.62	3.87	39.72	42.80
Lane Group LOS	A	A	A	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	No	Yes

50th-Percentile Queue Length [veh/ln]	3.09	2.88	1.25	1.34	0.17	5.25	5.58
50th-Percentile Queue Length [ft/ln]	77.37	72.07	31.28	33.55	4.33	131.20	139.43
95th-Percentile Queue Length [veh/ln]	5.57	5.19	2.25	2.42	0.31	9.01	9.45
95th-Percentile Queue Length [ft/ln]	139.27	129.72	56.30	60.39	7.80	225.13	236.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.58	5.65	5.73	4.57	4.60	3.87	39.72	39.72	39.72	42.80	42.80	42.80
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
Critical Movement	No	No	No	No	No	No	No	No	No	No	Yes	No
d_A, Approach Delay [s/veh]	5.65			4.55			39.72			42.80		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	14.17											
Intersection LOS	B											
Intersection V/C	0.418											

Option 1: Signalization

Number	21											
Intersection	Victoria Ave / 6th St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	31	120	7	39	423	23	23	57	41	62	46	38
Total Analysis Volume [veh/h]	62	156	29	67	520	47	26	106	46	69	102	43

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	60	0	0	60	0	0	40	0	0	40	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.76	0.76	0.76	0.76	0.76	0.76	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.09	0.07	0.02	0.17	0.17	0.03	0.10	0.14
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3	3
s, saturation flow rate [veh/h]	1037	1729	1615	1718	1729	1615	1712	1494
c, Capacity [veh/h]	843	1307	1221	1343	1307	1221	322	292
X, volume / capacity	0.12	0.09	0.02	0.22	0.22	0.04	0.55	0.73
d, Delay for Lane Group [s/veh]	3.79	3.34	3.06	3.90	3.97	3.12	40.29	44.23
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	Yes

50th-Percentile Queue Length [veh/ln]	0.47	0.56	0.13	1.51	1.51	0.21	4.15			5.38		
50th-Percentile Queue Length [ft/ln]	11.64	13.95	3.19	37.68	37.85	5.23	103.85			134.47		
95th-Percentile Queue Length [veh/ln]	0.84	1.00	0.23	2.71	2.73	0.38	7.48			9.18		
95th-Percentile Queue Length [ft/ln]	20.95	25.11	5.74	67.82	68.13	9.41	186.92			229.56		

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.79	3.44	3.06	3.90	3.94	3.12	40.29	40.29	40.29	44.23	44.23	44.23
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
Critical Movement	No	No	No	No	No	No	No	No	No	No	Yes	No
d_A, Approach Delay [s/veh]	3.48			3.87			40.29			44.23		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	15.67											
Intersection LOS	B											
Intersection V/C	0.315											

Option 1: Signalization

Number	21											
Intersection	Victoria Ave / 6th St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	46	484	74	62	227	24	26	65	25	30	52	32
Total Analysis Volume [veh/h]	55	658	83	73	278	29	38	178	27	34	96	45

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	61	0	0	61	0	0	39	0	0	39	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.76	0.76	0.76	0.76	0.76	0.76	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.21	0.21	0.05	0.14	0.12	0.02	0.14	0.11
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3	3
s, saturation flow rate [veh/h]	1717	1729	1615	1011	1729	1615	1790	1656
c, Capacity [veh/h]	1351	1318	1231	824	1318	1231	324	304
X, volume / capacity	0.26	0.27	0.07	0.18	0.16	0.02	0.75	0.58
d, Delay for Lane Group [s/veh]	3.97	4.07	3.09	3.98	3.46	2.91	44.39	41.10
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	Yes	No	No	No	No	No	Yes	No

50th-Percentile Queue Length [veh/ln]	1.80	1.84	0.36	0.69	0.95	0.12	6.08			4.15		
50th-Percentile Queue Length [ft/ln]	45.03	46.08	8.98	17.20	23.87	3.03	151.94			103.70		
95th-Percentile Queue Length [veh/ln]	3.24	3.32	0.65	1.24	1.72	0.22	10.12			7.47		
95th-Percentile Queue Length [ft/ln]	81.05	82.94	16.17	30.97	42.96	5.45	253.02			186.66		

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.97	4.02	3.09	3.98	3.60	2.91	44.39	44.39	44.39	41.10	41.10	41.10
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
Critical Movement	No	No	No	No	No	No	No	Yes	No	No	No	No
d_A, Approach Delay [s/veh]	3.92			3.62			44.39			41.10		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	14.10											
Intersection LOS	B											
Intersection V/C	0.343											

Option 1: Add NB right-turn lane with overlap

Number	33											
Intersection	Palm Ave / 5th St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	35	157	258	145	664	98	14	224	68	360	671	107
Total Analysis Volume [veh/h]	48	173	284	159	727	114	15	392	80	520	1108	113

Intersection Settings

Cycle Length [s]	150											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	33	18	41	0	46	34	0	65	53	0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	25	0	27	0	0	26	0	0	26	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.04	0.37	0.71	0.10	0.43	0.43	0.02	0.13	0.13	0.32	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.03	0.05	0.18	0.09	0.20	0.07	0.01	0.11	0.05	0.30	0.31	0.07
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1714	3618	1615	1714	3618	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	69	1344	1152	171	1559	696	39	458	204	552	1541	688
X, volume / capacity	0.69	0.13	0.25	0.93	0.47	0.16	0.39	0.86	0.39	0.94	0.72	0.16
d, Delay for Lane Group [s/veh]	82.77	31.32	7.98	85.48	31.39	26.63	78.38	68.91	61.43	67.21	36.28	26.69
Lane Group LOS	F	C	A	F	C	C	E	E	E	E	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No

50th-Percentile Queue Length [veh/ln]	2.06	2.15	3.28	6.95	9.69	2.65	0.64	7.67	2.89	21.65	16.92	2.57
50th-Percentile Queue Length [ft/ln]	51.44	53.85	82.06	173.71	242.23	66.29	15.98	191.69	72.25	541.27	423.07	64.37
95th-Percentile Queue Length [veh/ln]	3.70	3.88	5.91	11.27	14.79	4.77	1.15	12.21	5.20	29.28	23.67	4.63
95th-Percentile Queue Length [ft/ln]	92.58	96.93	147.70	281.78	369.85	119.32	28.76	305.22	130.05	732.04	591.73	115.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	82.77	31.32	7.98	85.48	31.39	26.63	78.38	68.91	61.43	67.21	36.28	26.69
Movement LOS	F	C	A	F	C	C	E	E	E	E	D	C
Critical Movement	No	No	No	Yes	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	23.09			39.45			67.97			44.89		
Approach LOS	C			D			E			D		
d_I, Intersection Delay [s/veh]	43.50											
Intersection LOS	D											
Intersection V/C	0.641											

Option 1: Add NB right-turn lane w overlap

Number	33											
Intersection	Palm Ave / 5th St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name							5th Street					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	95	638	534	201	280	40	95	794	67	190	267	146
Total Analysis Volume [veh/h]	106	706	595	214	320	44	111	1259	113	302	446	164

Intersection Settings

Cycle Length [s]	120											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	33	0	18	38	0	14	45	0	24	55	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	25	0	0	27	0	0	26	0	0	26	0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.08	0.25	0.13	0.30	0.30	0.08	0.35	0.35	0.18	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.12	0.09	0.03	0.06	0.35	0.07	0.18	0.12	0.10
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3			3			3		
s, saturation flow rate [veh/h]	1714	3618	1714	3618	1615	1714	3618	1615	1714	3618	1615
c, Capacity [veh/h]	131	904	214	1081	482	137	1266	565	300	1610	719
X, volume / capacity	0.81	0.78	1.00	0.30	0.09	0.81	0.99	0.20	1.01	0.28	0.23
d, Delay for Lane Group [s/veh]	65.84	48.57	80.75	33.07	30.71	65.02	49.40	27.43	87.94	21.17	20.73
Lane Group LOS	E	D	F	C	C	E	D	C	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No

50th-Percentile Queue Length [veh/ln]	3.56	10.53	8.11	3.70	0.98	3.71	19.98	2.31	12.15	3.99	2.88
50th-Percentile Queue Length [ft/ln]	89.10	263.34	202.72	92.48	24.41	92.71	499.62	57.73	303.87	99.67	71.95
95th-Percentile Queue Length [veh/ln]	6.42	15.86	12.78	6.66	1.76	6.67	27.32	4.16	17.93	7.18	5.18
95th-Percentile Queue Length [ft/ln]	160.38	396.40	319.47	166.46	43.93	166.87	682.91	103.91	448.34	179.40	129.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.84	48.57	0.00	80.75	33.07	30.71	65.02	49.40	27.43	87.94	21.17	20.73
Movement LOS	E	D		F	C	C	E	D	C	F	C	C
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	50.82			50.54			48.90			43.20		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	48.19											
Intersection LOS	D											
Intersection V/C	0.844											

Option 1: Add 2nd LT movement

Number	35											
Intersection	SR-210 EB Ramps / 5th Street											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	0	211	11	207	0	417	458	958	1337	0
Total Analysis Volume [veh/h]	0	0	0	222	12	532	0	534	548	1008	1788	0

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	1	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	33	0	0	34	0	33	67	0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle		0.30	0.30	0.30	0.31	0.31	0.30	0.64
(v / s)_i Volume / Saturation Flow Rate		0.06	0.06	0.33	0.15	0.34	0.32	0.49
so, Base Saturation Flow per Lane [veh/h/ln]		1900	1900	1900	1900	1900	1900	1900
Arrival type	3	3			3		3	
s, saturation flow rate [veh/h]		1810	1818	1615	3618	1615	3144	3618
c, Capacity [veh/h]		543	546	485	1121	501	943	2315
X, volume / capacity		0.22	0.21	1.10	0.48	1.09	1.07	0.77
d, Delay for Lane Group [s/veh]		27.10	27.09	105.25	28.24	102.94	71.92	14.58
Lane Group LOS		C	C	F	C	F	F	B
Critical Lane Group		No	No	Yes	No	Yes	Yes	No

50th-Percentile Queue Length [veh/ln]				2.20	2.21	20.92	5.15	21.33	15.99	13.15		
50th-Percentile Queue Length [ft/ln]				55.11	55.27	522.91	128.73	533.29	399.87	328.67		
95th-Percentile Queue Length [veh/ln]				3.97	3.98	30.11	8.87	30.59	23.49	19.09		
95th-Percentile Queue Length [ft/ln]				99.20	99.49	752.70	221.77	764.85	587.13	477.33		

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	27.10	27.09	105.25	0.00	28.24	102.94	71.92	14.58	0.00
Movement LOS				C	C	F		C	F	F	B	
Critical Movement				No	No	Yes		No	No	No	No	
d_A, Approach Delay [s/veh]	0.00			81.37			66.07			35.25		
Approach LOS	A			F			E			D		
d_I, Intersection Delay [s/veh]	50.04											
Intersection LOS	D											
Intersection V/C	0.989											

Option 1: Add 2nd left-turn movement

Number	35											
Intersection	SR-210 EB Ramps / 5th Street											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name				SR-210 SB Off-Ramp			5th Street			5th Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	0	559	9	170	0	1338	595	389	631	0
Total Analysis Volume [veh/h]	0	0	0	588	9	273	0	1826	1008	409	773	0

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	0	0	1	6	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
All red [s]	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.0
Split [s]	0	0	0	0	20	0	0	64	0	16	80	0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall					No			No		No	No	
Maximum Recall					No			No		No	No	
Pedestrian Recall					No			No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle		0.18	0.18	0.18	0.62	0.62	0.14	0.78
(v / s)_i Volume / Saturation Flow Rate		0.16	0.16	0.17	0.50	0.62	0.13	0.21
so, Base Saturation Flow per Lane [veh/h/ln]		1900	1900	1900	1900	1900	1900	1900
Arrival type	3	3			3		3	
s, saturation flow rate [veh/h]		1810	1812	1615	3618	1615	3144	3618
c, Capacity [veh/h]		317	317	283	2225	993	424	2804
X, volume / capacity		0.94	0.94	0.97	0.82	1.01	0.96	0.28
d, Delay for Lane Group [s/veh]		56.82	56.65	63.16	18.51	51.56	56.36	3.46
Lane Group LOS		E	E	E	B	F	E	A
Critical Lane Group		No	No	Yes	No	Yes	Yes	No

50th-Percentile Queue Length [veh/ln]				8.57	8.56	8.32	15.49	29.06	5.76	1.75		
50th-Percentile Queue Length [ft/ln]				214.29	214.06	208.12	387.37	726.58	143.94	43.74		
95th-Percentile Queue Length [veh/ln]				13.37	13.36	13.06	21.95	38.39	9.69	3.15		
95th-Percentile Queue Length [ft/ln]				334.33	334.03	326.42	548.76	959.87	242.32	78.73		

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	56.73	56.65	63.16	0.00	18.51	51.56	56.36	3.46	0.00
Movement LOS				E	E	E		B	F	E	A	
Critical Movement				No	No	Yes		No	No	No	No	
d_A, Approach Delay [s/veh]	0.00			58.75			30.27			21.77		
Approach LOS	A			E			C			C		
d_I, Intersection Delay [s/veh]	33.28											
Intersection LOS	C											
Intersection V/C	0.923											

Option 1: Add 3rd EB through lane

Number	38											
Intersection	Del Rosa Dr / 3rd St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	13	89	318	26	228	86	73	351	34	716	1075	13
Total Analysis Volume [veh/h]	14	94	335	37	240	108	93	601	36	754	1203	16

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	18	18	10	18	0	11	25	0	47	61	0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.02	0.40	0.71	0.05	0.42	0.42	0.07	0.16	0.16	0.28	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.03	0.21	0.02	0.09	0.10	0.05	0.12	0.02	0.24	0.32	0.32
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1714	3618	1615	1714	1900	1706	1714	4903	1530	3144	1900	1891
c, Capacity [veh/h]	40	1439	1144	78	797	716	117	766	239	883	701	698
X, volume / capacity	0.35	0.07	0.29	0.48	0.23	0.23	0.80	0.78	0.15	0.85	0.87	0.87
d, Delay for Lane Group [s/veh]	53.26	18.71	6.01	51.03	19.26	19.44	57.46	42.39	36.75	36.50	33.60	33.88
Lane Group LOS	D	B	A	D	B	B	E	D	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes

50th-Percentile Queue Length [veh/ln]	0.40	0.68	2.41	0.99	2.77	2.61	2.64	4.82	0.78	8.78	13.98	14.05
50th-Percentile Queue Length [ft/ln]	9.99	17.12	60.15	24.76	69.35	65.36	65.92	120.58	19.43	219.60	349.62	351.29
95th-Percentile Queue Length [veh/ln]	0.72	1.23	4.33	1.78	4.99	4.71	4.75	8.42	1.40	13.64	20.12	20.20
95th-Percentile Queue Length [ft/ln]	17.99	30.82	108.27	44.56	124.82	117.65	118.66	210.62	34.97	341.12	502.94	504.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.26	18.71	6.01	51.03	19.30	19.44	57.46	42.39	36.75	36.50	33.74	33.88
Movement LOS	D	B	A	D	B	B	E	D	D	D	C	C
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	10.20			22.39			44.03			34.80		
Approach LOS	B			C			D			C		
d_I, Intersection Delay [s/veh]	32.27											
Intersection LOS	C											
Intersection V/C	0.543											

Option 1: Add 3rd EB through lane

Number	38											
Intersection	Del Rosa Dr / 3rd St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	12	207	811	44	131	69	116	1394	7	351	569	26
Total Analysis Volume [veh/h]	13	218	854	48	138	91	141	1582	7	369	857	37

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	30	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	24	24	10	24	0	31	37	0	29	35	0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.02	0.23	0.52	0.05	0.26	0.26	0.10	0.34	0.34	0.26	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.01	0.06	0.53	0.03	0.06	0.07	0.08	0.32	0.00	0.12	0.24	0.24
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1714	3618	1615	1714	1900	1659	1714	4903	1530	3144	1900	1872
c, Capacity [veh/h]	38	829	837	89	492	430	176	1667	520	815	943	930
X, volume / capacity	0.35	0.26	1.02	0.54	0.24	0.26	0.80	0.95	0.01	0.45	0.48	0.48
d, Delay for Lane Group [s/veh]	53.53	32.40	60.48	51.26	30.44	30.87	52.01	35.88	21.89	31.49	16.99	17.00
Lane Group LOS	D	C	F	D	C	C	D	D	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No

50th-Percentile Queue Length [veh/ln]	0.37	2.24	26.67	1.28	2.39	2.27	3.79	12.61	0.11	3.74	6.63	6.55
50th-Percentile Queue Length [ft/ln]	9.35	55.94	666.82	32.06	59.80	56.71	94.71	315.24	2.75	93.56	165.80	163.71
95th-Percentile Queue Length [veh/ln]	0.67	4.03	35.73	2.31	4.31	4.08	6.82	18.43	0.20	6.74	10.86	10.75
95th-Percentile Queue Length [ft/ln]	16.84	100.70	893.16	57.70	107.64	102.08	170.48	460.83	4.96	168.41	271.39	268.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.53	32.40	60.48	51.26	30.50	30.87	52.01	35.88	21.89	31.49	17.00	17.00
Movement LOS	D	C	F	D	C	C	D	D	C	C	B	B
Critical Movement	No	No	Yes	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	54.75			34.22			37.14			21.23		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	36.73											
Intersection LOS	D											
Intersection V/C	0.610											

Option 1: Signalization

Number	41											
Intersection	Central Ave / 3rd St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name				Central Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	0	24	0	80	23	411	0	0	623	4
Total Analysis Volume [veh/h]	0	0	0	25	0	87	25	515	0	0	812	4

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	19	0	0	0	0	0	41	0	0	41	0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.55			0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.00			0.04	0.14	0.21	0.22
so, Base Saturation Flow per Lane [veh/h/ln]	1900			1900	1900	1900	1900
Arrival type	3	3		3		3	
s, saturation flow rate [veh/h]	1900			680	3618	1900	1897
c, Capacity [veh/h]	1041			181	1153	606	605
X, volume / capacity	0.00			0.14	0.45	0.67	0.67
d, Delay for Lane Group [s/veh]	0.00			26.13	16.50	19.04	19.06
Lane Group LOS	A			C	B	B	B
Critical Lane Group	No			No	No	No	Yes

50th-Percentile Queue Length [veh/ln]	0.00		0.34	2.59	4.63	4.64
50th-Percentile Queue Length [ft/ln]	0.00		8.42	64.85	115.87	115.95
95th-Percentile Queue Length [veh/ln]	0.00		0.61	4.67	8.17	8.17
95th-Percentile Queue Length [ft/ln]	0.00		15.15	116.74	204.14	204.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	26.13	16.50	0.00	0.00	19.05	19.06
Movement LOS	A	A	A				C	B			B	B
Critical Movement	No	No	No	No		No	Yes	No			No	No
d_A, Approach Delay [s/veh]	0.00			0.00			16.95			19.05		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	18.21											
Intersection LOS	B											
Intersection V/C	0.215											

Option 1: Signalization

Number	41											
Intersection	Central Ave / 3rd St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name				Central Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	1	3	0	22	0	30	191	1130	0	0	464	26
Total Analysis Volume [veh/h]	1	3	0	23	0	33	203	1418	0	0	661	27

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	20	0	0	0	0	0	40	0	0	40	0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.39		0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.00		0.26	0.39	0.18	0.18
so, Base Saturation Flow per Lane [veh/h/ln]	1900		1900	1900	1900	1900
Arrival type	3	3	3		3	
s, saturation flow rate [veh/h]	1877		766	3618	1900	1874
c, Capacity [veh/h]	733		366	1723	905	893
X, volume / capacity	0.01		0.55	0.82	0.38	0.39
d, Delay for Lane Group [s/veh]	11.19		20.10	14.57	10.31	10.35
Lane Group LOS	B		C	B	B	B
Critical Lane Group	Yes		No	Yes	No	No

50th-Percentile Queue Length [veh/ln]	0.03		2.46	7.05	2.51	2.52
50th-Percentile Queue Length [ft/ln]	0.80		61.39	176.13	62.87	63.10
95th-Percentile Queue Length [veh/ln]	0.06		4.42	11.40	4.53	4.54
95th-Percentile Queue Length [ft/ln]	1.44		110.50	284.96	113.17	113.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.19	11.19	11.19	0.00	0.00	0.00	20.10	14.57	0.00	0.00	10.33	10.35
Movement LOS	B	B	B				C	B			B	B
Critical Movement	No	No	No	No		No	Yes	No			No	No
d_A, Approach Delay [s/veh]	11.19			0.00			15.26			10.33		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	13.79											
Intersection LOS	B											
Intersection V/C	0.394											

Option 1: Add 2nd NB left-turn lane

Number	42											
Intersection	Palm Ave_Alabama St / 3rd St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	385	364	33	78	831	159	106	18	0	122	104	235
Total Analysis Volume [veh/h]	453	405	35	92	908	283	119	63	1	122	105	235

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	28	0	22	31	0	10	31	0	19	40	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.15	0.52	0.52	0.07	0.43	0.43	0.07	0.20	0.09	0.22
(v / s)_i Volume / Saturation Flow Rate	0.14	0.12	0.12	0.06	0.25	0.18	0.04	0.03	0.07	0.20
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3	
s, saturation flow rate [veh/h]	3329	1800	1750	1619	3618	1615	2959	1900	1714	1693
c, Capacity [veh/h]	514	930	904	117	1572	702	200	384	152	379
X, volume / capacity	0.88	0.24	0.24	0.78	0.58	0.40	0.60	0.16	0.80	0.90
d, Delay for Lane Group [s/veh]	46.49	13.95	13.97	56.47	22.90	21.10	48.13	33.11	54.08	46.67
Lane Group LOS	D	B	B	E	C	C	D	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	Yes

50th-Percentile Queue Length [veh/ln]	5.77	2.84	2.76	2.59	8.11	4.73	1.51	1.28	3.34	8.89
50th-Percentile Queue Length [ft/ln]	144.18	70.89	69.05	64.69	202.65	118.31	37.64	31.92	83.59	222.33
95th-Percentile Queue Length [veh/ln]	9.71	5.10	4.97	4.66	12.78	8.30	2.71	2.30	6.02	13.78
95th-Percentile Queue Length [ft/ln]	242.64	127.59	124.28	116.44	319.39	207.51	67.75	57.46	150.46	344.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.49	13.96	13.97	56.47	22.90	21.10	48.13	33.11	0.00	54.08	46.67	46.67
Movement LOS	D	B	B	E	C	C	D	C		D	D	D
Critical Movement	No	No	No	Yes	No	No	No	No		No	No	No
d_A, Approach Delay [s/veh]	30.46			24.91			42.93			48.63		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.72											
Intersection LOS	C											
Intersection V/C	0.628											

Option 1: Add 2nd NB left-turn lane

Number	42											
Intersection	Palm Ave_Alabama St / 3rd St											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	434	829	95	80	391	84	419	362	0	77	27	100
Total Analysis Volume [veh/h]	478	909	100	86	471	188	465	566	8	81	34	105

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	33	0	16	31	0	19	41	0	10	32	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	18	0	0	23	0	0	23	0	0	24	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.15	0.43	0.43	0.07	0.35	0.35	0.16	0.32	0.06	0.22
(v / s)_i Volume / Saturation Flow Rate	0.14	0.28	0.29	0.05	0.13	0.12	0.16	0.30	0.05	0.08
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3	
s, saturation flow rate [veh/h]	3329	1800	1738	1619	3618	1615	2959	1900	1714	1677
c, Capacity [veh/h]	499	776	750	109	1260	563	473	606	108	372
X, volume / capacity	0.96	0.66	0.66	0.79	0.37	0.33	0.98	0.93	0.75	0.37
d, Delay for Lane Group [s/veh]	53.24	26.92	27.28	58.08	25.26	25.63	57.30	49.48	56.21	33.65
Lane Group LOS	D	C	C	E	C	C	E	D	E	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No

50th-Percentile Queue Length [veh/ln]	6.55	10.14	9.97	2.46	4.27	3.49	6.66	15.70	2.27	2.90
50th-Percentile Queue Length [ft/ln]	163.79	253.44	249.19	61.45	106.71	87.18	166.41	392.39	56.76	72.61
95th-Percentile Queue Length [veh/ln]	10.75	15.36	15.15	4.42	7.66	6.28	10.89	22.19	4.09	5.23
95th-Percentile Queue Length [ft/ln]	268.73	383.99	378.64	110.61	191.42	156.92	272.19	554.82	102.17	130.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.24	27.08	27.28	58.08	25.26	25.63	57.30	49.48	0.00	56.21	33.65	33.65
Movement LOS	D	C	C	E	C	C	E	D		E	C	C
Critical Movement	No	No	No	Yes	No	No	No	No		No	No	No
d_A, Approach Delay [s/veh]	35.50			29.14			53.01			41.96		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	39.73											
Intersection LOS	D											
Intersection V/C	0.685											

Option 1: Add NB right-turn lane Add WB right-turn lane w overlap

Number	46											
Intersection	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	75	918	94	330	945	76	122	161	128	121	263	276
Total Analysis Volume [veh/h]	79	1184	99	347	1039	80	128	169	135	127	277	291

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	36	0	36	62	0	10	18	0	10	18	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.06	0.56	0.56	0.14	0.64	0.64	0.21	0.11	0.11	0.21	0.11
(v / s)_i Volume / Saturation Flow Rate	0.05	0.35	0.06	0.11	0.30	0.30	0.10	0.08	0.09	0.10	0.08
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3	
s, saturation flow rate [veh/h]	1714	3427	1530	3144	1900	1853	1345	1900	1630	1328	3427
c, Capacity [veh/h]	107	1922	858	434	1209	1179	305	211	181	295	381
X, volume / capacity	0.74	0.62	0.12	0.80	0.47	0.47	0.42	0.76	0.79	0.43	0.73
d, Delay for Lane Group [s/veh]	55.64	16.23	10.59	45.21	10.70	10.77	34.87	48.63	50.92	34.99	45.62
Lane Group LOS	E	B	B	D	B	B	C	D	D	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No

50th-Percentile Queue Length [veh/ln]	2.20	8.80	1.05	4.32	6.23	6.14	2.71	4.14	3.82	2.69	3.43
50th-Percentile Queue Length [ft/ln]	55.05	219.98	26.21	107.99	155.69	153.52	67.76	103.47	95.54	67.29	85.67
95th-Percentile Queue Length [veh/ln]	3.96	13.66	1.89	7.73	10.32	10.20	4.88	7.45	6.88	4.85	6.17
95th-Percentile Queue Length [ft/ln]	99.08	341.60	47.18	193.20	258.01	255.12	121.97	186.25	171.97	121.13	154.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.64	16.23	10.59	45.21	10.73	10.77	34.87	48.75	50.92	34.99	45.62	0.00
Movement LOS	E	B	B	D	B	B	C	D	D	C	D	
Critical Movement	Yes	No	No	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	18.10			18.90			45.31			42.28		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	24.29											
Intersection LOS	C											
Intersection V/C	0.608											

Option 1: Add NB right-turn lane Add WB right-turn lane w overlap

Number	46											
Intersection	Tippecanoe Ave / Orange Show Rd_San Bernardino Ave											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	129	1176	164	507	1110	63	219	699	145	237	535	362
Total Analysis Volume [veh/h]	136	1307	173	534	1419	66	231	736	153	249	563	381

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	41	0	20	50	0	16	28	0	11	23	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.08	0.38	0.38	0.17	0.47	0.47	0.36	0.25	0.25	0.36	0.21
(v / s)_i Volume / Saturation Flow Rate	0.08	0.38	0.11	0.17	0.39	0.40	0.20	0.24	0.24	0.28	0.16
so, Base Saturation Flow per Lane [veh/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3	
s, saturation flow rate [veh/h]	1714	3427	1530	3144	1900	1871	1172	1900	1788	905	3427
c, Capacity [veh/h]	137	1302	581	535	893	879	393	475	447	282	715
X, volume / capacity	0.99	1.00	0.30	1.00	0.83	0.84	0.59	0.96	0.96	0.88	0.79
d, Delay for Lane Group [s/veh]	79.71	56.80	22.98	59.36	31.95	33.05	28.14	62.56	63.84	57.20	39.43
Lane Group LOS	E	F	C	E	C	C	C	E	E	E	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No

50th-Percentile Queue Length [veh/ln]	4.63	19.73	3.01	7.81	16.64	16.96	4.28	14.19	13.53	6.41	6.62
50th-Percentile Queue Length [ft/ln]	115.87	493.15	75.19	195.36	415.89	423.95	106.96	354.69	338.17	160.14	165.56
95th-Percentile Queue Length [veh/ln]	8.17	27.08	5.41	12.40	23.32	23.71	7.67	20.36	19.56	10.56	10.84
95th-Percentile Queue Length [ft/ln]	204.13	676.97	135.34	309.97	583.12	592.79	191.76	509.12	488.97	263.90	271.07

Movement, Approach, & Intersection Results

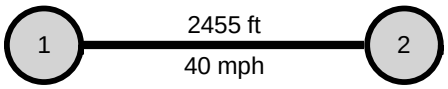
d_M, Delay for Movement [s/veh]	79.71	56.80	22.98	59.36	32.48	33.05	28.14	63.04	63.84	57.20	39.43	0.00
Movement LOS	E	F	C	E	C	C	C	E	E	E	D	
Critical Movement	Yes	No	No	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	55.11			39.61			55.95			44.88		
Approach LOS	E			D			E			D		
d_I, Intersection Delay [s/veh]	48.16											
Intersection LOS	D											
Intersection V/C	0.898											

APPENDIX G

BASE FREE FLOW SPEED ANALYSIS

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project AM	Number of Iterations	15
File Name	12-6th-DelRosatoSterling-BO+P	Analysis Year	2040	System Cycle Length, s	100
Intersections	Del Rosa Drive	Sterling Avenue		Analysis Period	1> 7:00
Project Description	6th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	1	1	2455	2455	50	50	0	0	70	70	0.0	0.0

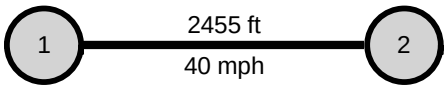
Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	40.23			40.10		
1	Running Speed, mph	41.61			41.75		
1	Through Delay, s/veh	11.65			11.05		
1	Travel Time, s	51.88			51.15		
1	Travel Speed, mph	32.27			32.73		
1	Stop Rate, stops/veh	0.73			0.37		
1	Spatial Stop Rate, stops/mi	1.58			0.80		
1	Through vol/cap Ratio	0.52			0.14		
1	Percent of Base FFS	73.22			74.26		
1	Level of Service	B			B		
1	Auto Traveler Perception Score	2.60			2.47		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	3.00		C	2.37		B
1	Bicycle Segment LOS Score / LOS	2.59		B	2.49		B
1	Transit Segment LOS Score / LOS	0.26		A	0.23		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	51.88	51.15
Facility Travel Speed, mph	32.27	32.73
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	73.22	74.26
Facility Level of Service	B	B
Facility Auto Traveler Perception Score	2.60	2.47

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.00	C	2.37	C
Bicycle Facility LOS Score / LOS	2.59	C	2.49	C
Transit Facility LOS Score / LOS	0.26	A	0.23	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project PM	Number of Iterations	15
File Name	12-6th-DelRosatoSterling-BO+P	Analysis Year	2040	System Cycle Length, s	100
Intersections	Del Rosa Drive	Sterling Avenue		Analysis Period	1> 7:00
Project Description	6th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	1	1	2455	2455	50	50	0	0	70	70	0.0	0.0

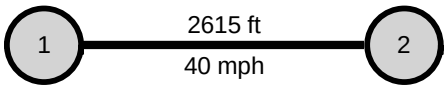
Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	40.23			39.97		
1	Running Speed, mph	41.61			41.88		
1	Through Delay, s/veh	12.39			8.59		
1	Travel Time, s	52.62			48.56		
1	Travel Speed, mph	31.81			34.47		
1	Stop Rate, stops/veh	0.74			0.31		
1	Spatial Stop Rate, stops/mi	1.58			0.67		
1	Through vol/cap Ratio	0.53			0.11		
1	Percent of Base FFS	72.19			78.21		
1	Level of Service	B			B		
1	Auto Traveler Perception Score	2.60			2.45		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	2.95		C	2.22		B
1	Bicycle Segment LOS Score / LOS	2.60		B	1.75		A
1	Transit Segment LOS Score / LOS	0.26		A	0.19		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	52.62	48.56
Facility Travel Speed, mph	31.81	34.47
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	72.19	78.21
Facility Level of Service	B	B
Facility Auto Traveler Perception Score	2.60	2.45

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	2.95	C	2.22	B
Bicycle Facility LOS Score / LOS	2.60	C	1.75	A
Transit Facility LOS Score / LOS	0.26	A	0.19	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project AM	Number of Iterations	15
File Name	13-6th-VictoriatoCentral-BO+P A	Analysis Year	2040	System Cycle Length, s	100
Intersections	Victoria Avenue	Central Avenue		Analysis Period	1> 7:00
Project Description	6th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	1	1	2615	2615	50	50	0	0	70	70	0.0	0.0

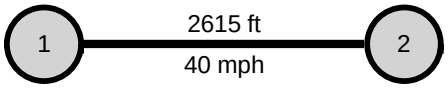
Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	42.46			42.32		
1	Running Speed, mph	41.99			42.13		
1	Through Delay, s/veh	0.00			0.10		
1	Travel Time, s	42.46			42.42		
1	Travel Speed, mph	41.99			42.03		
1	Stop Rate, stops/veh	0.00			0.01		
1	Spatial Stop Rate, stops/mi	0.00			0.02		
1	Through vol/cap Ratio	0.00			0.11		
1	Percent of Base FFS	95.29			95.38		
1	Level of Service	A			A		
1	Auto Traveler Perception Score	2.34			2.35		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	2.71		B	2.80		C
1	Bicycle Segment LOS Score / LOS	2.48		B	1.40		A
1	Transit Segment LOS Score / LOS	0.22		A	0.16		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	42.46	42.42
Facility Travel Speed, mph	41.99	42.03
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	95.29	95.38
Facility Level of Service	A	A
Facility Auto Traveler Perception Score	2.34	2.35

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	2.71	C	2.80	C
Bicycle Facility LOS Score / LOS	2.48	C	1.40	A
Transit Facility LOS Score / LOS	0.22	A	0.16	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project PM	Number of Iterations	15
File Name	13-6th-VictoriatoCentral-BO+P F	Analysis Year	2040	System Cycle Length, s	100
Intersections	Victoria Avenue	Central Avenue		Analysis Period	1> 5:00
Project Description	6th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	1	1	2615	2615	50	50	0	0	70	70	0.0	0.0

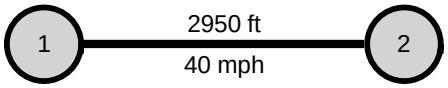
Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	42.72			42.21		
1	Running Speed, mph	41.73			42.24		
1	Through Delay, s/veh	0.00			0.07		
1	Travel Time, s	42.72			42.27		
1	Travel Speed, mph	41.73			42.18		
1	Stop Rate, stops/veh	0.00			0.01		
1	Spatial Stop Rate, stops/mi	0.00			0.02		
1	Through vol/cap Ratio	0.00			0.06		
1	Percent of Base FFS	94.69			95.70		
1	Level of Service	A			A		
1	Auto Traveler Perception Score	2.34			2.35		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	2.77		C	2.49		B
1	Bicycle Segment LOS Score / LOS	2.65		B	1.03		A
1	Transit Segment LOS Score / LOS	0.27		A	0.12		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	42.72	42.27
Facility Travel Speed, mph	41.73	42.18
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	94.69	95.70
Facility Level of Service	A	A
Facility Auto Traveler Perception Score	2.34	2.35

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	2.77	C	2.49	C
Bicycle Facility LOS Score / LOS	2.65	C	1.03	A
Transit Facility LOS Score / LOS	0.27	A	0.12	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project AM	Number of Iterations	15
File Name	14-5th-TippecanoetoDelRosa-B(	Analysis Year	2040	System Cycle Length, s	100
Intersections	Tippecanoe Avenue	Del Rosa Drive		Analysis Period	1> 7:00
Project Description	5th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	2	1	2950	2950	50	50	0	0	70	70	0.0	0.0

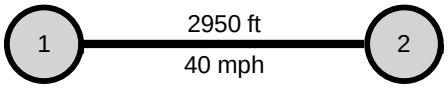
		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	47.71			49.29		
1	Running Speed, mph	42.16			40.81		
1	Through Delay, s/veh	9.33			7.49		
1	Travel Time, s	57.04			56.78		
1	Travel Speed, mph	35.26			35.42		
1	Stop Rate, stops/veh	0.30			0.22		
1	Spatial Stop Rate, stops/mi	0.54			0.39		
1	Through vol/cap Ratio	0.33			0.57		
1	Percent of Base FFS	80.01			80.37		
1	Level of Service	A			A		
1	Auto Traveler Perception Score	2.43			2.41		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	3.00		C	4.10		D
1	Bicycle Segment LOS Score / LOS	2.60		B	2.99		C
1	Transit Segment LOS Score / LOS	0.24		A	0.77		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	57.04	56.78
Facility Travel Speed, mph	35.26	35.42
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	80.01	80.37
Facility Level of Service	A	A
Facility Auto Traveler Perception Score	2.43	2.41

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.00	C	4.10	D
Bicycle Facility LOS Score / LOS	2.60	C	2.99	C
Transit Facility LOS Score / LOS	0.24	A	0.77	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project PM	Number of Iterations	15
File Name	14-5th-TippecanoetoDelRosa-B(	Analysis Year	2040	System Cycle Length, s	100
Intersections	Tippecanoe Avenue	Del Rosa Drive		Analysis Period	1> 5:00
Project Description	5th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	2	1	2950	2950	50	50	0	0	70	70	0.0	0.0

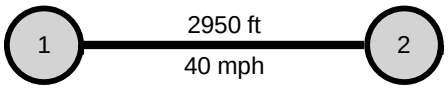
		Eastbound			Westbound		
Segment Output Data		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	48.22			48.88		
1	Running Speed, mph	41.71			41.15		
1	Through Delay, s/veh	21.56			9.15		
1	Travel Time, s	69.78			58.02		
1	Travel Speed, mph	28.83			34.66		
1	Stop Rate, stops/veh	0.69			0.28		
1	Spatial Stop Rate, stops/mi	1.24			0.50		
1	Through vol/cap Ratio	0.52			0.47		
1	Percent of Base FFS	65.41			78.66		
1	Level of Service	C			B		
1	Auto Traveler Perception Score	2.54			2.42		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	3.22		C	3.71		D
1	Bicycle Segment LOS Score / LOS	2.79		C	2.94		C
1	Transit Segment LOS Score / LOS	0.32		A	0.77		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	69.78	58.02
Facility Travel Speed, mph	28.83	34.66
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	65.41	78.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.54	2.42

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.22	C	3.71	D
Bicycle Facility LOS Score / LOS	2.79	C	2.94	C
Transit Facility LOS Score / LOS	0.32	A	0.77	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project AM	Number of Iterations	15
File Name	15-5th-VictoriatoCentral-BO+P A	Analysis Year	2040	System Cycle Length, s	100
Intersections	Victoria Avenue	Central Avenue		Analysis Period	1> 7:00
Project Description	5th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	2	1	2950	2950	50	50	0	0	70	70	0.0	0.0

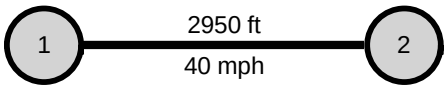
Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	47.54			50.54		
1	Running Speed, mph	42.31			39.80		
1	Through Delay, s/veh	4.92			25.84		
1	Travel Time, s	52.46			76.38		
1	Travel Speed, mph	38.34			26.33		
1	Stop Rate, stops/veh	0.21			0.68		
1	Spatial Stop Rate, stops/mi	0.37			1.22		
1	Through vol/cap Ratio	0.15			0.83		
1	Percent of Base FFS	87.00			59.75		
1	Level of Service	A			C		
1	Auto Traveler Perception Score	2.19			2.32		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	3.11		C	4.81		E
1	Bicycle Segment LOS Score / LOS	2.47		B	3.15		C
1	Transit Segment LOS Score / LOS	0.40		A	0.64		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	52.46	76.38
Facility Travel Speed, mph	38.34	26.33
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	87.00	59.75
Facility Level of Service	A	C
Facility Auto Traveler Perception Score	2.19	2.32

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.11	C	4.81	E
Bicycle Facility LOS Score / LOS	2.47	C	3.15	C
Transit Facility LOS Score / LOS	0.40	A	0.64	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project PM	Number of Iterations	15
File Name	15-5th-VictoriatoCentral-BO+P F	Analysis Year	2040	System Cycle Length, s	100
Intersections	Victoria Avenue	Central Avenue		Analysis Period	1> 5:00
Project Description	5th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	2	1	2950	2950	50	50	0	0	70	70	0.0	0.0

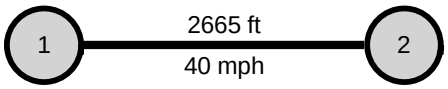
Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	48.26			48.53		
1	Running Speed, mph	41.68			41.45		
1	Through Delay, s/veh	12.18			22.43		
1	Travel Time, s	60.44			70.96		
1	Travel Speed, mph	33.28			28.35		
1	Stop Rate, stops/veh	0.44			0.65		
1	Spatial Stop Rate, stops/mi	0.80			1.16		
1	Through vol/cap Ratio	0.40			0.60		
1	Percent of Base FFS	75.51			64.32		
1	Level of Service	B			C		
1	Auto Traveler Perception Score	2.26			2.31		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	3.66		D	3.55		D
1	Bicycle Segment LOS Score / LOS	2.80		C	2.88		C
1	Transit Segment LOS Score / LOS	0.78		A	0.37		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	60.44	70.96
Facility Travel Speed, mph	33.28	28.35
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	75.51	64.32
Facility Level of Service	B	C
Facility Auto Traveler Perception Score	2.26	2.31

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.66	D	3.55	D
Bicycle Facility LOS Score / LOS	2.80	C	2.88	C
Transit Facility LOS Score / LOS	0.78	A	0.37	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project AM	Number of Iterations	15
File Name	16-5th-CentraltoPalm-BO+P AM	Analysis Year	2040	System Cycle Length, s	100
Intersections	Central Avenue	Palm Avenue		Analysis Period	1> 7:00
Project Description	5th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	2	2	2665	2665	50	50	0	0	70	70	0.0	0.0

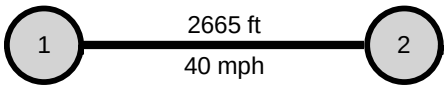
Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	43.34			44.18		
1	Running Speed, mph	41.93			41.13		
1	Through Delay, s/veh	45.13			15.32		
1	Travel Time, s	88.47			59.50		
1	Travel Speed, mph	20.54			30.54		
1	Stop Rate, stops/veh	0.91			0.67		
1	Spatial Stop Rate, stops/mi	1.79			1.32		
1	Through vol/cap Ratio	0.65			0.41		
1	Percent of Base FFS	46.61			69.29		
1	Level of Service	D			B		
1	Auto Traveler Perception Score	2.41			2.34		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	3.19		C	3.40		C
1	Bicycle Segment LOS Score / LOS	2.58		B	2.85		C
1	Transit Segment LOS Score / LOS	1.64		A	0.99		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	88.47	59.50
Facility Travel Speed, mph	20.54	30.54
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	46.61	69.29
Facility Level of Service	D	B
Facility Auto Traveler Perception Score	2.41	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.19	C	3.40	C
Bicycle Facility LOS Score / LOS	2.58	C	2.85	C
Transit Facility LOS Score / LOS	1.64	A	0.99	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project PM	Number of Iterations	15
File Name	16-5th-CentraltoPalm-BO+P PM	Analysis Year	2040	System Cycle Length, s	100
Intersections	Central Avenue	Palm Avenue		Analysis Period	1> 5:00
Project Description	5th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	2	2	2665	2665	50	50	0	0	70	70	0.0	0.0

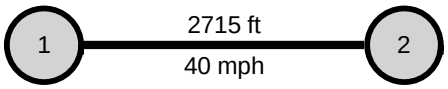
Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement	5	2	12	1	6	16
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	44.31			43.41		
1	Running Speed, mph	41.01			41.86		
1	Through Delay, s/veh	443.92			20.26		
1	Travel Time, s	488.23			63.67		
1	Travel Speed, mph	3.72			28.54		
1	Stop Rate, stops/veh	4.05			0.71		
1	Spatial Stop Rate, stops/mi	8.02			1.41		
1	Through vol/cap Ratio	1.23			0.24		
1	Percent of Base FFS	8.44			64.76		
1	Level of Service	F			C		
1	Auto Traveler Perception Score	3.55			2.35		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	3.97		D	2.68		B
1	Bicycle Segment LOS Score / LOS	2.92		C	2.55		B
1	Transit Segment LOS Score / LOS	3.95		D	1.01		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	488.23	63.67
Facility Travel Speed, mph	3.72	28.54
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	8.44	64.76
Facility Level of Service	F	C
Facility Auto Traveler Perception Score	3.55	2.35

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.97	D	2.68	C
Bicycle Facility LOS Score / LOS	2.92	C	2.55	C
Transit Facility LOS Score / LOS	3.95	D	1.01	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project AM	Number of Iterations	15
File Name	17-5th-PalmtoSR210-BO+P AM.	Analysis Year	2040	System Cycle Length, s	100
Intersections	Palm Avenue	SR 210 Ramps		Analysis Period	1> 7:00
Project Description	5th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	2	2	2715	2715	50	50	0	0	70	70	0.0	0.0

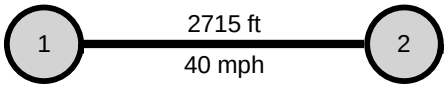
Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	44.43			45.85		
1	Running Speed, mph	41.67			40.37		
1	Through Delay, s/veh	9.19			20.16		
1	Travel Time, s	53.61			66.02		
1	Travel Speed, mph	34.53			28.04		
1	Stop Rate, stops/veh	0.29			0.57		
1	Spatial Stop Rate, stops/mi	0.57			1.10		
1	Through vol/cap Ratio	0.20			0.72		
1	Percent of Base FFS	78.35			63.63		
1	Level of Service	B			C		
1	Auto Traveler Perception Score	2.43			2.30		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	3.43		C	4.46		E
1	Bicycle Segment LOS Score / LOS	2.62		B	3.07		C
1	Transit Segment LOS Score / LOS	0.67		A	1.25		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	53.61	66.02
Facility Travel Speed, mph	34.53	28.04
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	78.35	63.63
Facility Level of Service	B	C
Facility Auto Traveler Perception Score	2.43	2.30

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	4.46	E
Bicycle Facility LOS Score / LOS	2.62	C	3.07	C
Transit Facility LOS Score / LOS	0.67	A	1.25	A

HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Kimley-Horn			Number of Intersections	2
Analyst	EJC	Analysis Date	Jul 2, 2019	Number of Segments	1
Jurisdiction	Highland	Time Period	Future Build-Out Plus Project PM	Number of Iterations	15
File Name	17-5th-PalmtoSR210-BO+P PM.	Analysis Year	2040	System Cycle Length, s	100
Intersections	Palm Avenue	SR 210 Ramps		Analysis Period	1> 5:00
Project Description	5th Street				



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	40	40	2	2	2715	2715	50	50	0	0	70	70	0.0	0.0

Segment Output Data		Eastbound			Westbound		
		EBL	EBT	EBR	WBL	WBT	WBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	44.07			44.07		
1	Running Time, s	45.21			44.56		
1	Running Speed, mph	40.95			41.54		
1	Through Delay, s/veh	14.62			27.03		
1	Travel Time, s	59.82			71.58		
1	Travel Speed, mph	30.94			25.86		
1	Stop Rate, stops/veh	0.41			0.62		
1	Spatial Stop Rate, stops/mi	0.80			1.21		
1	Through vol/cap Ratio	0.53			0.43		
1	Percent of Base FFS	70.21			58.68		
1	Level of Service	B			C		
1	Auto Traveler Perception Score	2.47			2.32		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	4.01		D	3.56		D
1	Bicycle Segment LOS Score / LOS	2.96		C	2.78		C
1	Transit Segment LOS Score / LOS	0.99		A	1.26		A

Facility Output Data	Eastbound	Westbound
Facility Travel Time, s	59.82	71.58
Facility Travel Speed, mph	30.94	25.86
Facility Base Free Flow Speed, mph	44.07	44.07
Facility Percent of Base FFS	70.21	58.68
Facility Level of Service	B	C
Facility Auto Traveler Perception Score	2.47	2.32

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	4.01	D	3.56	D
Bicycle Facility LOS Score / LOS	2.96	C	2.78	C
Transit Facility LOS Score / LOS	0.99	A	1.26	A

APPENDIX H

CORRIDOR ANALYSIS WORKSHEETS

Arterial Level of Service: EB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-215 SB On-Ramp	III	30	20.2	29.4	49.6	0.15	10.9	E
I-215 NB Off-Ramp	III	30	9.4	27.0	36.4	0.06	6.0	F
E Street	III	30	57.3	7.9	65.2	0.45	24.9	B
Arrowhead Avenue	III	30	32.7	1.3	34.0	0.26	27.2	B
Waterman Avenue	III	30	74.7	5.7	80.4	0.62	27.9	B
Tippecanoe Avenue	III	30	121.8	30.8	152.6	1.02	24.0	C
Del Rosa Drive	III	30	31.3	31.3	62.6	0.25	14.2	D
Sterling Avenue	III	30	28.9	33.3	62.2	0.23	13.2	E
Victoria Avenue	III	30	27.8	6.1	33.9	0.22	23.3	C
Central Avenue	III	30	29.2	38.4	67.6	0.23	12.3	E
Palm Avenue	III	30	28.7	23.0	51.7	0.23	15.7	D
Church Ave	III	30	8.9	14.0	22.9	0.06	9.0	F
SR-210 SB On-Ramps	III	30	34.0	33.8	67.8	0.27	14.2	D
SR-210 NB Off-Ramps	III	30	12.4	7.5	19.9	0.09	16.0	D
Total	III		517.3	289.5	806.8	4.12	18.4	C

Arterial Level of Service: WB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-210 NB On-Ramps	III	30	48.5	23.9	72.4	0.38	19.0	C
SR-210 SB Off-Ramp	III	30	12.4	7.4	19.8	0.09	16.0	D
Church Ave	III	30	34.0	6.1	40.1	0.27	24.1	B
Palm Avenue	III	30	13.8	21.0	34.8	0.10	10.1	E
Central Avenue	III	30	35.2	215.0	250.2	0.28	4.0	F
Victoria Avenue	III	30	33.6	7.4	41.0	0.26	23.2	C
Sterling Avenue	III	30	36.6	40.5	77.1	0.29	13.5	E
Del Rosa Drive	III	30	26.0	37.5	63.5	0.20	11.6	E
Tippecanoe Avenue	III	30	39.7	34.3	74.0	0.31	15.2	D
Waterman Avenue	III	30	121.8	16.6	138.4	1.02	26.4	B
Arrowhead Avenue	III	30	74.7	3.4	78.1	0.62	28.7	B
E Street	III	30	32.7	13.3	46.0	0.26	20.1	C
I-215 NB On-Ramp	III	30	57.3	26.3	83.6	0.45	19.4	C
I-215 SB Off-Ramp	III	30	9.4	9.3	18.7	0.06	11.6	E
Total	III		575.7	462.0	1037.7	4.59	15.9	D

Arterial Level of Service: EB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-215 SB On-Ramp	II	40	17.3	29.7	47.0	0.15	11.5	F
I-215 NB Off-Ramp	II	40	6.9	12.7	19.6	0.06	11.1	F
E Street	II	40	42.8	13.1	55.9	0.45	29.0	B
Arrowhead Avenue	II	40	28.3	3.4	31.7	0.26	29.2	B
Waterman Avenue	II	40	56.0	14.1	70.1	0.62	32.0	B
Tippecanoe Avenue	II	40	91.4	21.6	113.0	1.02	32.3	B
Del Rosa Drive	II	40	27.1	36.4	63.5	0.25	14.0	E
Sterling Avenue	II	40	25.0	38.6	63.6	0.23	12.9	F
Victoria Avenue	II	40	25.2	7.9	33.1	0.22	23.8	C
Central Avenue	II	40	25.3	27.9	53.2	0.23	15.6	E
Palm Avenue	II	40	24.9	29.5	54.4	0.23	15.0	E
Church Ave	II	40	6.6	43.5	50.1	0.06	4.1	F
SR-210 SB On-Ramps	II	40	29.5	25.1	54.6	0.27	17.7	D
SR-210 NB Off-Ramps	II	40	10.1	10.2	20.3	0.09	15.7	E
Total	II		416.4	313.7	730.1	4.12	20.3	D

Arterial Level of Service: WB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-210 NB On-Ramps	II	40	36.6	35.8	72.4	0.38	19.0	D
SR-210 SB Off-Ramp	II	40	10.1	5.2	15.3	0.09	20.8	D
Church Ave	II	40	29.5	12.1	41.6	0.27	23.2	C
Palm Avenue	II	40	11.2	21.6	32.8	0.10	10.7	F
Central Avenue	II	40	28.3	22.6	50.9	0.28	19.6	D
Victoria Avenue	II	40	29.1	5.5	34.6	0.26	27.5	C
Sterling Avenue	II	40	29.4	28.1	57.5	0.29	18.1	D
Del Rosa Drive	II	40	23.5	20.7	44.2	0.20	16.7	E
Tippecanoe Avenue	II	40	31.9	31.8	63.7	0.31	17.7	D
Waterman Avenue	II	40	91.4	21.1	112.5	1.02	32.5	B
Arrowhead Avenue	II	40	56.0	13.0	69.0	0.62	32.5	B
E Street	II	40	28.3	9.8	38.1	0.26	24.3	C
I-215 NB On-Ramp	II	40	42.8	26.1	68.9	0.45	23.6	C
I-215 SB Off-Ramp	II	40	6.9	7.3	14.2	0.06	15.3	E
Total	II		455.0	260.7	715.7	4.59	23.1	C

Arterial Level of Service: EB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-215 SB On-Ramp	II	40	17.3	29.9	47.2	0.15	11.5	F
I-215 NB Off-Ramp	II	40	6.9	26.0	32.9	0.06	6.6	F
E Street	II	40	42.8	11.5	54.3	0.45	29.9	B
Arrowhead Avenue	II	40	28.3	1.5	29.8	0.26	31.1	B
Waterman Avenue	II	40	56.0	26.7	82.7	0.62	27.1	C
Tippecanoe Avenue	II	40	91.4	34.9	126.3	1.02	28.9	B
Del Rosa Drive	II	40	27.1	39.7	66.8	0.25	13.3	E
Sterling Avenue	II	40	25.0	34.4	59.4	0.23	13.8	E
Victoria Avenue	II	40	25.2	7.5	32.7	0.22	24.1	C
Central Avenue	II	40	25.3	38.8	64.1	0.23	12.9	F
Palm Avenue	II	40	24.9	24.7	49.6	0.23	16.4	E
Church Ave	II	40	6.6	7.7	14.3	0.06	14.4	E
SR-210 SB On-Ramps	II	40	29.5	44.4	73.9	0.27	13.1	E
SR-210 NB Off-Ramps	II	40	10.1	4.7	14.8	0.09	21.5	D
Total	II		416.4	332.4	748.8	4.12	19.8	D

Arterial Level of Service: WB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-210 NB On-Ramps	II	40	36.6	23.3	59.9	0.38	22.9	C
SR-210 SB Off-Ramp	II	40	10.1	15.2	25.3	0.09	12.6	F
Church Ave	II	40	29.5	9.2	38.7	0.27	24.9	C
Palm Avenue	II	40	11.2	25.7	36.9	0.10	9.5	F
Central Avenue	II	40	28.3	493.2	521.5	0.28	1.9	F
Victoria Avenue	II	40	29.1	11.2	40.3	0.26	23.6	C
Sterling Avenue	II	40	29.4	40.1	69.5	0.29	14.9	E
Del Rosa Drive	II	40	23.5	34.7	58.2	0.20	12.7	F
Tippecanoe Avenue	II	40	31.9	33.3	65.2	0.31	17.3	D
Waterman Avenue	II	40	91.4	16.6	108.0	1.02	33.8	B
Arrowhead Avenue	II	40	56.0	4.8	60.8	0.62	36.9	A
E Street	II	40	28.3	9.1	37.4	0.26	24.8	C
I-215 NB On-Ramp	II	40	42.8	28.6	71.4	0.45	22.7	C
I-215 SB Off-Ramp	II	40	6.9	8.1	15.0	0.06	14.5	E
Total	II		455.0	753.1	1208.1	4.59	13.7	E

Arterial Level of Service: EB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-215 SB On-Ramp	II	40	17.3	30.2	47.5	0.15	11.4	F
I-215 NB Off-Ramp	II	40	6.9	11.7	18.6	0.06	11.7	F
E Street	II	40	42.8	14.9	57.7	0.45	28.1	B
Arrowhead Avenue	II	40	28.3	2.4	30.7	0.26	30.2	B
Waterman Avenue	II	40	56.0	15.4	71.4	0.62	31.4	B
Tippecanoe Avenue	II	40	91.4	36.4	127.8	1.02	28.6	B
Del Rosa Drive	II	40	27.1	38.1	65.2	0.25	13.6	E
Sterling Avenue	II	40	25.0	36.4	61.4	0.23	13.3	E
Victoria Avenue	II	40	25.2	11.1	36.3	0.22	21.7	D
Central Avenue	II	40	25.3	346.6	371.9	0.23	2.2	F
Palm Avenue	II	40	24.9	50.3	75.2	0.23	10.8	F
Church Ave	II	40	6.6	9.1	15.7	0.06	13.1	E
SR-210 SB On-Ramps	II	40	29.5	24.5	54.0	0.27	17.9	D
SR-210 NB Off-Ramps	II	40	10.1	8.5	18.6	0.09	17.1	D
Total	II		416.4	635.6	1052.0	4.12	14.1	E

Arterial Level of Service: WB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-210 NB On-Ramps	II	40	36.6	23.7	60.3	0.38	22.8	C
SR-210 SB Off-Ramp	II	40	10.1	4.4	14.5	0.09	21.9	D
Church Ave	II	40	29.5	14.1	43.6	0.27	22.1	C
Palm Avenue	II	40	11.2	21.4	32.6	0.10	10.8	F
Central Avenue	II	40	28.3	53.4	81.7	0.28	12.2	F
Victoria Avenue	II	40	29.1	8.8	37.9	0.26	25.1	C
Sterling Avenue	II	40	29.4	29.6	59.0	0.29	17.6	D
Del Rosa Drive	II	40	23.5	22.1	45.6	0.20	16.2	E
Tippecanoe Avenue	II	40	31.9	25.9	57.8	0.31	19.5	D
Waterman Avenue	II	40	91.4	18.2	109.6	1.02	33.4	B
Arrowhead Avenue	II	40	56.0	10.5	66.5	0.62	33.7	B
E Street	II	40	28.3	14.1	42.4	0.26	21.8	D
I-215 NB On-Ramp	II	40	42.8	20.2	63.0	0.45	25.8	C
I-215 SB Off-Ramp	II	40	6.9	8.2	15.1	0.06	14.4	E
Total	II		455.0	274.6	729.6	4.59	22.6	C

Arterial Level of Service: EB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-215 SB On-Ramp	II	40	17.3	29.6	46.9	0.15	11.6	F
I-215 NB Off-Ramp	II	40	6.9	18.4	25.3	0.06	8.6	F
E Street	II	40	42.8	9.0	51.8	0.45	31.3	B
Arrowhead Avenue	II	40	28.3	1.3	29.6	0.26	31.3	B
Waterman Avenue	II	40	56.0	5.9	61.9	0.62	36.2	A
Tippecanoe Avenue	II	40	91.4	26.7	118.1	1.02	31.0	B
Del Rosa Drive	II	40	27.1	37.7	64.8	0.25	13.7	E
Sterling Avenue	II	40	25.0	24.3	49.3	0.23	16.6	E
Victoria Avenue	II	40	25.2	7.3	32.5	0.22	24.3	C
Central Avenue	II	40	25.3	39.2	64.5	0.23	12.8	F
Palm Avenue	II	40	24.9	23.2	48.1	0.23	16.9	E
Church Ave	II	40	6.6	9.4	16.0	0.06	12.9	F
SR-210 SB On-Ramps	II	40	29.5	37.4	66.9	0.27	14.4	E
SR-210 NB Off-Ramps	II	40	10.1	7.3	17.4	0.09	18.3	D
Total	II		416.4	276.7	693.1	4.12	21.4	D

Arterial Level of Service: WB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-210 NB On-Ramps	II	40	36.6	19.1	55.7	0.38	24.7	C
SR-210 SB Off-Ramp	II	40	10.1	9.7	19.8	0.09	16.0	E
Church Ave	II	40	29.5	16.1	45.6	0.27	21.2	D
Palm Avenue	II	40	11.2	22.2	33.4	0.10	10.5	F
Central Avenue	II	40	28.3	313.3	341.6	0.28	2.9	F
Victoria Avenue	II	40	29.1	12.6	41.7	0.26	22.8	C
Sterling Avenue	II	40	29.4	37.1	66.5	0.29	15.6	E
Del Rosa Drive	II	40	23.5	29.5	53.0	0.20	13.9	E
Tippecanoe Avenue	II	40	31.9	39.1	71.0	0.31	15.9	E
Waterman Avenue	II	40	91.4	9.3	100.7	1.02	36.3	A
Arrowhead Avenue	II	40	56.0	7.6	63.6	0.62	35.2	A
E Street	II	40	28.3	9.3	37.6	0.26	24.6	C
I-215 NB On-Ramp	II	40	42.8	31.2	74.0	0.45	21.9	D
I-215 SB Off-Ramp	II	40	6.9	6.6	13.5	0.06	16.1	E
Total	II		455.0	562.7	1017.7	4.59	16.2	E

Arterial Level of Service: EB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-215 SB On-Ramp	II	40	17.3	29.4	46.7	0.15	11.6	F
I-215 NB Off-Ramp	II	40	6.9	9.7	16.6	0.06	13.1	E
E Street	II	40	42.8	9.5	52.3	0.45	31.0	B
Arrowhead Avenue	II	40	28.3	2.8	31.1	0.26	29.8	B
Waterman Avenue	II	40	56.0	20.5	76.5	0.62	29.3	B
Tippecanoe Avenue	II	40	91.4	155.4	246.8	1.02	14.8	E
Del Rosa Drive	II	40	27.1	63.6	90.7	0.25	9.8	F
Sterling Avenue	II	40	25.0	38.6	63.6	0.23	12.9	F
Victoria Avenue	II	40	25.2	16.5	41.7	0.22	18.9	D
Central Avenue	II	40	25.3	25.0	50.3	0.23	16.5	E
Palm Avenue	II	40	24.9	31.6	56.5	0.23	14.4	E
Church Ave	II	40	6.6	20.0	26.6	0.06	7.7	F
SR-210 SB On-Ramps	II	40	29.5	30.4	59.9	0.27	16.1	E
SR-210 NB Off-Ramps	II	40	10.1	8.4	18.5	0.09	17.2	D
Total	II		416.4	461.4	877.8	4.12	16.9	E

Arterial Level of Service: WB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-210 NB On-Ramps	II	40	36.6	31.6	68.2	0.38	20.1	D
SR-210 SB Off-Ramp	II	40	10.1	6.7	16.8	0.09	18.9	D
Church Ave	II	40	29.5	8.3	37.8	0.27	25.5	C
Palm Avenue	II	40	11.2	23.7	34.9	0.10	10.1	F
Central Avenue	II	40	28.3	19.8	48.1	0.28	20.7	D
Victoria Avenue	II	40	29.1	11.0	40.1	0.26	23.8	C
Sterling Avenue	II	40	29.4	34.1	63.5	0.29	16.4	E
Del Rosa Drive	II	40	23.5	12.1	35.6	0.20	20.7	D
Tippecanoe Avenue	II	40	31.9	22.1	54.0	0.31	20.8	D
Waterman Avenue	II	40	91.4	16.1	107.5	1.02	34.0	B
Arrowhead Avenue	II	40	56.0	7.2	63.2	0.62	35.5	A
E Street	II	40	28.3	12.3	40.6	0.26	22.8	C
I-215 NB On-Ramp	II	40	42.8	24.6	67.4	0.45	24.1	C
I-215 SB Off-Ramp	II	40	6.9	5.9	12.8	0.06	17.0	E
Total	II		455.0	235.5	690.5	4.59	23.9	C

Arterial Level of Service: EB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-215 SB On-Ramp	II	40	17.3	30.2	47.5	0.15	11.4	F
I-215 NB Off-Ramp	II	40	6.9	19.3	26.2	0.06	8.3	F
E Street	II	40	42.8	13.0	55.8	0.45	29.1	B
Arrowhead Avenue	II	40	28.3	2.1	30.4	0.26	30.5	B
Waterman Avenue	II	40	56.0	14.7	70.7	0.62	31.7	B
Tippecanoe Avenue	II	40	91.4	23.5	114.9	1.02	31.8	B
Del Rosa Drive	II	40	27.1	39.6	66.7	0.25	13.3	E
Sterling Avenue	II	40	25.0	21.4	46.4	0.23	17.7	D
Victoria Avenue	II	40	25.2	10.2	35.4	0.22	22.3	C
Central Avenue	II	40	25.3	36.7	62.0	0.23	13.4	E
Palm Avenue	II	40	24.9	24.9	49.8	0.23	16.3	E
Church Ave	II	40	6.6	6.2	12.8	0.06	16.1	E
SR-210 SB On-Ramps	II	40	29.5	54.4	83.9	0.27	11.5	F
SR-210 NB Off-Ramps	II	40	10.1	2.8	12.9	0.09	24.6	C
Total	II		416.4	299.0	715.4	4.12	20.7	D

Arterial Level of Service: WB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-210 NB On-Ramps	II	40	36.6	19.0	55.6	0.38	24.7	C
SR-210 SB Off-Ramp	II	40	10.1	40.4	50.5	0.09	6.3	F
Church Ave	II	40	29.5	22.0	51.5	0.27	18.7	D
Palm Avenue	II	40	11.2	27.4	38.6	0.10	9.1	F
Central Avenue	II	40	28.3	595.1	623.4	0.28	1.6	F
Victoria Avenue	II	40	29.1	18.8	47.9	0.26	19.9	D
Sterling Avenue	II	40	29.4	36.2	65.6	0.29	15.8	E
Del Rosa Drive	II	40	23.5	21.9	45.4	0.20	16.2	E
Tippecanoe Avenue	II	40	31.9	37.0	68.9	0.31	16.3	E
Waterman Avenue	II	40	91.4	9.9	101.3	1.02	36.1	A
Arrowhead Avenue	II	40	56.0	5.3	61.3	0.62	36.6	A
E Street	II	40	28.3	14.6	42.9	0.26	21.6	D
I-215 NB On-Ramp	II	40	42.8	34.0	76.8	0.45	21.1	D
I-215 SB Off-Ramp	II	40	6.9	6.4	13.3	0.06	16.4	E
Total	II		455.0	888.0	1343.0	4.59	12.3	F

Arterial Level of Service: EB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-215 SB On-Ramp	II	40	17.3	29.6	46.9	0.15	11.6	F
I-215 NB Off-Ramp	II	40	6.9	6.2	13.1	0.06	16.6	E
E Street	II	40	42.8	12.0	54.8	0.45	29.6	B
Arrowhead Avenue	II	40	28.3	3.1	31.4	0.26	29.5	B
Waterman Avenue	II	40	56.0	21.2	77.2	0.62	29.0	B
Tippecanoe Avenue	II	40	91.4	209.0	300.4	1.02	12.2	F
Del Rosa Drive	II	40	27.1	287.5	314.6	0.25	2.8	F
Sterling Avenue	II	40	25.0	40.4	65.4	0.23	12.5	F
Victoria Avenue	II	40	25.2	27.6	52.8	0.22	14.9	E
Central Avenue	II	40	25.3	440.1	465.4	0.23	1.8	F
Palm Avenue	II	40	24.9	72.2	97.1	0.23	8.4	F
Church Ave	II	40	6.6	26.0	32.6	0.06	6.3	F
SR-210 SB On-Ramps	II	40	29.5	178.6	208.1	0.27	4.6	F
SR-210 NB Off-Ramps	II	40	10.1	3.6	13.7	0.09	23.2	C
Total	II		416.4	1357.1	1773.5	4.12	8.4	F

Arterial Level of Service: WB 5th Street

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-210 NB On-Ramps	II	40	36.6	39.7	76.3	0.38	18.0	D
SR-210 SB Off-Ramp	II	40	10.1	12.8	22.9	0.09	13.9	E
Church Ave	II	40	29.5	11.1	40.6	0.27	23.8	C
Palm Avenue	II	40	11.2	23.3	34.5	0.10	10.2	F
Central Avenue	II	40	28.3	124.9	153.2	0.28	6.5	F
Victoria Avenue	II	40	29.1	14.6	43.7	0.26	21.8	D
Sterling Avenue	II	40	29.4	39.9	69.3	0.29	15.0	E
Del Rosa Drive	II	40	23.5	19.5	43.0	0.20	17.1	D
Tippecanoe Avenue	II	40	31.9	26.4	58.3	0.31	19.3	D
Waterman Avenue	II	40	91.4	17.8	109.2	1.02	33.5	B
Arrowhead Avenue	II	40	56.0	10.2	66.2	0.62	33.9	B
E Street	II	40	28.3	16.9	45.2	0.26	20.5	D
I-215 NB On-Ramp	II	40	42.8	17.8	60.6	0.45	26.8	C
I-215 SB Off-Ramp	II	40	6.9	3.1	10.0	0.06	21.8	D
Total	II		455.0	378.0	833.0	4.59	19.8	D